

In this demo we are going to launch a Windows Instance, connect to it using RDP and modify the contents of sample default web page for Windows IIS.

- **Task 1: Launch an Amazon EC2 instance**
  1. Go to **AWS Management Console** -> **Services** -> **EC2**
  2. Click on **Launch Instance**
  3. You will be asked to select **Amazon Machine Image(AMI)**
  4. Select **Windows Server 2016 Base**
  5. Select **instance type t2.micro**
  6. Click next **configure instance details**
  7. Keep everything default direct go to **Advanced Details**

In the text box, add the user data given below

**[User data specifies the script that will be launched at the boot of the instance. It is used for automating tasks. We have used user data this time to show launching the instance with IIS(Internet Information Services). The same can be performed manually after launching the instance. This is a PowerShell script to install the default web server IIS for Windows]**

<powershell>

Install-WindowsFeature Web-Server -IncludeManagementTools -IncludeAllSubFeature

</powershell>

8. Click next **add storage** default general purpose
9. Click next **add tags**
10. In tags click on **add tag**
  - **Key:** Name
  - **Value:** Web Server
11. Click next **Configure security group**
12. Click on **create a new security group**
  - **Security Group name:** Web and RDP
  - **Description:** Permit Web to Remote Desktop Access
13. You will have RDP as a default rule
14. Now Add Rule
  - 1<sup>st</sup> Rule
  - **Type:** HTTP
  - **Source:** Anywhere
  - 2<sup>nd</sup> Rule
  - **Type:** HTTPs
  - **Source:** Anywhere
15. Now check that you have 3 rules RDP,HTTP,HTTPs
16. Click on **review and launch**
17. In the **key pair** dialog box select on **Create a new key pair, download the key pair**, select the acknowledgement box, then click **launch instances**.
18. Now you will get the instance ready scroll down click on **view instance**
  - **Task 2: Obtain Windows Password**

When Amazon EC2 launches a new windows instance, it generates a random Administrator password. This prevents other people from having access to your instance.

In this task you download the private key and use it to decrypt the password so that you can login to the window instance.

19. Return to **Amazon EC2 Management Console**
20. When the instance is ready click on **connect**
21. In the **connect** to your instance dialog box click on **Get Password**

22. In that you will have to insert the **PEM key** that you downloaded earlier
23. Then click on **decrypt password**
  - **Task 3: Login to your EC2 Instance**
25. Now again the same dialog box will appear with the password copy the **password**
26. In the dialog box click on **desktop remote access** and open the file to start **Remote Desktop**  
If you receive yellow warning message click **connect**
27. Paste the **password** and click **OK**  
If you receive yellow warning message click **Yes**  
You should now be connected to your **Amazon EC2 instance**

- **Task 4: Configure the Windows Instance**

You are now connected to your Amazon EC2 Windows instance

As a result of the user Data script you used when launching the instance, IIS is already running on the computer. In this task you will configure IIS.

The following instruction should be performed on the EC2 instance via your remote desktop connection.

28. Launch **Server Manager** by clicking the windows icon and typing server manager
29. In server manager click on **IIS** in the left navigation panel.
30. Right click on the server that appears then select **Internet Information Services (IIS)**

**Manger.**

**Browse the default website**

You will now explore the web server configuration

31. Click the arrow beside the server name in the left column to expand it
32. Click the arrow beside **sites** to expand it
33. Right click on **Default web site**.
34. Select **Manage website** then select **browse**

A browser window will open, displaying the default home page.(It might launch behind the IIS window so bring it to the front) This confirms that IIS is functioning properly.

This web page is also accessible via the Internet. To test this you will now access the web page from your own computer.

35. Return to Amazon EC2 Management Console in your web browser.
36. Copy the **Public DNS (IPv4)** name of the web server to your clipboard.
37. Open a new tab in your web browser, paste the URL hit enter.

The web page should also be displayed in your web browser. This shows that you have created a web server that is accessible from the internet.

**Accessing Metadata**

Additional information is provided to Amazon Ec2 instances so applications can discover information about their environment. This is known as Metadata and it can be accessed only from the EC2 Instance itself.

38. Return to your Remote Desktop session.
39. Minimize the web browser and return to the Internet Information Services (IIS) Manager window that is showing the **default web site home**
40. In the left navigation pane, right click **default web site** and select **explore**

This will open a file explorer window showing the wwwroot directory that has your web server files.

You will now edit the contents of the default iistart.htm page

41. In the file explorer, right click on **iistart** with the blue/white Internet explorer icon and a type of HTML Document.
42. Click **open with** then select **notepad**.

This will display the contents of the default Home page for the web server. You will now replace the contents with modified HTML.

43. **Erase** the contents of the file and **paste** code shown below:

```
<html>
<body>
<h2>EC2 Instance Metadata</h2>
<a href="http://169.254.169.254/latest/meta-data/">InstanceMetadata</a>
<BR/>
<a href="http://169.254.169.254/latest/meta-data/hostname">Instance Hostname</a>
<BR/>
<a href="http://169.254.169.254/latest/meta-data/public-ipv4">Instance Public IP Address</a>
<BR/>
<a href="http://169.254.169.254/latest/meta-data/placement/availability-zone">Instance
Availability Zone</a>
<BR/>
<a href="http://169.254.169.254/latest/user-data">Instance User Data</a> </body>
</html>
```

44. Save and close the text file.

45. In Internet explorer (in your remote desktop session) reload the default home page by clicking the refresh icon.

46. Click the links to view Instance Metadata about the instance and the user data that was passed during the launch:

- **Instance Metadata** displays all the metadata available.
- **Instance Hostname** shows the name of your EC2 instance.
- **Instance Public IP Address** shows the IP address assigned to the instance.
- **Instance Availability Zone** shows the data centre where your instance is running.
- **User Data** shows the script that was passed to your instance and was run when the instance started.