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# Boîte aux lettres connectée

— M2M —  
11-04-2017

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Osvaldo MORENO

# CONTEXTE

L'objectif de ce projet a été la mise en place d'une mini infrastructure qui permet de collecter des données à travers des capteurs distribués.

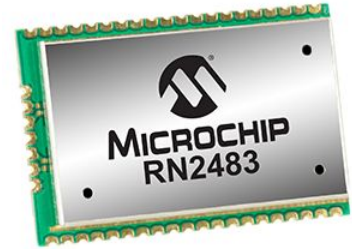
Les cartes de développement utilisées sont : STM32 Nucleo avec une technologie Lora RF, et Raspberry Pi, Un capteur US-100 et RN2483.



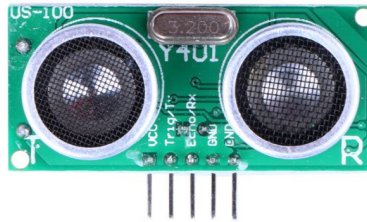
# MATÉRIEL UTILISÉ



SX1272 Lora



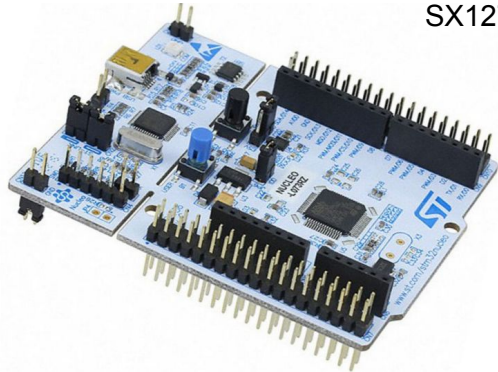
Carte RN2483



Détecteur Ultrason US-100

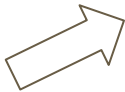
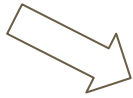
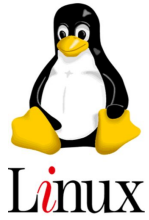


Raspberry Pi 3



STM32 NUCLEO-L073RZ

# TOOLCHAIN

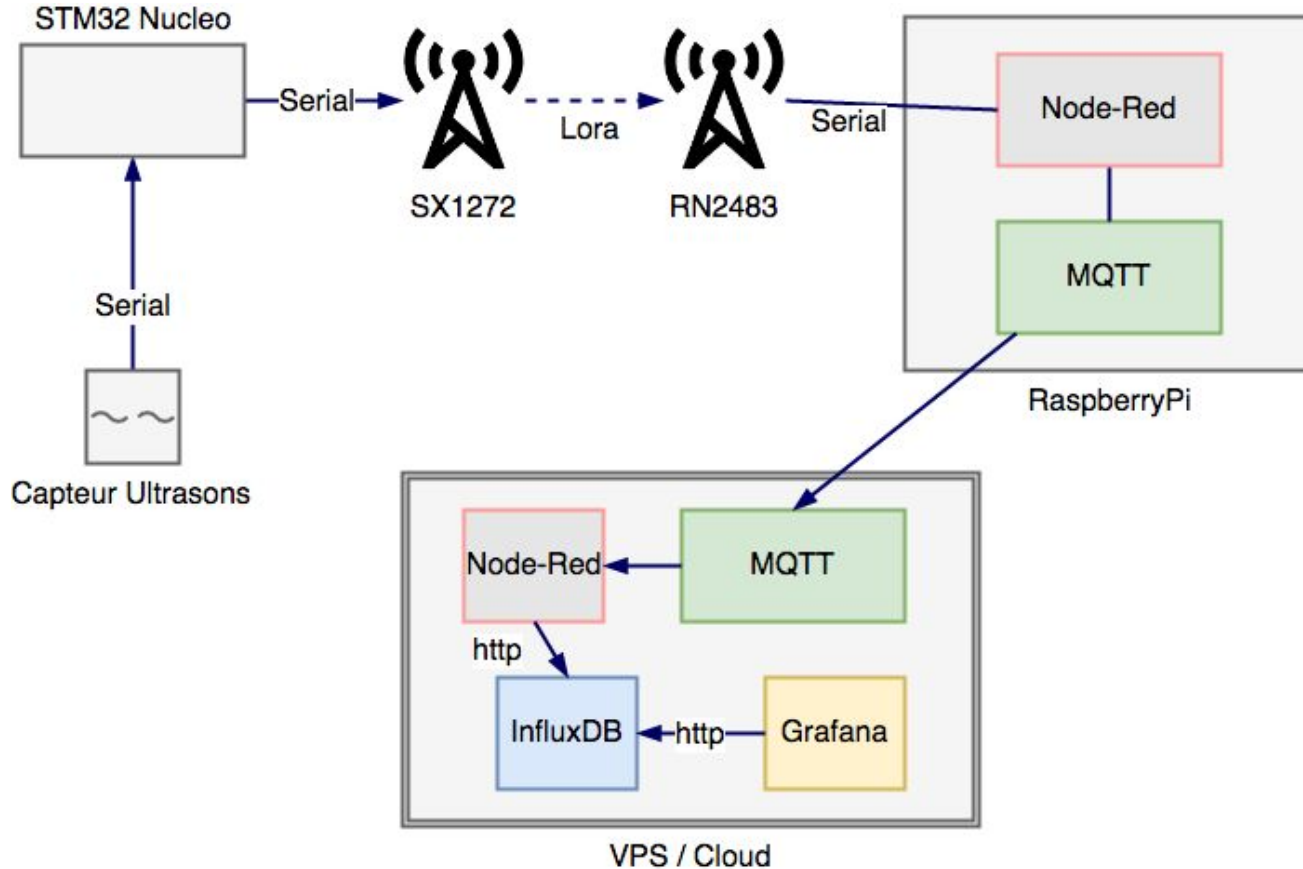


<https://developer.mbed.org/compiler>

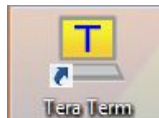
# DIFFICULTÉS RENCONTRÉES

- Capteur Ultrasons en panne
- Pucés Lora
- STM32 Toolchain Windows
- ST-LINK Utility ne marche pas sur Windows

# ARCHITECTURE



# DEMO



Tera Term: Nouvelle connexion

TCP/IP

Hôte: myhost.example.com

Historique

Service  Telnet TCP port#: 22

SSH SSH version: SSH2

Autre Protocole: UNSPEC

Série

Port: COM4: STMicroelectronics STLink Virt

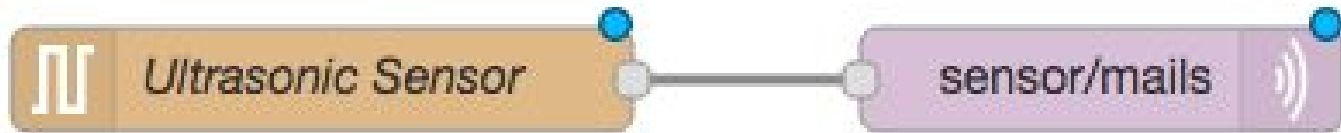
OK Effacer Aide

VT COM4 - Tera Term VT

Fichier Edition Configuration Contrôle Fenêtre(W) Aide

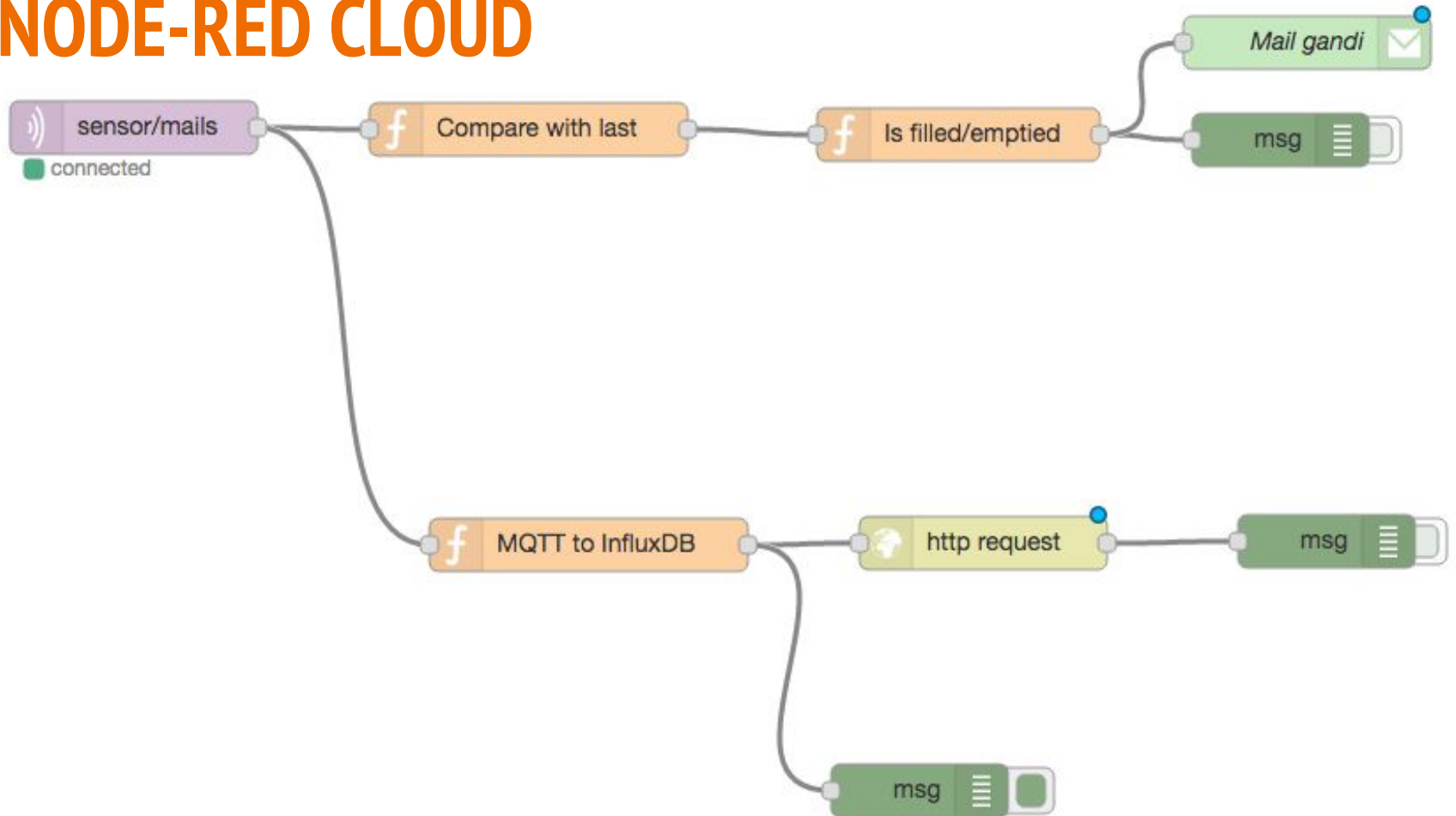
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Distance changed to 1678mm
Distance changed to 1678mm
Distance changed to 1678mm
Distance changed to 1675mm
Distance changed to 1678mm
Distance changed to 1678mm
Distance changed to 1678mm
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Distance changed to 1675mm
Distance changed to 1678mm
Distance changed to 1675mm
Distance changed to 1675mm
Distance changed to 442mm
Distance changed to 454mm
Distance changed to 1675mm
Distance changed to 1678mm
Distance changed to 1678mm
Distance changed to 1678mm
Distance changed to 1678mm
Distance changed to 1678mm
Distance changed to 1678mm
Distance changed to 430mm
Distance changed to 441mm
Distance changed to 1678mm
Distance changed to 1675mm
Distance changed to 167
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# NODE-RED RASPBERRY





# NODE-RED CLOUD



# GRAFANA

