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Matrícula: 2022.08.29247-1 - Campus POLO VL NEGRELLO - VALINHOS – SP
4º Período do CURSO SUPERIOR DE TECNOLOGIA EM
DESENVOLVIMENTO FULL STACK

Missão Pratica nível 5 – Mundo 4

Vamos interligar as coisas com a Nuvem

Objetivo:

- Como criar um Hub IoT do Azure;
- Como registrar um novo dispositivo no Hub IoT;
- Adicionando extensão Hub IoT do Azure para VS Code;
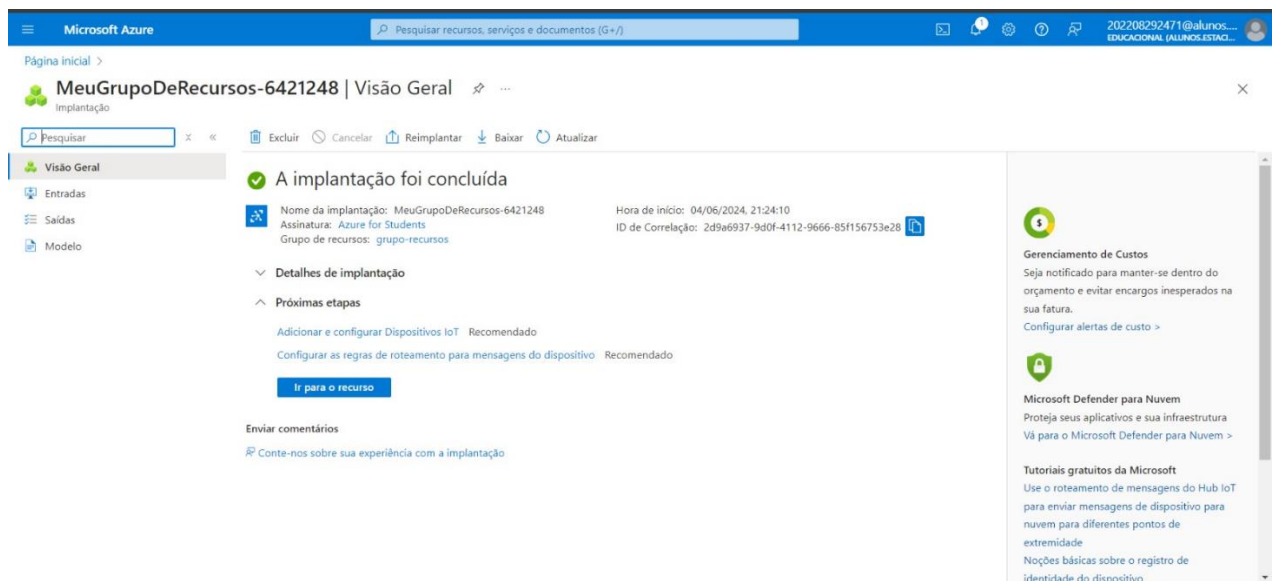- Gerenciando e interagindo com o Hub IoT.

1 - Login Azure CLI:

2 – Criando Grupo de Recursos IoT Hub:

3 - Adicionar um grupo de consumidores:

Resposta do terminal:

PS C:\Users\iques\OneDrive\Área de Trabalho\Nivel5-M4\web-apps-node-iot-hub-data-visualization-master> az iot hub create --name MeuIoTHub --resource-group MeuGrupoDeRecursos --sku S1 --location "East US"

```
{
  "etag": "AAAAAAYAAAA=",
  "id": "/subscriptions/0d7b6093-f0ab-4649-9f45-
6a0ac4a61cf3/resourceGroups/MeuGrupoDeRecursos/providers/Microsoft.Devi
ces/IotHubs/MeuIoTHub",
  "identity": {
    "principalId": null,
    "tenantId": null,
    "type": "None",
    "userAssignedIdentities": null
  },
  "location": "eastus",
```

```json
  "name": "MeuIoTHub",
 "properties": {
  "allowedFqdnList": [],
  "authorizationPolicies": null,
  "cloudToDevice": {
   "defaultTtlAsIso8601": "1:00:00",
   "feedback": {
    "lockDurationAsIso8601": "0:00:05",
    "maxDeliveryCount": 10,
    "ttlAsIso8601": "1:00:00"
   },
   "maxDeliveryCount": 10
  },
  "comments": null,
  "deviceStreams": null,
  "disableDeviceSas": null,
  "disableLocalAuth": null,
  "disableModuleSas": null,
  "enableDataResidency": null,
  "enableFileUploadNotifications": false,
  "encryption": null,
  "eventHubEndpoints": {
   "events": {
    "endpoint": "sb://iothub-ns-meuiothub-60006561-dcdec9b812.servicebus.windows.net/",
    "partitionCount": 4,
    "partitionIds": [
     "0",
     "1",
     "2",
     "3"
```

```json
    ],
    "path": "meuiothub",
    "retentionTimeInDays": 1
  }
},
"features": "RootCertificateV2",
"hostName": "MeuIoTHub.azure-devices.net",
"ipFilterRules": [],
"ipVersion": null,
"locations": [
  {
    "location": "East US",
    "role": "primary"
  },
  {
    "location": "West US",
    "role": "secondary"
  }
],
"messagingEndpoints": {
  "fileNotifications": {
    "lockDurationAsIso8601": "0:00:05",
    "maxDeliveryCount": 10,
    "ttlAsIso8601": "1:00:00"
  }
},
"minTlsVersion": null,
"networkRuleSets": null,
"privateEndpointConnections": null,
"provisioningState": "Succeeded",
```

```json
        "publicNetworkAccess": null,
        "restrictOutboundNetworkAccess": null,
        "rootCertificate": {
          "enableRootCertificateV2": true,
          "lastUpdatedTimeUtc": "2024-06-05T00:23:41.477440+00:00"
        },
        "routing": {
          "endpoints": {
            "cosmosDbSqlContainers": [],
            "eventHubs": [],
            "serviceBusQueues": [],
            "serviceBusTopics": [],
            "storageContainers": []
          },
          "enrichments": null,
          "fallbackRoute": {
            "condition": "true",
            "endpointNames": [
              "events"
            ],
            "isEnabled": true,
            "name": "$fallback",
            "source": "DeviceMessages"
          },
          "routes": []
        },
        "state": "Active",
        "storageEndpoints": {
          "$default": {
            "authenticationType": null,
```

```json
      "connectionString": "",

      "containerName": "",

      "identity": null,

      "sasTtlAsIso8601": "1:00:00"

    }

  }

},

"resourcegroup": "MeuGrupoDeRecursos",

"sku": {

  "capacity": 1,

  "name": "S1",

  "tier": "Standard"

},

"subscriptionid": "0d7b6093-f0ab-4649-9f45-6a0ac4a61cf3",

"systemData": {

  "createdAt": "2024-06-05T00:24:05.046666+00:00",

  "createdBy": null,

  "createdByType": null,

  "lastModifiedAt": null,

  "lastModifiedBy": null,

  "lastModifiedByType": null

},

"tags": {},

"type": "Microsoft.Devices/IotHubs"

}
```

4 - <u>Definir variáveis de ambiente:</u>

```
type : microsoft.bevices/iothubs
PS C:\Users\iques\OneDrive\Área de Trabalho\Nivel5-M4\web-apps-node-iot-hub-data-visualization-master>
PS C:\Users\iques\OneDrive\Área de Trabalho\Nivel5-M4\web-apps-node-iot-hub-data-visualization-master>
PS C:\Users\iques\OneDrive\Área de Trabalho\Nivel5-M4\web-apps-node-iot-hub-data-visualization-master> set IotHubConnectionString=MeuIoTHub
PS C:\Users\iques\OneDrive\Área de Trabalho\Nivel5-M4\web-apps-node-iot-hub-data-visualization-master> set EventHubConsumerGroup=MeuGrupoDeRecursos
PS C:\Users\iques\OneDrive\Área de Trabalho\Nivel5-M4\web-apps-node-iot-hub-data-visualization-master> az iot hub show-connection-string --hub-name MeuIoTHub --policy-name service
>>
This command has been deprecated and will be removed in a future release. Use 'IoT Extension (azure-iot) connection-string command (az iot hub connection-string show)' instead.
{
  "connectionString": "HostName=MeuIoTHub.azure-devices.net;SharedAccessKeyName=service;SharedAccessKey=TsUpzE6ml5/fgPxDFM30ejN8PW//aABXuAIoTPtXxVg="
}
PS C:\Users\iques\OneDrive\Área de Trabalho\Nivel5-M4\web-apps-node-iot-hub-data-visualization-master> []
```

5 - Rodando aplicação:

```
This command has been deprecated and will be removed in a future release. Use 'IoT Extension (azure-iot) connection-string command (az iot hub connection-string show)' instead.
{
    "connectionString": "HostName=MeuIoTHub.azure-devices.net;SharedAccessKeyName=service;SharedAccessKey=TsUpzE6ml5/fgPxDFM30ejN8PW//aABXuAIoTPtXxVg="
}
PS C:\Users\iques\OneDrive\Área de Trabalho\Nivel5-M4\web-apps-node-iot-hub-data-visualization-master> npm run
Lifecycle scripts included in webapp@0.0.1:
  start
    node server.js
```

```
found 0 vulnerabilities
PS C:\Users\iques\OneDrive\Área de Trabalho\Nivel5-M4\web-apps-node-iot-hub-data-visualization-master> npm start

> webapp@0.0.1 start
> node server.js

Environment variable IotHubConnectionString must be specified.
PS C:\Users\iques\OneDrive\Área de Trabalho\Nivel5-M4\web-apps-node-iot-hub-data-visualization-master> []
```