Steps for Practical 01

1. Open AWS Educate: https://aws.amazon.com/education/awseducate/
2. Click on “Sign-In to AWS Educate” and Verify your e-mail.
3. On the dashboard select the course: “Getting started with Compute (Lab)” and click Confirm.
4. Click on the Next button (Don’t click on “Take Survey”)
5. On the left-side, click on MODULE.
6. From the options displayed, select: “4. Getting started with Compute Lab”
7. Click on “Load Getting started with Compute Lab in a new Window”.
8. Workbench gets opened
9. Then click “Start Lab” on top-right.
10. The lab will get ready. Now you can follow the instructions from “Accessing th AWS Management Console”.

Steps:

1At the top of these instructions, choose Start Lab to launch your lab. A Start Lab panel opens, and it displays the lab status.

Tip: If you need more time to complete the lab, choose the Start Lab button again to restart the timer for the environment.

2. Wait until you see the message Lab status: ready, then close the Start Lab panel by choosing the X.

3. At the top of these instructions, choose AWS.
This opens the AWS Management Console in a new browser tab. The system will automatically log you in.

4. Arrange the AWS Management Console tab so that it displays alongside these instructions. Ideally, you should be able to see both browser tabs at the same time so that you can follow the lab steps.

5. In the AWS Management Console on the Services menu, enter EC2. From the search results, choose EC2.

6. In the left navigation pane, choose EC2 Dashboard to ensure that you are on the dashboard page.

7. In the Launch instance section, choose the Launch instance button.

8. In the Name and tags pane, in the Name text box, enter `Web-Server.`

9. Choose the Add additional tags link.

10. From the Resource types dropdown list, select Instances and Volumes.

11. Locate the Application and OS Images (Amazon Machine Image) section. It is just below the Name and tags section.

12. In the search box, enter `Windows Server 2019 Base` and press Enter.

13. Next to Microsoft Windows Server 2019 Base, choose Select.

14. In the Instance type section, keep the default instance type, t2.micro.

15. In the Key pair (login) section, from the Key pair name - required dropdown list, choose Proceed without a key pair (not recommended).

16. In the Network settings section, choose Edit.

17. From the VPC - required dropdown list, choose Lab VPC. The Lab VPC was created using an AWS CloudFormation template during the setup process of your lab. This VPC includes two public subnets in two different Availability Zones.

18. For Security group name - required, choose choose Select existing security group.

19. From Common security groups, select `Web Server security group`.

20. In the Configure storage section, keep the default storage configuration.

21. Expand the Advanced details section.

22. For IAM instance profile, choose the role that has LabInstanceProfile in the name.

23. From the Termination protection dropdown list, choose Enable.

24. Copy the following commands, and paste them into the User data text box.

```
<powershell>
# Installing web server
Install-WindowsFeature -name Web-Server -IncludeManagementTools
# Getting website code
wget https://aws-tc-largeobjects.s3.us-west-2.amazonaws.com/CUR-TF-100-EDCOMP-1-DEV/
lab-01-ec2/code.zip -outfile "C:\Users\Administrator\Downloads\code.zip"
# Unzipping website code
Add-Type -AssemblyName System.IO.Compression.FileSystem
function Unzip
{
    param([string]$zipfile, [string]$outpath)
    [System.IO.Compression.ZipFile]::ExtractToDirectory($zipfile, $outpath)
}
Unzip "C:\Users\Administrator\Downloads\code.zip" "C:\inetpub\"
# Setting Administrator password
$Secure_String_Pwd = ConvertTo-SecureString "P@ssW0rD!" -AsPlainText -Force
$UserAccount = Get-LocalUser -Name "Administrator"
$UserAccount | Set-LocalUser -Password $Secure_String_Pwd
</powershell>
```

25. In the Summary section, choose Launch instance.

26. Choose View all instances. The instance appears in a Pending state, which means that it is being launched. It then changes to Running, which indicates that the instance has started booting. There will be a short time before you can access the instance.

27. Next to your Web-Server, select the check box. The Details tab displays detailed information about your instance. To view more information in the Details tab, drag the window divider upward. Review the information displayed in the Details, Security and Networking tabs.

28. Wait for your instance to display the following:
Note: Refresh if needed.
•Instance State: Running
•Status Checks: 2/2 checks passed

29. Choose the Status checks tab.

30. Choose the Monitoring tab.

This tab displays Amazon CloudWatch metrics for your instance. Currently, there are not many metrics to display because the instance was recently launched.

31. At the top of the page, choose the Actions dropdown menu. Select Monitor and troubleshoot Get system log.

32. Scroll through the log and review the messages in the output.

33. Scroll through the log and review the messages in the output.

34. With your Web-Server selected, choose the Actions dropdown menu, and select Monitor and troubleshoot Get instance screenshot.This option shows you what your EC2 instance console would look like if a screen were attached to it. Because this is a Windows instance, the screenshot shows a locked log-in screen.

35. At the bottom of the page, choose Cancel.

36. Select the check box next to the Amazon EC2 Web-Server that you created, and then choose the Details tab.

37. Copy the Public IPv4 address of your instance to your clipboard.

38. In your web browser, open a new tab, paste the IP address you just copied, and then press Enter.

39. Keep the browser tab open, but return to the EC2 Management Console tab.

40. In the left navigation pane, choose Security Groups.

41. In the left navigation pane, choose Security Groups.

42. Choose the Inbound rules tab.The security group currently has no rules.

43. Choose Edit inbound rules, and then choose Add rule, and configure the following options:
•Type: Choose HTTP.

•Source: Choose Anywhere-IPv4.

44. Choose Save rules

45. Return to the web server browser tab with the public IPv4 address that you previously opened, and choose to refresh the page. You should now find a web website with the message Welcome Students!

46. In the AWS Management Console on the Services menu, search for and select Systems Manager.

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48. Under Managed nodes, select your Web-Server EC2 instance.

49. From the Node actions dropdown list, choose Connect with Remote Desktop.
A new tab opens.

50. Enter the following values:
•Username: `Administrator`
•Password: `P@ssW0rD!`

51. Choose Connect.

52. To disconnect from your Web-Server instance, choose Actions and then choose End session.

53. In the pop-up window, choose End session again .

54. In the pop-up window, choose End session again .

55. On the EC2 Management Console, in the left navigation pane, choose Instances.

56. Select the check box next to your Web-Server instance. At the top of the page, choose the Instance state dropdown menu, and choose Stop instance.

57. In the Stop instance? pop-up window, choose Stop.Your instance performs a normal shutdown and then stops running.

58. Wait for the Instance state to display Stopped.

59. Select the check box next to your Web-Server. From the Actions dropdown menu, select Instance settings Change instance type, and then configure the following option:
•Instance type: Select t2.nano.

60. Choose Apply. Note: You are restricted from using other instance types in this lab.

61. In left navigation pane, choose Instances. Next to your Web-Server, select the check box.

62. From the Instance state dropdown menu, choose Start instance.
Once the instance is restarted, the Instance state displays Running.

63. Select the check box next to your Web-Server instance. From the Instance state dropdown menu, choose Terminate instance.

64. Notice that Termination protection is enabled for this instance. You can easily enable and disable termination protection from the Actions dropdown menu.

65. From the Actions dropdown menu, choose Instance settings, and then choose Change termination protection.

66. Clear the check box for Enable.

67. Choose Save.

68. Now, try to terminate the instance again.The instance state will now successfully be terminated.

69. In the top right corner of the AWS console, select your username, and then choose Service Quotas.

70. From the left navigation menu, select AWS services.

71. In the search box, enter `Amazon Elastic Compute Cloud`, and then select the link that is returned. You can request an increase for many of these limits.

72. Choose End Lab at the top of this page, and then select Yes to confirm that you want to end the lab.

73. Select the X in the top right corner to close the panel.