

ALLARD
ROCHER
RICM4

PLATFORM IoT FOR TERRA NOSTRA

terra
nostra

prototype d'habitat
bois & terre

Project 2016-2017

Polytech Grenoble

I.

General aspects

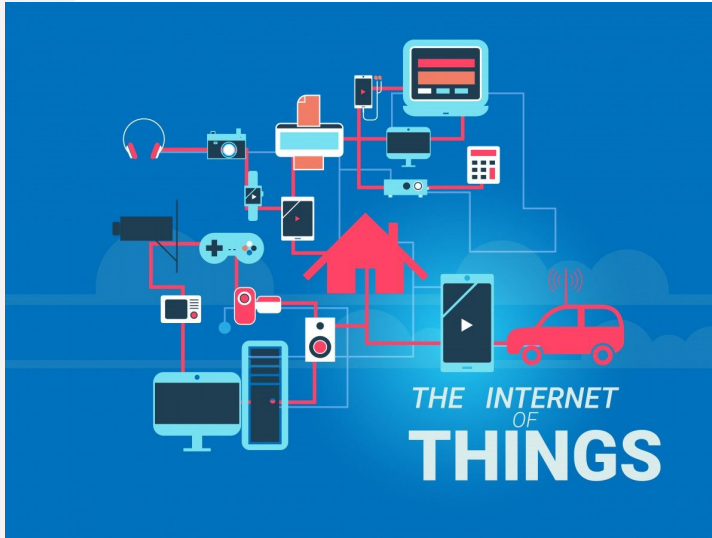
Presentation of the project

Context



- ▶ Ecological building
- ▶ Numerous sensors collecting data

Objectives



- ▶ Collect data
- ▶ Visualise them
- ▶ Compute statistics

II.

Collecting Data

Captors informations from Terra Nostra

Collecting Data

House



SpaceLink

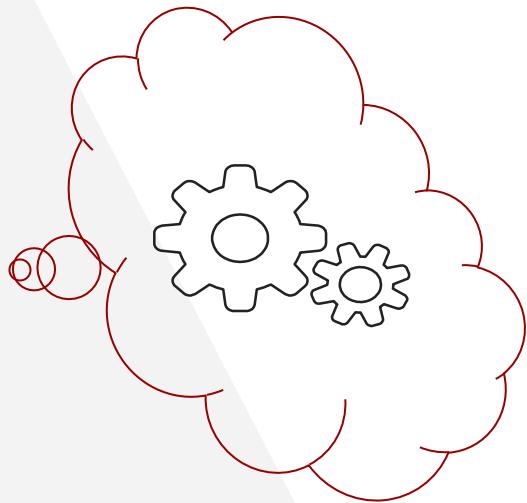


Data

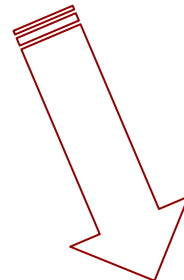
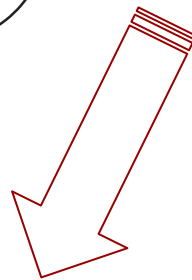
A screenshot of the spaceLink software interface. The interface shows a list of data points with columns for Name, Address, Type, Value, and Tags. The data points are organized into a table with various filters and search options. The interface is in French and shows a list of data points for a specific system.

Objet	Adresse	Type de données	Valeur actuelle	Historique	Export	Tags	Mis à jour à	Règles	Param.	Valeur
0501	Extraction gen. commun	05.1.1 bit (booléen)	0				08.06.2016 10:...			
0502	Extraction gen. assaut	05.1.1 bit (booléen)	0				21.09.2016 07:...			
0503	Fermeture gen. com...	05.1.1 bit (booléen)	1				08.06.2016 10:...			
0504	Fermeture gen. assaut	05.1.1 bit (booléen)	1				21.09.2016 07:...			
1001	Température intérieure	08.2 octets int.	17.47 °C				21.09.2016 07:...			
1002	Humidité	08.001 octets	57 %				21.09.2016 06:...			
1003	CO2	08.2 octets int.	461.84 ppm				21.09.2016 06:...			
1004	Température Extérieure	08.001 temp.	23.30 °C				08.06.2016 10:...			
1005	Luminosité	08.2 octets int.	108.64 Lux				08.06.2016 10:...			
1011	Puissance ECS	08.2 octets int.	0.00 W				21.09.2016 06:...			
1012	Puissance chauffage	08.2 octets int.	0.02 W				21.09.2016 06:...			
1013	Puissance prise	08.2 octets int.	0.00 W				21.09.2016 06:...			
1014	Puissance générale	14.4 octets int.	180.000 W				28.03.2017 15:...			
1015	Energie générale	14.4 octets int.	500000.000 kWh				28.03.2017 15:...			
1016	Energie chauffage	14.4 octets int.	0.000 kWh				21.09.2016 06:...			
1017	Energie prise	14.4 octets int.	0.000 kWh				21.09.2016 06:...			
1018	Energie ECS	14.4 octets int.	0.000 kWh				21.09.2016 06:...			
1019	TEST - courant	14.4 octets int.	0.380A				07.06.2016 18:...			
1021	Intrus fenêtre ouverte	05.1 bit (booléen)	0				28.04.2016 12:...			
1022	Info porte ouverte	05.1 bit (booléen)	0				28.04.2016 12:...			
3001	Commande chauffage...	05.1 bit (booléen)	0				28.04.2016 13:...			
3002	Circulateur ECS	05.1 bit (booléen)	0				28.04.2016 13:...			
3003	Ventilation	05.1 bit (booléen)	0				28.04.2016 13:...			
30201	Etat 3001	05.1 bit (booléen)	0				28.04.2016 13:...			

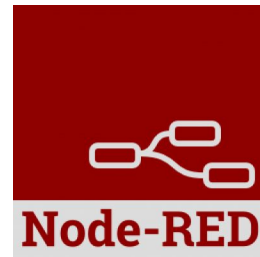
Ideas - Implementation



HTTP request



JavaScript

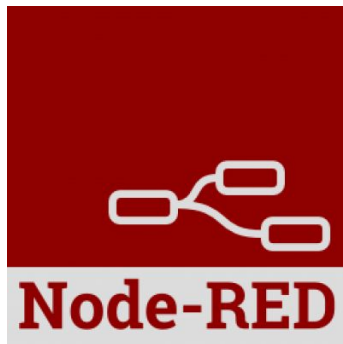
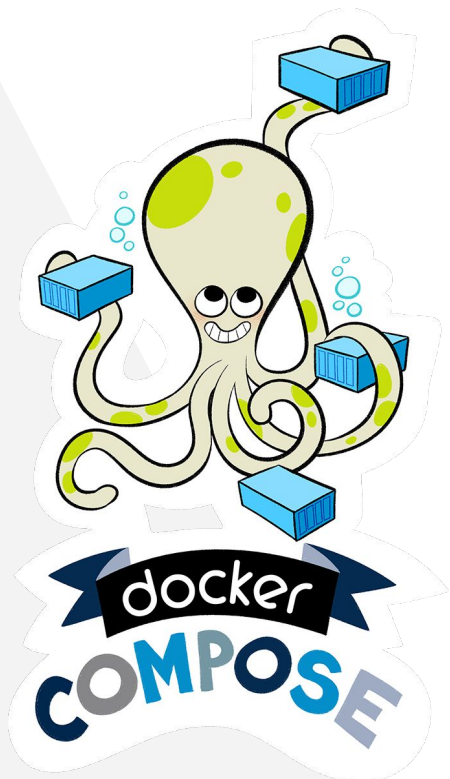


III.

Platform development

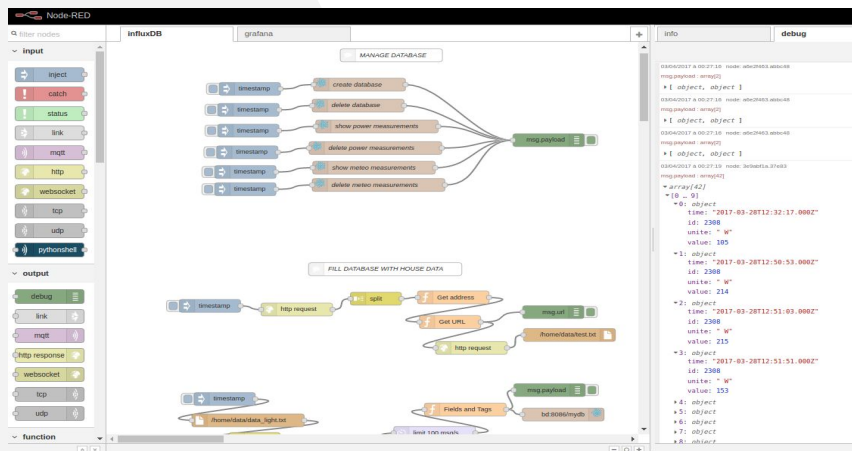
Data visualisation

Technologies used



Platform functionalities

- ▶ Collect data
- ▶ Configure grafana and influxDB



- ▶ Display graphics
- ▶ Compute statistics



DEMONSTRATION



Node-RED

IV.

Feedback and conclusion

Positiv and negativ aspects

Feedback and conclusion

- ▶ Unfinished
- ▶ But :
 - ▷ Many information available
 - ▷ Able to be used with other devices

Rewarding
Research

Managing project
Working in pairs
Meeting

Thank you for your attention

Questions ?