



Gabriel Henrique dos Santos – Matrícula 202208292411

Polo: Limeira Centro

Turma 2023.3 - MUNDO 5 - Vamos Interligar as Coisas Com a Nuvem!

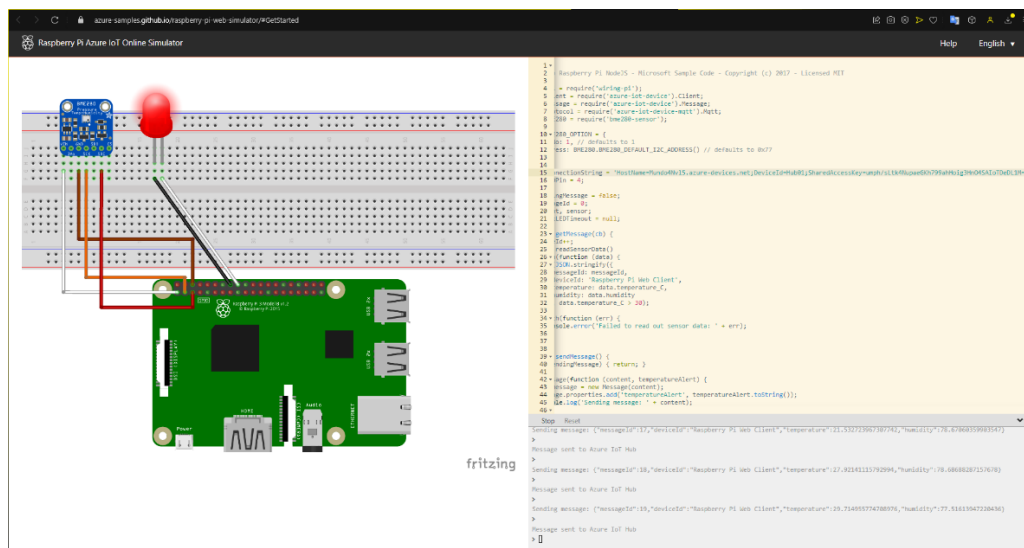
Objetivos da prática:

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

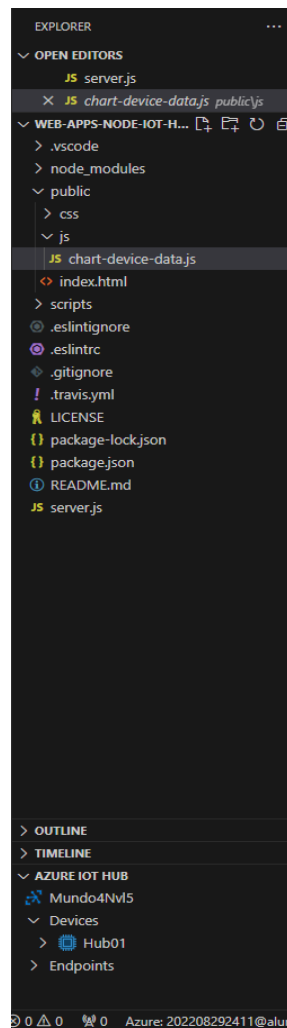
Link para acesso do App:

<https://hub-humidade-estacio4-5.azurewebsites.net>

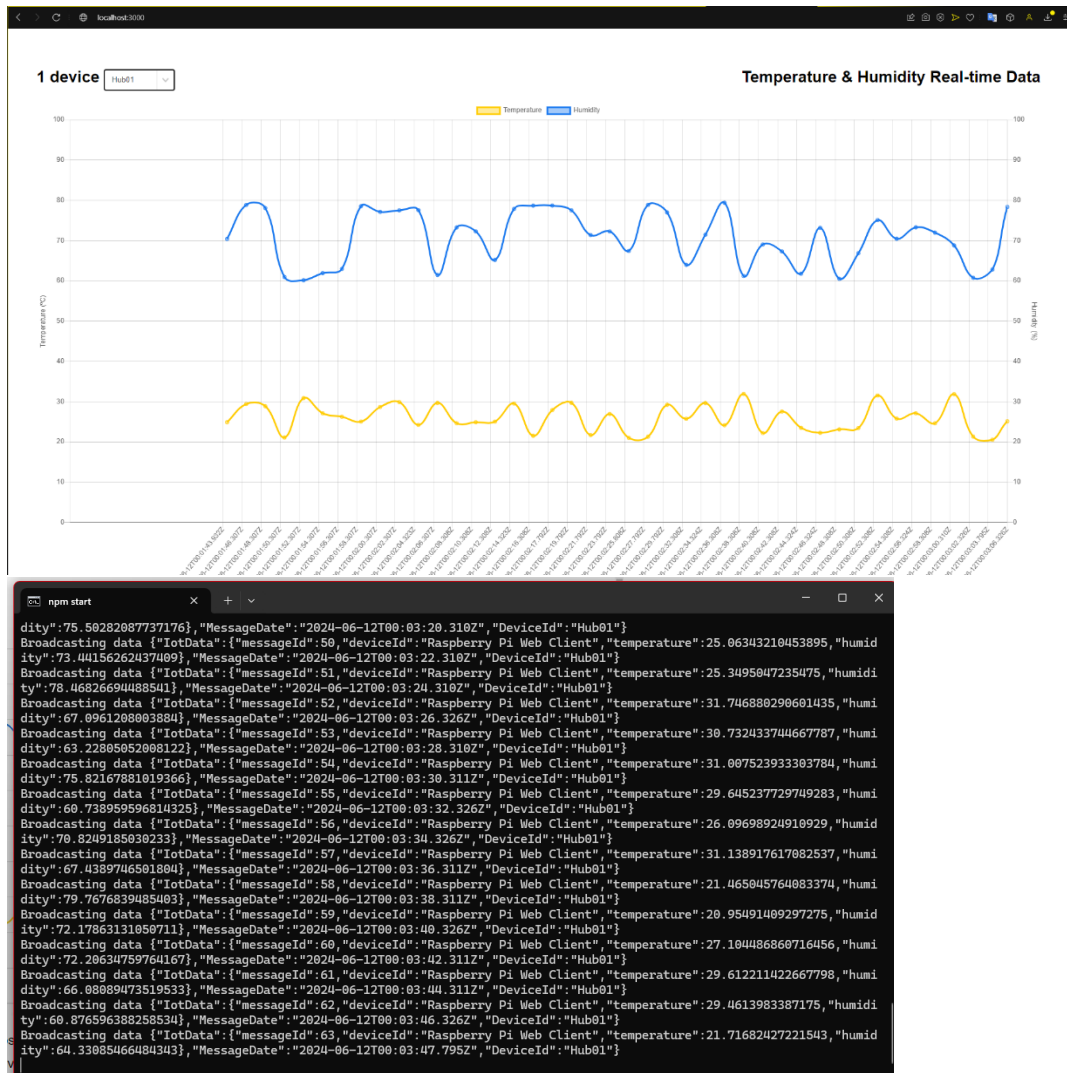
Conectando o emulador Raspberry Pi ao aplicativo usando a linha de conexão



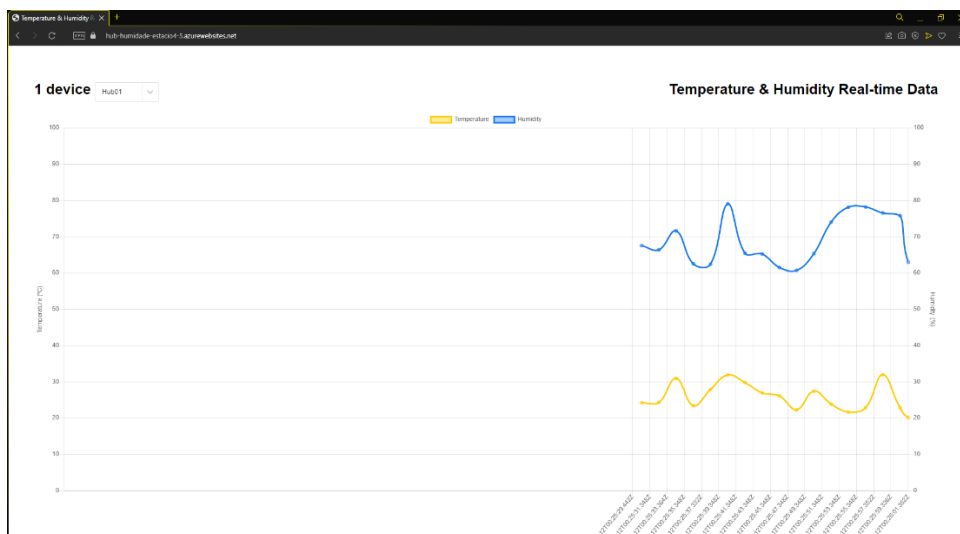
Clone do repositório indicado no git com o Hub IoT conectados ao Visual Studio Code



Aplicativo rodando em versão local e saídas do console referentes aos envios do sensor



App rodando via web (Ao final se encontram todos os comandos utilizados na CLI do Azure)



```
gabriel [ ~ ]$ az appservice plan create --name servnuvem --resource-group HubIoT --sku FREE
ReadyOnly attribute name will be ignored in class <class 'azure.mgmt.web.v2023_01_01.models._models_py3.AppServicePlan'>
Resource provider 'Microsoft.Web' used by this operation is not registered. We are registering for you.
Registration succeeded.
{
  "elasticScaleEnabled": false,
  "extendedLocation": null,
  "freeOfferExpirationTime": null,
  "geoRegion": "Brazil South",
  "hostingEnvironmentProfile": null,
  "hyperV": false,
  "id": "/subscriptions/5c8b99bb-5010-4d15-9d25-35b81a3c7be0/resourceGroups/HubIoT/providers/Microsoft.Web/serverfarms/servnuvem",
  "isSpot": false,
  "isXenon": false,
  "kind": "app",
  "kubeEnvironmentProfile": null,
  "location": "brazilsouth",
  "maximumElasticWorkerCount": 1,
  "maximumNumberOfWorkers": 0,
  "name": "servnuvem",
  "numberOfSites": 0,
  "numberOfWorkers": 0,
  "perSiteScaling": false,
  "provisioningState": "Succeeded",
  "reserved": false,
  "resourceGroup": "HubIoT",
  "sku": {
    "capabilities": null,
    "capacity": 0,
    "family": "F",
    "locations": null,
    "name": "F1",
    "size": "F1",
    "skuCapacity": null,
    "tier": "Free"
  },
  "spotExpirationTime": null,
  "status": "Ready",
  "subscription": "5c8b99bb-5010-4d15-9d25-35b81a3c7be0",
  "tags": null,
  "targetWorkerCount": 0,
  "targetWorkerSizeId": 0,
  "type": "Microsoft.Web/serverfarms",
  "workerTierName": null,
  "zoneRedundant": false
}
gabriel [ ~ ]$ az webapp create -n Hub-Humidade-Estacio-5 -g HubIoT -p servnuvem --runtime "NODE:16 LTS" --deployment-source-url https://github.com/Azure-Samples/web-apps-node-iot-hub-data-visualization
Linking to git repository 'https://github.com/Azure-Samples/web-apps-node-iot-hub-data-visualization'
location is not a known attribute of class <class 'azure.mgmt.web.v2023_01_01.models._models_py3.SiteSourceControl'> and will be ignored
{
  "availabilityState": "Normal",
  "clientAffinityEnabled": true,
  "clientCertEnabled": false,
  "clientCertExclusionPaths": null,
  "clientCertMode": "Required",
  "cloningInfo": null,
  "containerSize": 0,
  "customDomainVerificationId": "761fcaf6cbac62cce593cc3514c82059e92b65ef00071d87924f5c11f0870",
  "dailyMemoryTimeQuota": 0,
  "debugConfig": null,
  "defaultHostName": "hub-humidade-estacio4-5.azurewebsites.net",
  "enabled": true,
  "enabledHostNames": [
    "hub-humidade-estacio4-5.azurewebsites.net",
    "hub-humidade-estacio4-5.scm.azurewebsites.net"
  ],
  "extendedLocation": null,
  "ftpPublishingUrl": "https://www-prod-cq1-033.ftp.azurewebsites.windows.net/site/wwwroot",
  "hostNameSslStates": [
    {
      "certificateResourceId": null,
      "hostType": "Standard",
      "ipBasedSslResult": null,
      "ipBasedSslState": "NotConfigured",
      "name": "hub-humidade-estacio4-5.azurewebsites.net",
      "sslState": "Disabled",
      "thumbprint": null,
      "toIpdate": null,
      "toIpdateIpBasedSsl": null,
      "virtualIpV6": null,
      "virtualIp": null
    },
    {
      "certificateResourceId": null,
      "hostType": "Repository",
      "ipBasedSslResult": null,
      "ipBasedSslState": "NotConfigured",
      "name": "hub-humidade-estacio4-5.scm.azurewebsites.net",
      "sslState": "Disabled",
      "thumbprint": null,
      "toIpdate": null
    }
  ]
}
gabriel [ ~ ]$ az webapp config appsettings set -n Hub-Humidade-Estacio-5 -g HubIoT --settings EventHubConsumerGroup=Cons01 IoTHubConnectionString=HostName=Mundollv15.azure-devices.net;SharedAccessKeyName=service;SharedAccessKey=H
0ttnbty6k6p9wz9c2e9ar/Ma0tWt8C80-
App settings have been redacted. Use 'az webapp logicapp/functionapp config appsettings list' to view.
{
  "name": "WEBSITE_NODE_DEFAULT_VERSION",
  "slotSetting": false,
  "value": null
},
{
  "name": "EventHubConsumerGroup",
  "slotSetting": false,
  "value": null
},
{
  "name": "IoTHubConnectionString",
  "slotSetting": false,
  "value": null
}
}
```

```
gabriel [ ~ ]$ az webapp config set -n Hub-Humidade-Estacio4-5 -g HubIot --web-sockets-enabled true
{
  "acrUserManagedIdentityCreds": false,
  "acrUserManagedIdentityId": null,
  "alwaysOn": false,
  "apiDefinition": null,
  "apiManagementConfig": null,
  "appCommandLine": "",
  "appSettings": null,
  "autoHealEnabled": false,
  "autoHealRules": null,
  "autoSwapSlotName": null,
  "azureStorageAccounts": {},
  "connectionStrings": null,
  "cors": null,
  "defaultDocuments": [
    "Default.htm",
    "Default.html",
    "Default.asp",
    "index.htm",
    "index.html",
    "iisstart.htm",
    "default.aspx",
    "index.php",
    "hostingstart.html"
  ],
  "detailedErrorLoggingEnabled": false,
  "documentRoot": null,
  "elasticWebAppScaleLimit": 0,
  "experiments": {
    "rampUpRules": []
  },
  "ftpsState": "FtpsOnly",
  "functionAppScaleLimit": null,
  "functionsRuntimeScaleMonitoringEnabled": false,
  "handlerMappings": null,
  "healthCheckPath": null,
  "http20Enabled": true,
  "httpLoggingEnabled": false,
  "id": "/subscriptions/5c8b99bb-5010-4d15-9d25-35b81a3c7be0/resourceGroups/HubIot/providers/Microsoft.Web/sites/Hub-Humidade-Estacio4-5",
  "ipSecurityRestrictions": [
    {
      "action": "Allow",
      "description": "Allow all access",
      "headers": null
    }
  ]
}
```

```
gabriel [ ~ ]$ az webapp update -n Hub-Humidade-Estacio4-5 -g HubIot --https-only true
{
  "availabilityState": "Normal",
  "clientAffinityEnabled": true,
  "clientCertEnabled": false,
  "clientCertExclusionPaths": null,
  "clientCertMode": "Required",
  "cloningInfo": null,
  "containerSize": 0,
  "customDomainVerificationId": "761FCAF6CBCAC62CEECS953CC3514C82059E92B65EFD071D87924FC511FC070",
  "dailyMemoryTimeQuota": 0,
  "daprConfig": null,
  "defaultHostName": "hub-humidade-estacio4-5.azurewebsites.net",
  "enabled": true,
  "enabledHostNames": [
    "hub-humidade-estacio4-5.azurewebsites.net",
    "hub-humidade-estacio4-5.scm.azurewebsites.net"
  ],
  "extendedLocation": null,
  "hostNameSslStates": [
    {
      "certificateResourceId": null,
      "hostType": "Standard",
      "ipBasedSslResult": null,
      "ipBasedSslState": "NotConfigured",
      "name": "hub-humidade-estacio4-5.azurewebsites.net",
      "sslState": "Disabled",
      "thumbprint": null,
      "toUpdate": null,
      "toUpdateIpBasedSsl": null,
      "virtualIPv6": null,
      "virtualIp": null
    },
    {
      "certificateResourceId": null,
      "hostType": "Repository",
      "ipBasedSslResult": null,
      "ipBasedSslState": "NotConfigured",
      "name": "hub-humidade-estacio4-5.scm.azurewebsites.net",
      "sslState": "Disabled",
      "thumbprint": null,
      "toUpdate": null,
      "toUpdateIpBasedSsl": null,
      "virtualIPv6": null,
      "virtualIp": null
    }
  ]
}
```

```
gabriel [ ~ ]$ az webapp show -n Hub-Humidade-Estacio4-5 -g HubIot --query state
"Running"
gabriel [ ~ ]$
```

Todos os comandos utilizados no CLI do Azure para execução deste projeto:

```
az iot hub consumer-group create --hub-name Mundo4Nvl5 --name Cons01
```

```
az configure --defaults group=HubIot
```

```
az iot hub show-connection-string --hub-name Mundo4Nvl5 --policy-name
service
```

```
set IotHubConnectionString=HostName=Mundo4Nvl5.azure-
devices.net;SharedAccessKeyName=service;SharedAccessKey=HiU3tttzB
syY6ehgW4rnx5z+MSear/NVuAIoTN/0C80=
```

```
set EventHubConsumerGroup=Cons01
```

```
az appservice plan create --name servnuvem --resource-group HubIot --sku
FREE
```

```
az webapp create -n Hub-Humidade-Estacio4-5 -g HubIot -p servnuvem --
runtime "NODE:16LTS" --deployment-source-url
https://github.com/Azure-Samples/web-apps-node-iot-hub-data-
visualization
```

```
az webapp config appsettings set -n Hub-Humidade-Estacio4-5 -g HubIot -  
-settings EventHubConsumerGroup=Cons01  
IotHubConnectionString="HostName=Mundo4Nv15.azure-  
devices.net;SharedAccessKeyName=service;SharedAccessKey=HiU3tttzB  
syY6ehgW4rnx5z+MSear/NVuAIoTN/0C80="
```

```
az webapp config set -n Hub-Humidade-Estacio4-5 -g HubIot --web-  
sockets-enabled true
```

```
az webapp update -n Hub-Humidade-Estacio4-5 -g HubIot -- https-only  
true
```

```
az webapp show -n Hub-Humidade-Estacio4-5 -g HubIot --query state
```