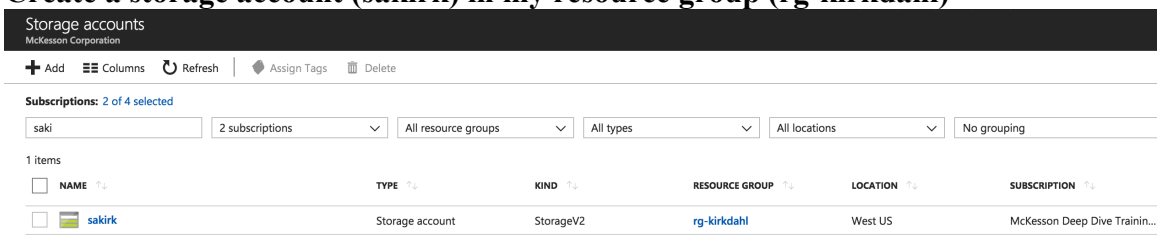
KIRK DAHL
McKesson **Assignment 09** Deep Azure

Handed out: 12/07/2017 Due by 11:59 PM, midnight (CST) on Thursday, 12/14/2017

Do one of two problems.
Note: You can do the second problem for extra credit if you need extra points on a previous homework. Please leave a note in the comment grade if you are doing the second problem for extra credit to be applied to a previous homework. Note which assignment to apply the extra credit to.

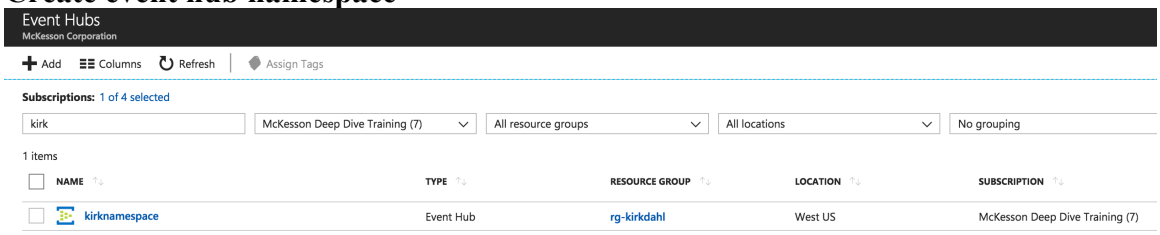
Problem 01. Please establish a storage account, a container within that account, an event hub and build a client that will send 10 messages to your event hub. You can you're your messages one by one or in a single batch. Capture your messages in the container. Demonstrate that you can download your messages (one is enough) and can open them in a text editor. Build another client that would read all ten messages and display their content. You can implement your clients in Java, C# or Python.
https://docs.microsoft.com/en-us/azure/event-hubs/event-hubs-dotnet-standard-getstarted-send
https://docs.microsoft.com/en-us/azure/event-hubs/event-hubs-java-get-started-receive-eph

Create a storage account (sakirk) in my resource group (rg-kirkdahl)

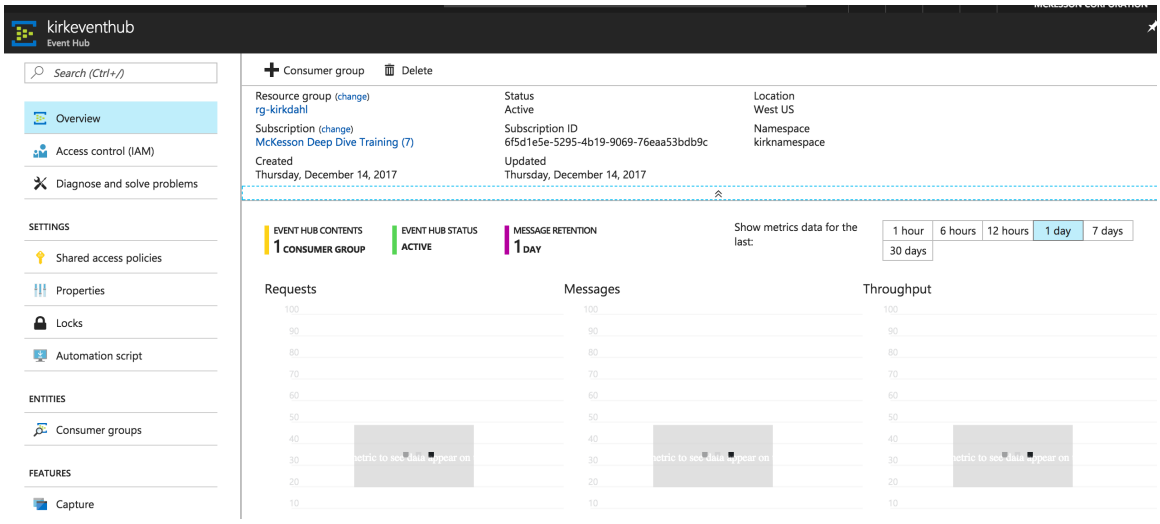


Created a container in my storage account

Create event hub namespace



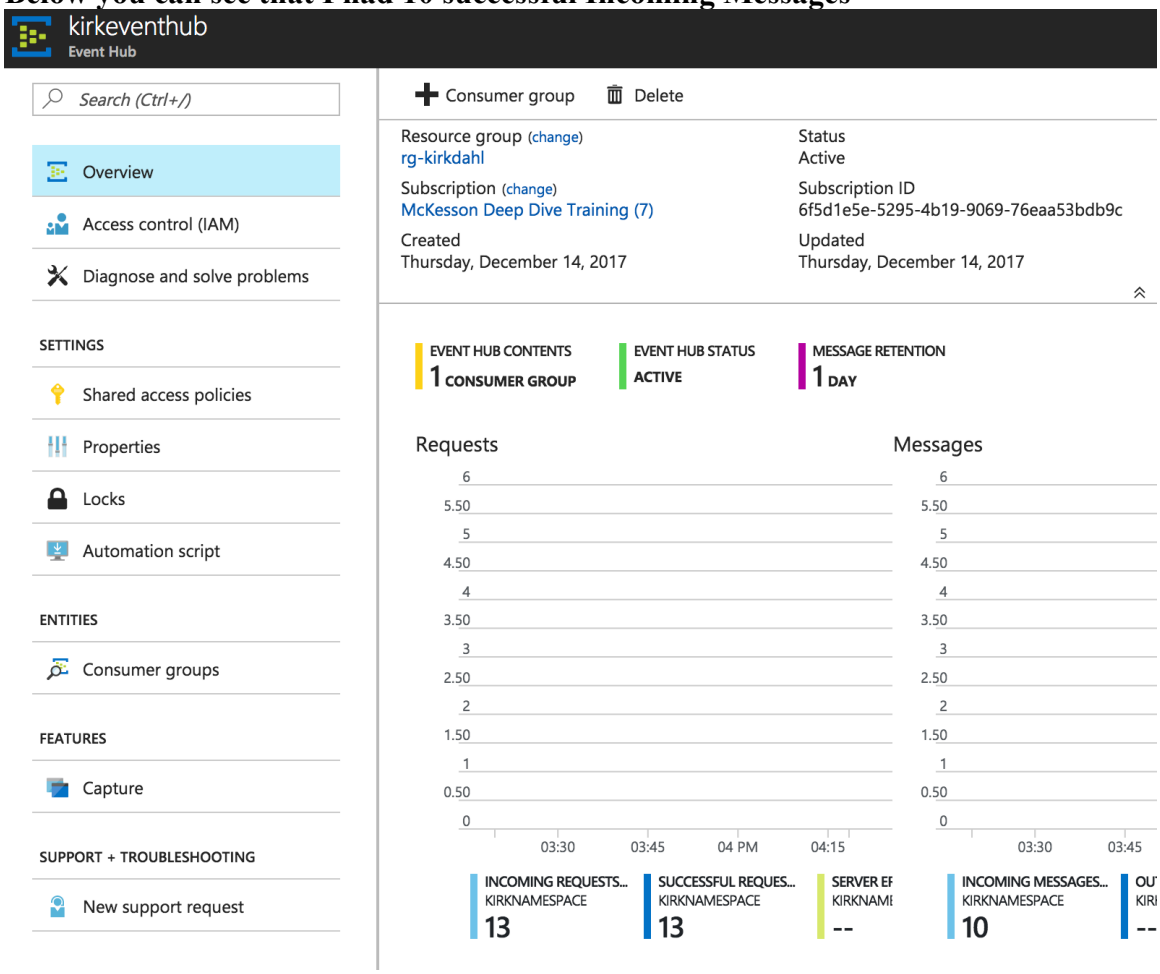
Create Event Hub



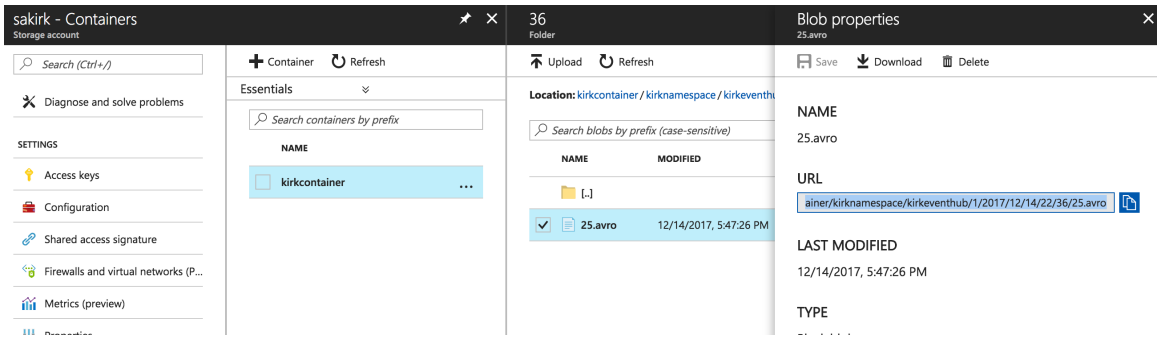
Script to send 10 messages

```
Sending message: Message 0
Sending message: Message 1
Sending message: Message 2
Sending message: Message 3
Sending message: Message 4
Sending message: Message 5
Sending message: Message 6
Sending message: Message 7
Sending message: Message 8
Sending message: Message 9
10 messages sent.
Press ENTER to exit.
```

Below you can see that I had 10 successful Incoming Messages



Here is my storage blob container showing the captured message. The file structure is year/month/date



Here are my captured messages

```
Objavro.codecnullavro.schemaÎ{"type":"record","name":"EventData","namespace":"Microsoft.ServiceBus.Messaging","fields":
[{"name":"SequenceNumber","type":"long"},{"name":"Offset","type":"string"},{"name":"EnqueuedTimeUtc","type":"string"},
{"name":"SystemProperties","type":{"type":"map","values":["long","double","string","bytes"]}},{"name":"Properties","type":
{"type":"map","values":["long","double","string","bytes","null"]}},{"name":"Body","type":["null","bytes"]}]}{*ªºá'´IÅùï¨ØÔvê®åÍ
13440,12/14/2017 10:36:53 PMMessage 0Ï
13496,12/14/2017 10:36:53 PMMessage 2Ô
13552,12/14/2017 10:36:53 PMMessage 4
13608,12/14/2017 10:36:53 PMMessage 6Ú
13664,12/14/2017 10:36:54 PMMessage 8Ù
13720,12/14/2017 10:36:54 PMMessage 10ˆ
13776,12/14/2017 10:36:54 PMMessage 12¯
13832,12/14/2017 10:36:54 PMMessage 14˙
13888,12/14/2017 10:36:54 PMMessage 16¸
13944,12/14/2017 10:36:54 PMMessage 18¸
14000,12/14/2017 10:36:55 PMMessage 20Å
14056,12/14/2017 10:36:55 PMMessage 22Ç
14112,12/14/2017 10:36:55 PMMessage 24Ñ
14168,12/14/2017 10:36:55 PMMessage 26Ü
14224,12/14/2017 10:36:55 PMMessage 28à
14280,12/14/2017 10:36:56 PMMessage 30ä
14336,12/14/2017 10:36:56 PMMessage 32å
14392,12/14/2017 10:36:56 PMMessage 34é
14448,12/14/2017 10:36:56 PMMessage 36ê
14504,12/14/2017 10:36:56 PMMessage 38í
14560,12/14/2017 10:36:56 PMMessage 40î
14616,12/14/2017 10:36:57 PMMessage 42ñ
14672,12/14/2017 10:36:57 PMMessage 44ò
14728,12/14/2017 10:36:57 PMMessage 46ö
14784,12/14/2017 10:36:57 PMMessage 48ú
14840,12/14/2017 10:36:57 PMMessage 50û
14896,12/14/2017 10:36:57 PMMessage 52†
14952,12/14/2017 10:36:58 PMMessage 54¢
```

(100%)

Problem 02. Create a simulated “thing” (device) and provide it with proper identity. Create an IoT hub that could communicate with your thing. Write a device client that could send a message to the IoT hub. Let your IoT hub respond to the thing with a message of its own. Have your client print the message it receives from the IoT hub. Implement your solution in any language of your choice. See the slides from lab for the .NET and Python examples.
https://docs.microsoft.com/en-us/azure/iot-hub/iot-hub-csharp-csharp-getstarted
https://docs.microsoft.com/en-us/azure/iot-hub/iot-hub-java-java-c2d
https://docs.microsoft.com/en-us/azure/iot-hub/iot-hub-python-getstarted
(100%)

As your guide please use materials provided in Lab09 on IoT and Event Hubs and the material in Lecture 09. Be free to use any of the code we collected among Azure samples and provided in the attached ZIP file. Also, consult Azure on-line documentation on Event Hubs and IoT Hubs.

SUBMISSION INSTRUCTIONS:

Your main submission should be a MS Word or PDF document containing descriptions of your action while configuring Azure services. If your MS Word document is larger than 1 MB, save it as a MINIMIZED PDF. Please be merciful and capture small JPGs. Describe the purpose of every action and the significance of the results. Start with the text of this homework assignment as the template. Please add any other files that you might have used or generated. Please write your solution as if you are writing a tutorial for your colleagues. Please make your text readable. Make sure that your fonts, especially in captured images are not unreadable. Please do not provide ZIP or RAR or any other archives. Canvas cannot open those archives and they turn into a nuisance for us.