IoT Central Lab

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| 1 | **Create Raspberry PI simulated device** |  |
|  | Open device explorer in IoT Central. |  |
|  | For this lab we are going to create a “real” device. |  |
|  | Give it a name like “refrigerator”. In a real application you would use a device provisioning service. |  |
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|  | **Generating connection string** |  |
| 2 | For devices to connect to IoT Central, a connection string must be securely generated. Open the device explorer. |  |
|  | Click on the newly created device, then open the “connect” property sheet. This is located in the upper right corner of the IoT Central device screen. |  |
|  | Navigate to: https://dpscstrgen.azurewebsites.net/ |  |
|  | Enter Scope ID, device ID and Primary Key in the appropriate fields and press submit. |  |
|  | Copy the connection string generated at the bottom of the page, we will use this in step 4. |  |
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|  | **Add telemetry to the template** |  |
| 3 | To generate graphs on your new telemetry data, you need to add measurements. Open the device explorer |  |
|  | Select a device, then select edit “Edit Template”. |  |
|  | Select “New Measurement” |  |
|  | Select “Telemetry” |  |
|  | Enter a display name “Temperature” and “temperature” in lowercase for the field name. 0 for minimum and 100 for max will work, decimal place of 2 works well. Select a color or use default. Press save then done. follow these instructions and add “humidity” as well. |  |
|  |  | {"temperature":20.382343099614402,  "humidity":79.89472136906859} |
|  | **Connect to IoT Central from device** |  |
| 4 | In this lab we are going to use a simulated version of a raspberry pi. https://azure-samples.github.io/raspberry-pi-web-simulator/#Getstarted |  |
|  | Locate the connection string variable and replace the value with the output from step 2 | const connectionString = '[Your IoT hub device connection string]'; |
|  | Run the device |  |
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|  | **Review the telemetry data** |  |
| 5 | Open the device explorer |  |
|  | Review telemetry data |  |
|  |  |  |
|  | **Create alert notification** |  |
| 6 | In this section we will create an alert when the temperature rises above 70 degrees. We will add code on the raspberry pi to simulate an overheat. Open the device explorer. |  |
|  | Select a device and select “Rules” |  |
|  | Select edit template |  |
|  | Select “New Rule” |  |
|  | Select “Telemetry” |  |
|  | Enter a descriptive name like “overheat”. Select “temperature” in the condition drop down and “greater than” in the Operator. Set the threshold to 70. Save and select. Add email as an action and fill out the email fields. Save and press done. |  |
|  | Replace the getMessage method with the code in the overheat.js file. Run the device |  |
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