Develop and Deploy .Net Application

(LAB-M03-02)

Version Control	
Document	Develop and deploy .Net application
Owner	Ahmad Majeed Zahoory
Version	3.1
Last Change	22nd May 2024
Description of Change	Task steps updated

Lab duration: **20 minutes**

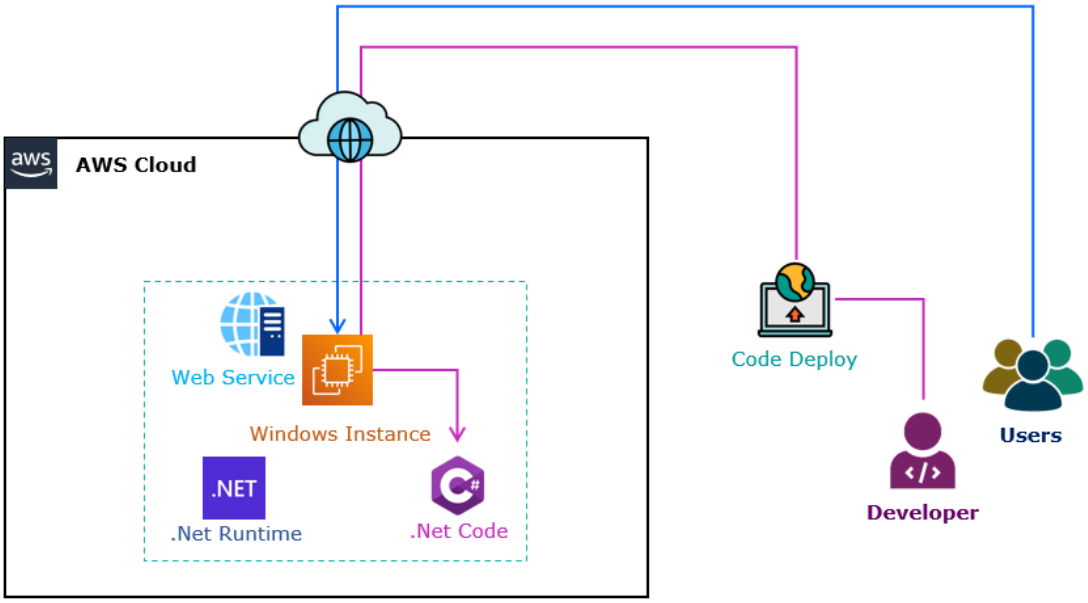
Lab scenario

You're preparing to deploy web application in AWS. As a development group, your team has decided to use .NET application to deploy in the Windows environment in AWS.

Objectives

After you complete this lab, you will be able to:

- Develop the .Net code.
- Create a Windows virtual machine.
- Build the Run-time environment.
- Deploy the .Net code.
- Access Web application server.



Task 1: Develop .Net Application

In this task, you will develop the .Net code to deploy in the virtual machine.

Step 1: Develop the Code to Display the Server IP Address

1. **Unzip** the **LAB-03-02-Code.zip** (*.Net code*).

Note: **lab-03-02-code**.zip is available with the **Lab manual**.

a. Open the **views** folder.

b. Open the **home** folder.

i. Open the **index.cshtml** in the **Notepad**.

a) **Add** the **code** after **TO DO** to **Display** the **Server Private IP Address**.

Info: You can also use the below code to **display the Server Private IP Address**.

```
<h1 class="fontSize"><center><font color="white">
<span>@ViewBag.PrivateIPAddress</span></font colour></center></h1>
```

Add the above code below to **<! TODO >** in the index.cshtml.

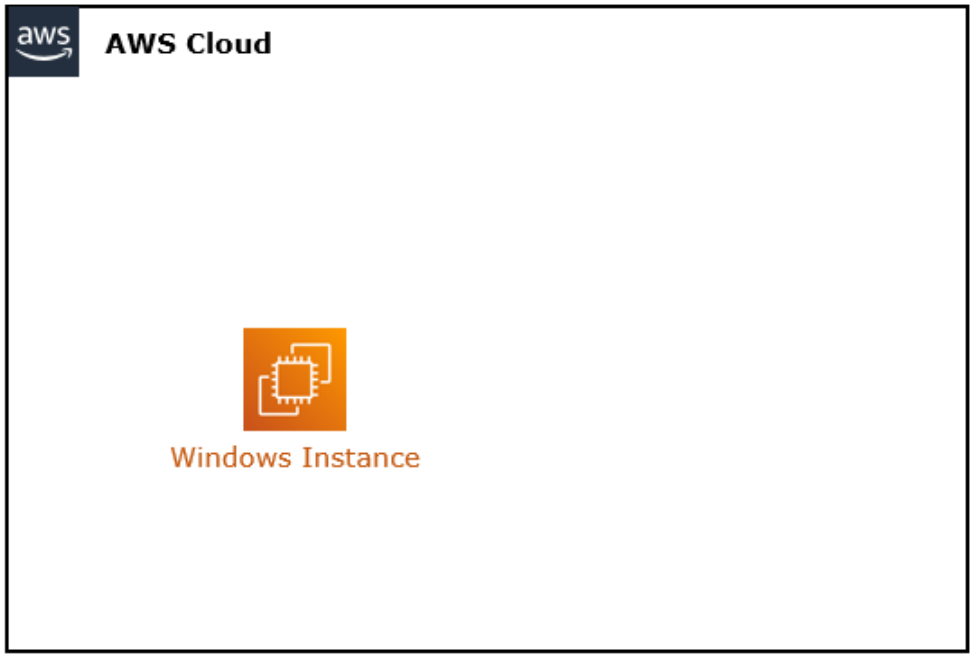
```
<body>
    <br /><br />
    <h1 class="fontSize"><center><font color="white">Developing with Azure LAB </font colour></center></h1>
    <h1 class="fontSize"><center><font color="white"> Private IP of the Dot Net App Server </font colour></center></h1>
    <! TO DO >
    <h1 class="fontSize"><center><font color="white"> <span>@ViewBag.PrivateIPAddress</span></font colour></center></h1>

</body>
```

1) Select **File**.

2) Select **Save**.

Task 2: Create Windows Server

In this task, you will launch an Amazon EC2 instance using the management console to deploy the .Net code.



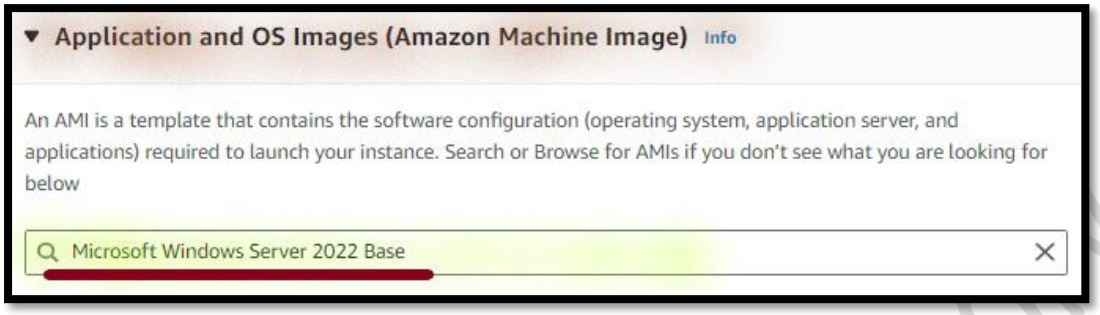
Step 1: Create EC2 Instance

2. In the **AWS Management Console**, on the **Services** menu, search and select **EC2**.
3. Choose the **YOUR ALLOCATED REGION**, region list to the right of your account information on the navigation bar.
4. Select **Instances**.
5. Select **Launch Instances**.
    a. In the **Name and tags** section:
        i. **Name**: Write **Windows Web Server**.

b. In the In the **Application and OS Images** section:

i. In the **Search box**:

a) Type **Microsoft Windows Server 2022 Base**.

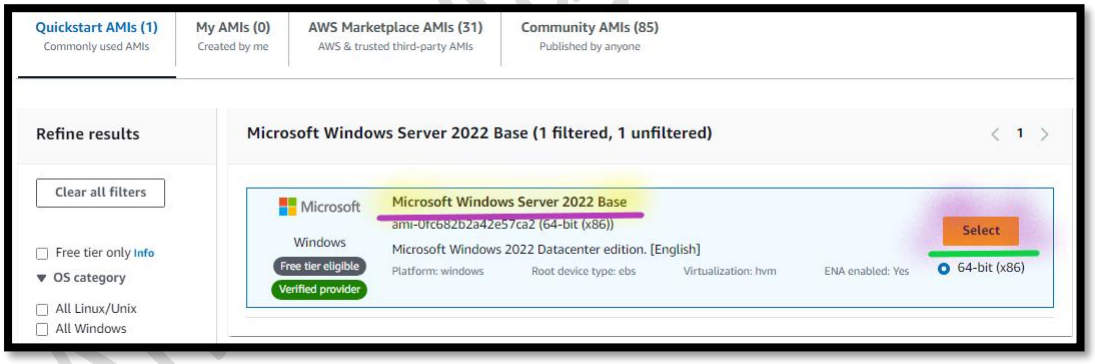


b) Press **Enter** ***key***.

Note: You can see the **Choose an Amazon Machine Image** page.

c) **From** the **Choose an Amazon Machine Image** page:

1) Select **Microsoft Windows Server 2022 Base**.

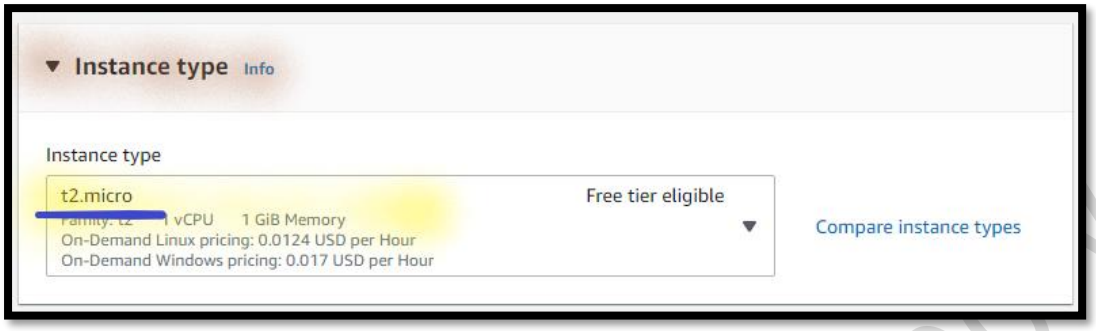


Note: You can see the **Launch an Instance** page.

c. In the **Instance Type** section:

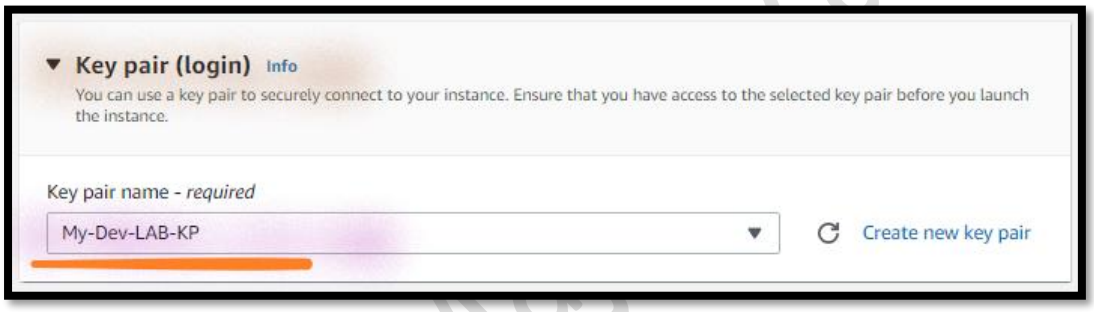
i. **Instance type**: Dropdown and in the **Search box**:

a) Type and select **t2.micro**.



d. In the **Key pair (login)** section:

i. **Key pair name**: Dropdown and select **My-Dev-LAB-KP**.



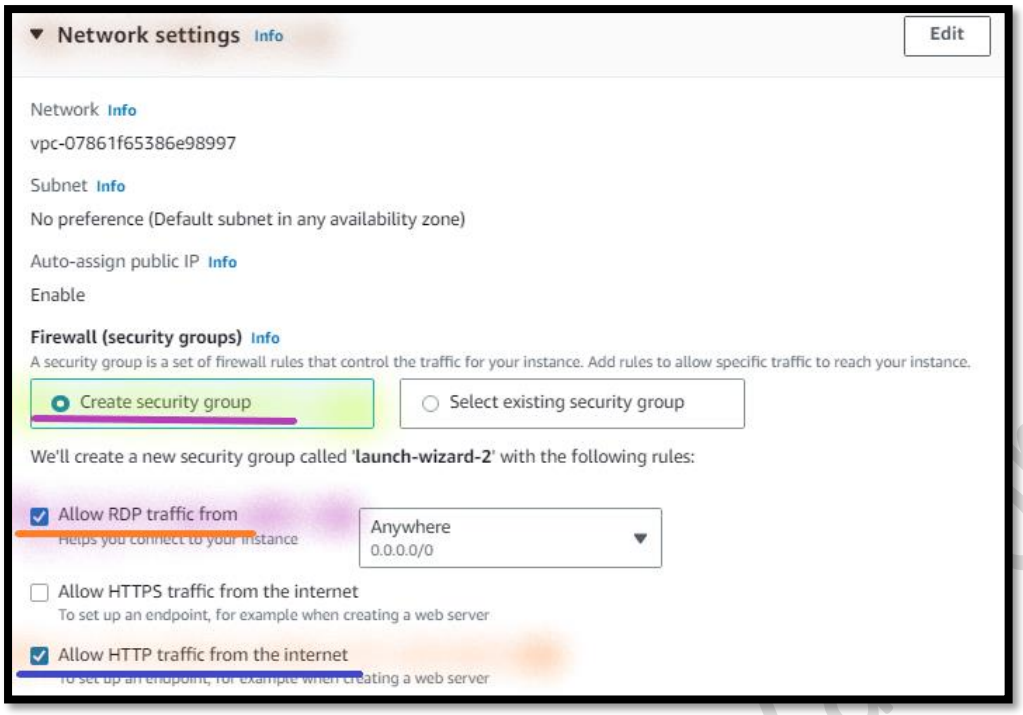
e. In the **Network setting** section:

Note: You can see "**Allow RDP traffic**" is already **enabled** from "**Anywhere**".

i. Select **Create security group**.

a) **Allow HTTP traffic from the internet**: **Enable** the **Checkmark**.

Note: Leave the other details as default.



f. In the **Summary** section:

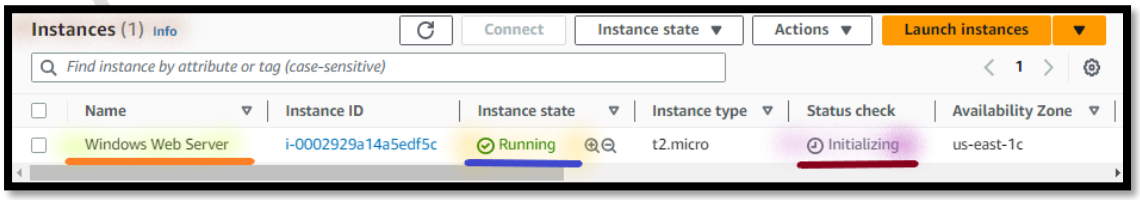
i. Select **Launch Instances**.

Note: **Wait**, till you can see the **message** "**Successfully initiated launch of instance**".

g. Select **View all instances**.

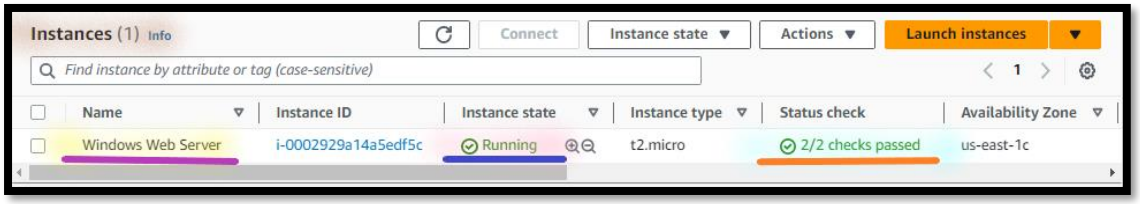
Note: **Wait**, till you can see the **Windows Web Server** Instance **State** is **Running**.

Note: You can see the **Windows Web Server** Instance **Status check** is **initializing**.



Note: **Wait**, till you can see the **Windows Web Server** Instance **Status check** is **2/2 check passed**.

Note: **Refresh** your **screen** unless you can see the **2/2 check passed**.



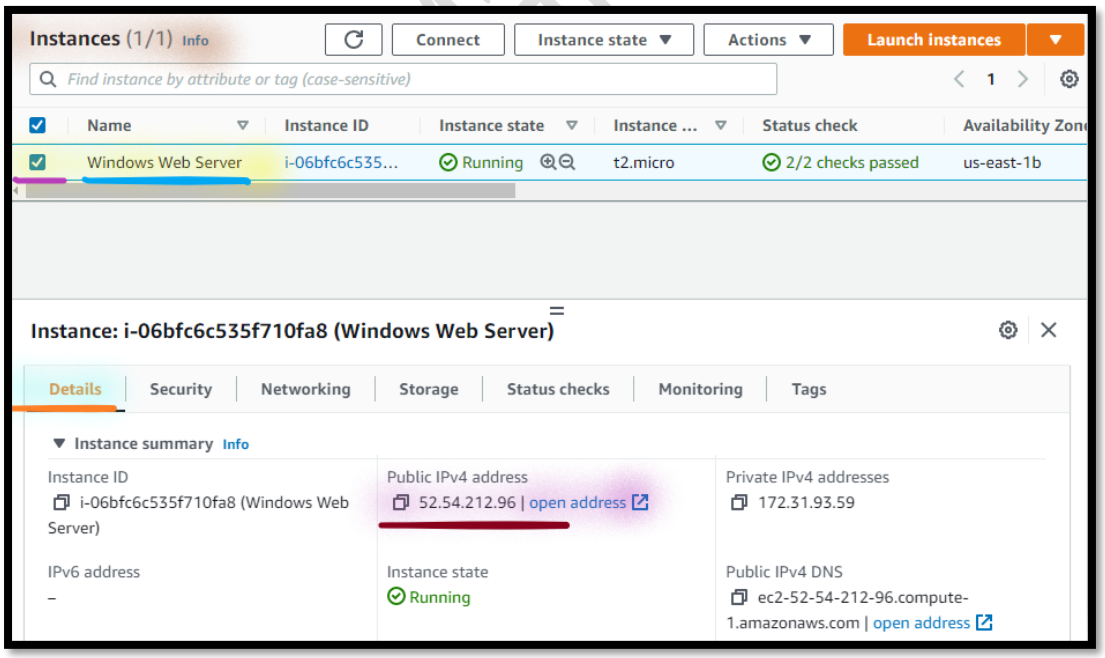
Task 3: Log into Windows Instance

In this task, you will log into the Windows server.

Step 1: Copy the IP Address of Windows Web Server

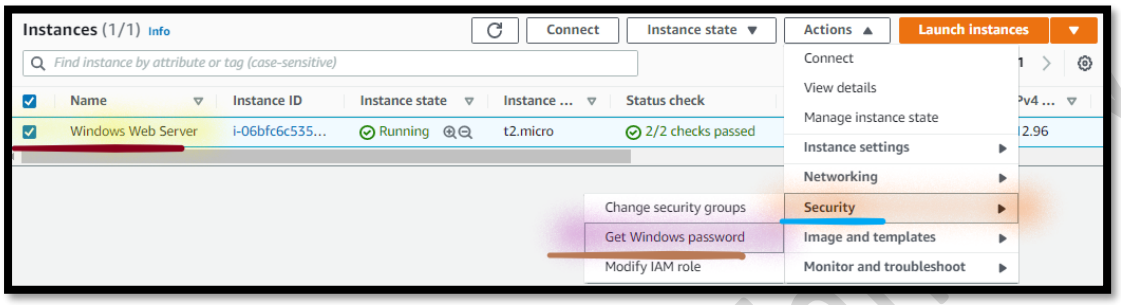
6. **From** the **EC2** console.
7. Select the **Windows Web Server**.
    a. Select the **Details**.

Note: **Copy** the **Public IP address** of **Windows Web Server** in the **Notepad**.



Step 2: Generate the Password for Windows Web Server

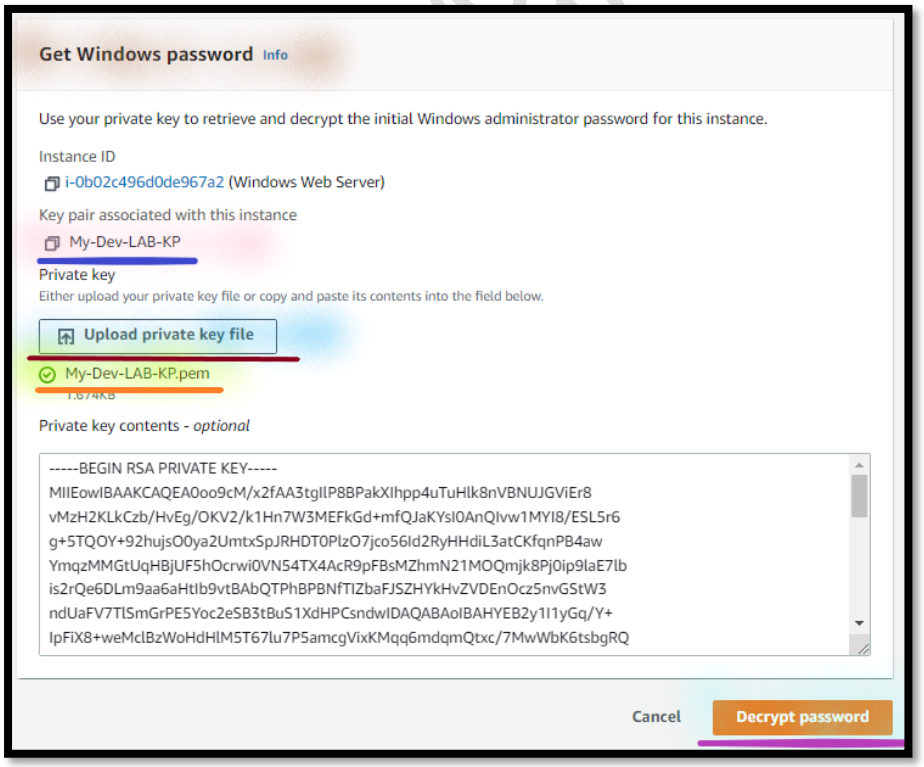
8. **From** the **Windows Web Server** console.
   a. Select **Actions**.
      i. Select **Security**.
      ii. Select **Get Windows Password**.



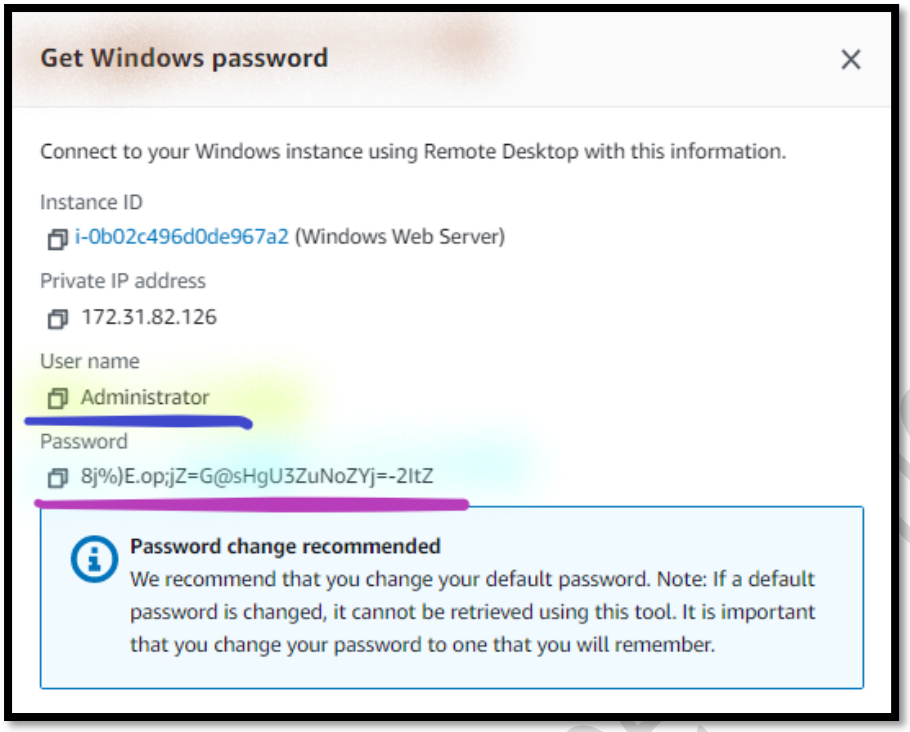
a) From the **Get Windows Password** console:

1) **Browse**: **Click**, **Navigate** and **select** the **My-Dev-LAB-KP.pem** key pair (which you have downloaded in the previous step).

2) Click on **Decrypt Password**.



Note: **Copy** the **Windows Web Server Password** in the **Notepad**.



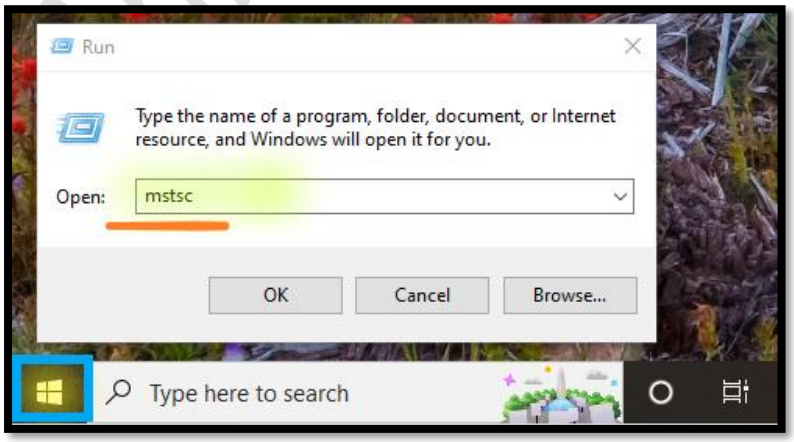
3) Select **Ok**.

Step 3: Connect to Windows Web Server Instance

9. From the **Local Desktop/ Laptop** (Windows server 2019), right click on **Start** & **Run**.

   a. In the **Open**, write **mstsc**.

   b. Select **Ok**.



i. **From** the **Remote Desktop Connection**:

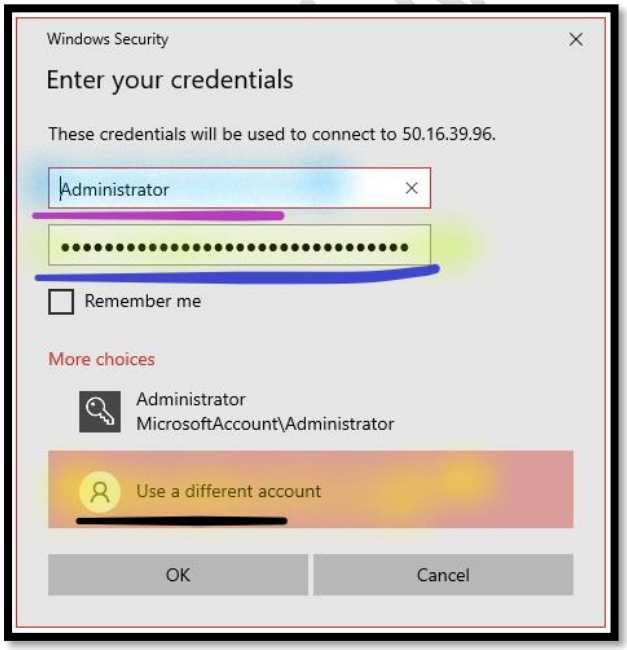
a) **Computer**: Write the **Public IP Address** of the **Windows Web Server**.

b) Select **Connect**.

Note: You can **get the prompt** to enter the **Username** and **Password**.

1) **Username:** Write **Administrator**.

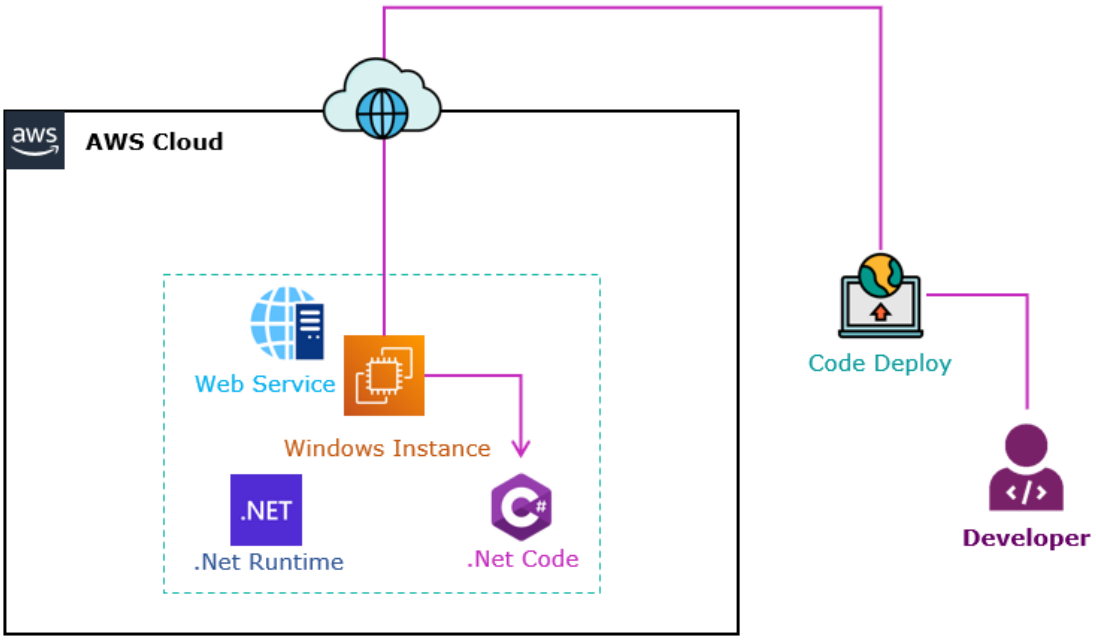
2) **Password**: Write the **Password** (*which you have copied in the previous step*).



3) Select **Ok**.

Task 4: Deploy the .Net Code

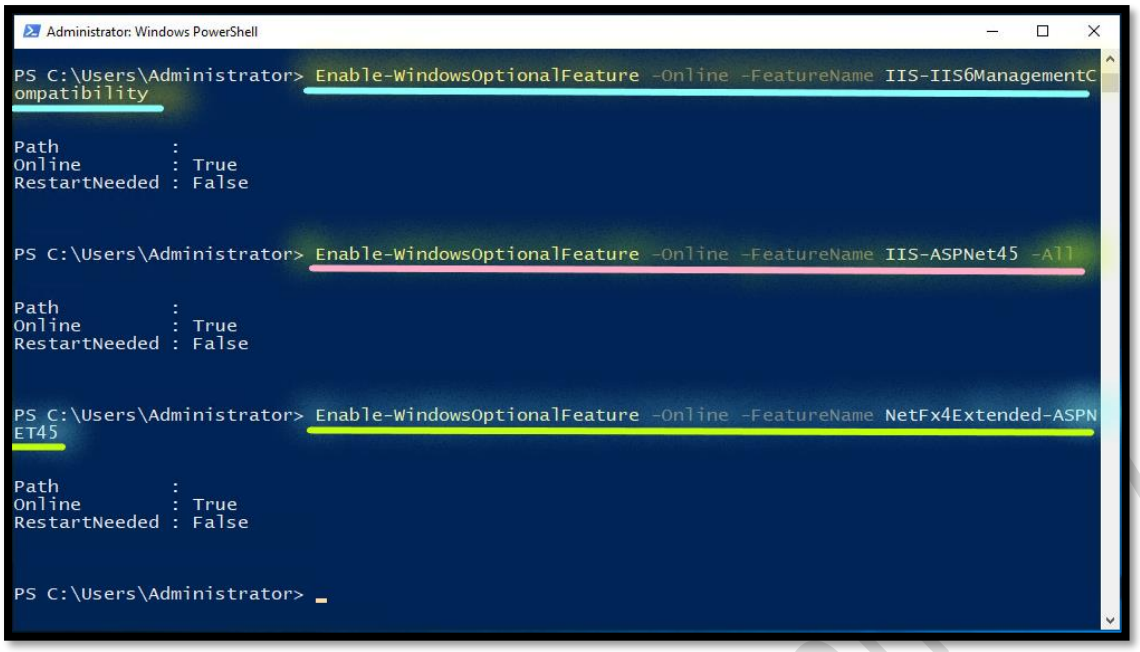
In this task, you will install the web service and .net run-time environment to deploy the .net code.



Step 1: Configure the Runtime Environment

10. **From** the **windows web server** virtual machine, right click on **Start** & **Run**.
    a. In the **Open**, write **powershell.exe**.
    b. Select the **Ok**.
        i. **From** the **PowerShell**, **Execute** the **Enable-WindowsOptionalFeature -Online -FeatureName IIS-WebServer** (***Run-time environment for dotnet.txt***).

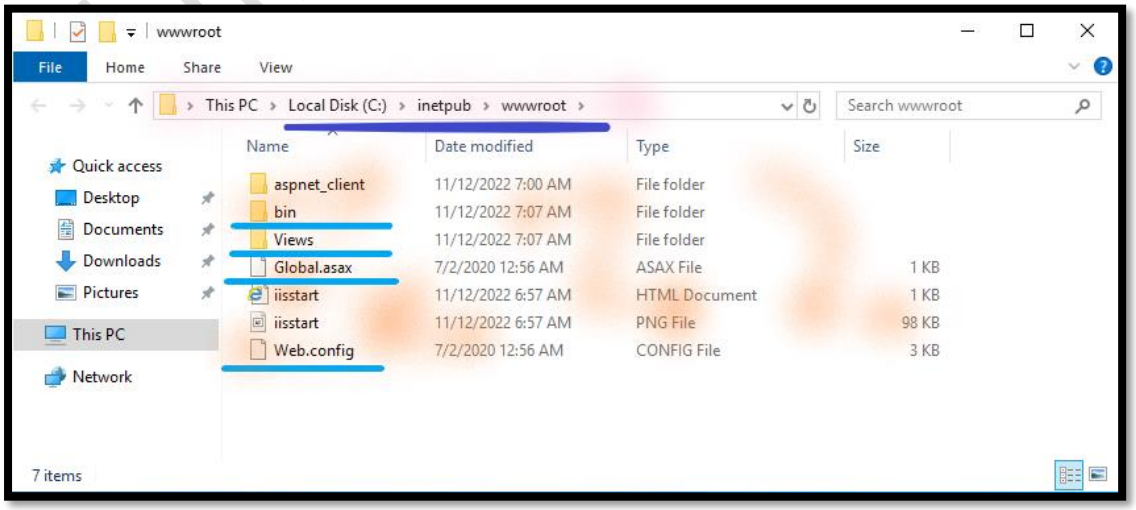
Note: ***Run-time environment for dotnet.txt*** is available with the Lab manual.



Step 2: Deploy the Develop Code

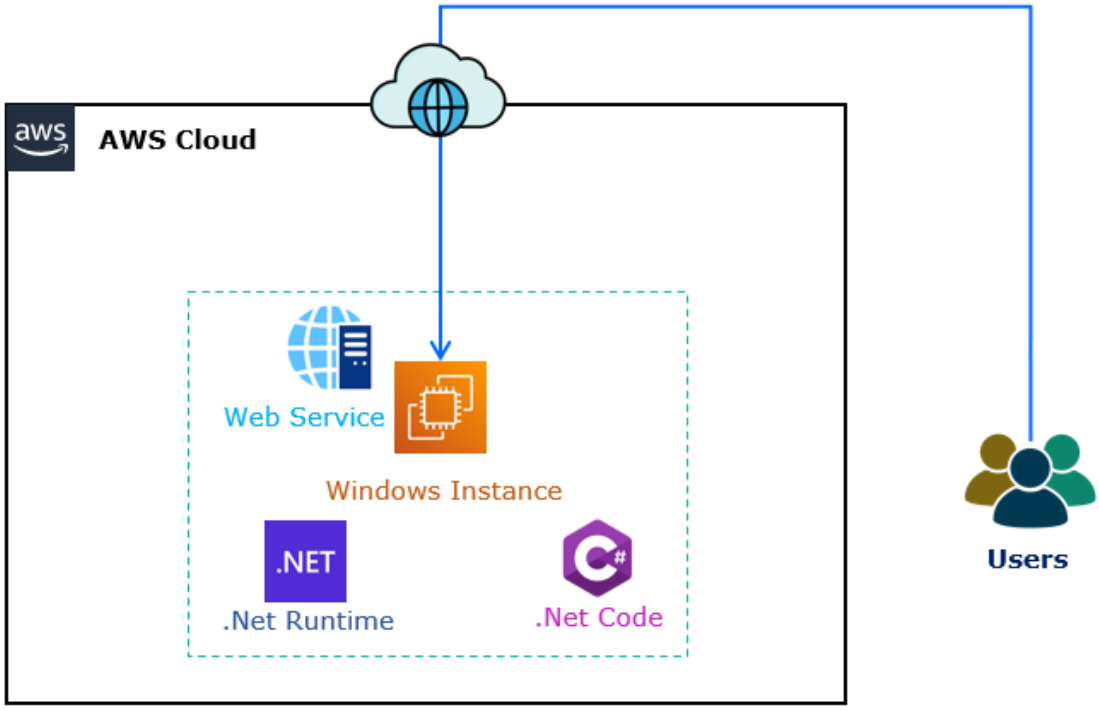
11. **From** the **windows web server** virtual machine, right click on **Start** & **Run**.
    a. In the **Open**, write **c:\inetpub\wwwroot**.
    b. Select the **Ok**.
        i. **Copy** the **code** into the **wwwroot** folder (which you have updated in the previous step)

Note: You need to **Copy** the **folder** and **files**, **not zip file**.



Task 5: Access Web Application

In this task you will access your web application.



Step 1: Access the .Net App Server

12. **From** your **Local Desktop/ Laptop**, open the **Browser**, write **Public IP Address** of the ***Windows web server***, to access the **website**.

Note: You can see the .**Net Application web page**.

Note: .Net Application **web page display** the .Net Application Server (Windows virtual machine) **Private IP address**.

Task 6: Clean up the Environment

Step 1: Terminate EC2 Instances

13. In the **AWS Management Console**, on the **Services** menu, click **EC2**.
14. Choose the **YOUR ALLOCATED REGION**, region list to the right of your account information on the navigation bar.
15. Click **Instances**.
16. Select **Windows Web Server**.
    a. Select the **Instance state**.
        i. Select **Terminate instance**.
            a) Select **Terminate**.