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platform: {Windows10} device: {Nise51}

language: {C#}

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# Connect Nise51 device to your Azure IoT services

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## Introduction

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### About this document

This document describes how to connect [Nexaiot Nise51](#) to Azure IoT Hub using the Azure IoT Explorer with certified device application and device models.

IoT Plug and Play certified device simplifies the process of building devices without custom device code. Using Solution builders can integrated quickly using the certified IoT Plug and Play enabled device based on Azure IoT Central as well as third-party solutions.

This getting started guide provides step by step instruction on getting the device provisioned to Azure IoT Hub using Device Provisioning Service (DPS) and using Azure IoT Explorer to interact with device's capabilities.

[Nexaiot Nise51](#) is Powered by the latest generation of Intel® Celeron® processor N3350/J3455 (formerly codenamed "Apollo Lake"), NISE 51 series positions at the intelligent IoT gateway for factory automation and for smart city applications. DDR3L SODIMM memory socket, the NISE 51 series support operating temperature from -5 up to 55 degree C with 12V/24V DC input with +/-10% range. The NISE 51 series have strong connectivity - Ethernet-based LAN port and traditional RS485, mainly for Modbus TCP or Modbus RTU communication. For wireless connectivity, there are 1 x mini-PCIe sockets and 2 x M.2 slots which can support optional wireless modules for IoT applications, for example, Wi-Fi, Bluetooth, 3.5G and 4G LTE module as well as storage module. NISE 51 series is definitely the best choice for M2M intelligent system as an intelligent IoT gateway.

## Step 1: Prerequisites

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You should have the following items ready before beginning the process:

- [Azure Account](#)
- [Azure IoT Hub Instance](#)
- [Azure IoT Hub Device Provisioning Service](#)
- [Azure IoT Public Model Repository](#)

## Step 2: Prepare your Device

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- Connect the power adapter, USB Keyboard/Mouse with [Nexaiot Nise51](#).
- Wait until the operating system is ready.

## Step 3: Prepare your DPS and iot hub

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- Connect to the Azure portal and Create [Azure IOT Hub Device Provisioning Services](#) and [Azure IoT Hub Instance](#)
- Please keep the DPS information (ID Scope/Global device endpoint/Device Key).
- Please Create a device under [Azure IoT Hub Instance](#) and keep the device ID.

## Step 4: Build and Run the sample

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- Download the [Xcare SDK](#) and the sample programs and save them to your local repository.
- Start a new instance of Visual Studio 2019.
- Open the **xcarePNP.csproj** solution in your local copy of the repository.
- In **Solution Explorer**, right-click and choose **Build** for build this project.
- right-click the **XcarePNP** project, click **Debug**, and then add run parameter : "-s dps -i {DPS ID Scope} -d {Device ID} -k {DeviceKey} -e {Global device endpoint}"
- click **Start new instance** to build and run the sample. The console displays messages as the application sends device-to-cloud messages to IoT Hub.

## Integration with Azure IoT Explorer

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- Use the **DeviceExplorer** utility and Click **IoT Plug and Play components**

- (Step1) On the **Model ID** field to fill **dtmi:Nexcom:Nise50:Xcare;1**
- (Step2) You can add **Public Repository** or Choose **Local Folder** (Path on Models in your local copy of the repository).
- (Step3) Click **Components\***->Default component\*\*
- Refer [IOT Plug and Play components](#)
- You can see the device **Information\Properties(read-only)\Properties(writable)\Commands\Telemetry**
- Refer [IOT Plug and Play components Interface](#) to see the your device Interface.
- Refer [IOT Plug and Play components Properiteies](#) to see the your device Properiteies.
- Refer [IOT Plug and Play components Properiteies \(writable\)](#) to see the your device Properiteies(writable).
- Refer [IOT Plug and Play components Command](#) to sent your reboot command.
- Under **Telemetry** property and press **Start** to observe the messages IoT Hub receives from the application.

## Additional Links

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Please refer to the below link for additional information for Plug and Play - [Manage cloud device messaging with Azure-IoT-Explorer](#) - [Import the Plug and Play model](#) - [Configure to connect to IoT Hub](#) - [How to use IoT Explorer to interact with the device](#) - [Nexaiot Nise50](#)