

# nRF9160 IoT Connect sample

## Prerequisites

### Hardware

- PCA10090 nRF 9160 DK kit revision 1.1.3

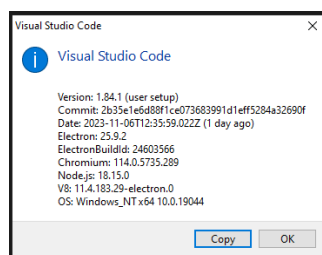


- Preactivated eSim Avnet bics

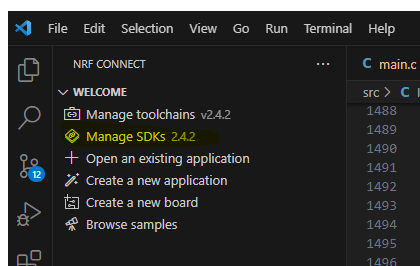


### Software

- Visual Studio Code



- nRF Connect SDK 2.4.2

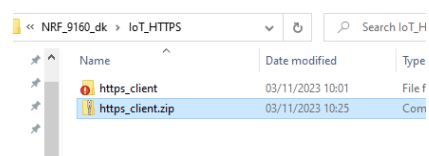


Follow the guides at link <https://www.nordicsemi.com/Products/Development-software/nRF-Connect-SDK> to install all development SW needed to handle this sample demo.

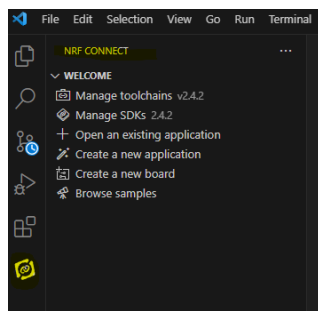
## Importing project

Download from GitHub the “https\_client” project.

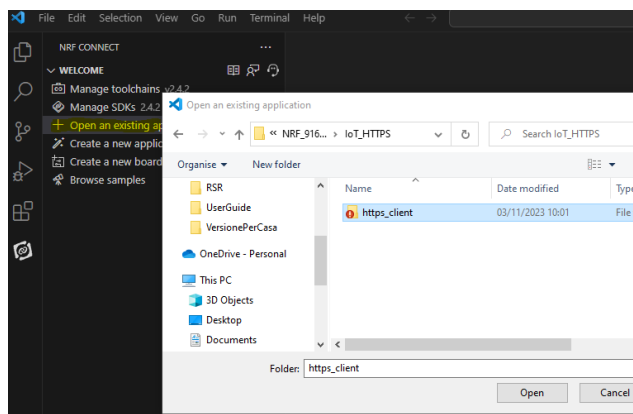
Make a “workspace” folder and unzip the project inside



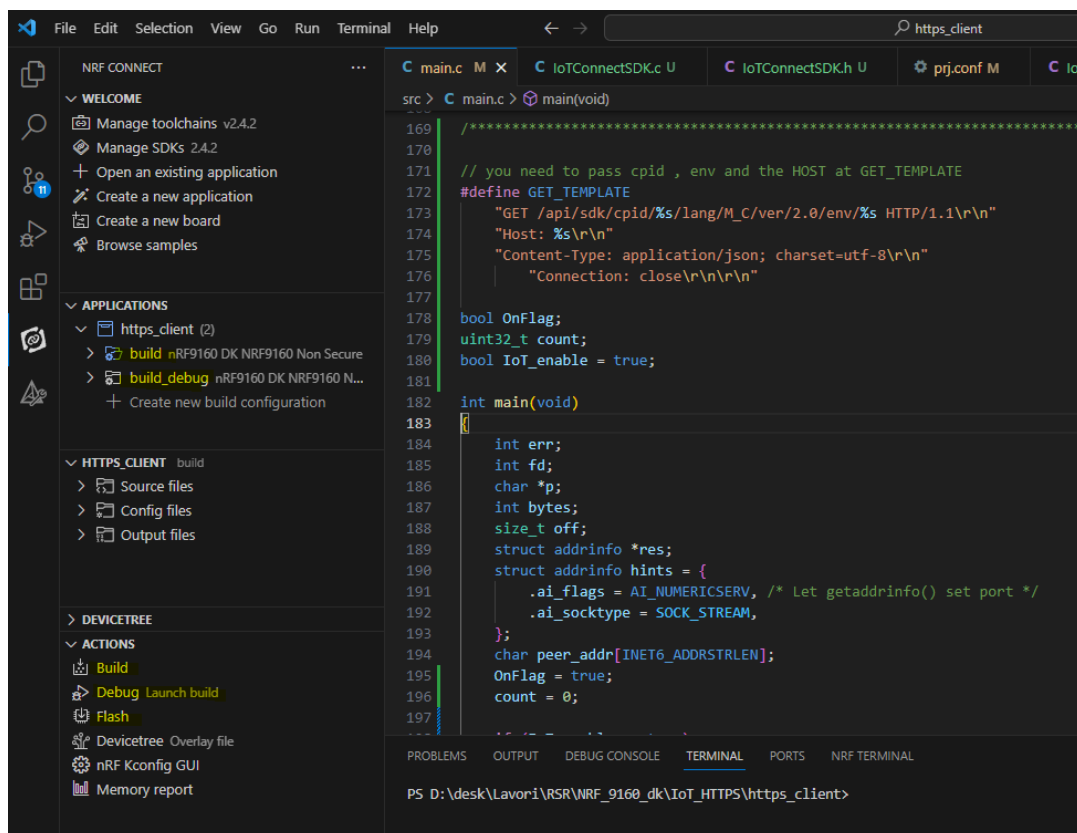
Open Visual Studio Code, go to nRF tab on left



Click on “Open an existing application”, browse to https\_client on workspace folder just created, select it and click “Open”



This is the scenario of development suite with opened code

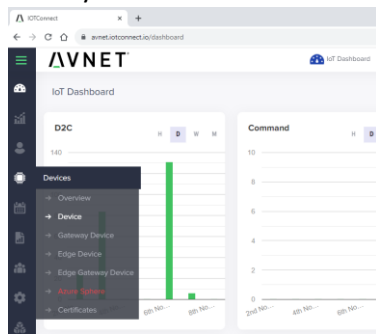


Now you can see and modify the source code, build and debug with PCA10090 9160 DK Kit

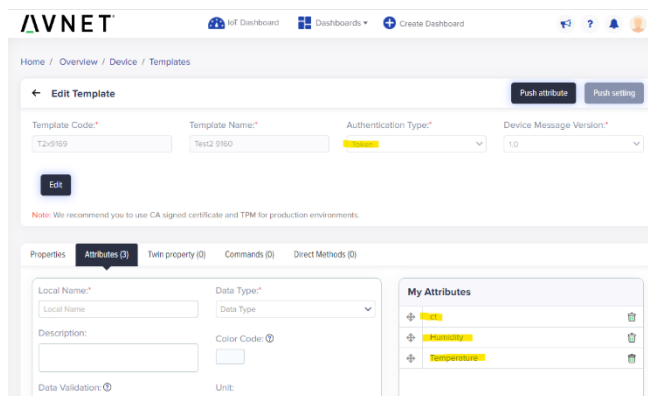
## Quick start

To see the functionality, you need to have:

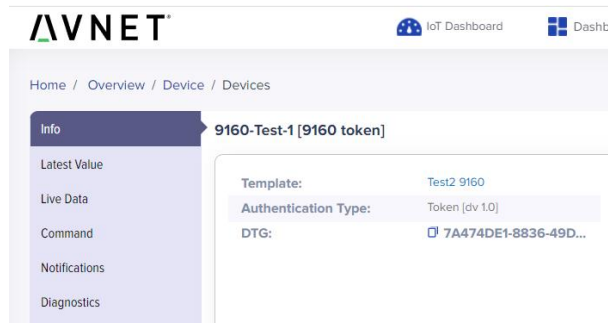
- Go to your account on Avnet IoT Connect Cloud



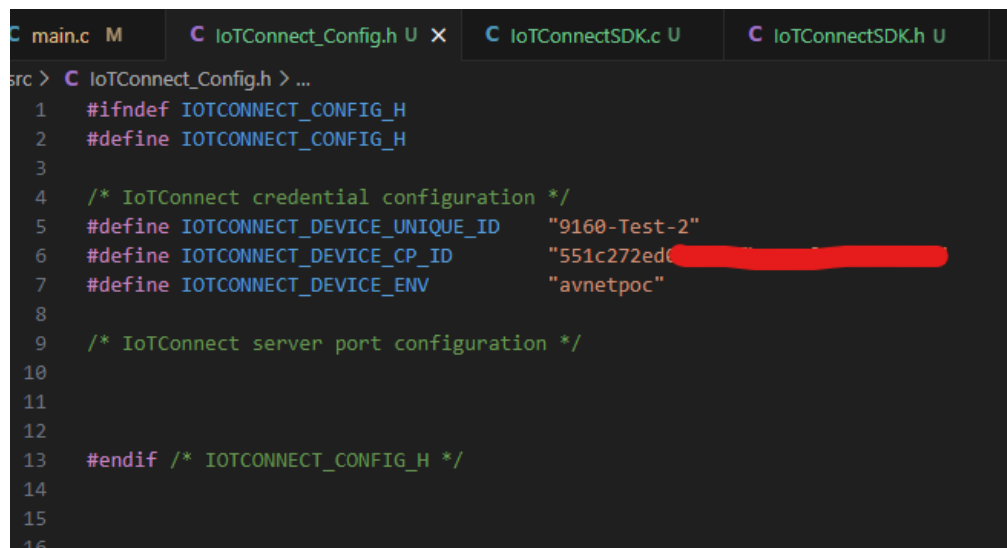
- Create a template as follow



- Create device connected to this template



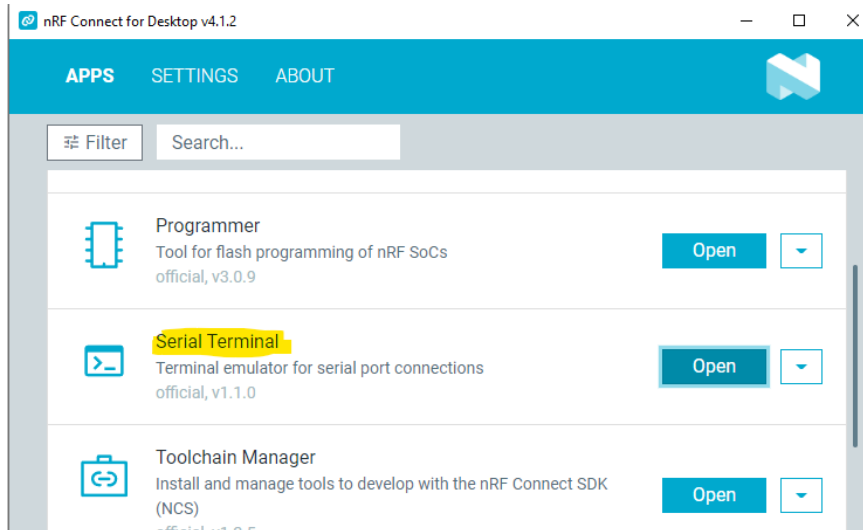
- Configure on "IoTConnect\_Config.h" file your device credentials



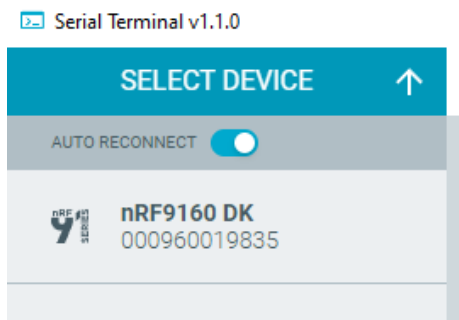
- Make a "pristine" Build of project and flash your 9160 DK Kit

## Running the sample

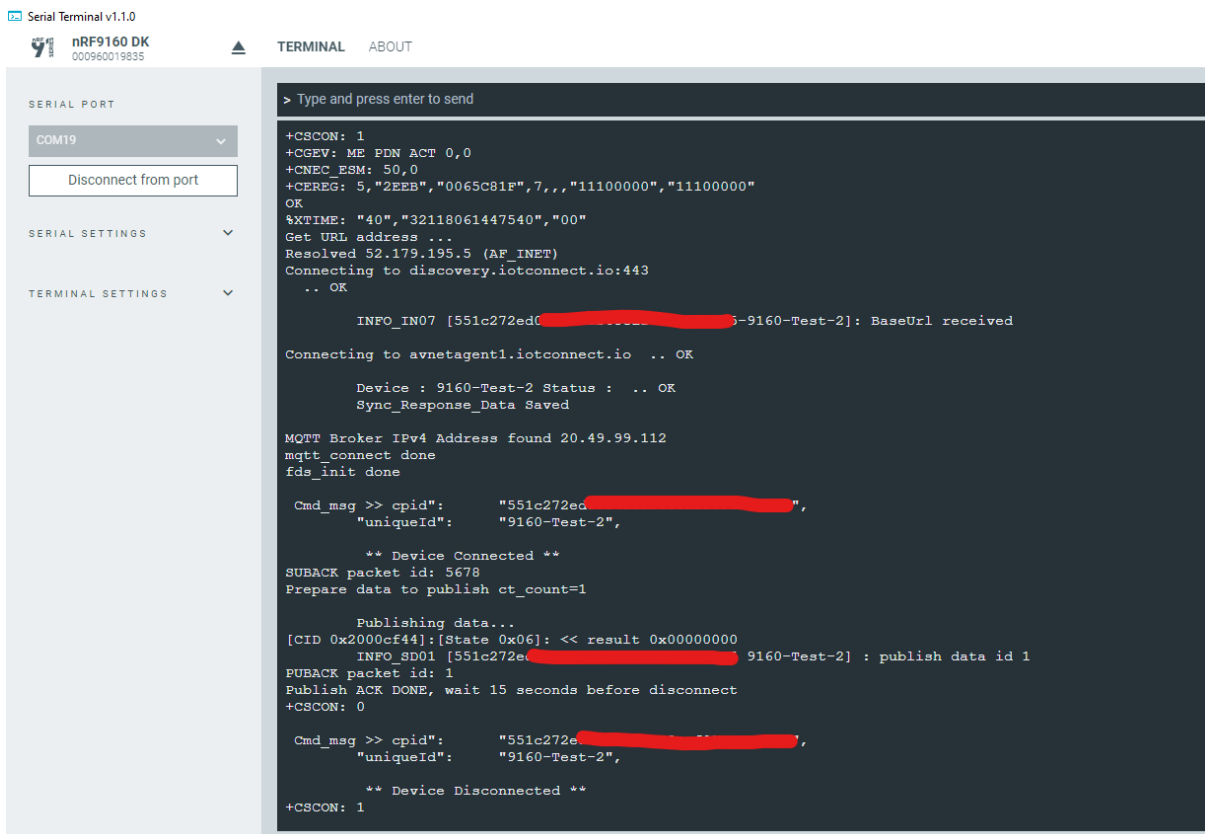
You need to have nRF Connect for desktop with installed "Serial Terminal"



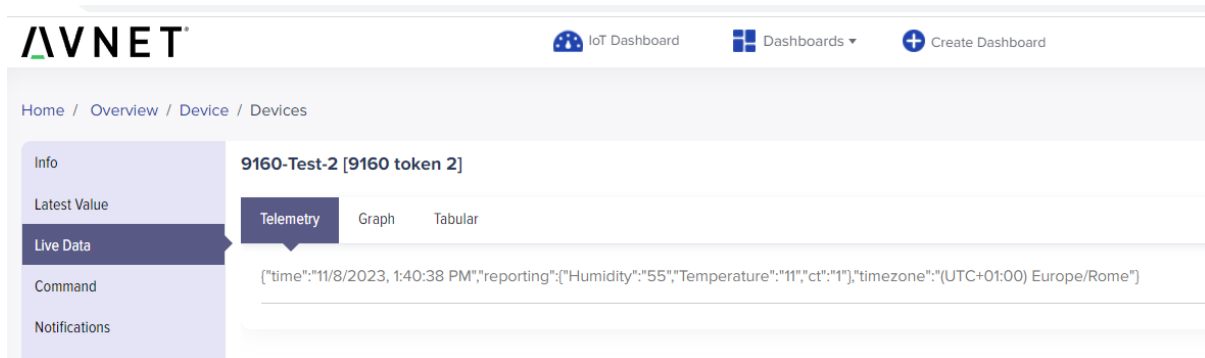
Open "Serial Terminal", you can see your 9160 DK



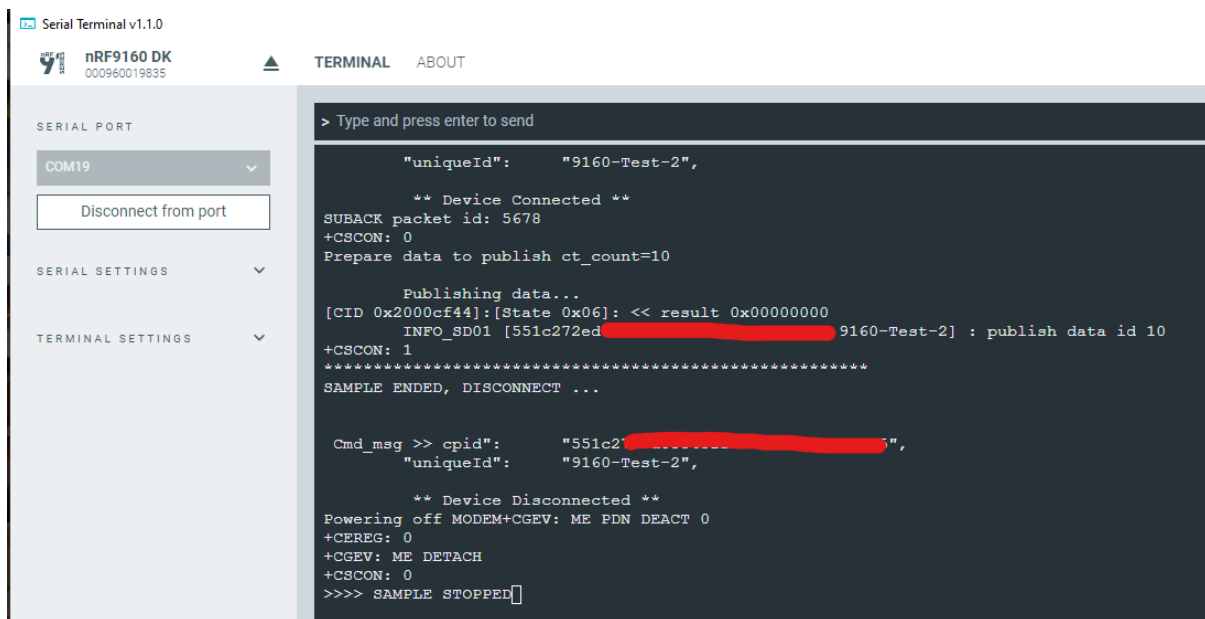
Here below the serial log of application into nRF Connect for Desktop Serial Terminal



And here the “Live Data” on IoT Connect portal

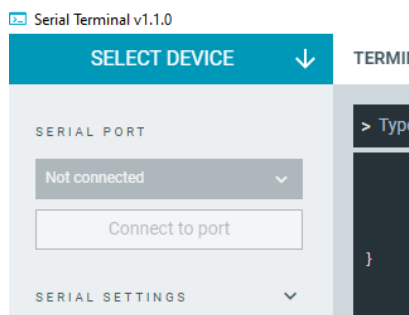


The sample stops after sent 10 time the telemetry data.



## Tips and trick

- Before flashing code on 9160 DK you need to disconnect the Serial Terminal. Otherwise, the flag programming fails



- The first LTE connection (using Avnet bics eSim) could take a long time, up to 10 minutes
- Sample code contains a simple basic connection errors handle. The errors handle must be updated to ensure coverage for all possible error/failure.
- **IMPORTANT: unwanted repeated reset during LTE connection could cause the 9160 modem enters in “reset loop” state with LTE connection restrictions up to 30 minutes**  
**If you note that the LTE connection never go up for over 10 minutes, it needs to power off the board for over 30 minutes**