Develop Azure Queue Application

(LAB-204-08-01)

Task 1: Develop Dot Net Core Application

Step 1: Develop the Code to Perform Queue Operation

1. **Unzip** the **.Net core** code to **review**

Note: .Net Code **(lab-204-08-01.zip)** is available with the Lab Manual.

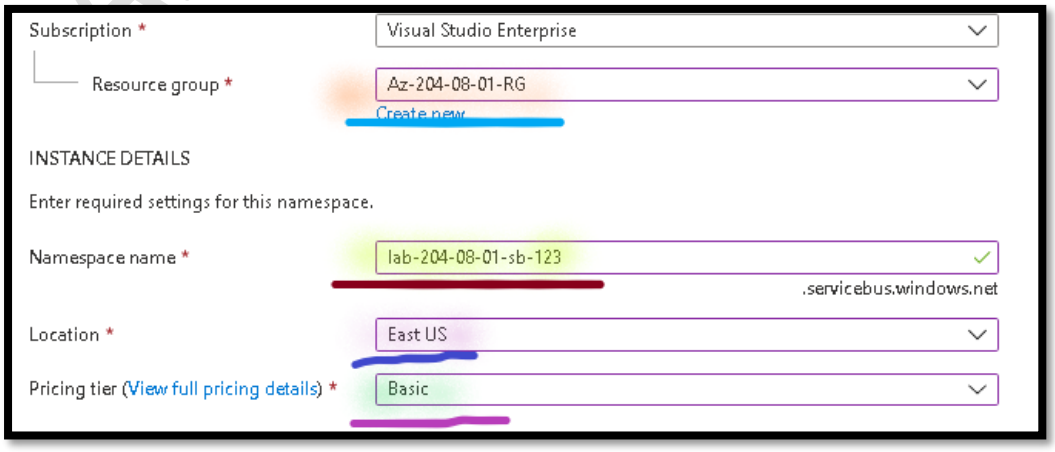
Task 2: Create Service Bus

Step 1: Create Service Bus Resource

2. **Go to the left** side. Select **Create a Resource**
3. **Search** & **Select** **Service Bus**
4. Create **Service Bus** & configure
    a. **Subscription**: Select your **Default subscription**
    b. **Resource group**: Create **new** resource group **Az-204-08-01-RG**
    c. **Name**: Write **lab-204-08-01-sb-123**

Note: **Replace 123** to make account name unique.

    d. **Region**: Dropdown and Select **East US**
    e. **Pricing**: Dropdown and Select **Basic**



f. Select **Next: Tags**

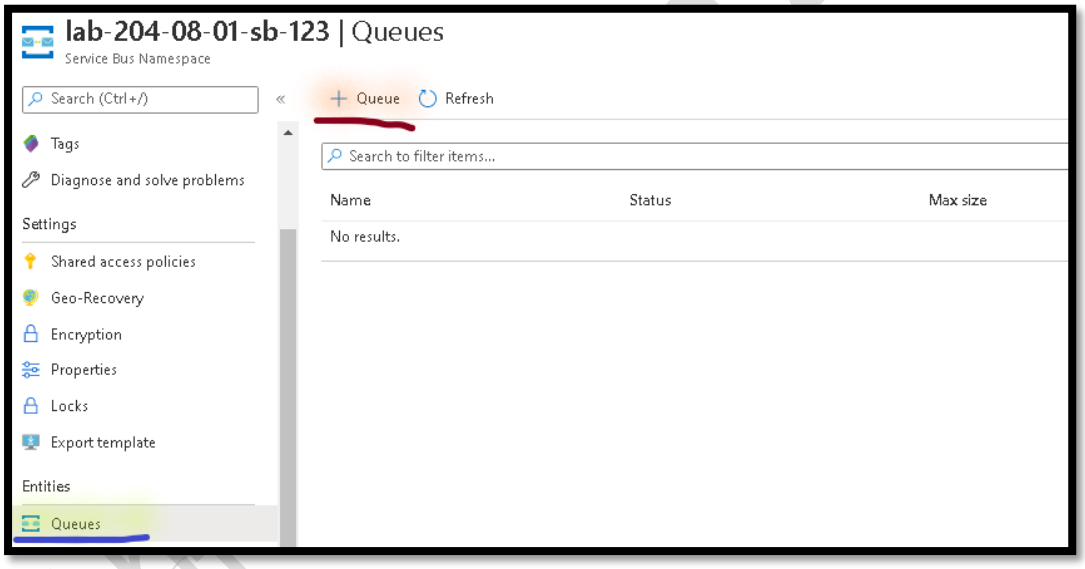
g. Select **Next: Review + Create**

h. Select **Next: Create**

Note: **Wait** for deployment completion.

Step 2: Create Queue

5. **Go to left** side, click on **Resource Group**
6. Open **Az-204-08-01-RG** resource group
7. Open the **lab-204-08-01-sb-123** service bus
8. Select the **Queues** under **Entities**
9. Select **Queue**



a. **Name**: Write **QueueF**

Note: Leave other details as default.

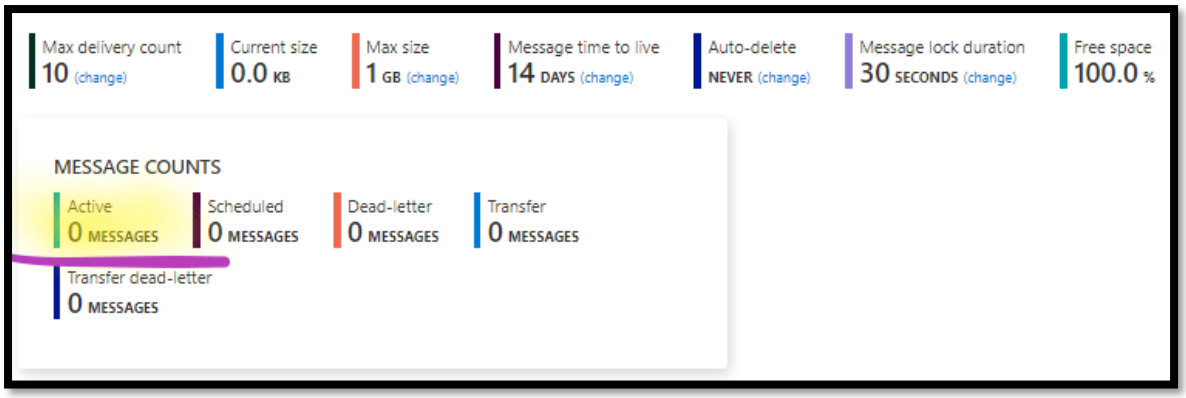
b. Select **Create**

Note: **Wait** for queue creation.

Step 3: Access your Queue

10.Open your **QueueF** queue**.**

Note: Review your active messages count.



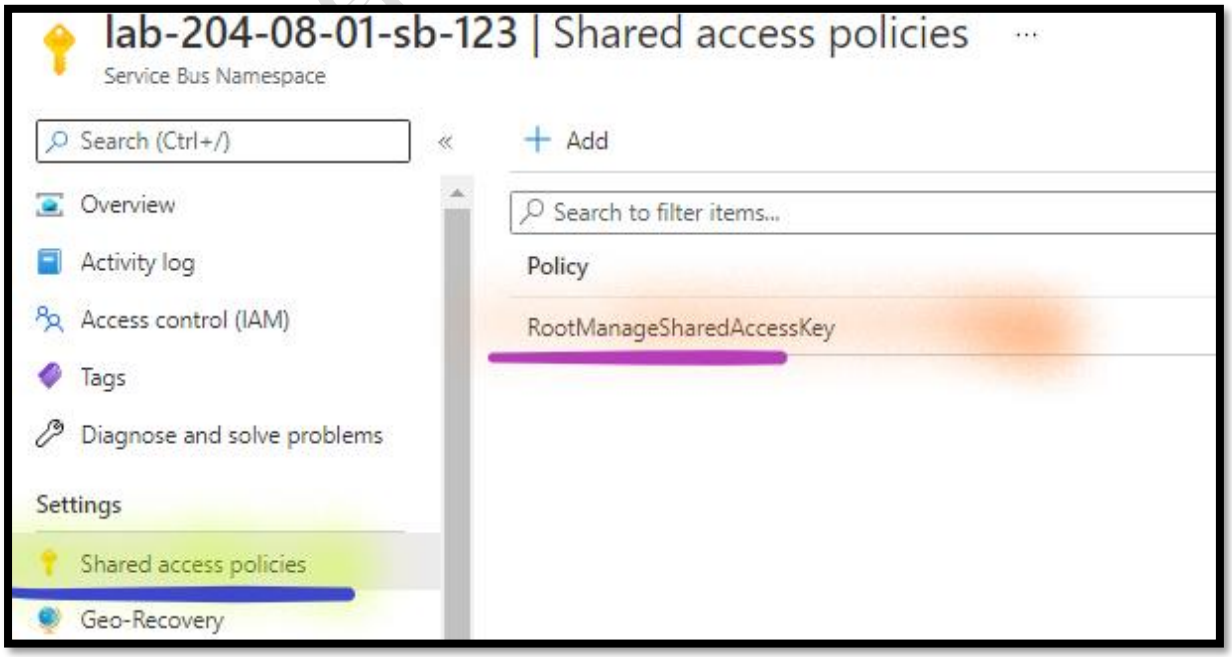
Step 4: Copy Connection String

11.Go to left side, click on **Resource Group**

12.Open **Az-204-08-01-RG** resource group

13.Open the **lab-204-08-01-sb-123** service bus

14.Select **Shared access policies** under **Settings**



15. Open **RootManageSharedAccessKey**

    a. **Copy** the **Primary Connection String** in **Notepad**.

Task 3: Deploy Azure Virtual Machines

Step 1: Create Windows Virtual Machine

16. Click the **virtual machines** link in the left-hand navigation bar.

17. Click the **Create** button to start the creation process.

18. You will be required to **fill in specific** information regarding your virtual machine, including:

    a. **Subscription**: Select **Default subscription**

    b. **Resource Group**: Select **existing** resource group **Az-204-08-01-RG**

    c. **Name**: Write **LAB-204-08-VM**

    d. **Region**: Select region **East US**

    e. **Image**: Dropdown and Select **Windows Server 2019 Datacenter**

    f. **Size**:

        i. Select **Change size**

        ii. Search & **Select** **B2ms** virtual machine

g. **Administrator Account**:

   i. **Username**: Write **master**

   ii. **Password**: Write **Lab@password**

h. **Inbound Port Rules**:

   i. **Public inbound ports**: Select **Allow selected ports**

   ii. **Select inbound ports**:

      a. Dropdown and select **RDP (3389)**

i. Click the **Next: Disks** to continue

j. Click the **Next: Networking** to continue.

k. Click the **Next: Management** to continue.

l. Click on the **Next: Advanced** to continue

m. Click the **Next: Tags** to continue.

n. Click the **Next: Review + create** button to continue.

o. Click the **Create** button

Note: **Wait** for deployment.

Task 4: Deploy the Dot Net Core App Code

Step 1: Connect to Windows 2019 Virtual Machine

19. Go to the left side of the menu, select **virtual machines**.
20. Select & Open the virtual machine **LAB-204-08-VM** from the list.
21. On the right side of the page copy **Public IP Address**.
22. **Login** into **LAB-204-08-VM** virtual machine using **RDP**.

Step 2: Install Dot Net Core Runtime Environment to Deploy the Dot Net Code

23. From the **Dot Net Core App Server**, Go to **Start menu**, open **Server manager**

    a. Select **Local Server**

    b. Click in **ON** showing against IE Enhanced Security Configuration

    c. Select **Off** in Administrator and Select **Ok**.

    d. Refresh you screen & now you can see **OFF** showing against IE Enhanced Security Configuration

24. **Download** and **Install**, **Dot Net Runtime v2.1**.

    https://download.visualstudio.microsoft.com/download/pr/7efea5a3-1365-48e1-8946-6ca6851f3952/f7d545ae430b9d83e4ebc9247a17b096/dotnet-runtime-2.1.19-win-x64.exe

25. From the **Dot Net Core App Server** (Windows 2019), right click on **Start** & **Run**

    a. In the **open,** write **powershell.exe**, press **OK**

    b. **Install** the below commands (one by one) to ready the Runtime Environment

Note: You need to wait after every command to complete succesfully before executing the next command.

    i. Import-Module ServerManager

    ii. Install-windowsfeature web-server, web-webserver -IncludeAllSubFeature

    iii. Install-windowsfeature web-mgmt-tools

    c. **Restart** the **Dot Net Core App** Server.

Step 3: Deploy Dot Net Core Code

26. **Unzip** the **.Net core** code

Note: Dot Net core code (**lab-204-08-01-code.zip**) is available with the Lab Manual.

27. From the **NS App Server** (Windows 2019), right click on **Start** & **Run**

    a. In the **open**, write **c:\inetpub\wwwroot**, press **OK**

    b. **Copy** the **code structure** from local laptop/ desktop to the **wwwroot** folder.

Note: You need to copy all the files, not zip file.

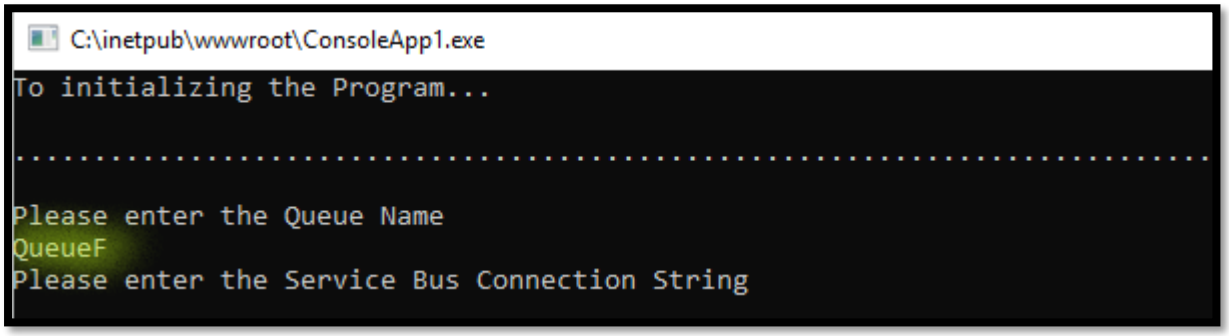
Step 4: Access the Dot Net Core App

28. From the **Dot Net Core App Server** (Windows 2019), open the **c:\inetpub\wwwroot** folder.

29. Open the **ConsoleApp1.exe**

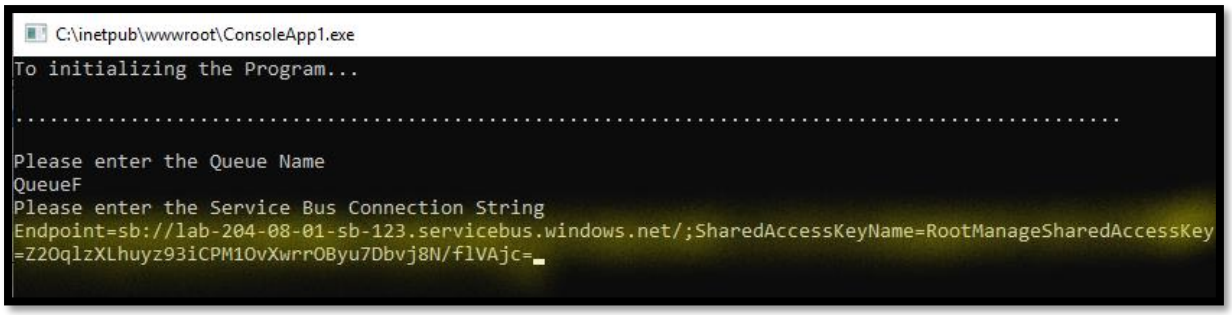
30. You get the **Prompt** to enter the **Queue Name**

    a. Provide **QueueF** and Press enter



    b. You get the **Prompt** to enter the **Service Bus Connection String**

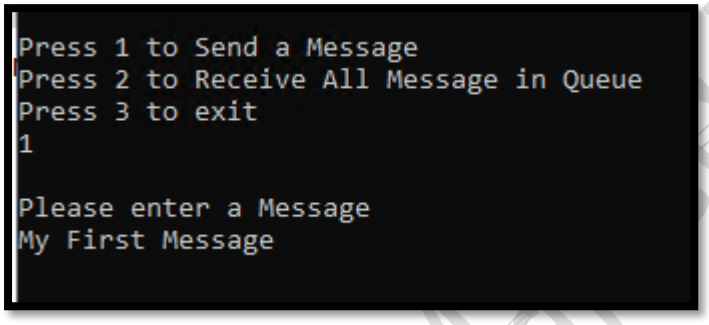
    c. Provide the **Connection String** which you have copied in the previous step



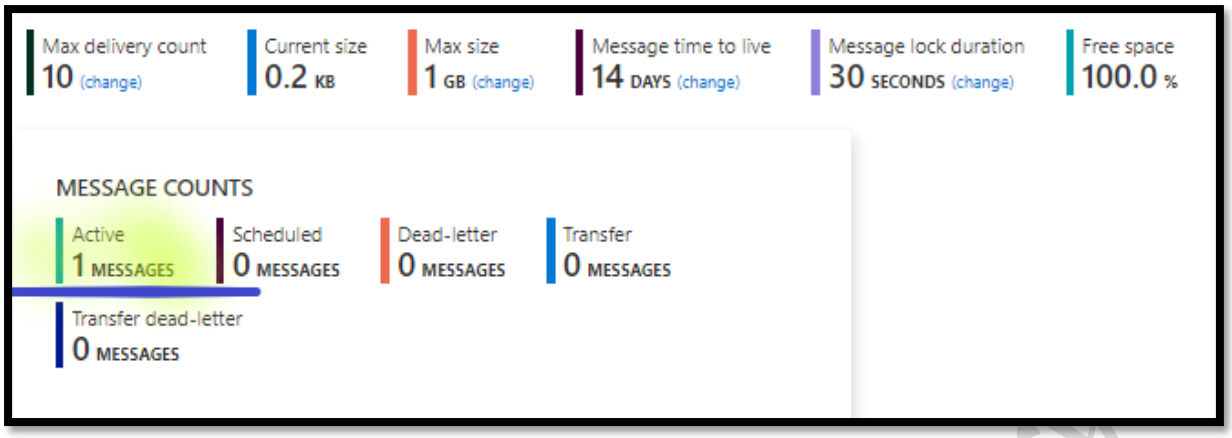
Step 5: Perform the Queue Operations

Send the Message

31. Write **1** to send the message to Queue
    a. **Message**: Write **My First Message**



32. **Go to left** side, click on **Resource Group**
33. Open **Az-204-08-01-RG** resource group
34. Open the **lab-204-08-01-sb-123** service bus
35. Select the **Queues** under Entities
36. Open **QueueF**



Note: You can view 1 active message.

Read the Message

37. **Return** to the **Dot Net Core App Server**.

a. Write **2** to read the message from Queue

Note: You can view your message now.

```
Press 1 to Send a Message
Press 2 to Receive All Message in Queue
Press 3 to exit
2


Press 1 to Send a Message
Press 2 to Receive All Message in Queue
Press 3 to exit
Received message: SequenceNumber: 1,  --> Body:My First Message.
```

Task 5: Delete the Environment

Step 1: Delete the resource group

38. Delete the **Az-204-08-01-RG** resource group