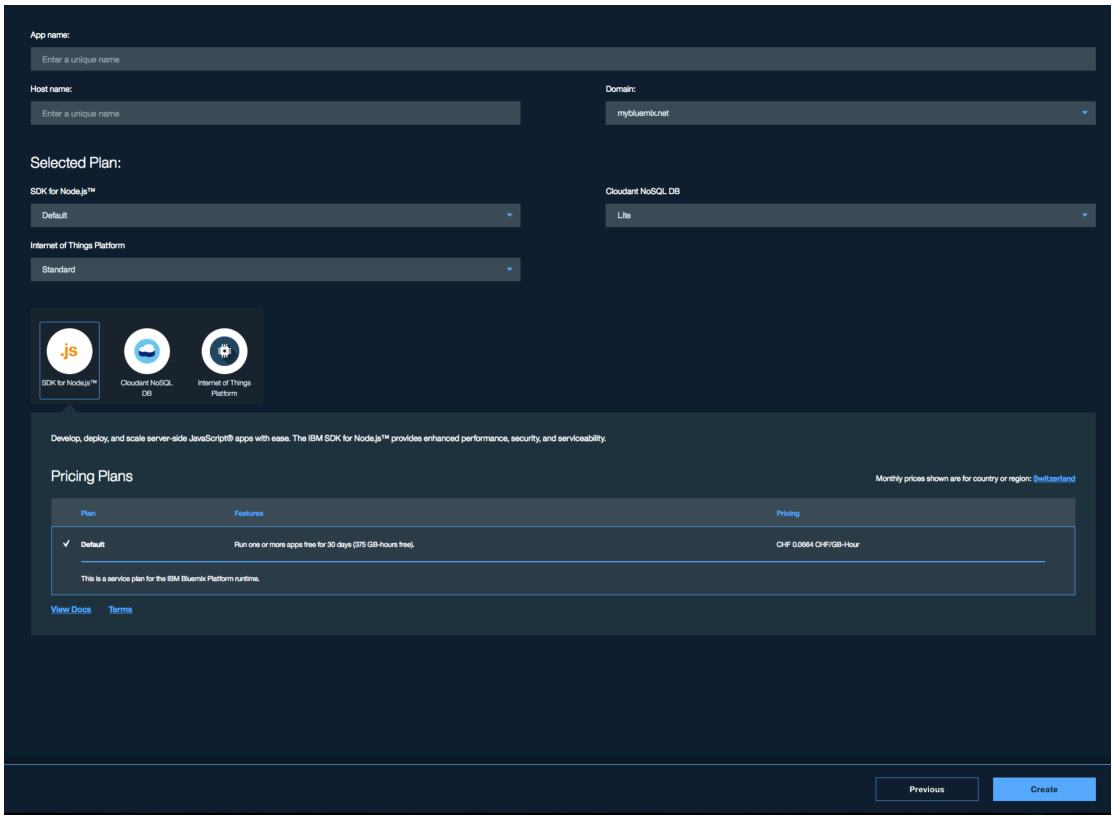
Exercise 1: Deploy and use the TestDataCreator

In this assignment you will

- Create a test data generator using Node-RED
- Publishing data to the Watson IoT platform
- Implement a flow to subscribe to this data and store it in a NoSQL database

Step 1: Create a Node-RED instance in Bluemix

- Register for a free Bluemix account: http://ibm.biz/joinIBMCloud
- Create a node-red instance using this boilerplate https://console.ng.bluemix.net/catalog/starters/internet-of-things-platform-starter/
    - Enter a unique name
    - Click on create



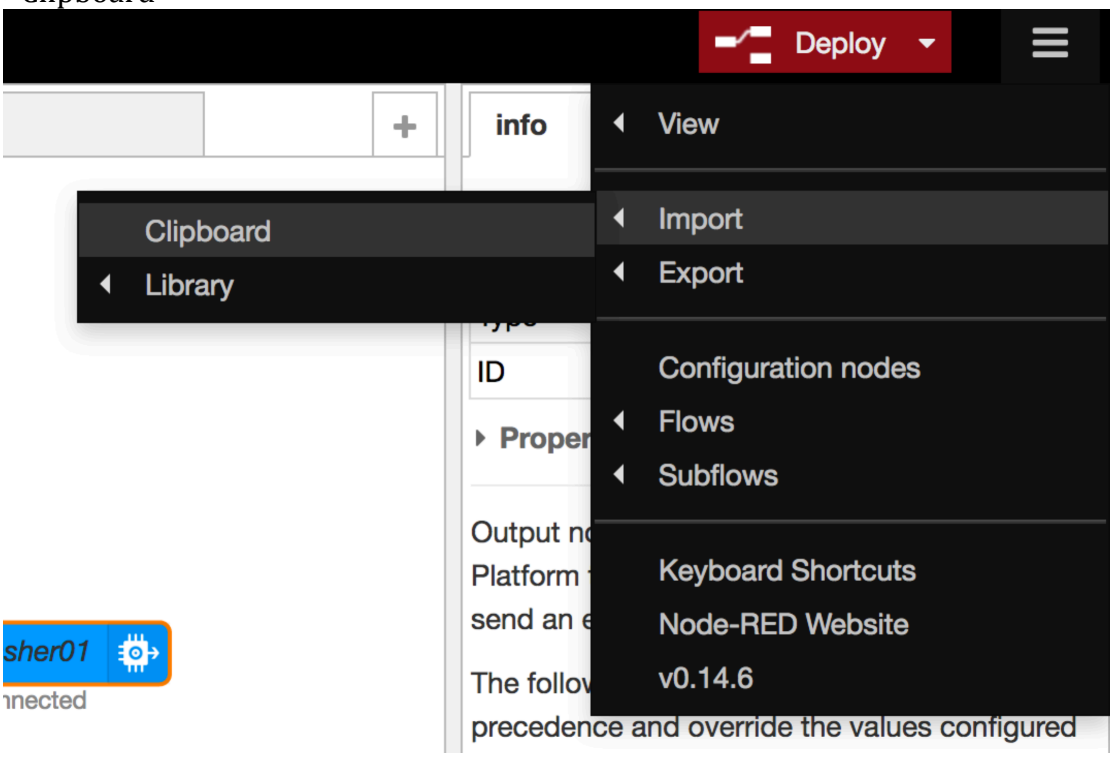
Step 2: Create the test data creator

Import a flow from flow1.json to NodeRED:

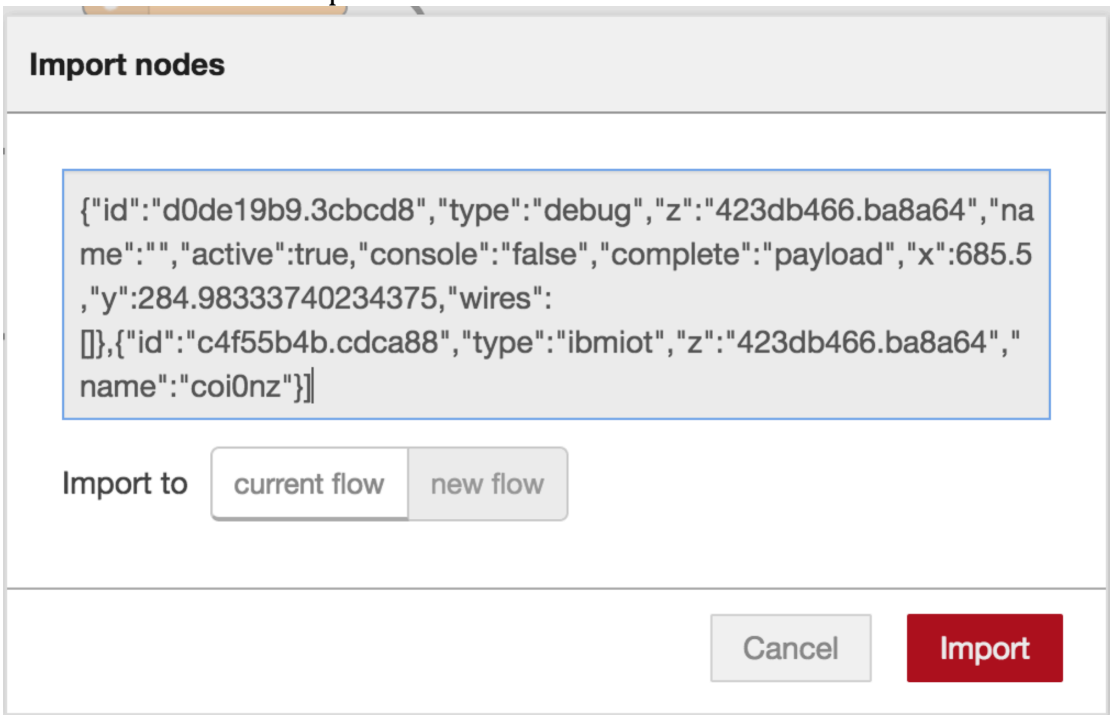
- Download the following file and paste it's contents to the clipboard (e.g. using a text editor, you can also select the contents directly in the browser

and copy):
https://raw.githubusercontent.com/romeokienzler/developerWorks/master/coursera/a0_m2_flow1.json

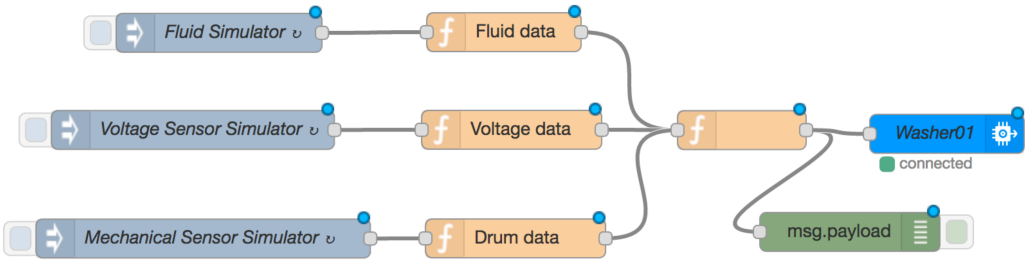
- Now click on the top right menu button of NodeRED and select Import->Clipboard



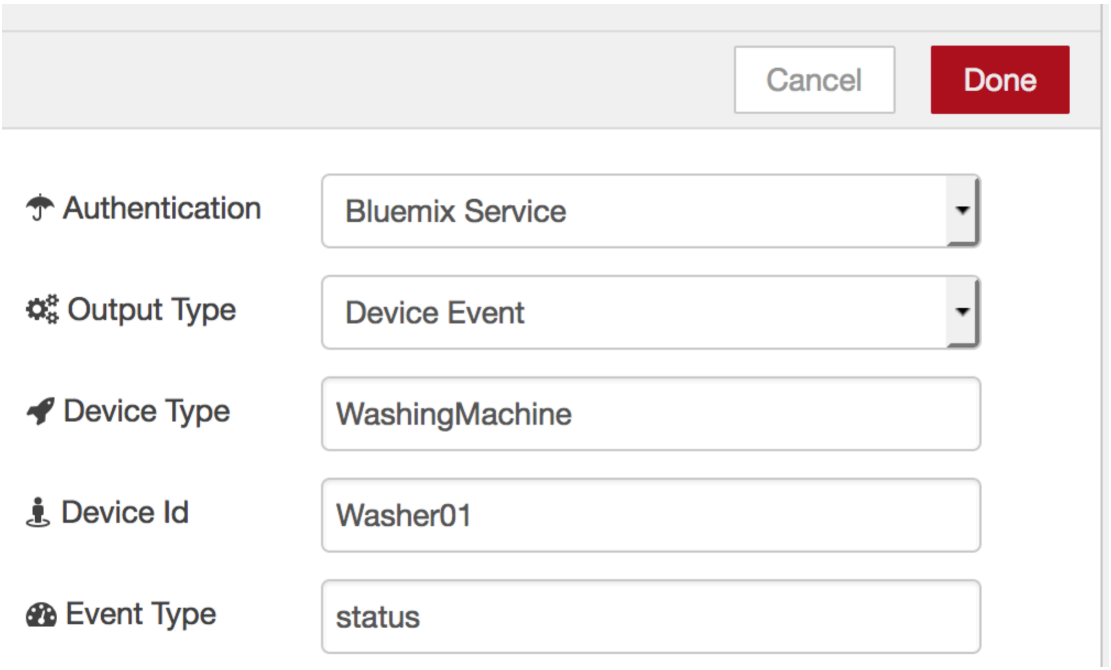
- Paste the contents of the file you've previously downloaded into the textarea and click on import



- Drag the appearing flow to the panel and click



- Double-Click on Washer01 and ensure that “Bluemix Service” is selected as authentication method:

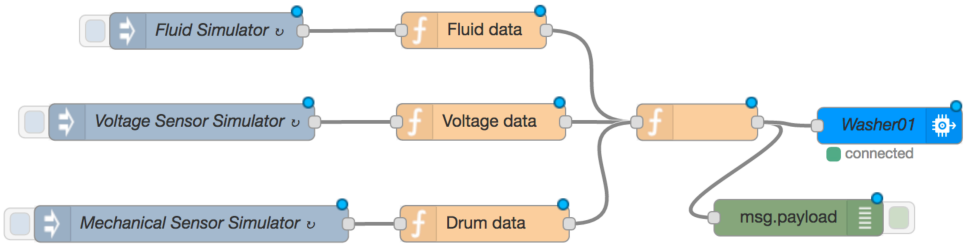


Click on “deploy”, now the test data generator sends data from a hypothetical washing machine to the IBM Watson IoT Platform. It also generates some anomalies, which we can analyze later.

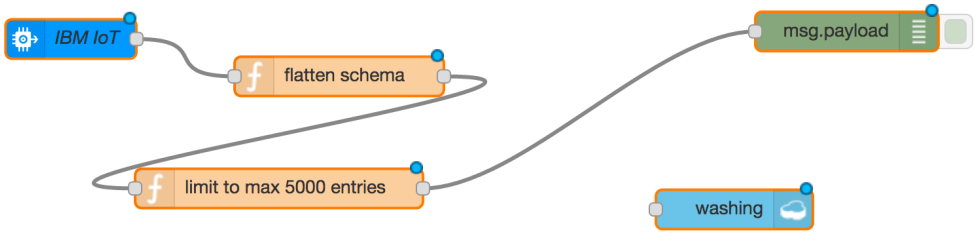
Step 3: Stream the data to the Apache CouchDB (Cloudant) NoSQL database.

Now we want to subscribt to these data using a IBM Watson IoT Platform Input node, transform it a bit and store it in Apache CouchDB

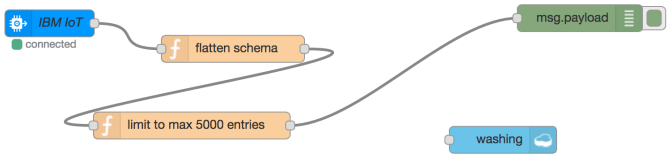
- Click on the “+” symbol top right



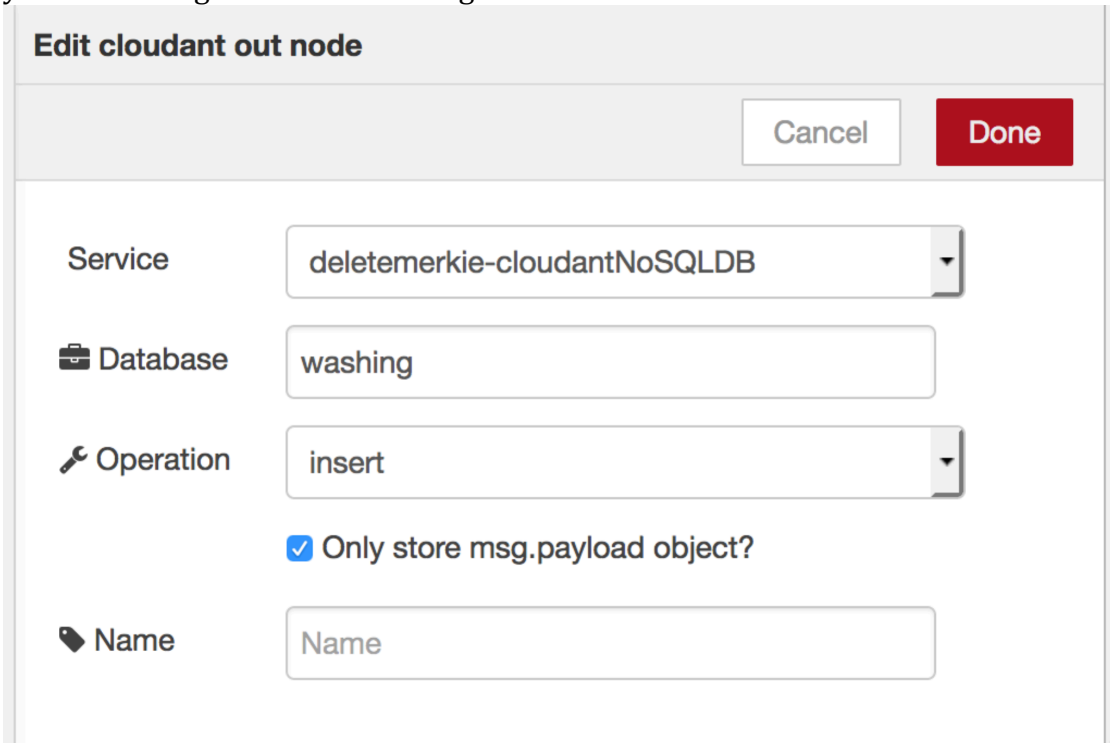
- Again import a flow to the new panel as described in the previous section, but now use this file: https://raw.githubusercontent.com/romeokienzler/developerWorks/master/coursera/a0_m2_flow2.json
- You should see a flow like this:



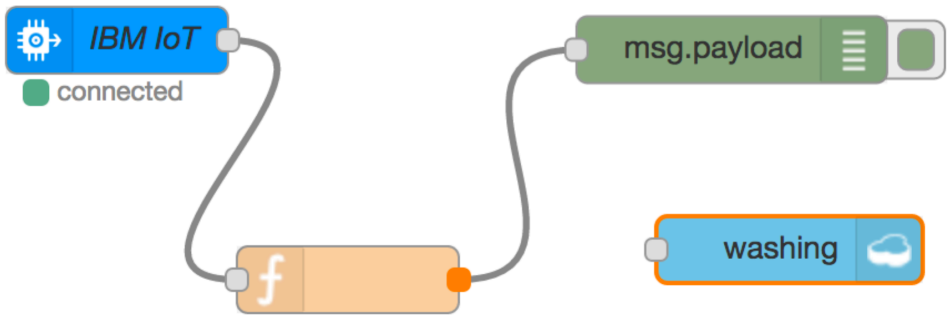
- Click on the red deploy button top right, and then on the debug tab, you should see data coming in like this:



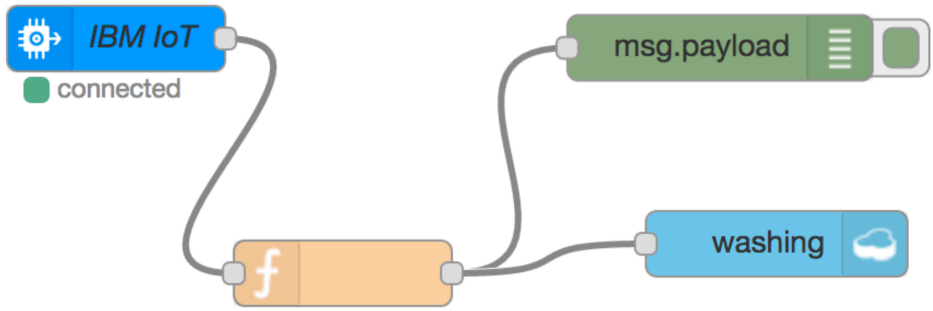
- Double-click on the washing node and make sure that the database name you are storing data to is “washing”:



- Click on done. We are actually not storing data because there is a connection missing, let’s create it:



- Click on the little orange bubble and drag a connection to the grey input bubble at the washing node:



- Click deploy again

- Now we are streaming data into ApacheCouchDB
  Wait for around 5 minutes, remove the connection you've created and click on "deploy" again, so we are done creating a test data set

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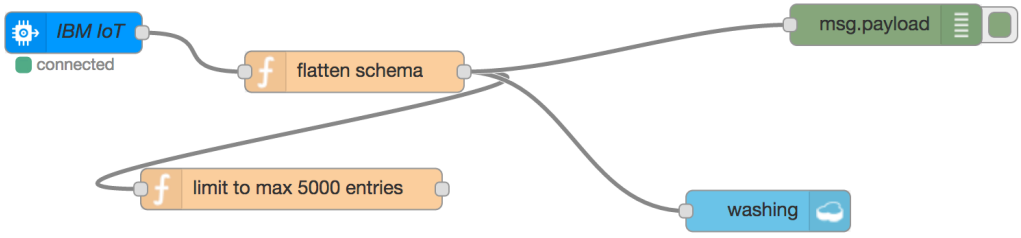
In order to avoid a dataset which is too large max 5000 entries are stored. But in case you are not seeing any messages anymore (the counter get's only reset in case you restart the application) you can also connect both output nodes like this:



But then please ensure to stop after 5 minutes as mentioned above, otherwise you are generating too much data and things are getting very slow in the subsequent assignments

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Please check if the data arrives in the database as described in the video “Overview of end-to-end scenario” of week 2 starting from 5:25