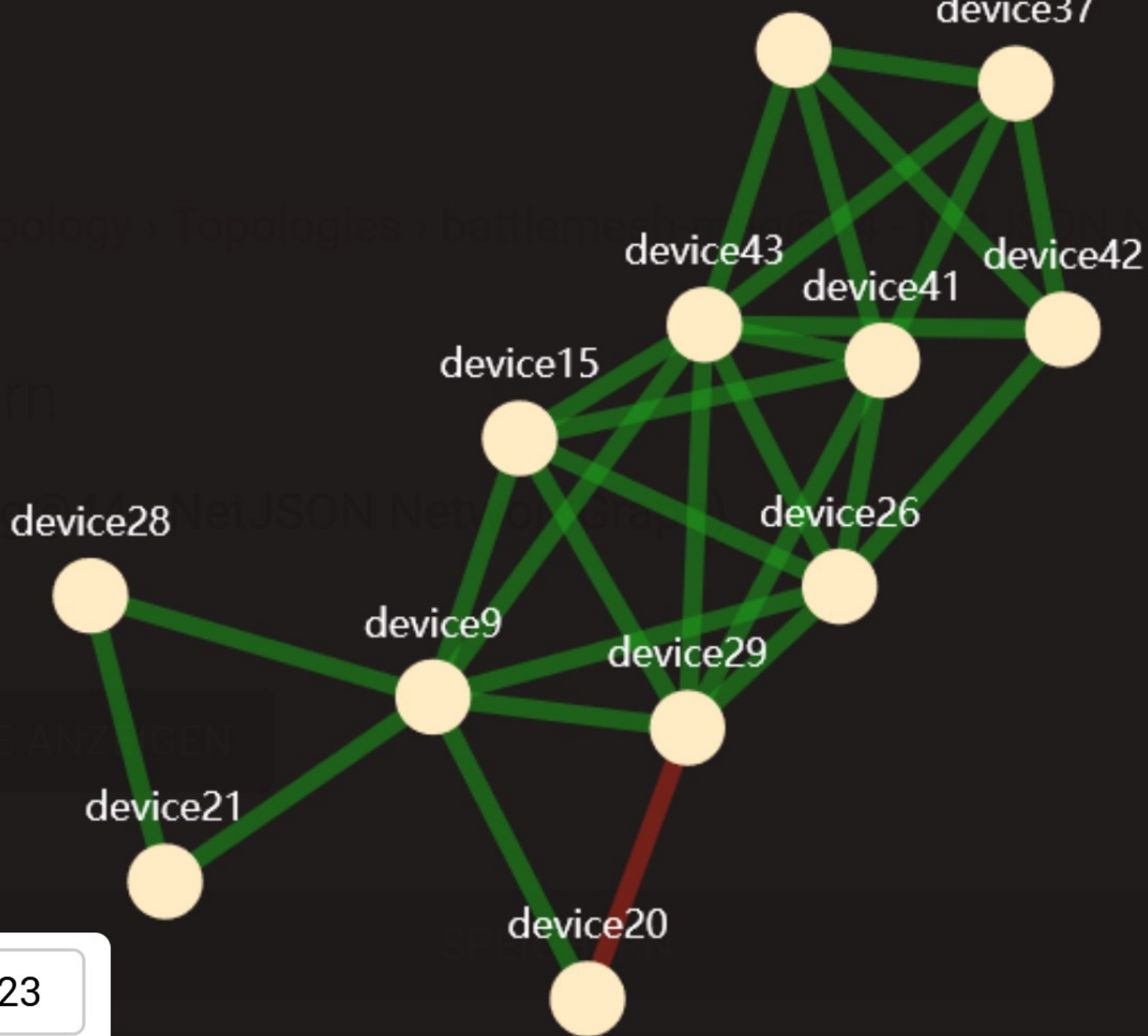


Testbed results of our battle

Battlemesh v15 in Calafou (may 2023)

- Federico Capoano (<https://openwisp.org>) + Pedro @guifi +
- Thijs van Veen (TJvV) + Bastian Bittorf (bb@npl.de) + alot more..





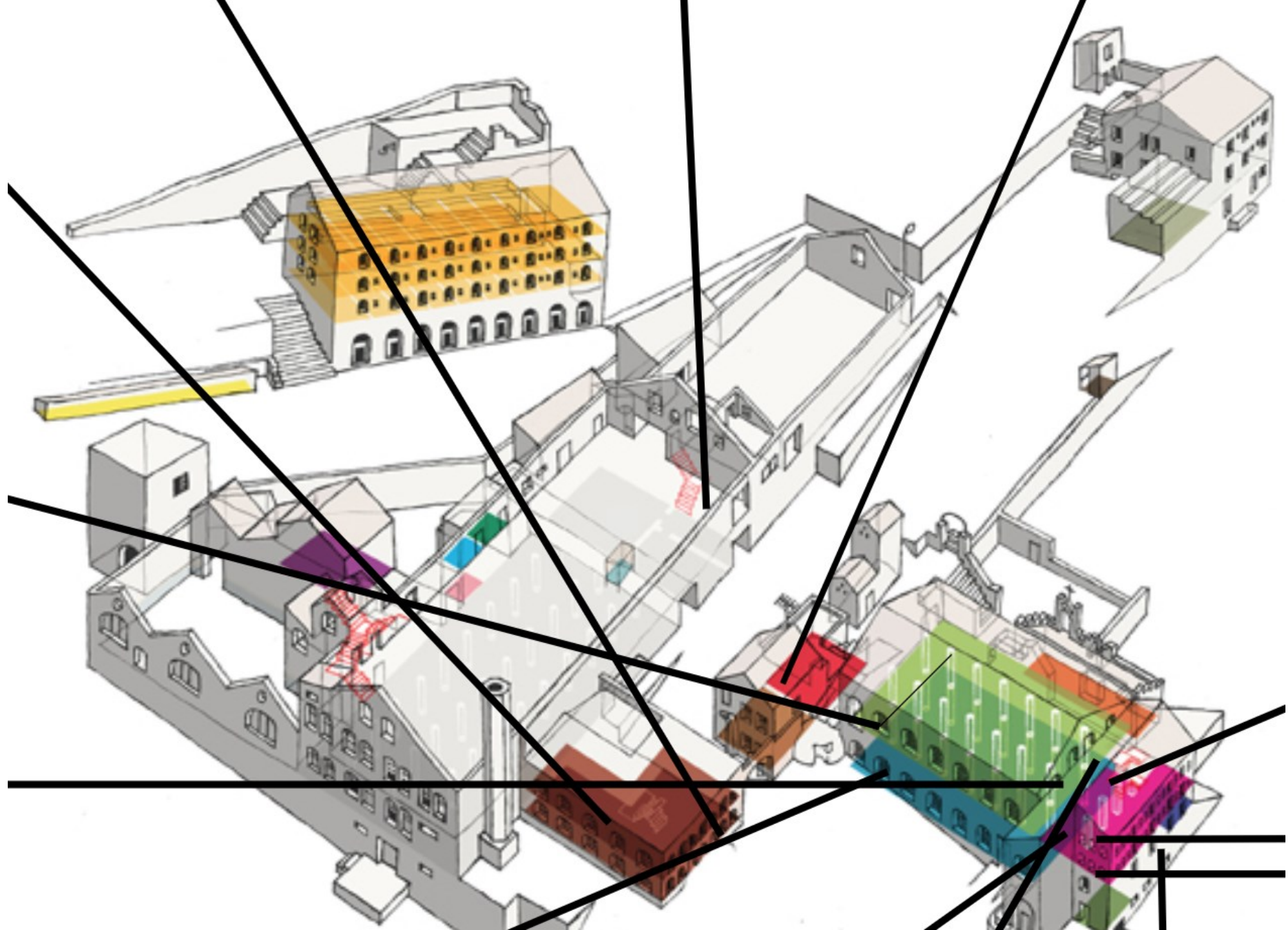
Date:

12/05/2023

Legend

 Up

 Down





Federico



SOLO
SOLO
SOLO
SOLO



Sorry - no results at all 8-(

- it did not work out, although 15 routers were fully prepared
- no reliable testing was possible
- our fallback (neutral) protocol mesh11s had issues
- access network on-site had issues
- remote controlling a testbed from another timezone is pressuring
- building and debugging testbed is stressful
- babeld had issues („cannot determine channel of interface XY“)
- bmx did not start, so better preparation needed and a lot more...

Summary of dslreports_8dn test run from 2023-05-12 09:16:06.961445

Title: 'TJvV-Alpha-15_5ghz_21_37_5ghz_datoren'

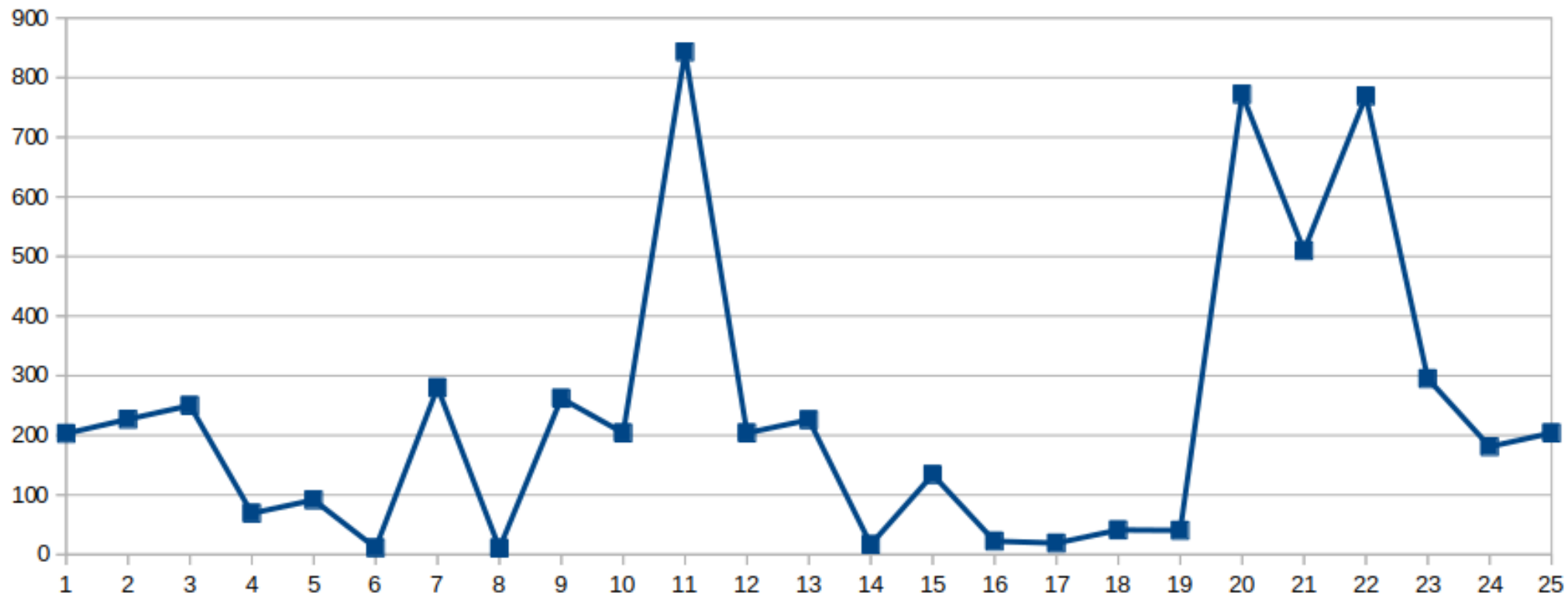
	avg	median	99th %	# data pts
Ping (ms) ICMP :	1336.26	616.50	13209.75 ms	379
Ping (ms) TCP BE1 :	0.99	0.82	3.36 ms	18
Ping (ms) TCP BE2 :	1.78	0.88	6.53 ms	20
Ping (ms) TCP BE3 :	1.44	1.24	4.34 ms	17
Ping (ms) avg :	1336.26	N/A	N/A ms	379
TCP download BE::1 :	0.00	0.00	0.00 Mbits/s	10
TCP download BE::2 :	0.06	0.04	0.23 Mbits/s	28
TCP download BE::3 :	0.04	0.02	0.19 Mbits/s	8
TCP download BE::4 :	0.09	0.03	0.42 Mbits/s	7
TCP download BE::5 :	0.16	0.08	0.66 Mbits/s	23
TCP download BE::6 :	0.34	0.15	1.49 Mbits/s	40
TCP download BE::7 :	0.07	0.03	0.31 Mbits/s	28
TCP download BE::8 :	0.01	0.00	0.02 Mbits/s	6
TCP download avg :	0.10	N/A	N/A Mbits/s	214
TCP download sum :	0.22	N/A	N/A Mbits/s	214

Summary of dslreports_8dn test run from 2023-05-12 11:36:14.594042

Title: 'TJvV-Alpha-15_5ghz_15_37_5ghz_datoren'

	avg	median	99th %	# data pts
Ping (ms) ICMP :	229.94	193.00	715.84 ms	351
Ping (ms) TCP BE1 :	5.51	4.76	24.85 ms	351
Ping (ms) TCP BE2 :	5.23	4.60	24.74 ms	351
Ping (ms) TCP BE3 :	5.45	4.67	26.11 ms	351
Ping (ms) avg :	61.53	N/A	N/A ms	351
TCP download BE::1 :	0.66	0.64	1.83 Mbits/s	351
TCP download BE::2 :	0.57	0.63	1.64 Mbits/s	351
TCP download BE::3 :	0.71	0.72	2.08 Mbits/s	351
TCP download BE::4 :	0.72	0.69	1.76 Mbits/s	351
TCP download BE::5 :	0.70	0.71	1.79 Mbits/s	351
TCP download BE::6 :	0.67	0.70	1.62 Mbits/s	351
TCP download BE::7 :	0.77	0.75	1.94 Mbits/s	351
TCP download BE::8 :	0.62	0.63	1.43 Mbits/s	351
TCP download avg :	0.68	N/A	N/A Mbits/s	351
TCP download sum :	5.42	N/A	N/A Mbits/s	351

203
227
250
69.3
91.6
11.3
280
10.8
262
204
843
204
226
16.9
134
22.4
19.2
41.3
40.6
772
510
769
295
181
204

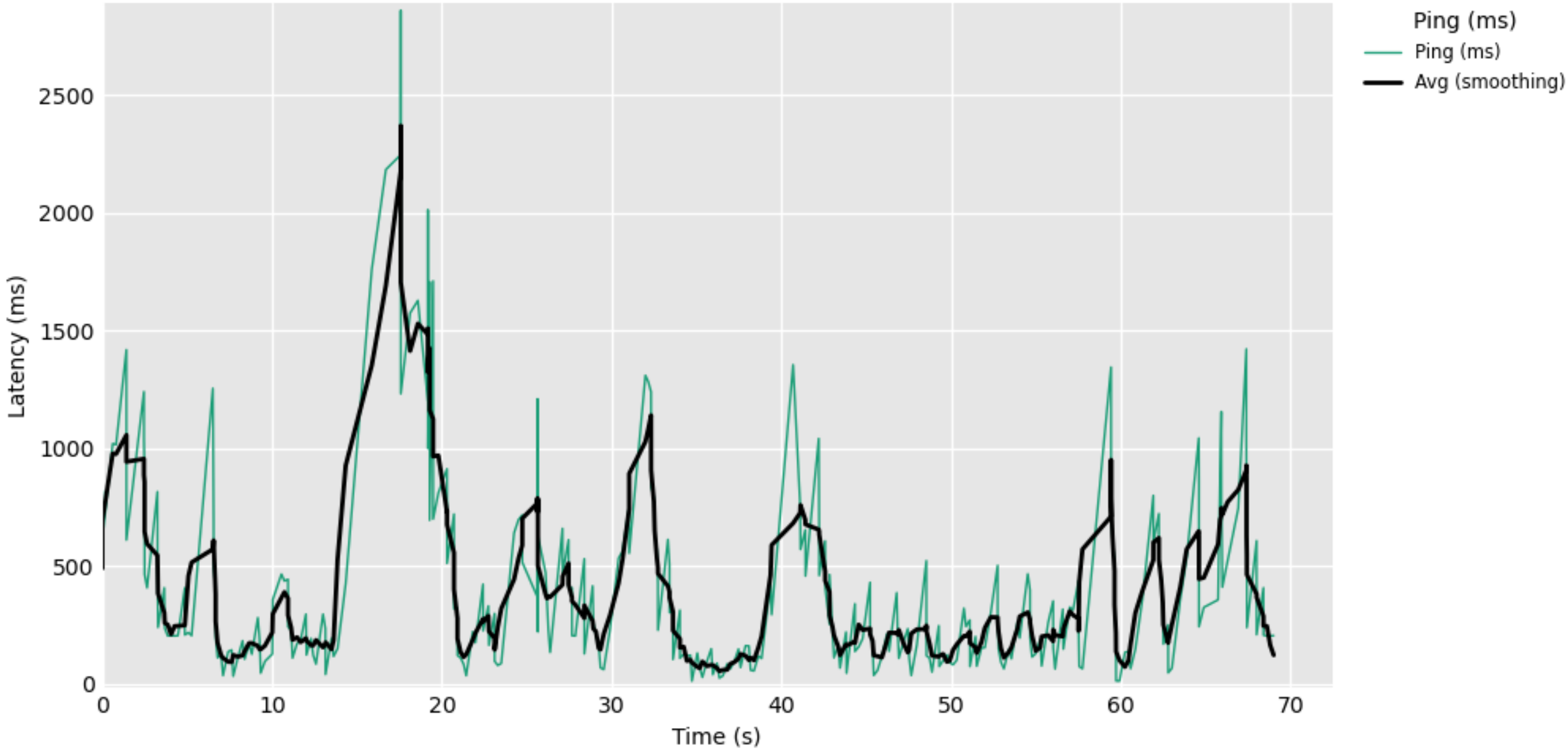


ping

TCP download stream w/ping

Ping plot (inc smoothed average)

nono



Lessons learned for next Iteration in 2024

- we need to place the devices and test each link to ensure minimum wireless link quality: we need more people onsite involved for that
- we didn't have power where we needed it: we need long cables to place devices in optimal locations
- ideally next time we we should get newer hardware with wifi5/wifi6 and more flash space >8mb because flash got full quickly with OpenWrt 22.04
- planning in advance: we need floor plans of the location
- do we want to test bmx6 or bmx7?
- we need some funding for openwisp (e.g. distributed commands)

Lessons learned ...

- we must have at least 1 person responsible for the test on-site
- better to plan tests to run while talks are not happening
- we need 2 dedicated test hardware devices to run tests
- more preparation together with protocol maintainers
- new protocols needs better preparation (and more flash space 8-), sorry @dimitri for that
- testing-tool <https://flent.org> had issues with our raspi4
- OpenWRT stable had issues with dnsmasq and so had OpenWISP
- ...nobody onsite was an expert in tooling (flent+openwisp)




HACKCUTINA

```
7 Fri May 12 17:19:05 2023 kern.info kernel: [ 1370.316650] br-lan: topology c
8 Fri May 12 17:19:05 2023 kern.info kernel: [ 1370.320519] br-lan: port 4(mes
9 Fri May 12 17:19:05 2023 kern.info kernel: [ 1370.328832] br-lan: topology c
```

anything you want me to try?

 **nemesisdesign (Federico Capoano)**

TJ can you try unplugging your laptop for a moment
please

 **tj_vv**

ok

Done

 **nemesisdesign (Federico Capoano)**

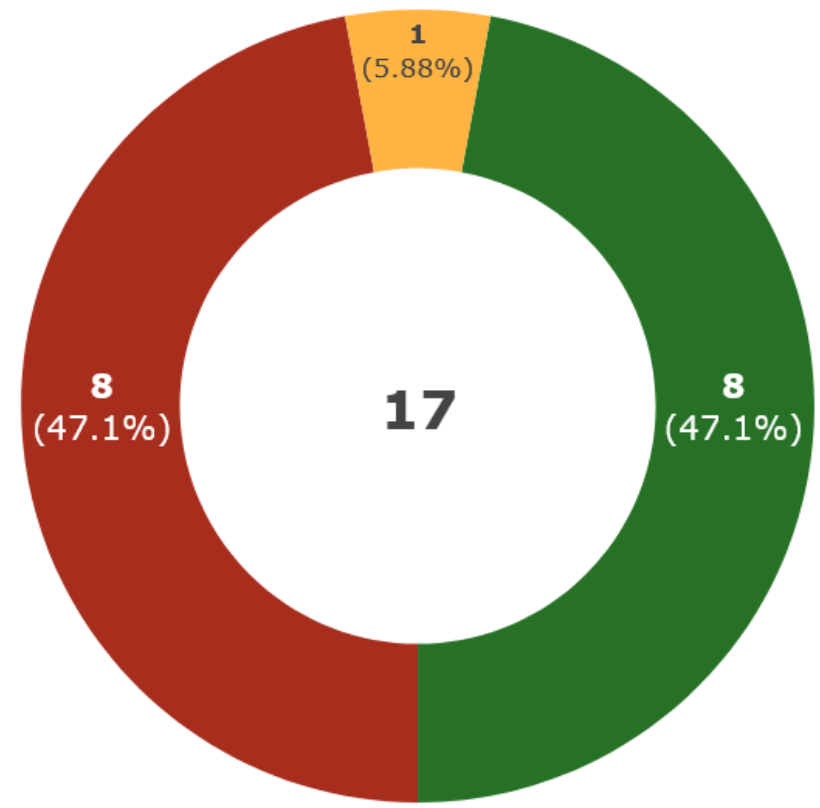
ok

something weird I saw in some devices: `Maximum number of concurrent DNS queries reached`



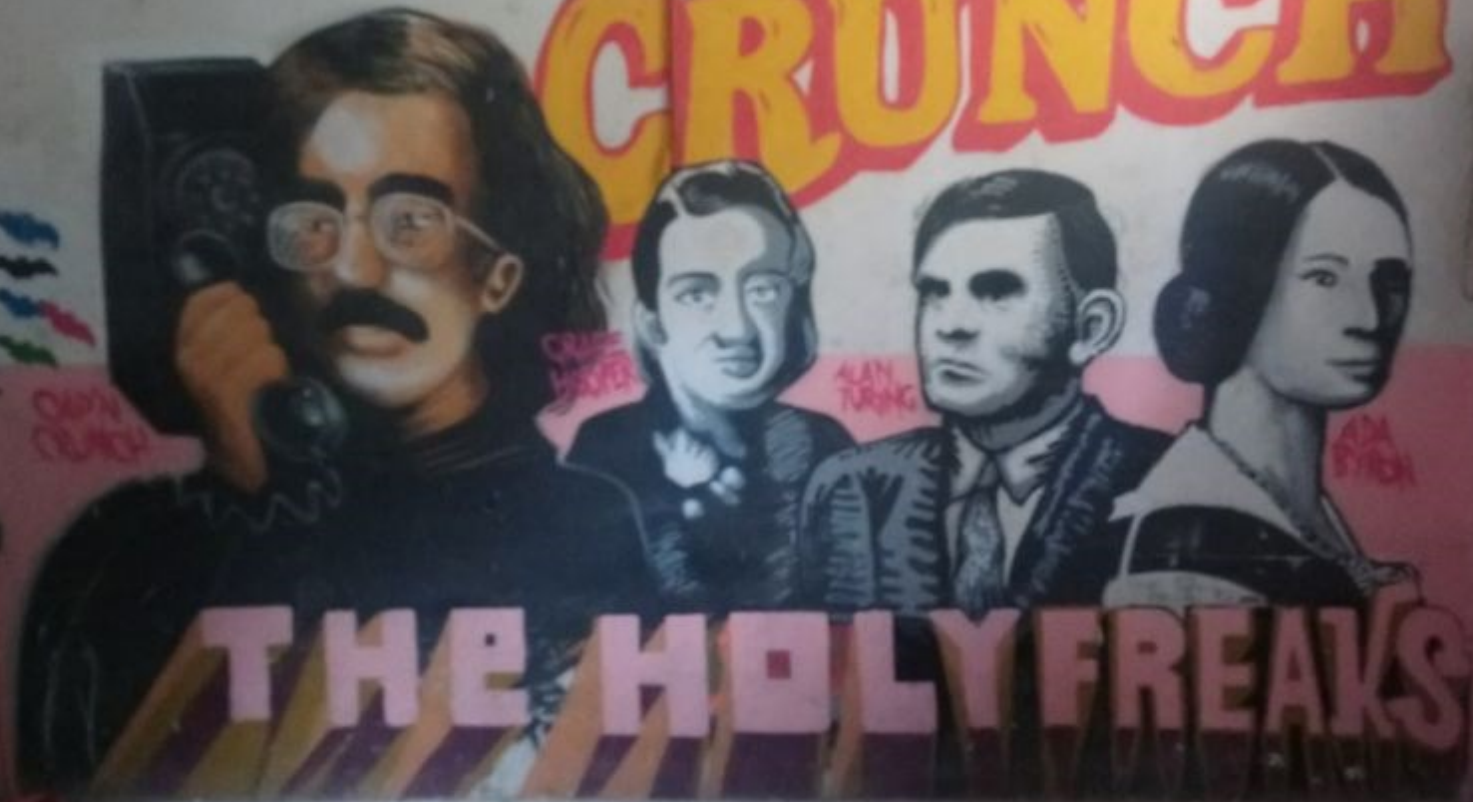


- START
- DEVICES
- CONFIGURATIONS ▼
- USERS & ORGANIZATIONS ▼
- GEOGRAPHIC INFO ▼
- CAS & CERTIFICATES ▼



- Critical
- Ok
- Problem

CAP'N CRUNCH





Bastian

Filter

- SSH keys (required)
- Management Interface wg0
- Management VPN (OpenVPN)
- Management VPN (WireGuard)
- Mesh Demo (radio0: 2 GHz, radio1: 5 GHz)
- Captive Portal Demo
- Babeld
- OLSRd1
- Bmx7
- Access Point SSID
- Batman-advanced
- WBM Testbed L3 5GHz Testbed Interface
- OLSRd2

Choose items and order by drag & drop.

Federicos Bildschirmfreigabe

configur

Microphone icon, Video icon, Screen share icon, Chat icon, Hand icon, 3 participants icon, App Store icon, More options icon, End call icon

F

M Feder...

Federicos...

Fellow Jitster

3 months of preparation

- Frederico + Pedro made sure, that the whole testbed was ready
- In theory plug-and-play
- Thanks for that! & applause!

Chatten und Umfragen

Chatten

Umfragen

F

- we need floorplans of the location
- do we want to the bmx6 or bmx7
- we must have at least 1 person responsible for the test on-site
- better to plan tests to run while talks are not happening
- we need 2 dedicated test hardware devices to run tests

21:54

bb@npl.de

22:01

Nachricht eingeben



guifi-net/eXO

Battlemesh Testbed 4:03:50



Bastian



Federico

Meeting control bar: microphone, video, share, chat, hand raise, participants (2), gallery view, more options, end call.



Federico