

29C3 NOC Review

“IPv6 is important now”

Topics

- Uplink
- New Building
- New Hardware Platform
- Core / Distribution
- Wireless
- Colo
- Abuse
- Geoloc
- Monitoring
- Graphs

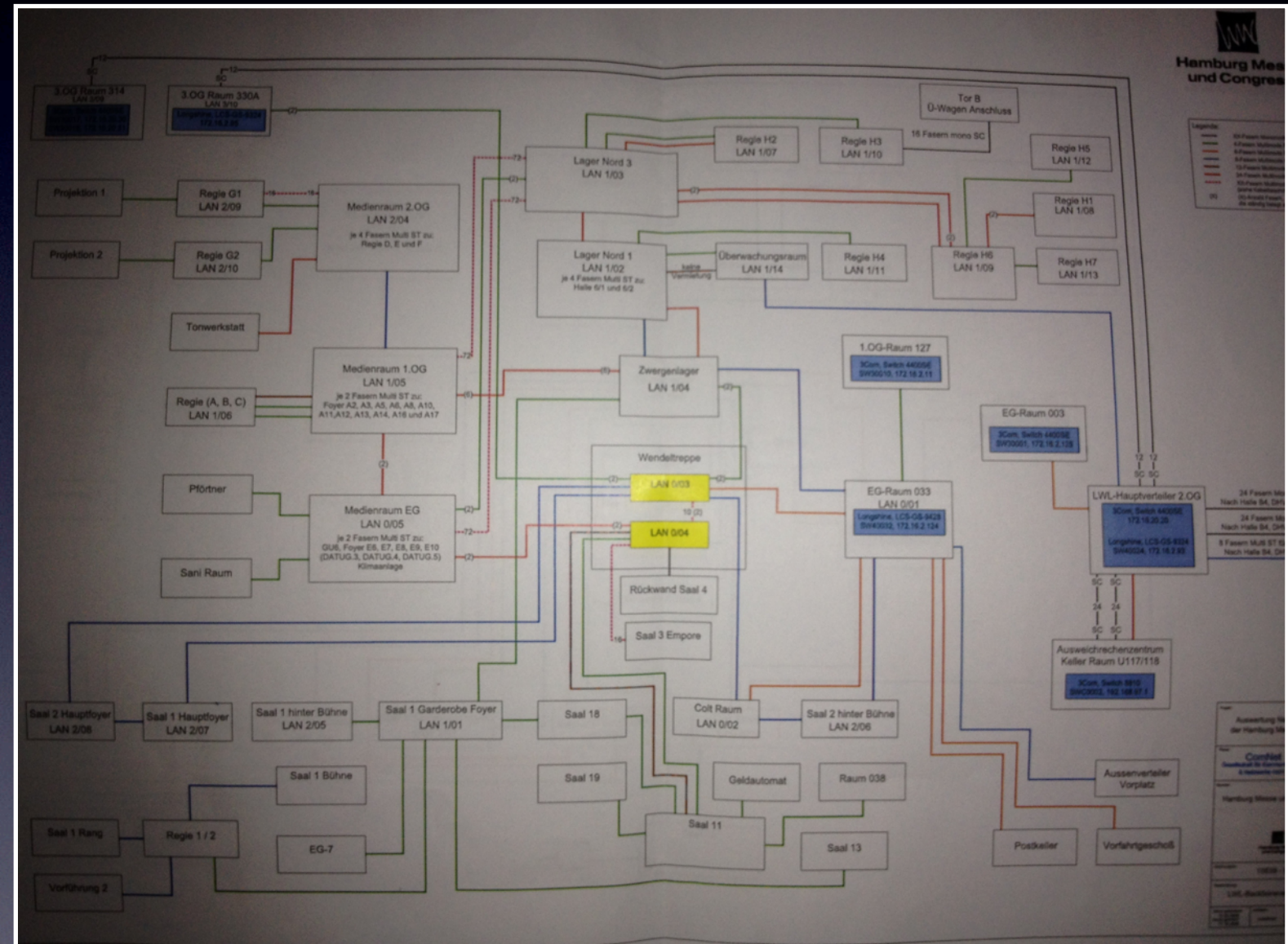
Uplink

- Colocation at IPHH
- Fulltable
 - 10GE Atrato (AS5580)
 - 10GE KPN (AS286)
- Partial Transit
 - 1GE IPHH (AS12731) WORK-IX / ECIX-HAM
 - 1GE rrbone (AS39138) ECIX-DUS



New Building

- new fibres
- more rooms
- new people
- more users



New Hardware Platform

- Complete Sponsoring by Juniper
- Only as Edge Router till now
- Virtual Stacks and EX4500/EX4200



Core / Distribution

- 8 Virtual Stacks
 - 6 EX4500
 - many * EX4200
- Multiple L3 Routers -> No flat L2 Star
- IPv6 problems on EX
- Heat Problems
- Attack on our Infra

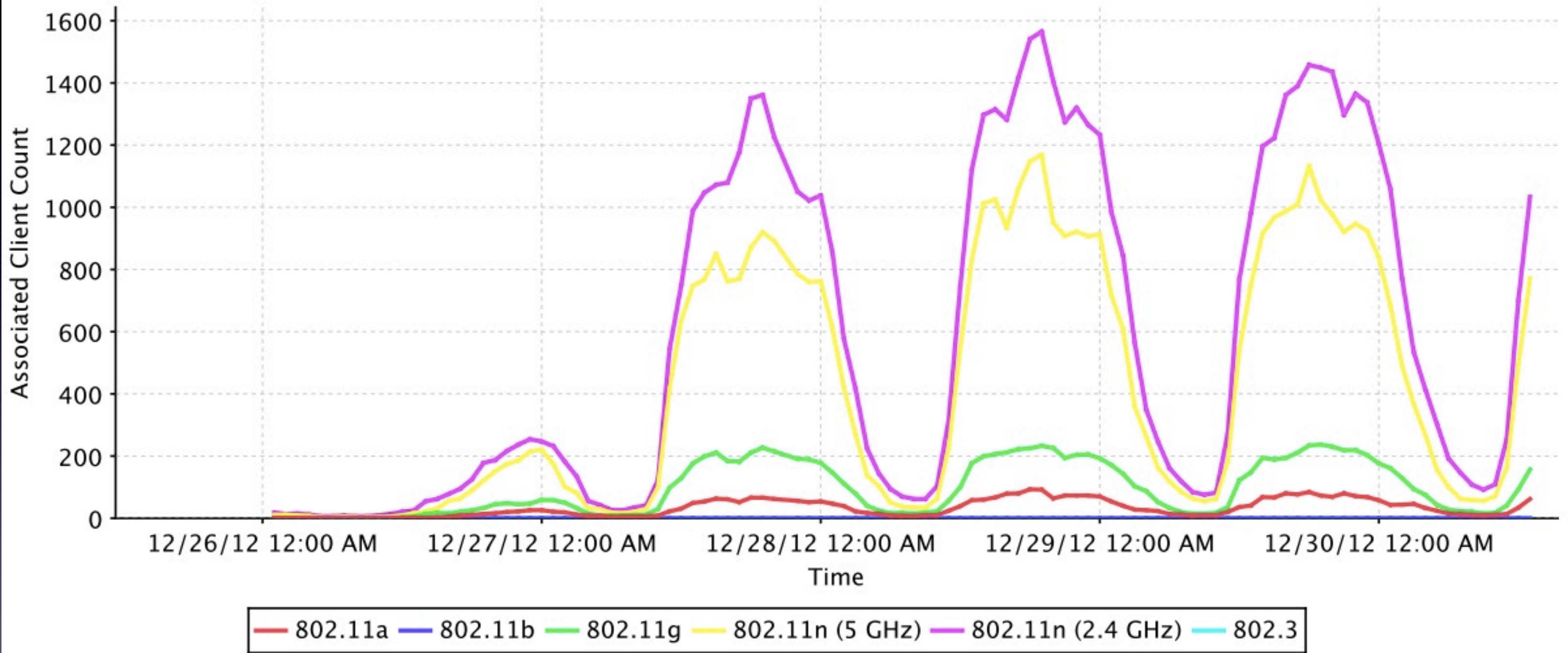


Wireless

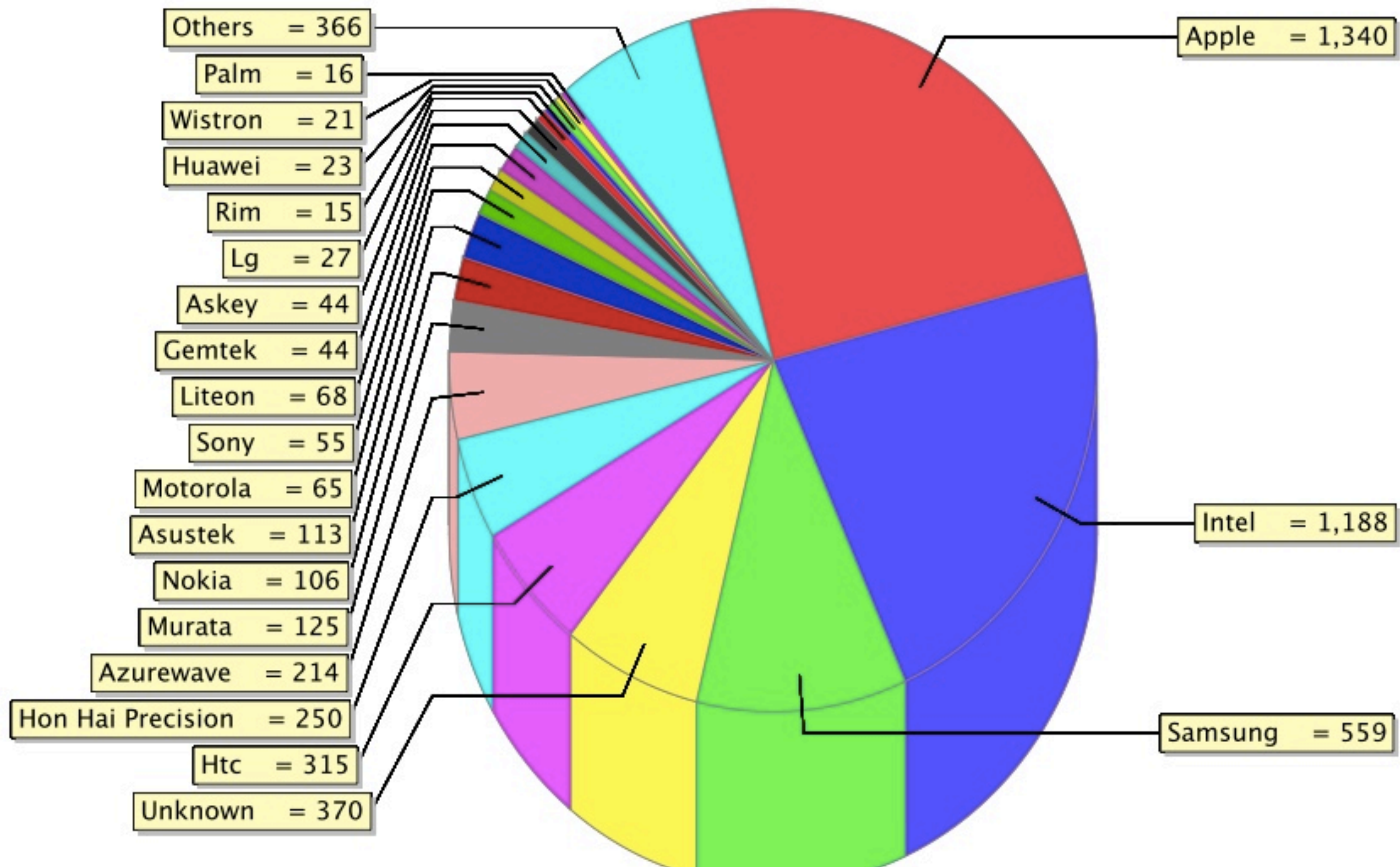
- ~70 APs
- Bigger Building
- 3059 concurrent Peak Users
- 8676 unique devices seen
- Ages 0-99+



Client Count Distribution of All Protocols





Clients by Vendor



General Info

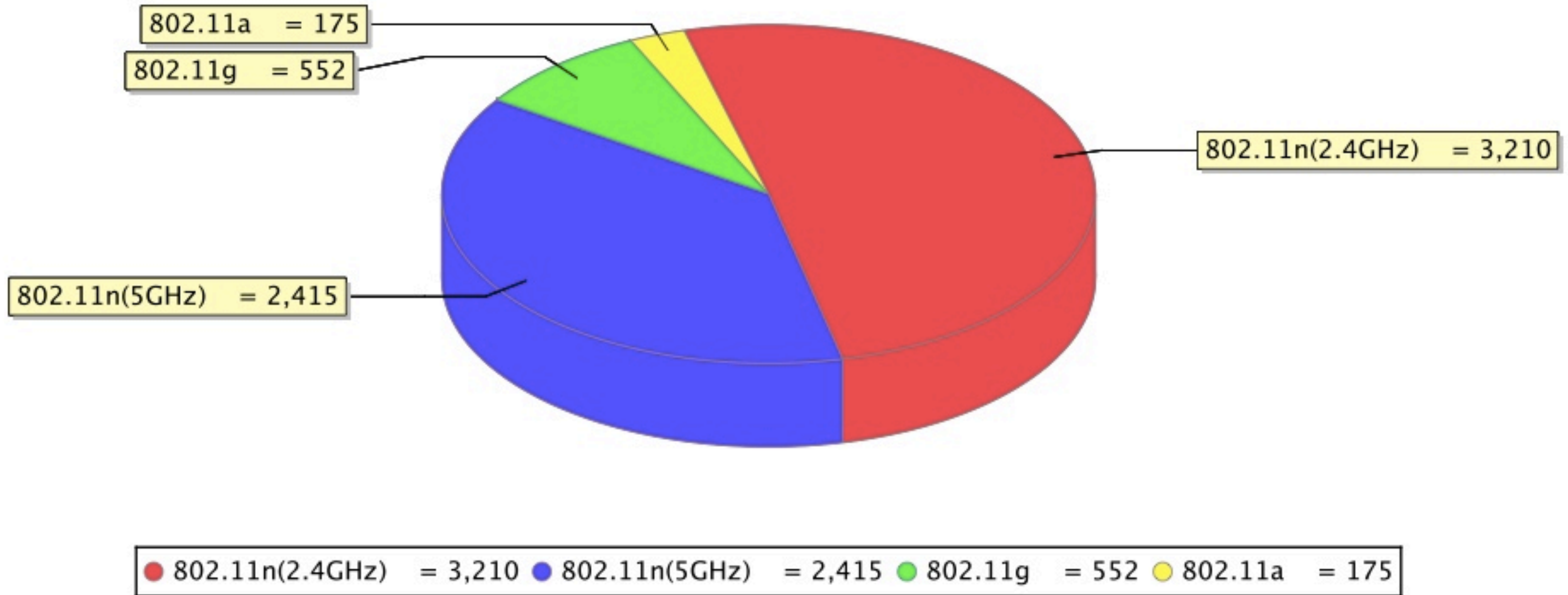


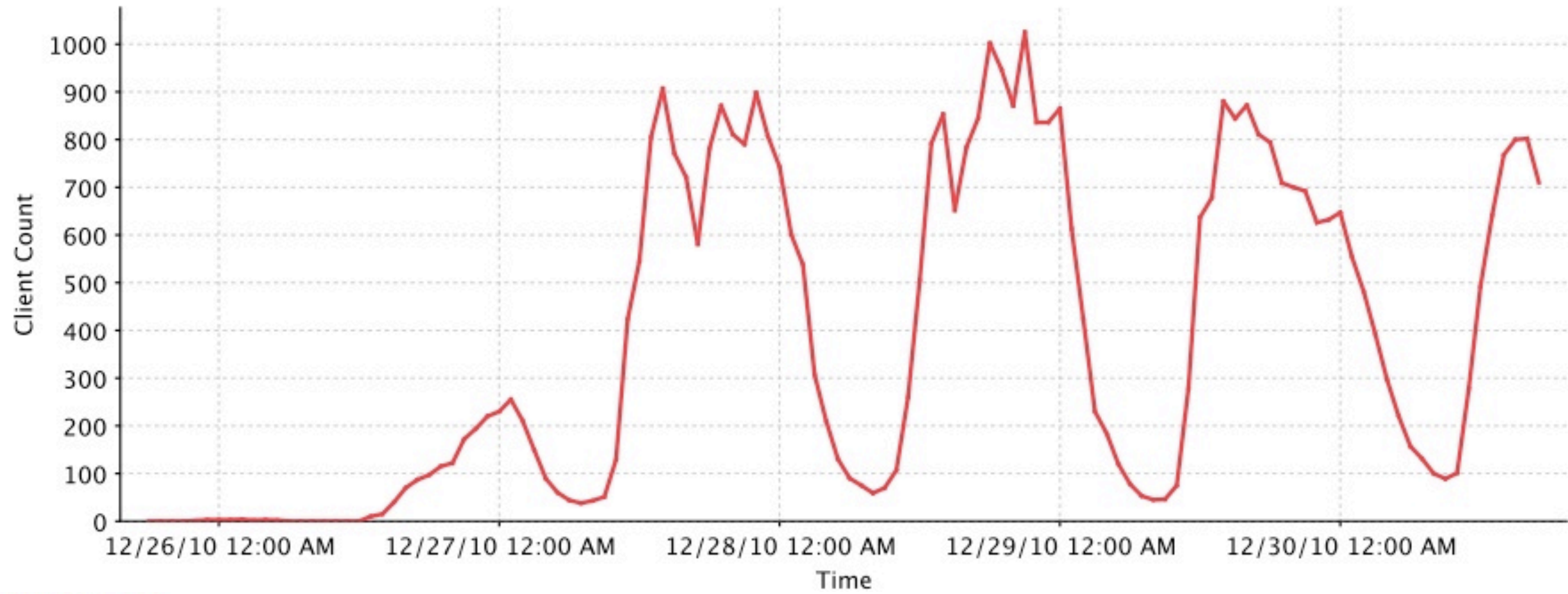
Failure Source	WLAN Controller wlc01-29c3/151.217.192.10
Acknowledged	false
Category	Controller
Created	December 28, 2012 2:03:12 PM CET
Modified	December 30, 2012 2:14:04 PM CET
Generated By	Controller
Severity	 Critical
Previous Severity	 Critical

Messages

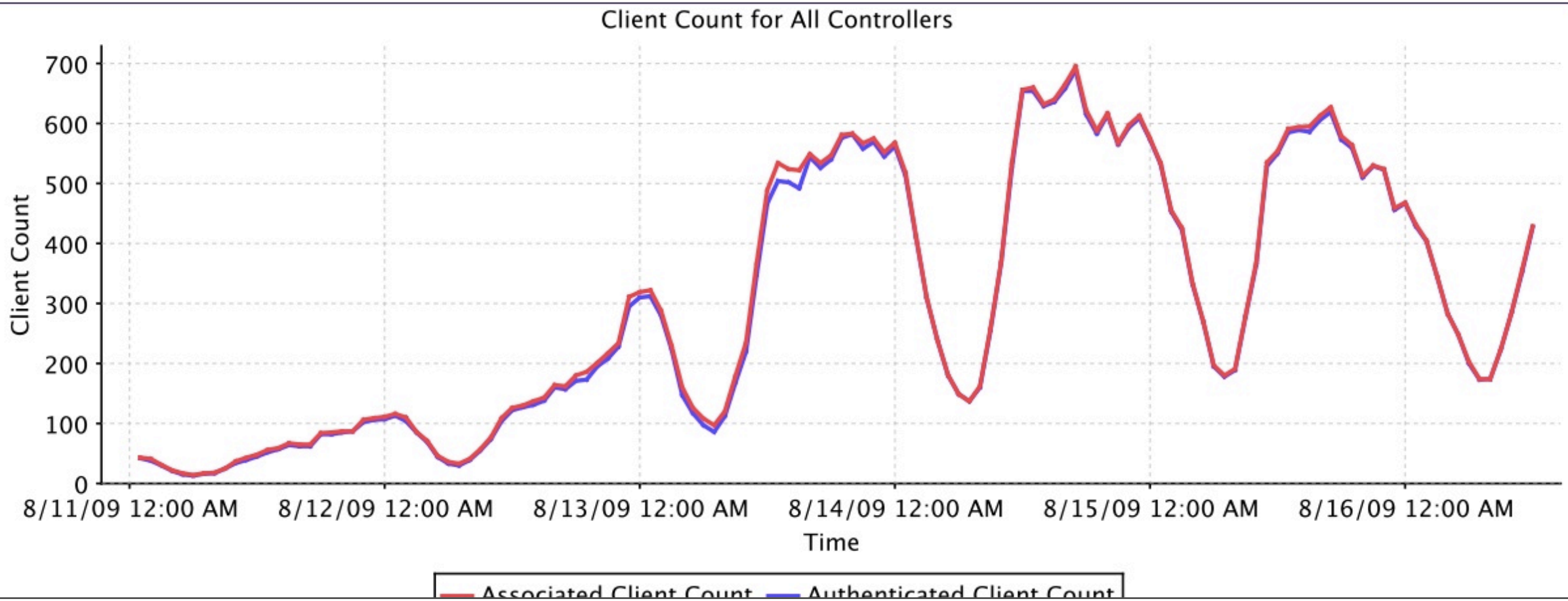
CPU Receive Multicast Queue is full on Controller '151.217.192.10'.

Clients by Protocol



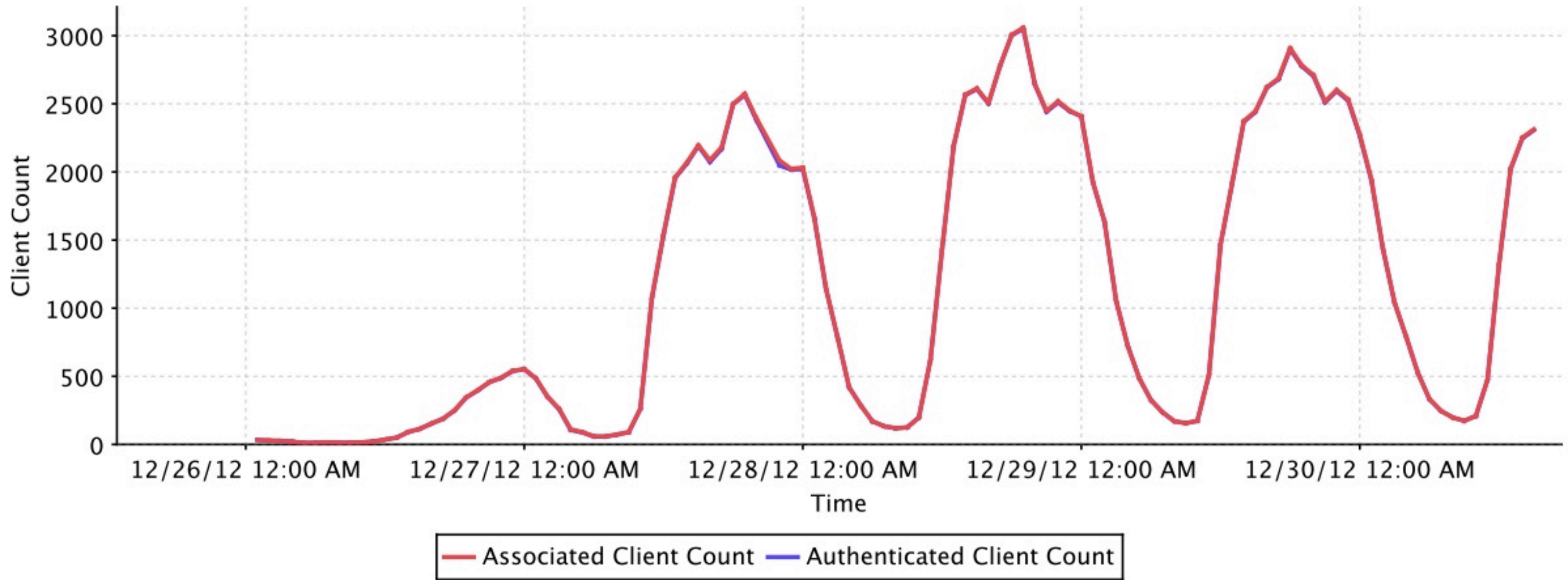


Client Count



Associated Client Count Authenticated Client Count

Client Count for ROOT-DOMAIN



Colo

- Better Hardware this year
- 20GE Link almost full



NOG Tisch
-ONLY- (e ♀)

Abuse

- No real abuse cases
- 2 Calls (all satisfied by blackholing)

N.O.C.
:HELP:DESK



hamburg cch



Kempston West End

Search Results

s/berlin/hamburg/;

s/hamburg/miltonkeynes/? WTF?

1 mi
2 km

©2012 Google - Map data ©2012 Google



Geolocation

- Geolocation seems to use a variety of methods, including:
 - WIFI AP BSSID (i.e. MAC address)
 - IP address of host
- Many APs here were last used at EMFCamp in September 2012 - Milton Keynes, UK
- IP address geoloc is important - media rights, security
- More work needed in this area

The screenshot shows a Windows Phone weather application interface. At the top, there's a status bar with various icons and the time 13:19. Below that, the app title is "Forecast" with a search icon and a refresh icon. The main content area is divided into several sections:

- Warnings:** A yellow warning icon with an exclamation mark.
- Location:** "Willen" with a star icon, and "Observations from Bedford" below it.
- Temperature:** A large "6°" with a thermometer icon, and "m 5° C" and "M 8° C" below it. "feels like 3° C" is also displayed.
- Weather Condition:** A sun icon and the word "Sunny".
- Rain Probability:** A water drop icon with "3%" and "Rain probability" below it.
- Wind and Pressure:** "Wind 17/31mph SW", "Pressure 1008 hPa", "Very good visibility", and "80% humidity".
- Sunrise/Sunset:** "09:12" and "17:00" with sun icons, and "Waning Gibbous" with a moon icon.

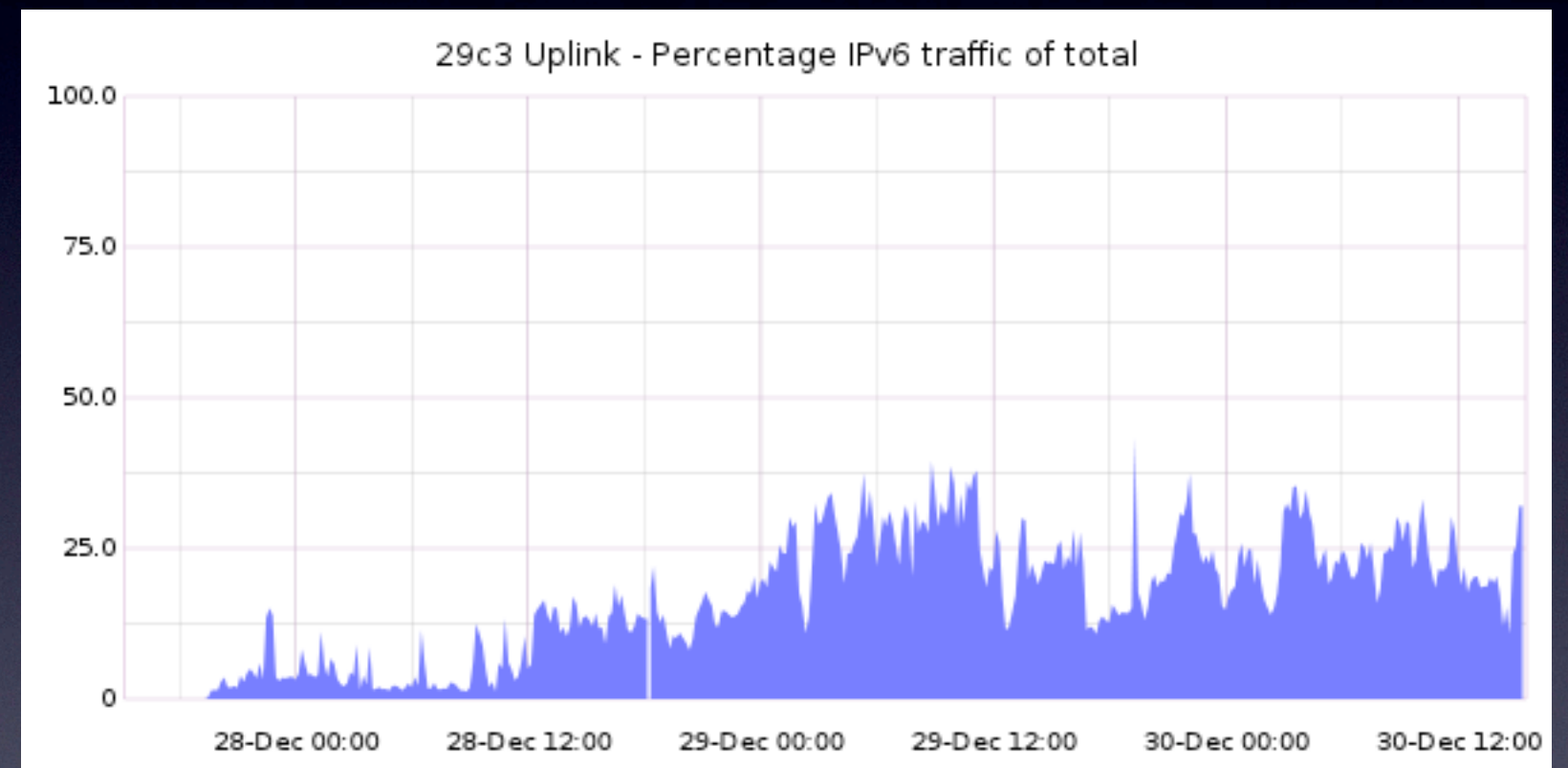
Below this, there's a "TODAY" section with a vertical label on the left. It shows two time slots: "16:00" with a sun and cloud icon, "8° C", and "Rain prob. 1%"; and "19:00" with a cloud icon, "8° C", and "Rain prob. 7%".

Below that, there's a "NEXT 48h" section with a vertical label on the left. It shows two time slots: "22:00" with a cloud icon, "8° C"; and "01:00" with a cloud icon, "9° C".

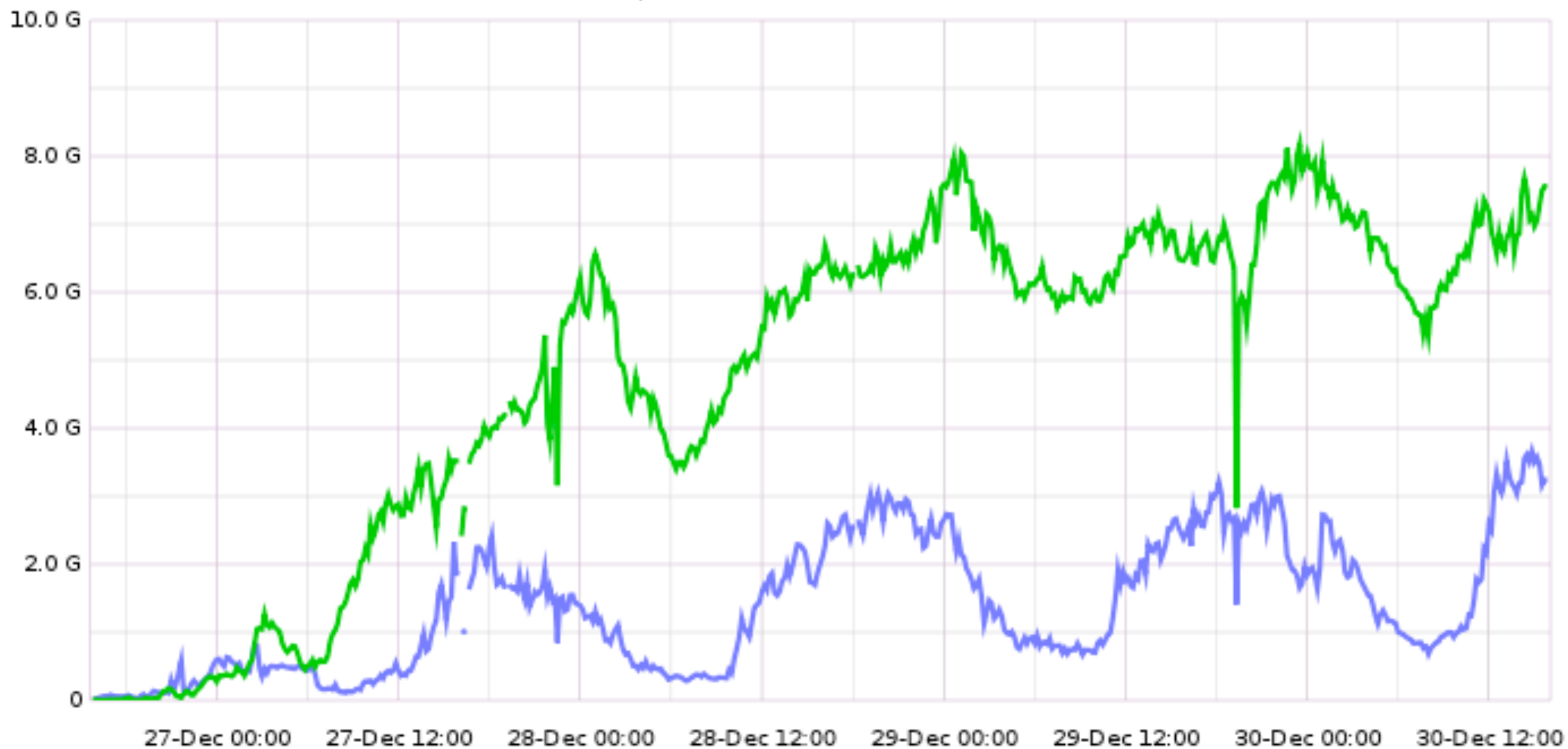
At the bottom, there's a navigation bar with four buttons: "Current", "Warnings", "Five days", and "Textual".

“IPv6 is important now”

- Post ‘IPv6 launch day’
- We were surprised at the amount of _inbound_ IPv6 - up to 40% of total
- Attributed to v6-enabled services like Google/Youtube/Facebook



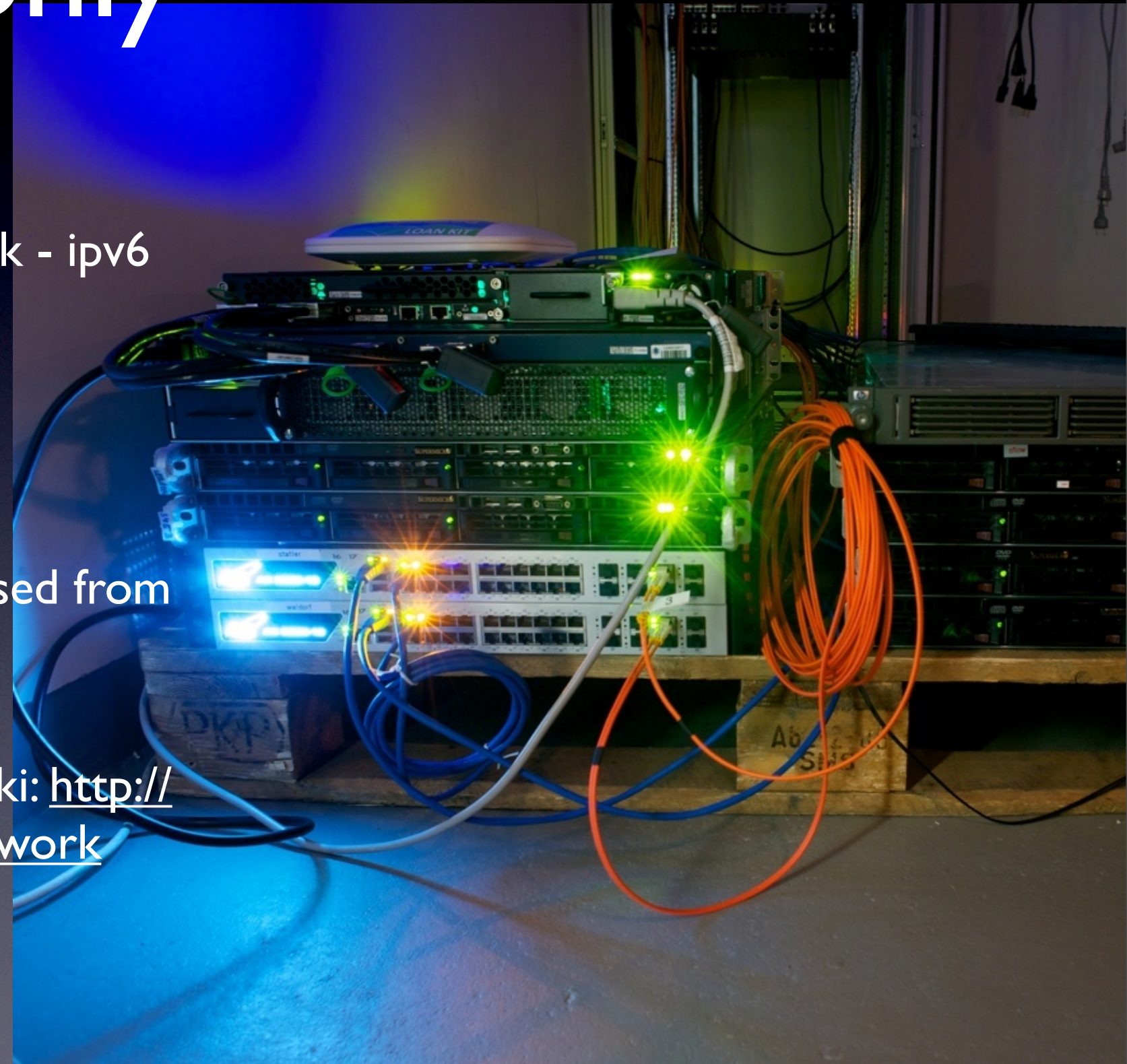
Uplink, total bandwidth



mx80-wendel.ae0.inoctets Current:3245217086.53 Max:3850764606.43 Min:13406968.29
mx80-wendel.ae0.outoctets Current:7562281431.25 Max:8228433637.60 Min:2257372.00

v6-only

- Deployed an experimental NAT64 network - ipv6 only!
- Using A10 equipment
- Port 1-4 on edge switches, and could be used from the wireless
- Thanks for interesting feedback on the Wiki: <http://events.ccc.de/congress/2012/wiki/Talk:Network>





Questions?