



HURRICANE ELECTRIC
INTERNET SERVICES

World v6 Launch!

... will you be ready on June 6th 2012?

Hurricane Electric

IPv6 Native Backbone – Massive Peering!

2012 – A great year for IPv6

ICANN 43

San José, Costa Rica – 15th March 2012

Martin J. Levy, Director IPv6 Strategy

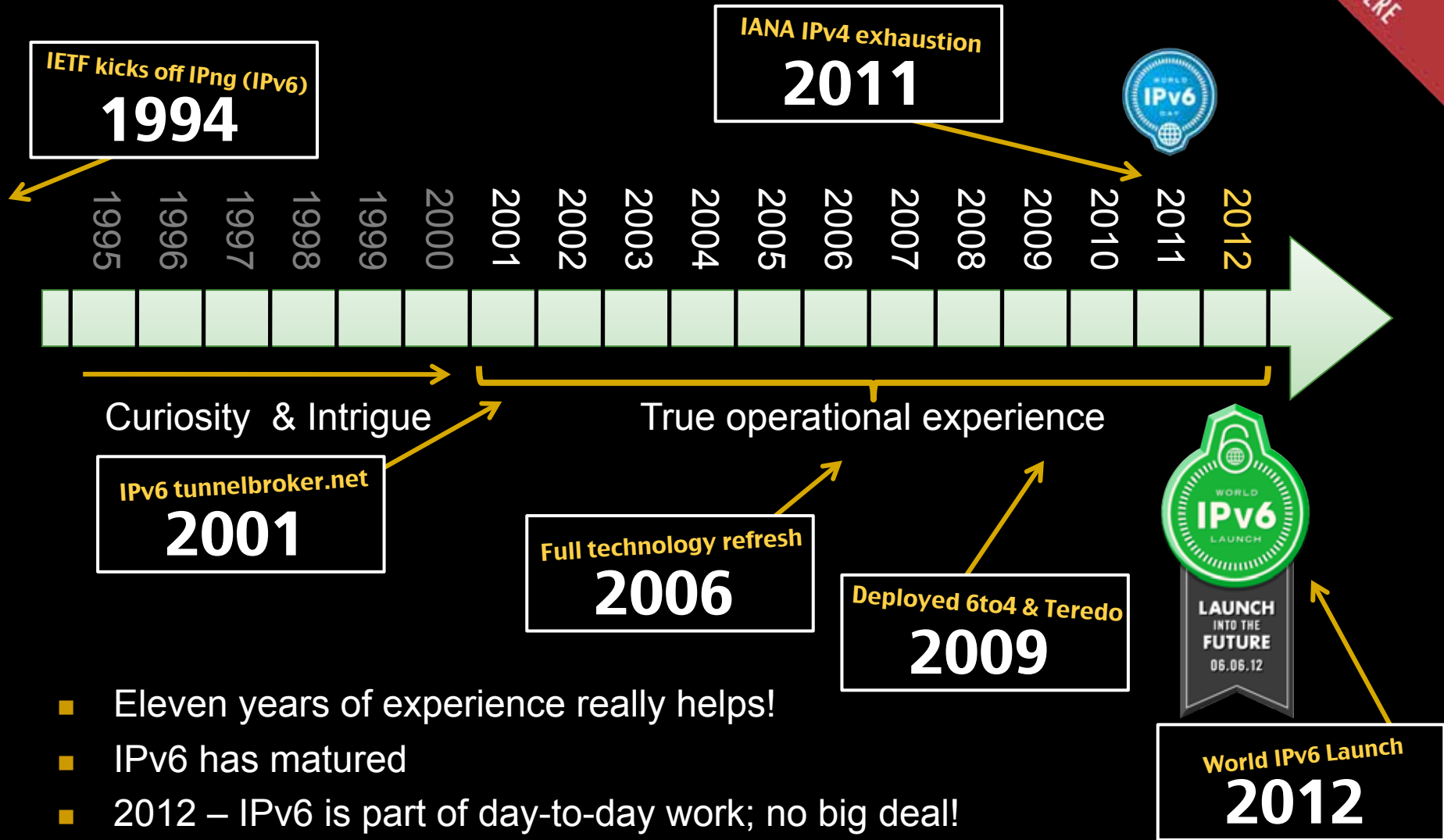
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INTRODUCTION

A quick history lesson ...

Hurricane Electric's 11 year experience with IPv6

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IPv6 METRICS

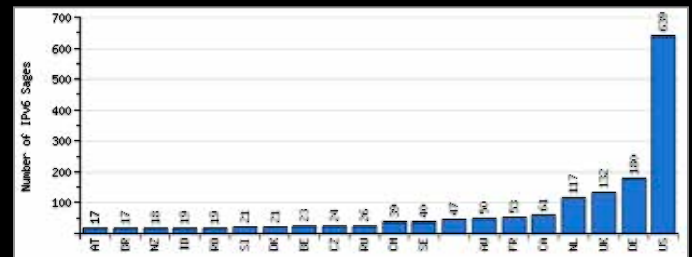
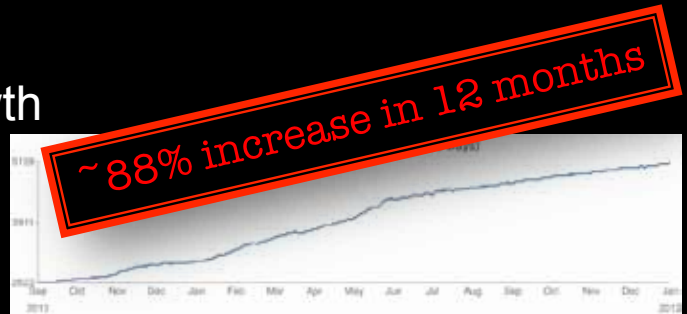
A very positive trend ...



Some of today's key global IPv6 metrics

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- IPv6 global routing table
 - 2010, 2011 and 2012 have seen solid growth
 - Increase to 12.7% of all ASNs
- DNS glue records
 - TLD's & ccTLD's doing well (266 out of 313)
 - Operators improving v6 performance
- Country code count
 - 149 countries and counting!
 - (Up from 91 in Jan 2010)
- Awareness and Training
 - Hurricane Electric IPv6 Certification up!



IPv6 growth on BGP tables

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<http://bgp.he.net/ipv6-progress-report.cgi>

Networks Running IPv6

We can measure the percentage of networks running IPv6 by comparing the set of ASes in the IPv6 routing table to those in the combined set of IPv4 and IPv6.

IPv4 and IPv6 RIBs Last Parsed: Sat Jan 21 01:08:07 PST 2012

IPv4 ASes: 40085

IPv6 ASes: 5047

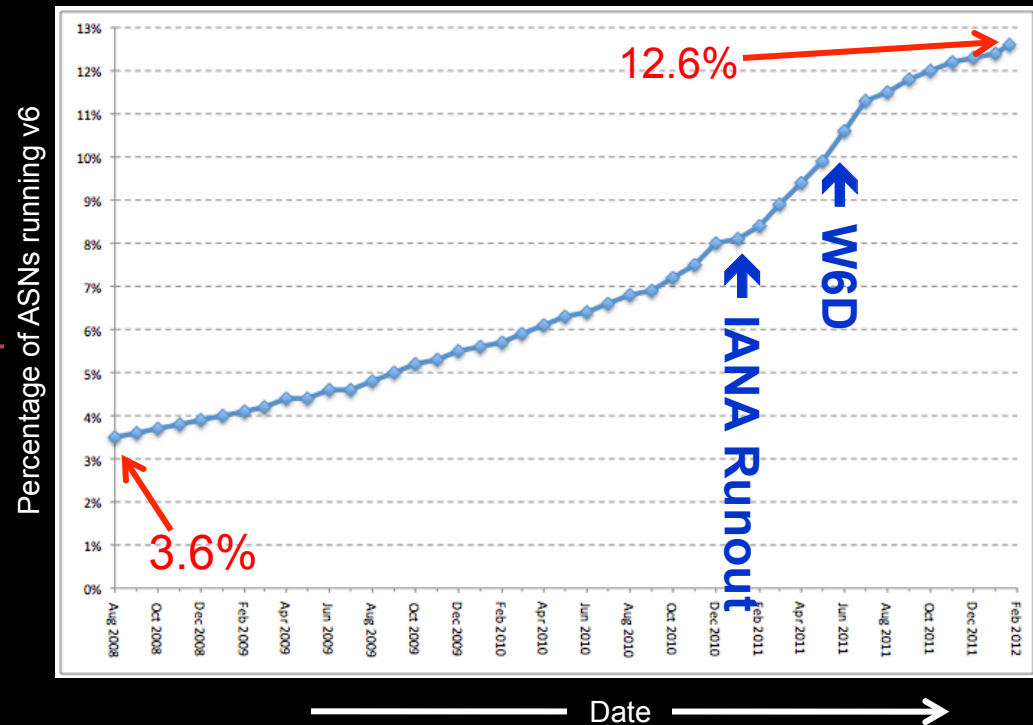
ASes using only IPv4: 35141

ASes using only IPv6: 103

ASes using IPv4 and IPv6: 4944

ASes using IPv4 or IPv6: 40188

Percentage of ASes (IPv4 or IPv6)
running IPv6: 12.6%



IPv6 routing/interconnect/peering

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http://bgp.he.net/report/prefixes#_prefixes



http://bgp.he.net/report/prefixes#_networks

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2011 & WORLD IPv6 DAY

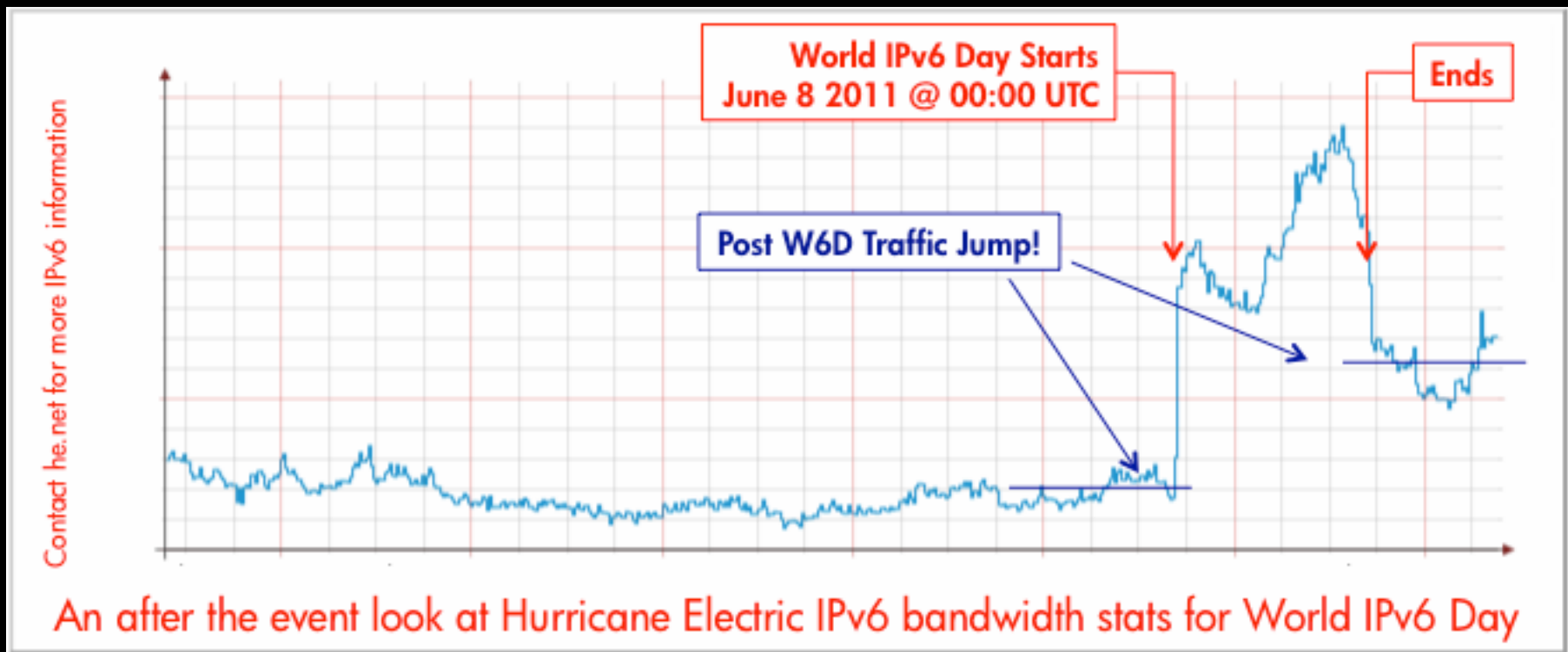


Every day is **IPv6 Day** at Hurricane Electric ...

World IPv6 Day – June 2011 (the close look)

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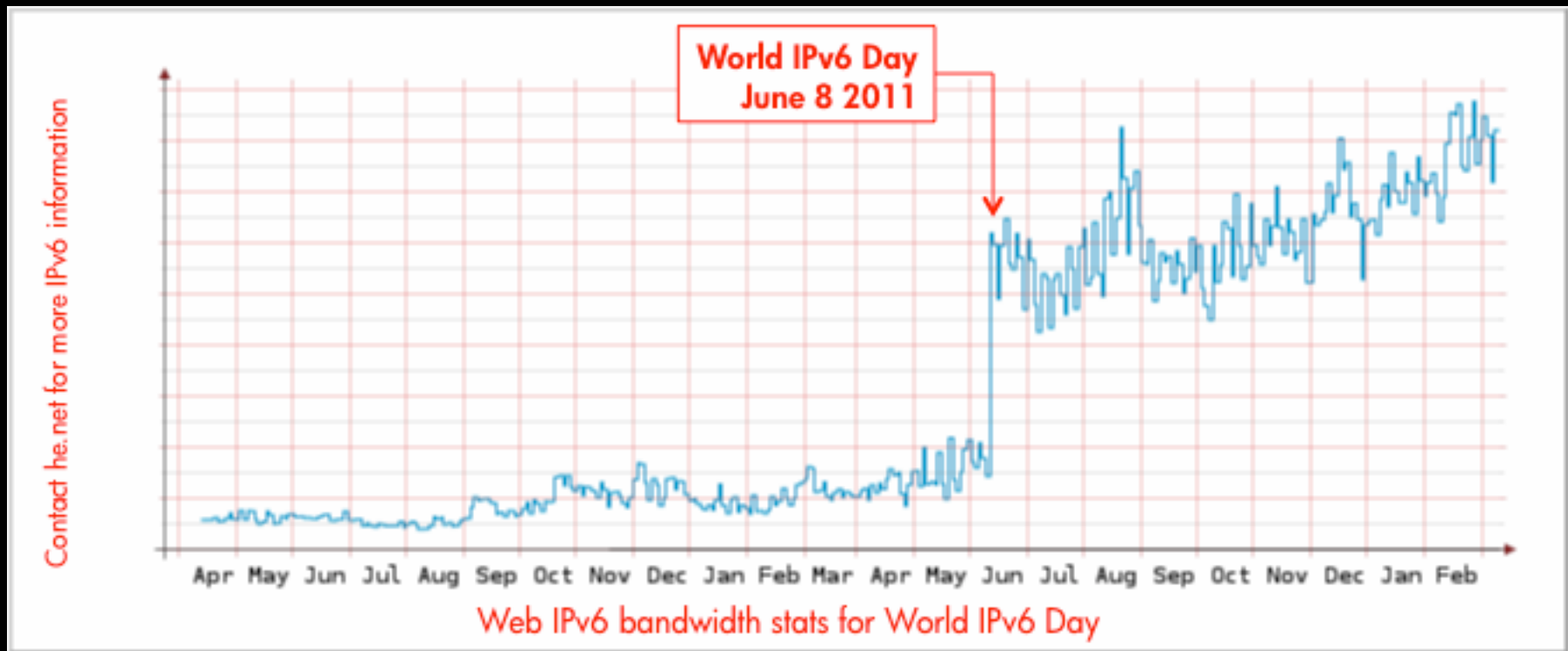
- Instant traffic at 00:00 UTC – 5X traffic peak



World IPv6 Day – June 2011 (the longer trend)

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- Real IPv6 traffic see during and after W6D



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ICANN41 THRU ICANN43

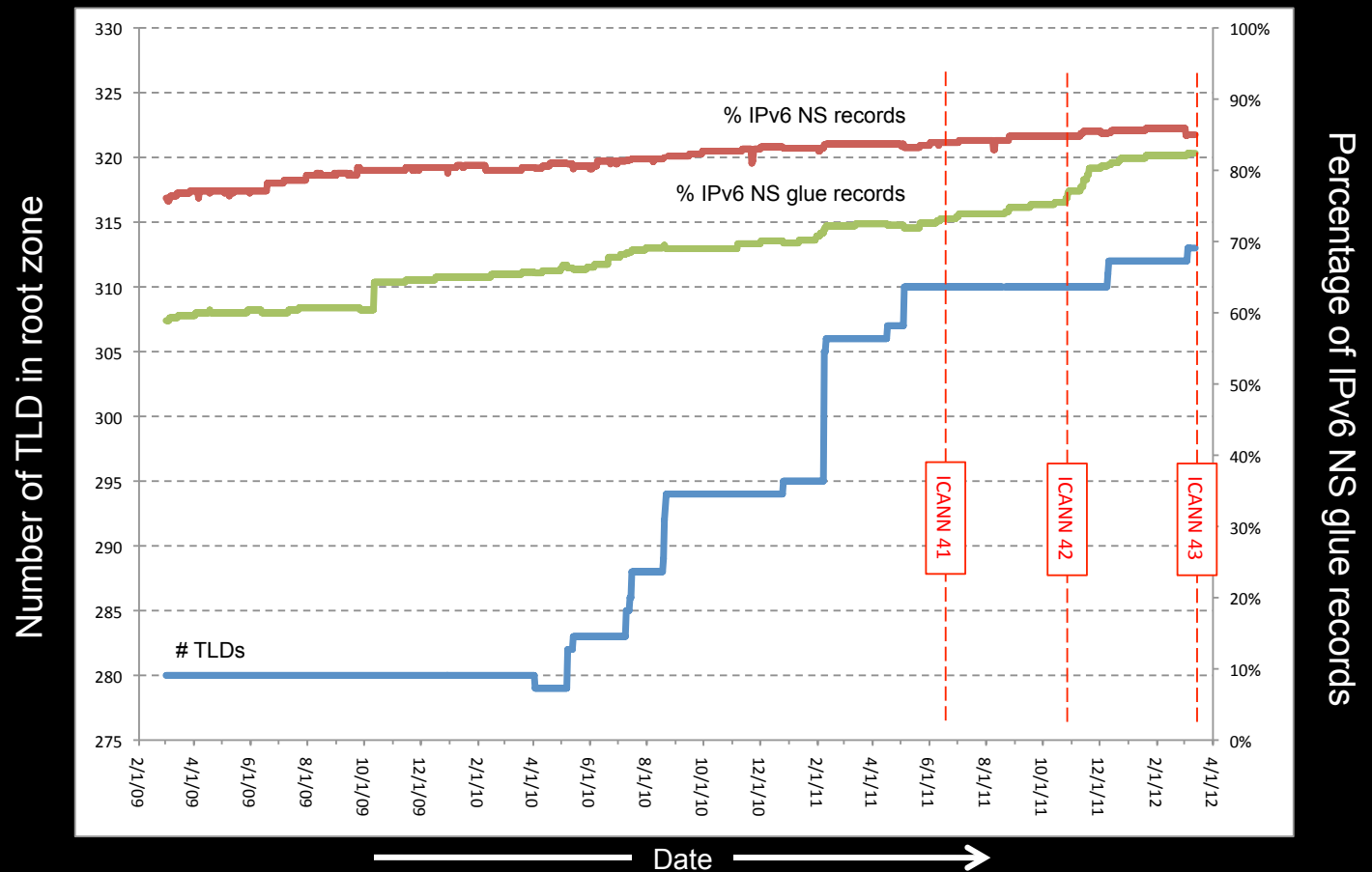
IPv6 DNS configuration for xTLDs – a quick review



IPv6 in the TLDs – by the numbers

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- 85.0% of TLDs have IPv6 enabled nameservers
- 82.4% of TLDs have IPv6 glue records installed in the root



IPv6 in the TLDs – who's missing?

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- IPv6 (ie: AAAA) NS glue records are missing for these TLDs

- .AW Aruba
- .BF Burkina Faso
- .BS Bahamas
- .BV Bouvet Island
- .CM Cameroon
- .COOP
- .MV Maldives
- .SJ Svalbard and Jan Mayen

- Any form of IPv6 (ie: AAAA) NS record is still missing for another 51 TLDs

- .AI .AX .BB .BD .BH .BJ .BL .BN .BO .CC .CK .CX .DJ .EH .FK .FO .GF
- .GM .HM .IQ .KP .KY .MF .MH .MP .MQ .NI .PF .PK .PW .SL .SR .ST .TD .TG .TL
- .TV .UM .UZ .VI .VU .WS .YE .ZW
- .مصر
- .فلسطين
- .الجزائر
- .jobs .mil .name .pro

- IPv6 glue records are fundamental to a fully functional dual stack IPv6 deployment.

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<http://www.worldipv6launch.org/>

2012 & WORLD IPv6 LAUNCH



Don't be left behind

World IPv6 Launch – June 6'th 2012

<http://www.worldipv6launch.org/>

- Do much more than last years W6D 24 hour test
- Turn on IPv6; leave IPv6 on; success!
- Primary focus on access networks; but also ...
 - Website Operators / Hosting Companies
 - Home Router Hardware Companies
 - ... and everything else
- IPv6 support in registries/registrars must be a focus!
 - Provide customers with IPv6 AAAA NS glue support
- IPv6 support should be fundamental within all Internet services

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<http://www.worldipv6launch.org/>

■ Google & Facebook statements:

For Google, World IPv6 Launch means that virtually all our services, including Search, Gmail, YouTube and many more, will be available to the world over IPv6 permanently. Previously, only participants in the Google over IPv6 program (several hundred thousand users, including almost all Google employees [PDF]) have been using it every day. Now we're including everyone.

The vast majority of users shouldn't notice ...

<http://googleblog.blogspot.com/2012/01/ipv6-countdown-to-launch.html>

“Last year's industry-wide test of IPv6 successfully showed that the global adoption of IPv6 is the best way to keep web devices communicating in the future. Permanently enabling IPv6 is vital to keeping the Internet open and ensuring people stay connected online as the number of web users and devices continues to grow.”

https://www.facebook.com/note.php?note_id=10150602344750676



World IPv6 Launch – June 6'th 2012

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<http://www.worldipv6launch.org/>

- What can you to help support World IPv6 Launch?
- Today?
 - Educate customers and offer AAAA NS record support
 - Enable IPv6 for existing web portal, parked domains, etc.
 - Enable IPv6 for existing nameservers
- Summer 2012?
 - Take advantage of the IPv6 press focus; promote yourself
- Afterwards?
 - Continue to support IPv6 services



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HURRICANE ELECTRIC

A very brief introduction ...



Hurricane Electric – IPv6 Global Network

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All Hurricane Electric POPs are full IPv6 Native routing and peering



IPv6 peering at all major peering points in US, Europe & Asia.
Private and public peering capacity at 10Gbps and above.





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