

HOW FAST IPv6 CAN GROW

Large increases in IPv6 can happen in a short time...

COMMON VIEWS ABOUT IPv6

- Many organisations seem to think:
 - We have plenty IPv4 so we don't need IPv6
 - ISPs can deploy IPv4 NAT
 - IPv6 deployment is slow
 - We have plenty of time
 - Etc...

FIRST BIG MISTAKE

- “We have plenty IPv4 so we don’t need IPv6”
- It doesn’t matter how much IPv4 you have
 - There is a global shortage of IPv4 addresses
 - The rest of the world is deploying IPv6
 - Your IPv4 supply is irrelevant: the world is moving to IPv6

SECOND BIG MISTAKE

- “ISPs can deploy IPv4 NAT”
- They might, but think about the consequences
 - It will be expensive to invest in larger and larger NAT devices
 - It will be almost impossible to separate abusers from users
 - No more GeoIP, rate limiting per user, ACLs etc etc etc...

THE BIGGEST MISTAKE

- “IPv6 deployment is slow”
- It is going faster than you think
 - What are the countries with the most IPv6?
 - How long did it take them to deploy?

COUNTRIES WITH MOST IPv6

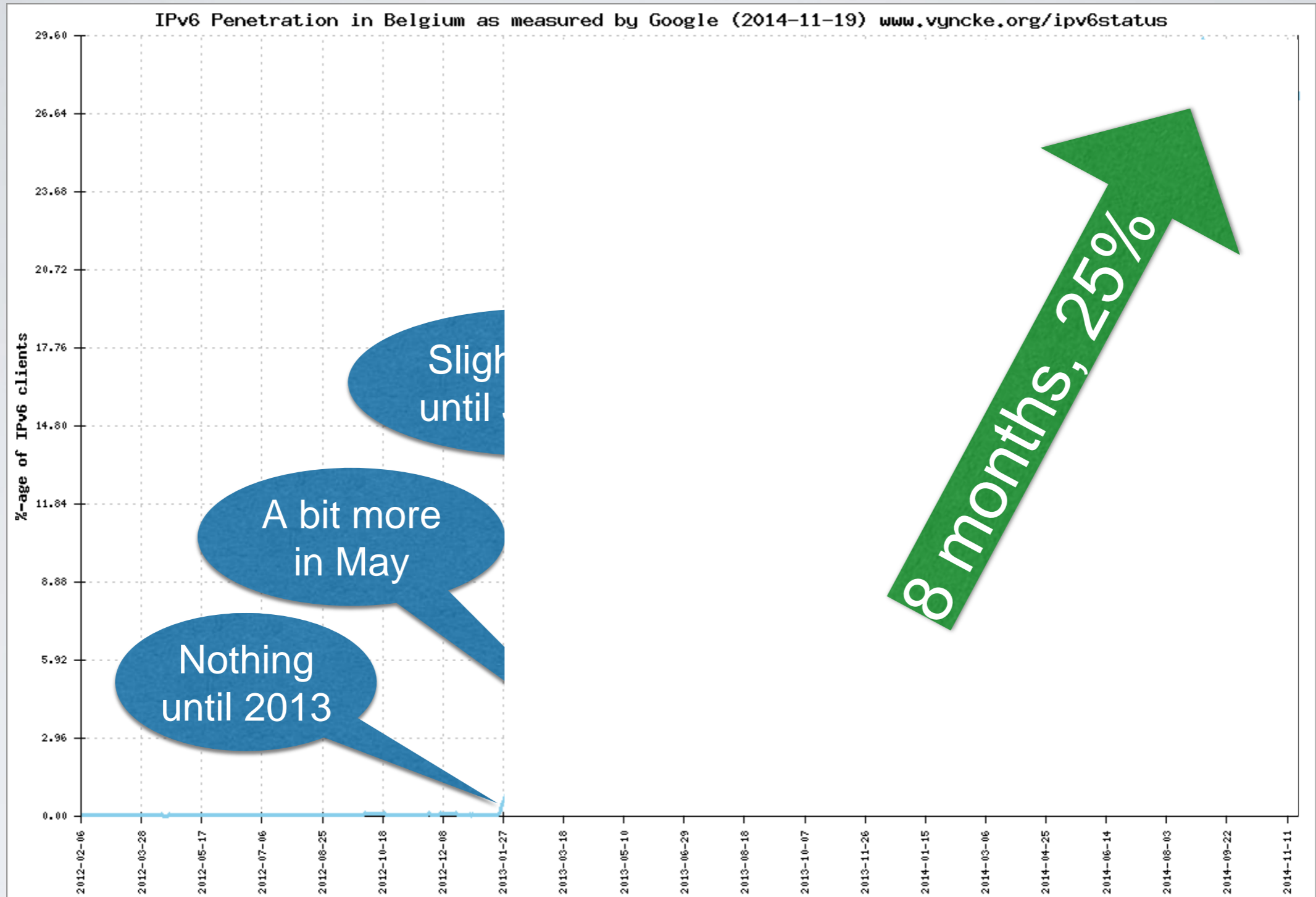
- Question to the room
 - When looking at the number of IPv6-capable users in a country, what percentage would you consider to be significant?
- Significant = worth taking into account when deploying services

COUNTRIES WITH MOST IPv6

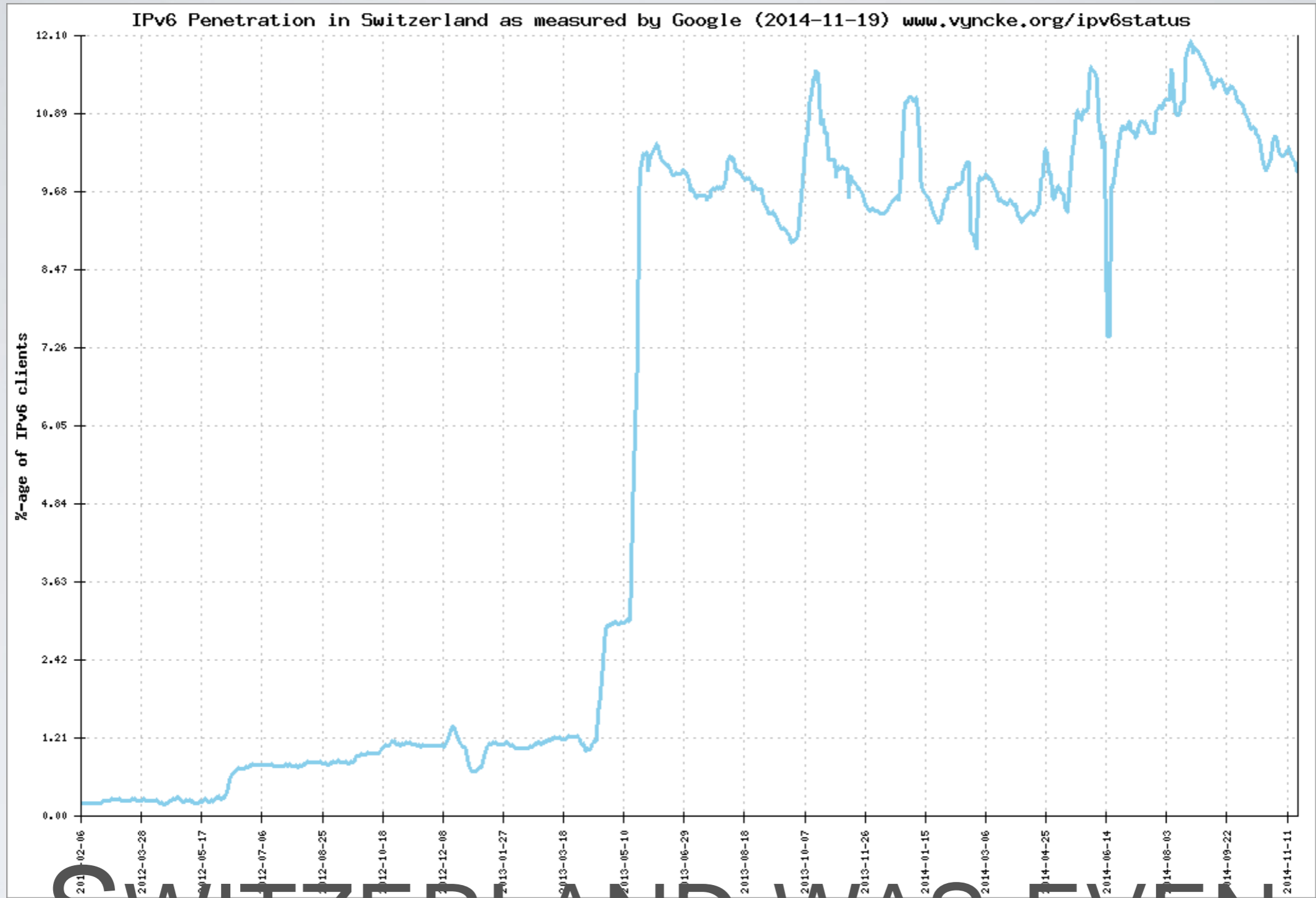
- Belgium • %33.6
- Germany • %15.5
- USA • %14.6
- Peru • %13.9
- Luxembourg • %10.7
- Switzerland • %8.4
- Czech Republic • %8.2
- Norway • %7.8

YES, $>1/3$ OF THE COUNTRY

- Belgium was not first to deploy IPv6 large scale
 - Romania was the first
 - Switzerland was the second
- In absolute numbers the USA has an enormous amount of IPv6 users
- How did that happen?



VERY QUICKLY

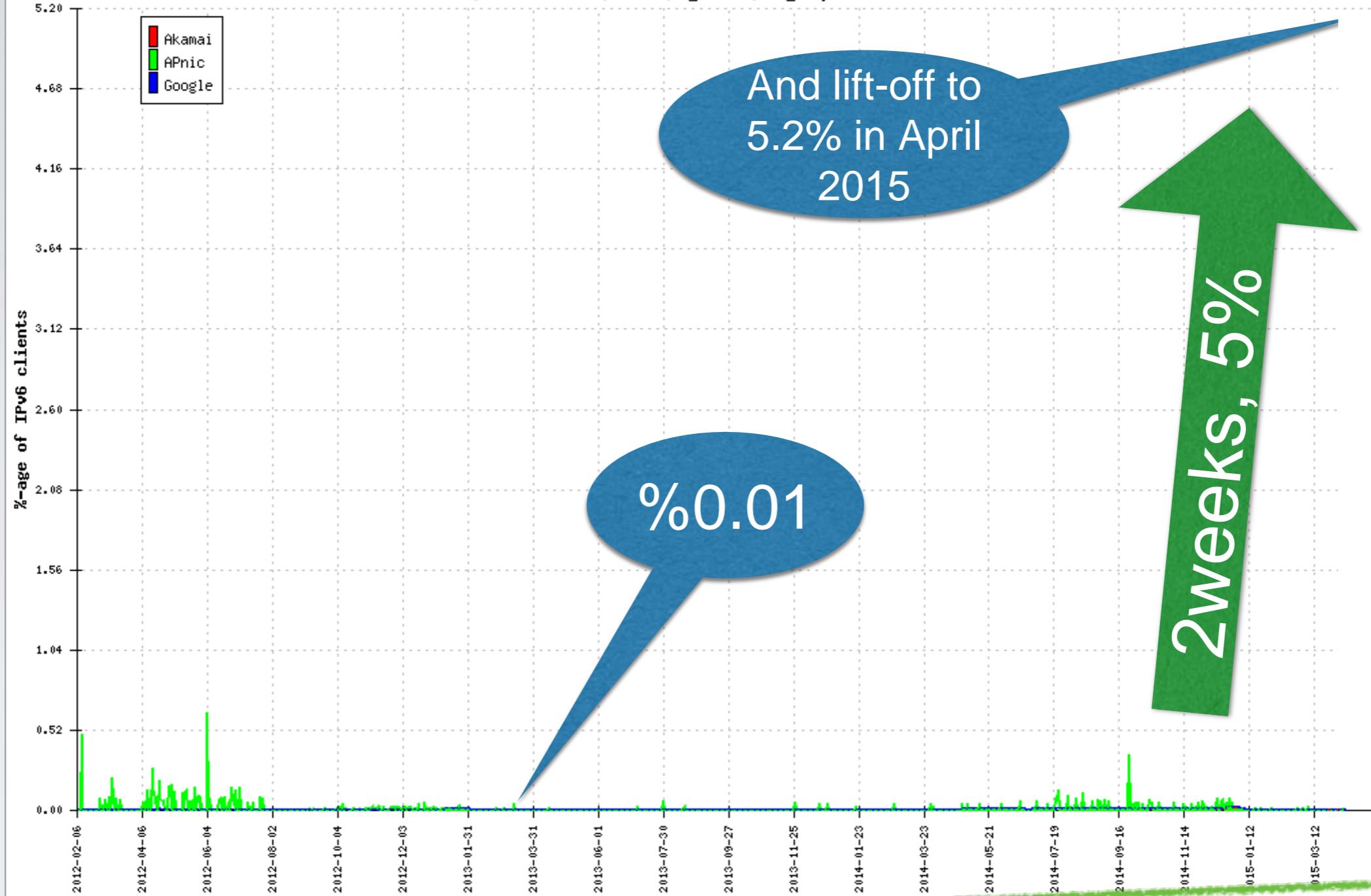


SWITZERLAND WAS EVEN SHORTER

WHAT HAPPENED HERE?

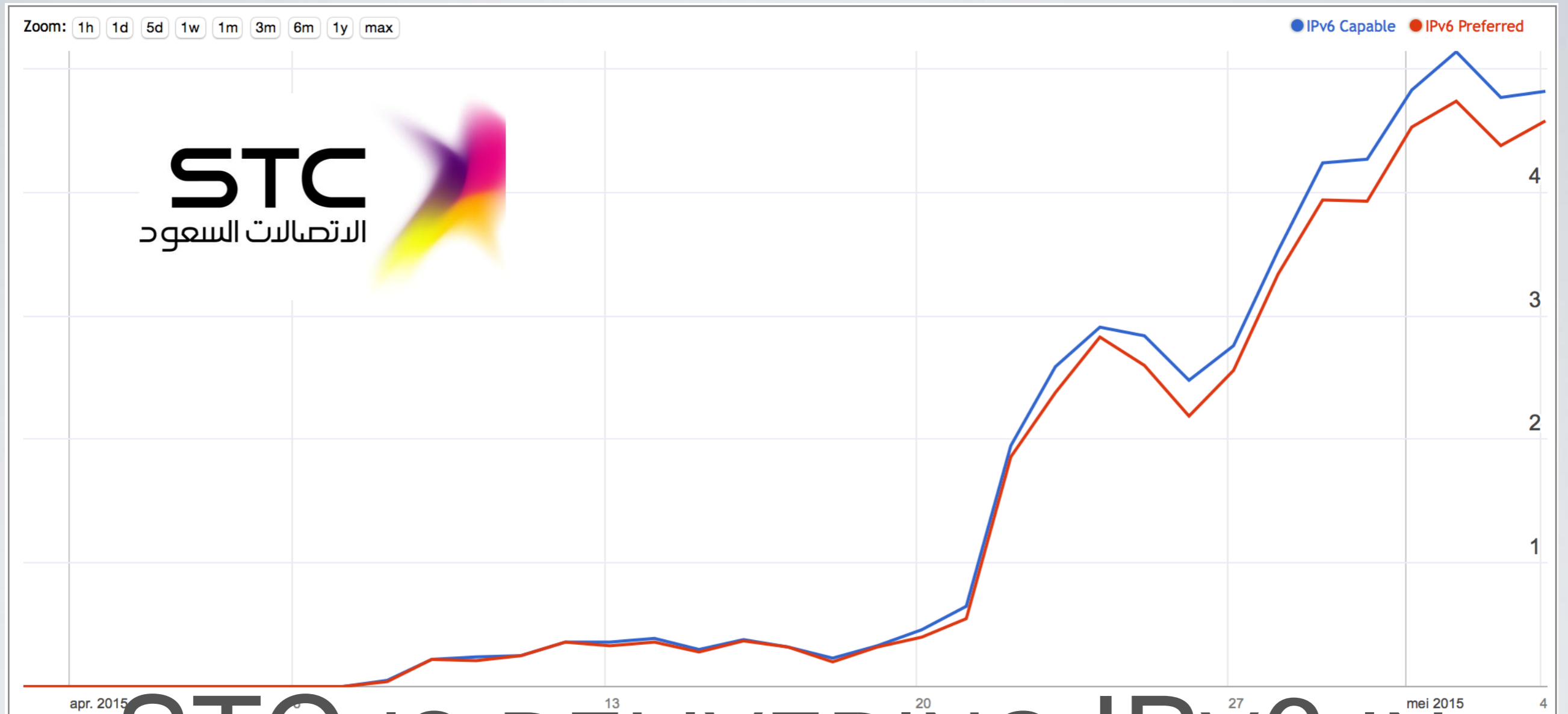
- This wasn't caused by a national event
- One or two large ISPs took their responsibility and deployed IPv6 to their customers

IPv6 Penetration in Saudi Arabia as measured by Akamai, APnic and Google
(2015-05-05) www.vyncke.org/ipv6status



KSA

DEPLOYS IPV6 AT HIGH SPEED



STC IS DELIVERING IPv6 IN KSA

First live IPv6 traffic seen on 7 April 2015

)many thanks to APNIC, George Michaelson and Geoff Huston for the measurement data(

IPv6 IS HAPPENING IN YOUR COUNTRY!

- A few large ISPs make a huge difference
 - Every ISP will run out of IPv4 addresses
 - There will be many IPv4 related problems
 - Deploy IPv6 so your customers won't suffer
 - Deploy IPv6 so your business won't suffer
 - Deploy IPv6 so your country won't suffer
- Make sure your business is not left behind!

CONCLUSION

- “We have plenty of time”
- Do you still think so?
 - How much time will you need?
 - If you deploy early you have time to learn, improve and test
 - That opportunity has almost disappeared already!
 - If the world around you already has IPv6 then your own IPv6 deployment will be stressful and has to be perfect

CONCLUSION

Start now!