"World IPv6 Day" Impact
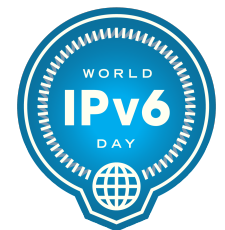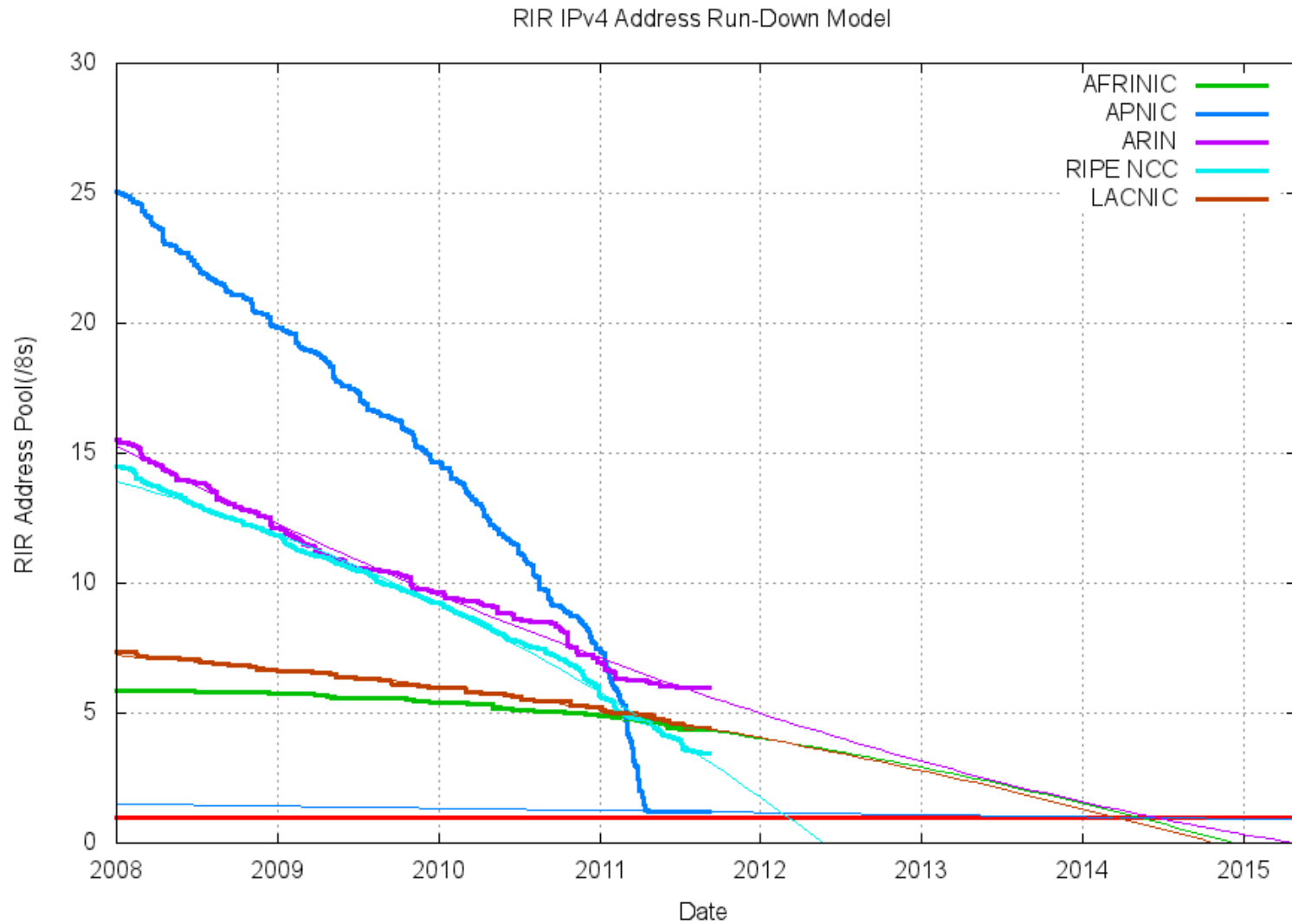
www.WorldIPv6Day.org

SANOG 18
8-16 September 2011
Pokhara, Nepal

Phil Roberts, Technology Programme Manager
Presented by Anne Lord, Director of Chapters, Internet Society

Internet Society

What we all know - IPv4 is running out

RIR IPv4 Address Run-Down Model

Source: Geoff Huston (APNIC)

What was World IPv6 Day?

For 24 hours on 8 June 2011 (00h00-23h59 UTC) Facebook, Google, Yahoo! and more than 1000 other websites turned on IPv6 access on their website (eg. *www.companyname.com***)**

Goals:

- **To get Internet service providers, hardware makers, operating system vendors, web companies and others to prepare their services for IPv6**

- **Understand what issues still need to be addressed to ensure a successful transition to IPv6 as IPv4 addresses run out.**

While there have been similar notable efforts, World IPv6 Day was the first global, real-world "test-flight" of IPv6, and the largest ever.
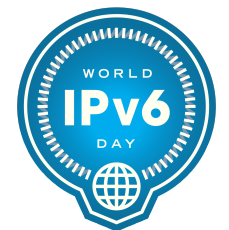
Why "World IPv6 Day"? And the Impacts?

- **Breaking the 'chicken-and-egg' problem of IPv6 deployment – now networks clearly see that content is getting there**

- **Improving IPv6 connectivity by understanding outstanding issues faced by a small percentage of users (but significant numbers for large content providers) – more fixes underway**

- **Providing a target date for already planned IPv6 rollouts – people definitely responded to having a date**

- **Spurring organizations to create a plan for rolling out IPv6 – being like Google, Facebook, and Yahoo! is important**

- **… - created customer demand for vendors, cdns, isps**

- **Catalyzing the kind of collaboration that the Internet has relied upon through its history – people noticed that the Internet industry collaborated to advance something that is important for the overall long term health of the Internet**
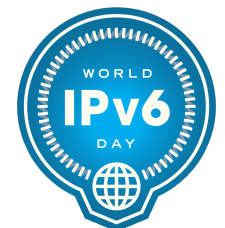
Who turned up IPv6 on June 8?

www.google.com

www.facebook.com

www.youtube.com

www.yahoo.com

www.blogspot.com

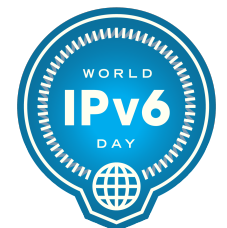www.yahoo.co.jp (#12)

www.bing.com (#21)

www.microsoft.com (#25)

www.bbc.co.uk (#38)

www.cnn.com (#48)

www.aol.com (#55)

And many many more….

Local Events in Asia Pacific around June 8

Australia, China, Hong Kong, India, Japan, Malaysia, Pacific Islands, Philippines, Pakistant, Sri Lanka, Taiwan, ...

- Press conferences

- Trainings/Seminars/workshops/conference

- Media coverage (newspaper articles, interviews)

- "Keeping a watch"

- Local resource list

ISOC Chapters worldwide were fantastic partners!

Activities by Australia Chapter, Belgium Chapter, Hong Kong Chapter, Mauritanian Chapter, India Delhi Chapter, Sri Lanka Chapter, Swedish Chapter, PICISOC, Philippines Chapter, Netherlands Chapter, New York Chapter, Portugal Chapter, Japan Chapter (rejuvenating)
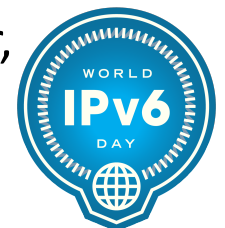
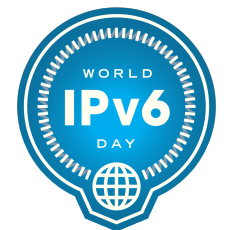# Hosting companies added thousands of domains, addressing the long tail of websites

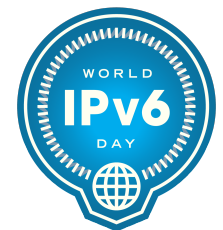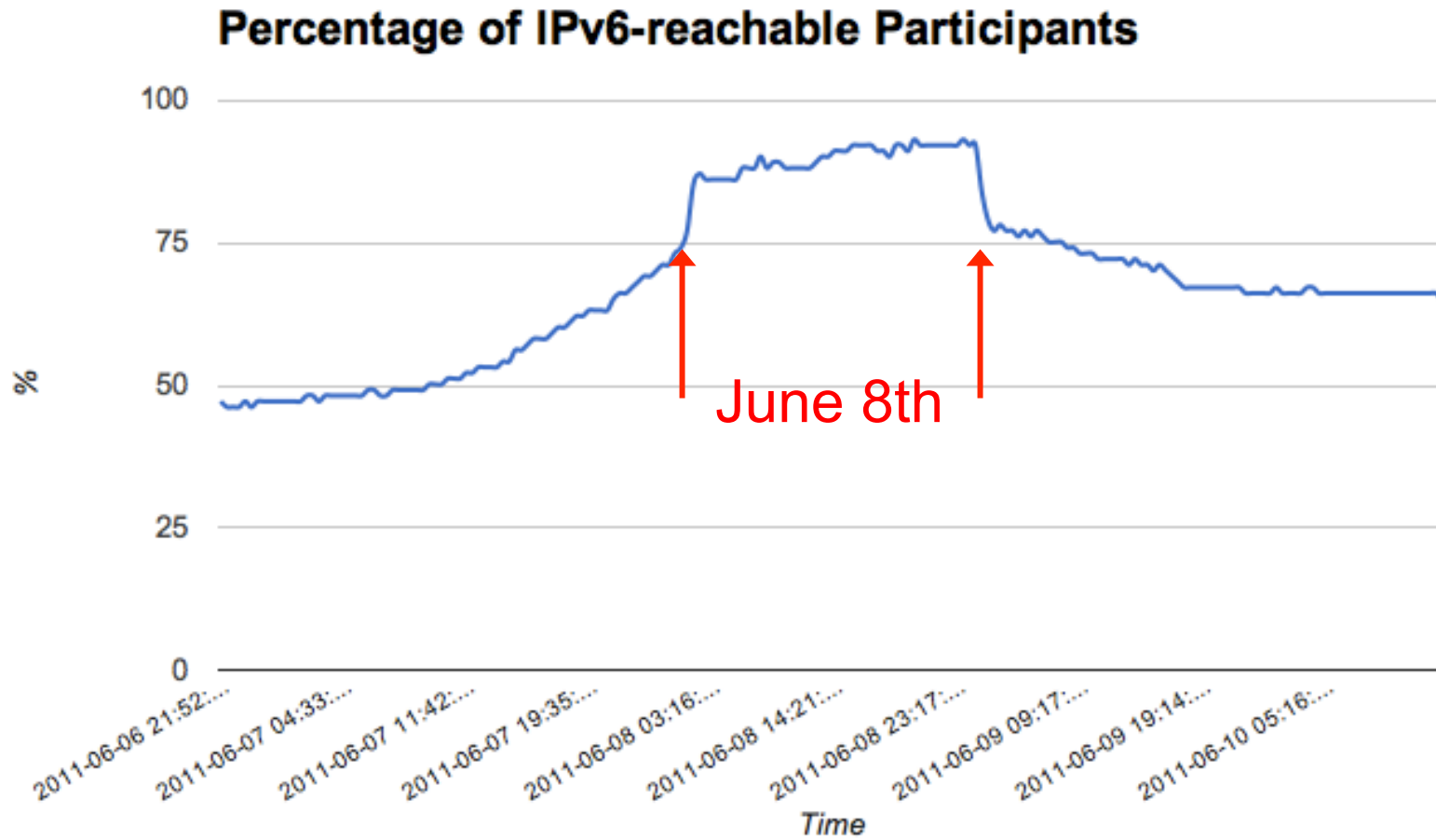www.host.md (@4500 - permanent)

www.task.com.br (@7000 – left on)

www.df.eu (@700,000 - 4 trouble tickets, left on)

www.strato.de (@4,000,000 – left on)

… others with 1000s and 10000s of thousands

Participating Websites Graph

Documenting Success

- **Improved connectivity**

  - Large websites were really aware of this important aspect of June 8 and see the need to move forward with deployment

  - Documented through an IPv6 reachability dashboard

   http://www.worldipv6day.org/participants-dashboard/index.html

- **Increase IPv6 deployment**

  - Longer term goal permanently turning up IPv6

  - Some happened on the day; some will happen later as a result of World IPv6 day, some need more time

 - Roughly 2/3rds of participating sites who contacted us remain on IPv6

- **Traffic increased and remained higher**

  - Ripe Labs measured impact on IPv6 traffic

  - http://labs.ripe.net/Members/emileaben/measuring-world -ipv6-day-long-term-effects
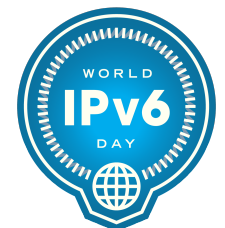
Broad observations

- **No large scale breakage**

- **For 24 hours some people (some websites and some end users?) could ignore things**

- **DDOS fears did not pan out**

- **Difficult for some in financial sector to join in**

- **Low numbers of visitors**

- **Work remains to be done… priorities?**
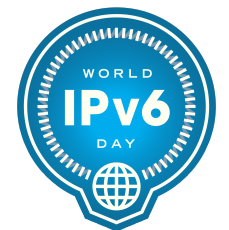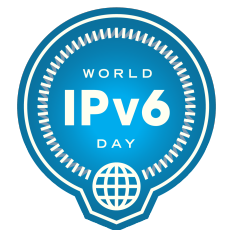
Future Impacts - What's needed?

Websites

• More websites need to enable IPv6 permanently

• Really large websites are still somewhat inhibited by phantom IPv6 connectivity - patches coming

Access

• There are still very few access networks with reliable IPv6 connectivity.

Industry

• Industry wide collaboration is still needed to enable quality IPv6 deployment throughout the Internet

• Another "World IPv6 …. " event?

Links

World IPv6 Day website

http://www.worldipv6day.org/

List of Participants

http://www.worldipv6day.org/participants/index.html

IPv6 Enabled Websites

http://www.worldipv6day.org/v6-enabled-websites/index.html

Dashboards (ISOC, US Govt, RIPE NCC, Akamai, Arbor)

http://www.worldipv6day.org/participants-dashboard/index.html
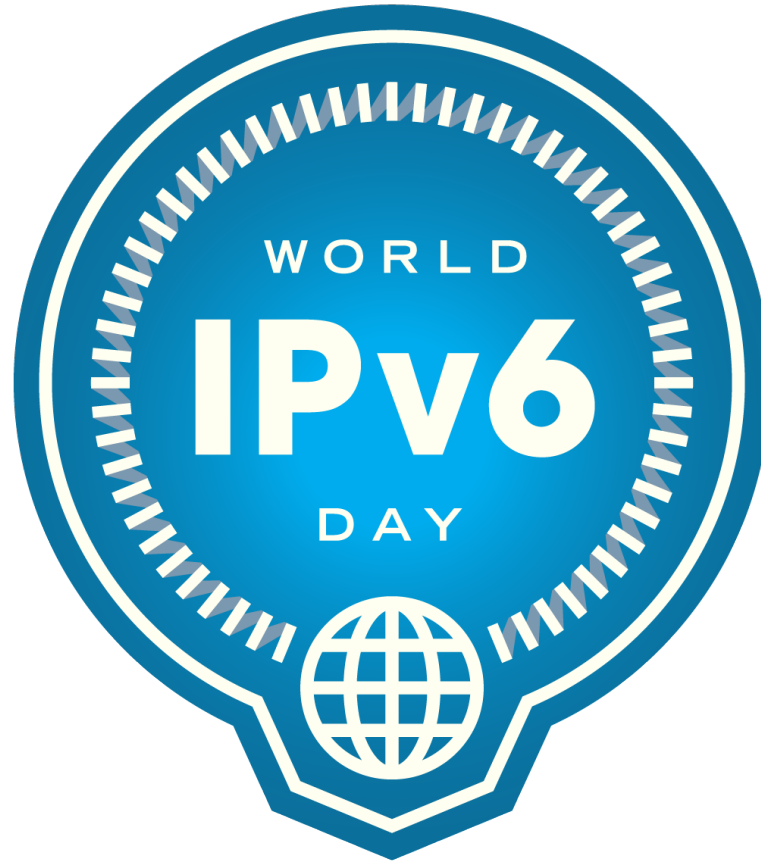
On Twitter

#WorldIPv6Day
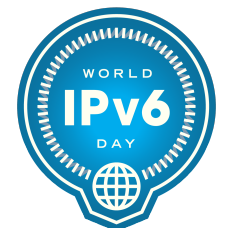
Dhanybhad!

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info@InternetSociety.org