# Backend get D2C message

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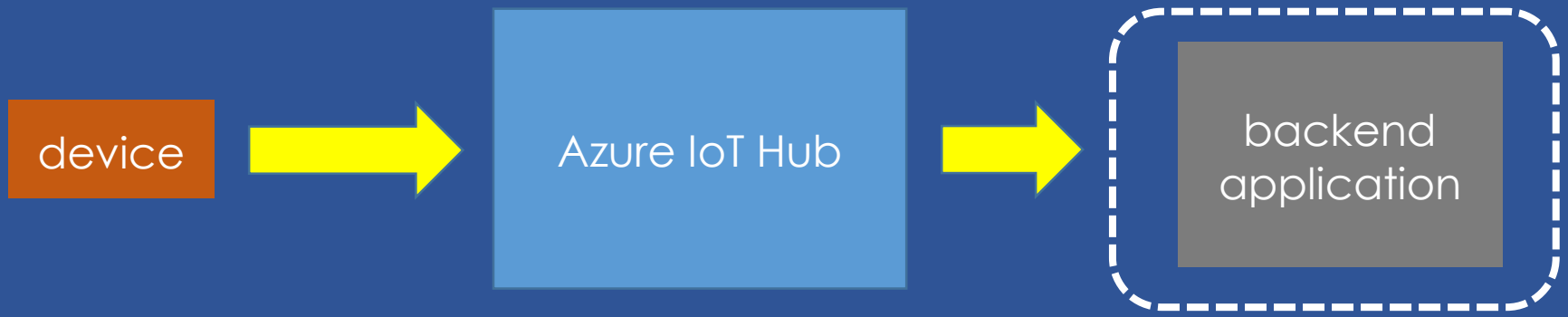
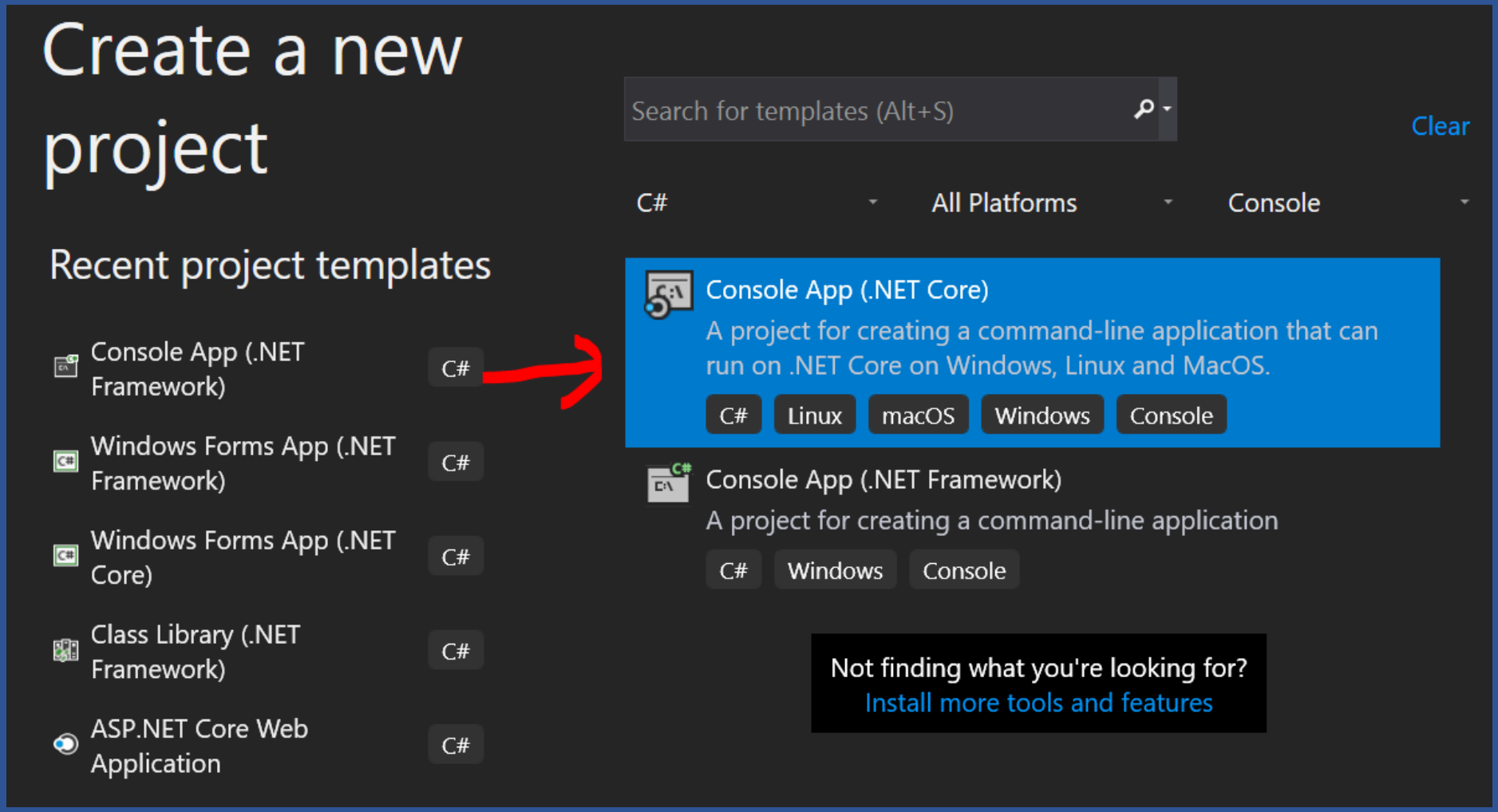
# What to do ?

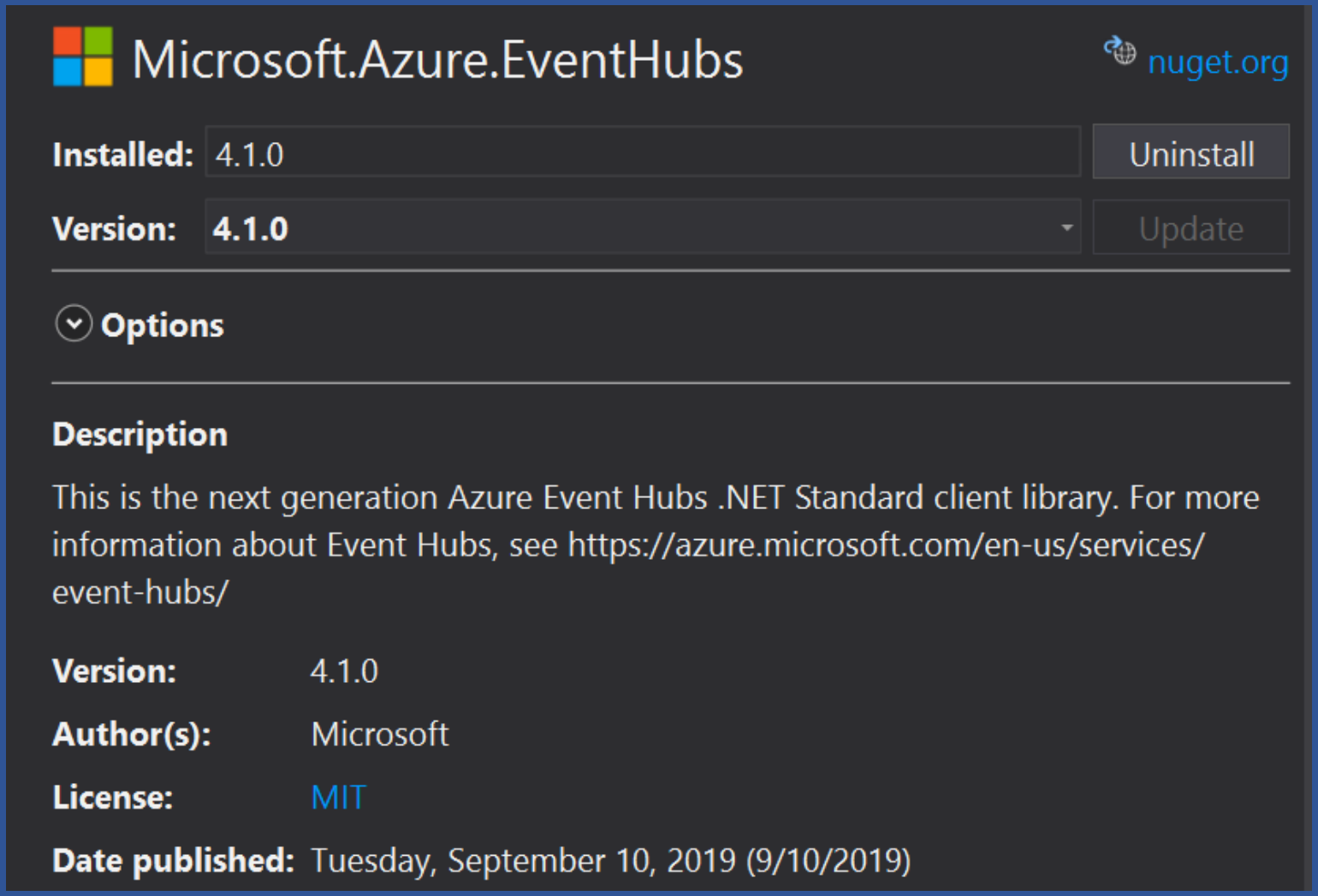
Develop a back-end application to monitor message from device via IoT Hub



# Open Visual Studio / Create C# Console App .NET Core / Name = backD2C



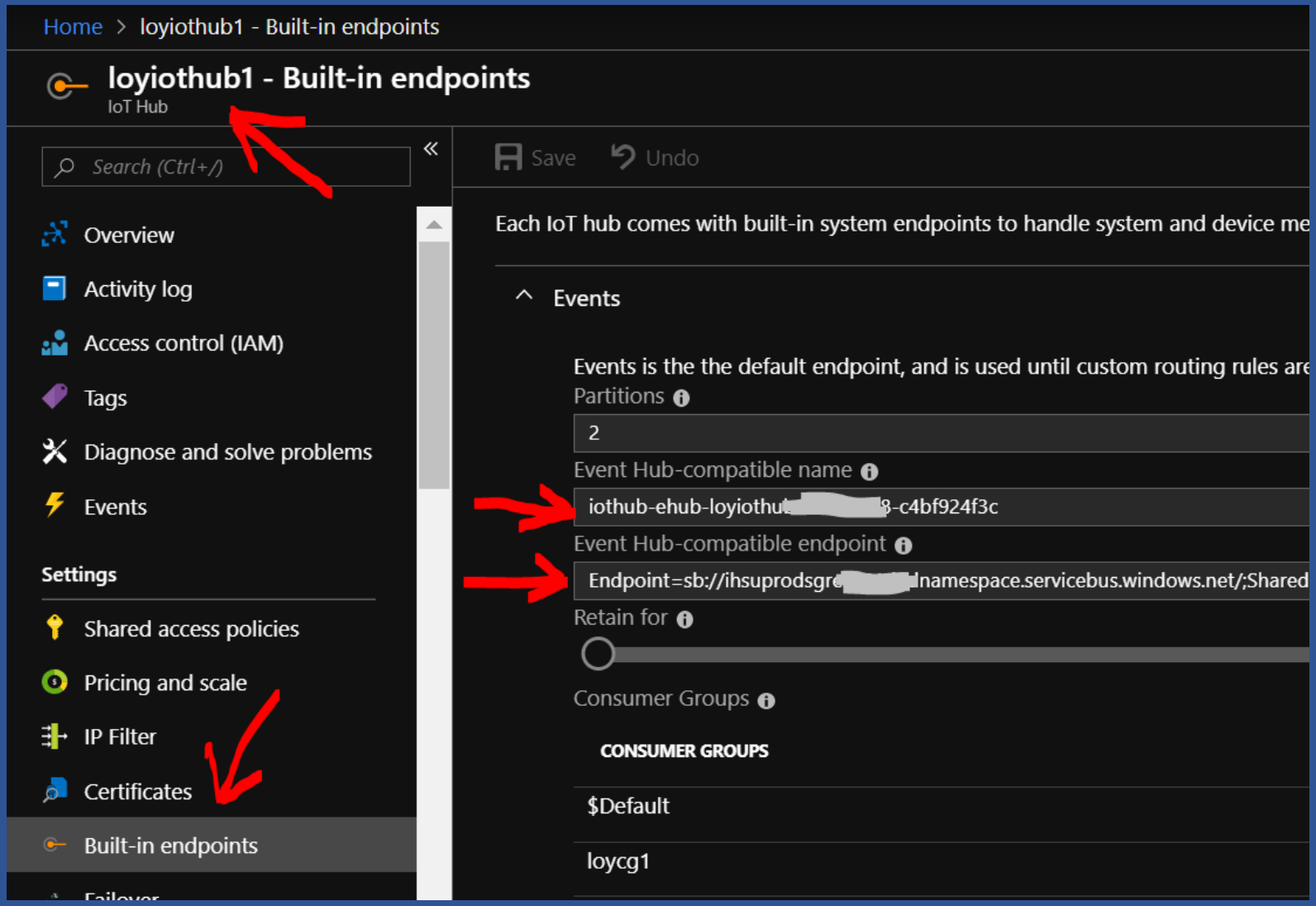
# NuGet Microsoft.Azure.EventHubs



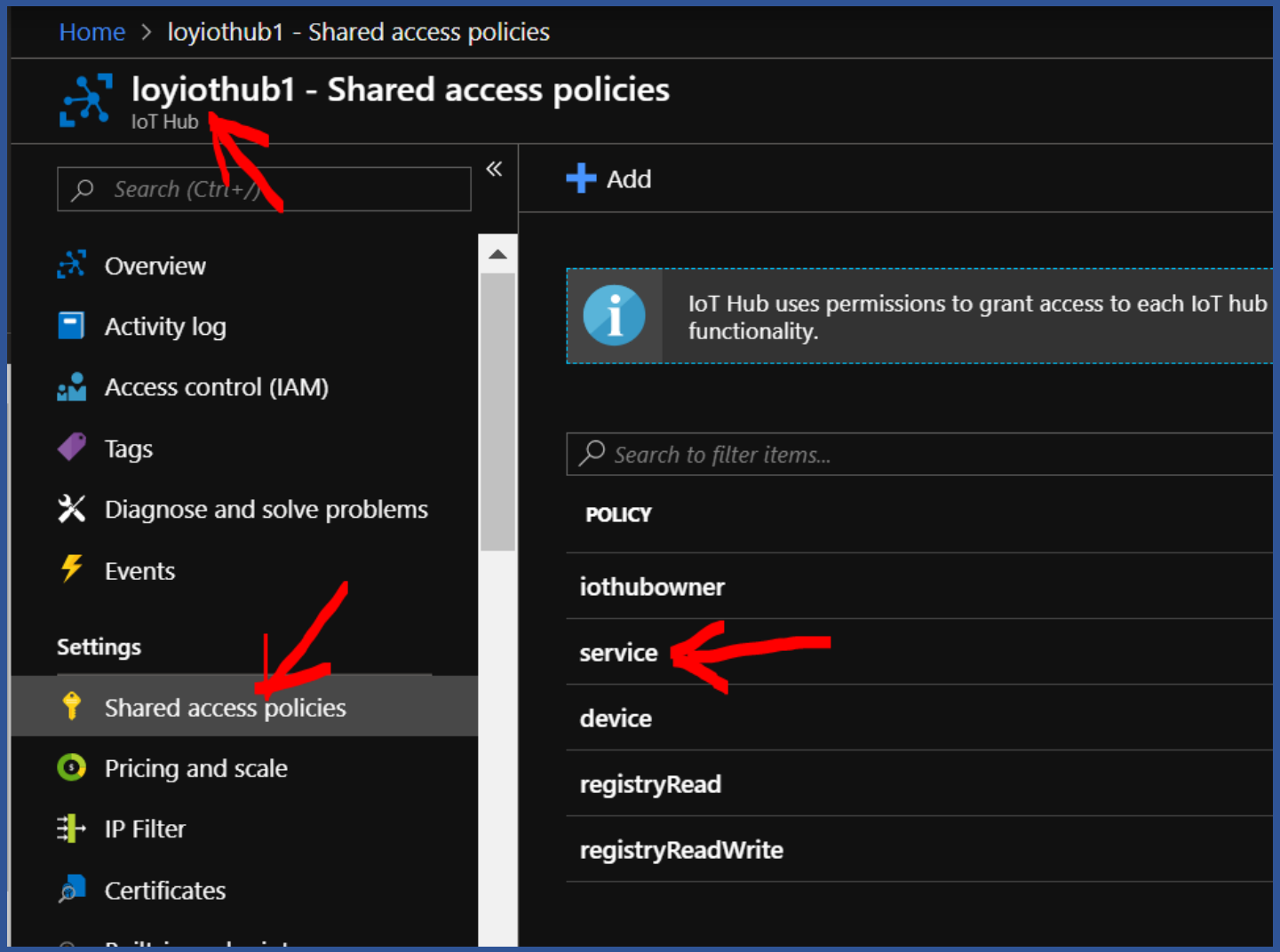
# Add Namespace

```
6
7   using System;
8   using Microsoft.Azure.EventHubs;
9   using System.Threading.Tasks;
10  using System.Threading;
11  using System.Text;
12  using System.Collections.Generic;
13
```

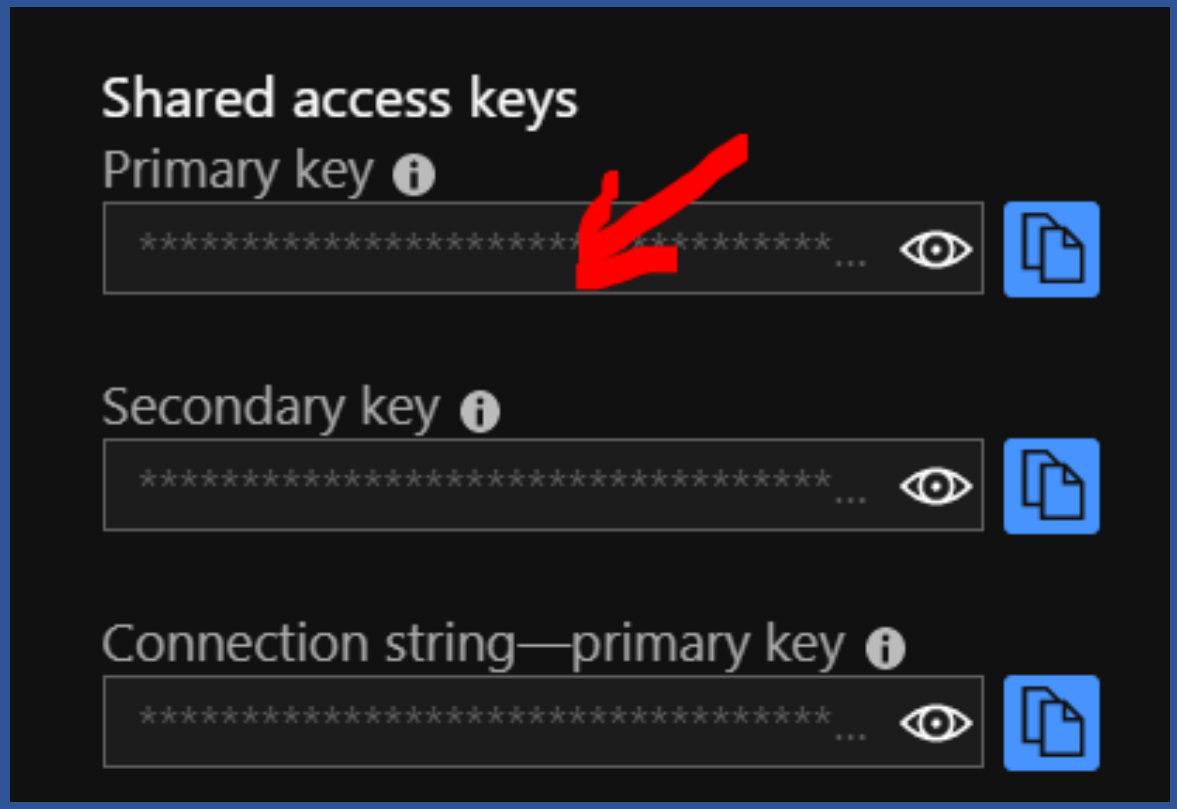
# Get Event Hubs Compatible Endpoint & Path



# Get Iot Hub Sas Key



# Get Iot Hub Sas Key



# Add 5 class private fields

```
private readonly static string s_eventHubsCompatibleEndpoint =
    "sb://ihsuprods[redacted]space.servicebus.windows.net/";

private readonly static string s_eventHubsCompatiblePath =
    "iothub-ehub-loyiothu[redacted]-c4bf924f3c";

private readonly static string s_iotHubSasKey =
    "KCyf3omKkmWncXu[redacted]IxBWRoWgmAw=";

private readonly static string s_iotHubSasKeyName = "service";
private static EventHubClient s_eventHubClient;
```

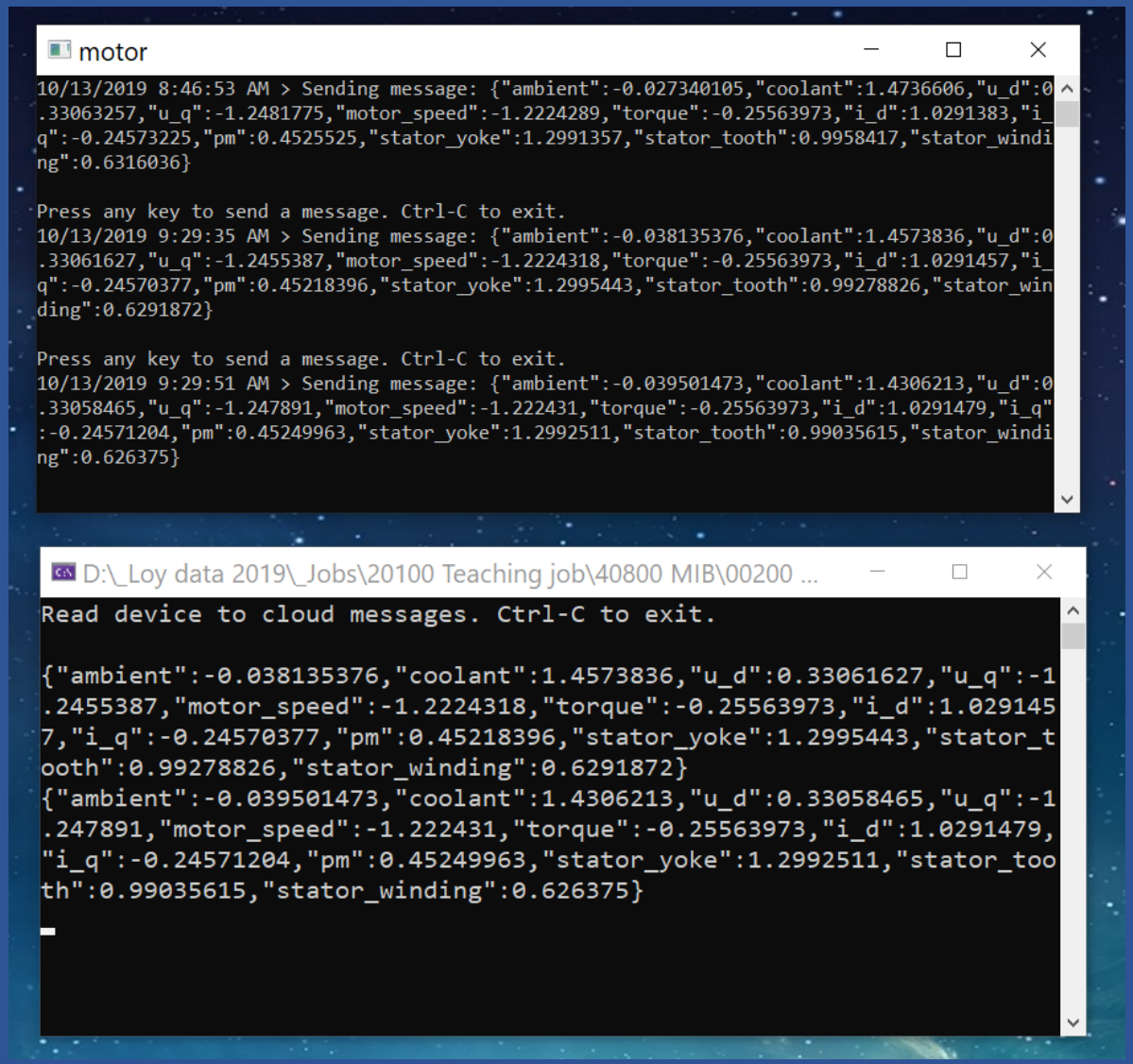
# Add method GetD2CMessage

```
30          private static async Task GetD2CMessage(
31              string partition, CancellationToken ct)
32          {
33              var eventHubReceiver = s_eventHubClient.CreateReceiver(
34                  "$Default",
35                  partition,
36                  EventPosition.FromEnqueuedTime(DateTime.Now));
37              while (true)
38              {
39                  if (ct.IsCancellationRequested) break;
40                  var events = await eventHubReceiver.ReceiveAsync(100);
41                  if (events == null) continue;
42                  foreach (EventData eventData in events)
43                  {
44                      Console.WriteLine(
45                          Encoding.UTF8.GetString(eventData.Body.Array));
46                  }
47              }
48          }
```

# Add code to Main

```
50      private static async Task Main(string[] args)
51      {
52          Console.WriteLine(
53              "Read device to cloud messages. Ctrl-C to exit.\n");
54          var connectionString = new EventHubsConnectionStringBuilder(
55              new Uri(s_eventHubsCompatibleEndpoint),
56              s_eventHubsCompatiblePath,
57              s_iotHubSasKeyName,
58              s_iotHubSasKey);
59          s_eventHubClient = EventHubClient.CreateFromConnectionString(
60              connectionString.ToString());
61          var runtimeInfo =
62              await s_eventHubClient.GetRuntimeInformationAsync();
63          var d2cPartitions = runtimeInfo.PartitionIds;
64          CancellationTokenSource cts = new CancellationTokenSource();
65          Console.CancelKeyPress += (s, e) =>
66          {
67              e.Cancel = true;
68              cts.Cancel();
69              Console.WriteLine("Exiting...");
70          };
71          var tasks = new List<Task>();
72          foreach (string partition in d2cPartitions)
73          {
74              tasks.Add(GetD2CMessage(partition, cts.Token));
75          }
76          Task.WaitAll(tasks.ToArray());
77      }
```

# Run program c2d and this app to test



# What's next?