

## PREREQUISITES

1. Access to OPC UA server
2. [KEPServerEx](#) and [QuickOPC](#)
3. [NodeRed](#) installed on your machine
4. Access to MQTT broker (Login credentials)
5. This document is inspired from the implementation done by [sensetecnic](#)

## SETUP OPC SERVER ON LOCAL MACHINE

1. Create a new project
2. In connectivity, create a new channel with 'Simulator' type driver(This will change to OPC Client during the actual implementation)
3. In Channel create a new a device. In device, create a new tag
4. Tag is the variable where values will be written or read
5. You can assume all the default values and just go ahead with creating tags
6. When creating tags, make sure to provide appropriate address, data type and description
7. We will link this tag with the NodeRed node to pull data from it
8. Because this is a 'proof-of-concept' task, we will create 2 tags: one that will read data from NodeRed and the other that will send data to NodeRed
9. After this is done, just go to Tools and select 'Launch OPC client' which should start your local KepwareEX server

## SETUP NODERED

1. Install NodeRed as per the above given link
2. Go to command prompt and type 'node-red' which should start the NodeRed server locally
3. Import the NodeRed workflow as provided with this document
4. Here we have provided appropriate addresses for the read part and for the write part to pull and send data respectively to the two tags we had created in the Kepware server
5. Hit deploy
6. The workflow should look something like this as shown below
7. The current architecture is also attached as shown in the 2<sup>nd</sup> image

