

## **Pull information from network devices with the same API.**

**By Federico Capoano (aka Nemesis)**

## Federico Capoano

Web Designer & Web Developer

Ninux hacktivist

**@nemesisdesign** on twitter and github

Nodeshot developer

OpenWISP developer

**In Ninux we use several different firmwares and devices**

**OpenWISP case: 1 firmware only  
unflexible solution**

**We need to retrieve data  
from network devices**

**Real world networks are not always  
homogeneous**

**We need to support different firmwares,  
devices and protocols**

**Automate data entry in the network DB**

**Avoid mistakes in entering the data**



**Periodically check data is  
up to date and correct**

# What can we do?

**It would be really cool to have...**

**Abstract differences between  
manufacturers, devices and protocols**

Would be cool to

**Retrieve data for different firmwares and protocols with the same API**

Would be cool to

**Make it easy to add support for new combinations**

**step 1: prototypal feature integrated in  
nodeshot**

**coupled with nodeshot code**

**not reusable unless you used nodeshot**



**hard to contribute for those  
who don't know django and nodeshot**

**code developed quickly just  
to demonstrate it was possible**

**separated in a separate repository,  
python only, no django, no web apps**

**simpler codebase: easier to maintain**

**people with no experience with  
django can contribute**

**reusable: anybody can use it  
also with other NodeDBs**

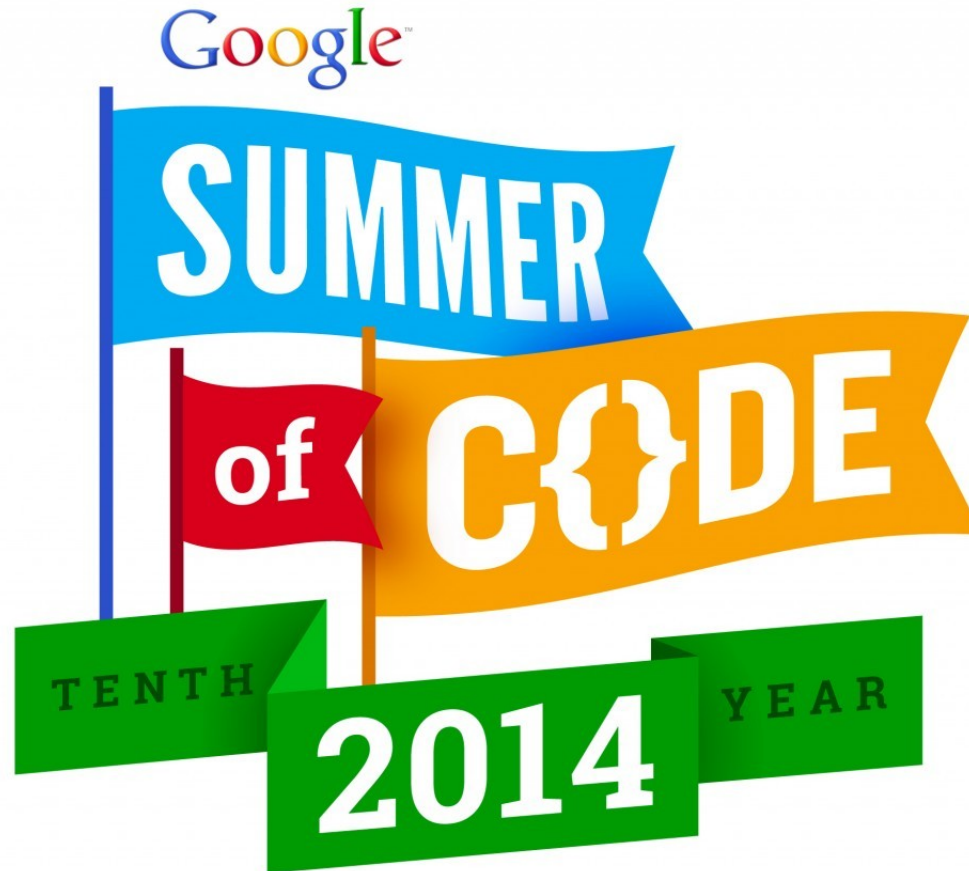
**It was still a prototype == it sucked**

**+ I had no time because actively working on Nodeshot 1.0 (new version)**

**The project aimed to facilitate contributions**

**So it should be possible for a student  
to work on it**





Thanks to Mario Behling and Freifunk

**Student: Alessandro Bucciarelli  
University of Tor Vergata, Rome**

**Mentored by me**

**Milestone 1:  
finish SNMP/OpenWRT, SNMP/AirOS,  
SSH/OpenWRT, SSH/AirOS**

**Milestone 2:  
explore possibility of HTTP/OpenWRT,  
HTTP/AirOS, SNMP/EdgeMax**

**Alessandro already did 37 commits and showed up on our meetings every week**

Ok but...

**Show us something!**

# Live demo

**release 0.1 version + docs**



**I'll use this library in my daily job  
on OpenWISP and Nodeshot**

**Hence I'll probably be able  
to get more funding to keep improving it**

## Questions?

Find out more on:

<https://github.com/ninuxorg/netengine>

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