

15 December 11
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IPv6 Status and Transition

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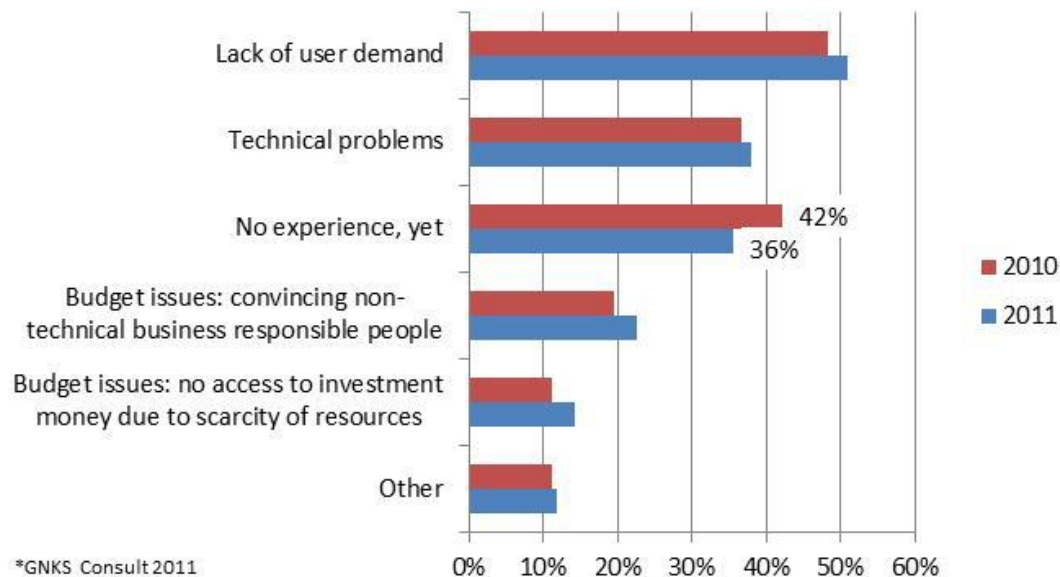
Agenda

- + US IPv6 Deployment Status
- + US IPv6 Transition
- + World IPv6 Day



Deployment Issues

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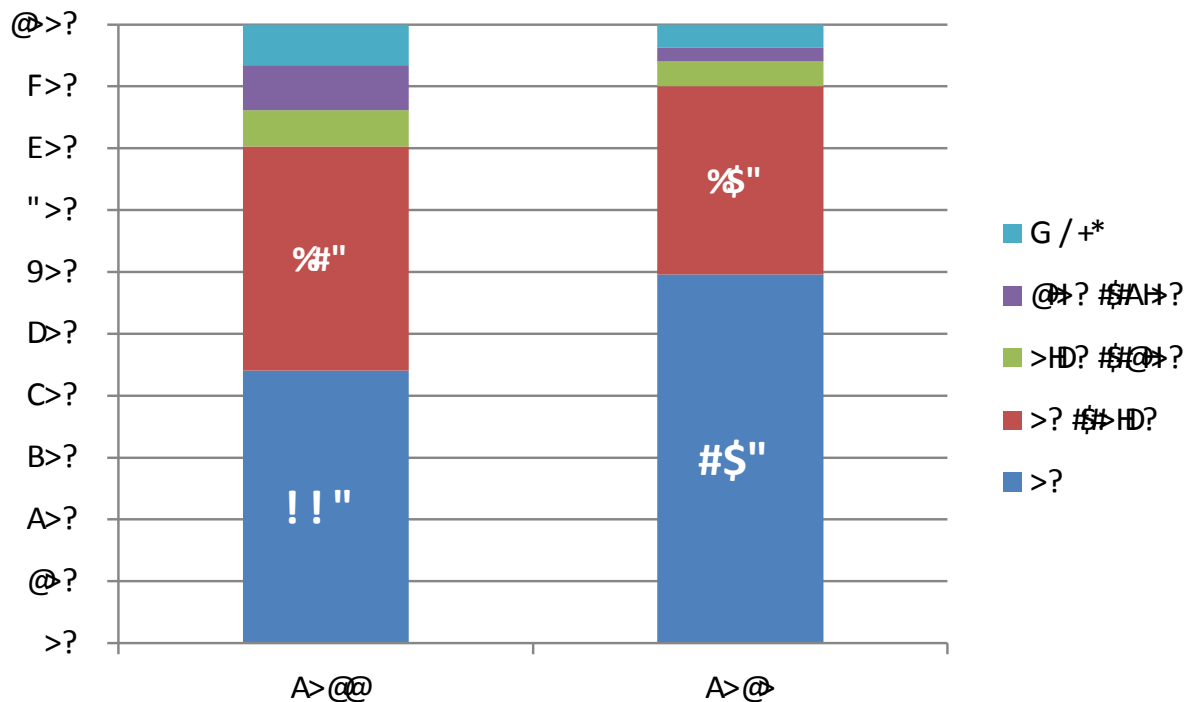


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ISP View (Global)

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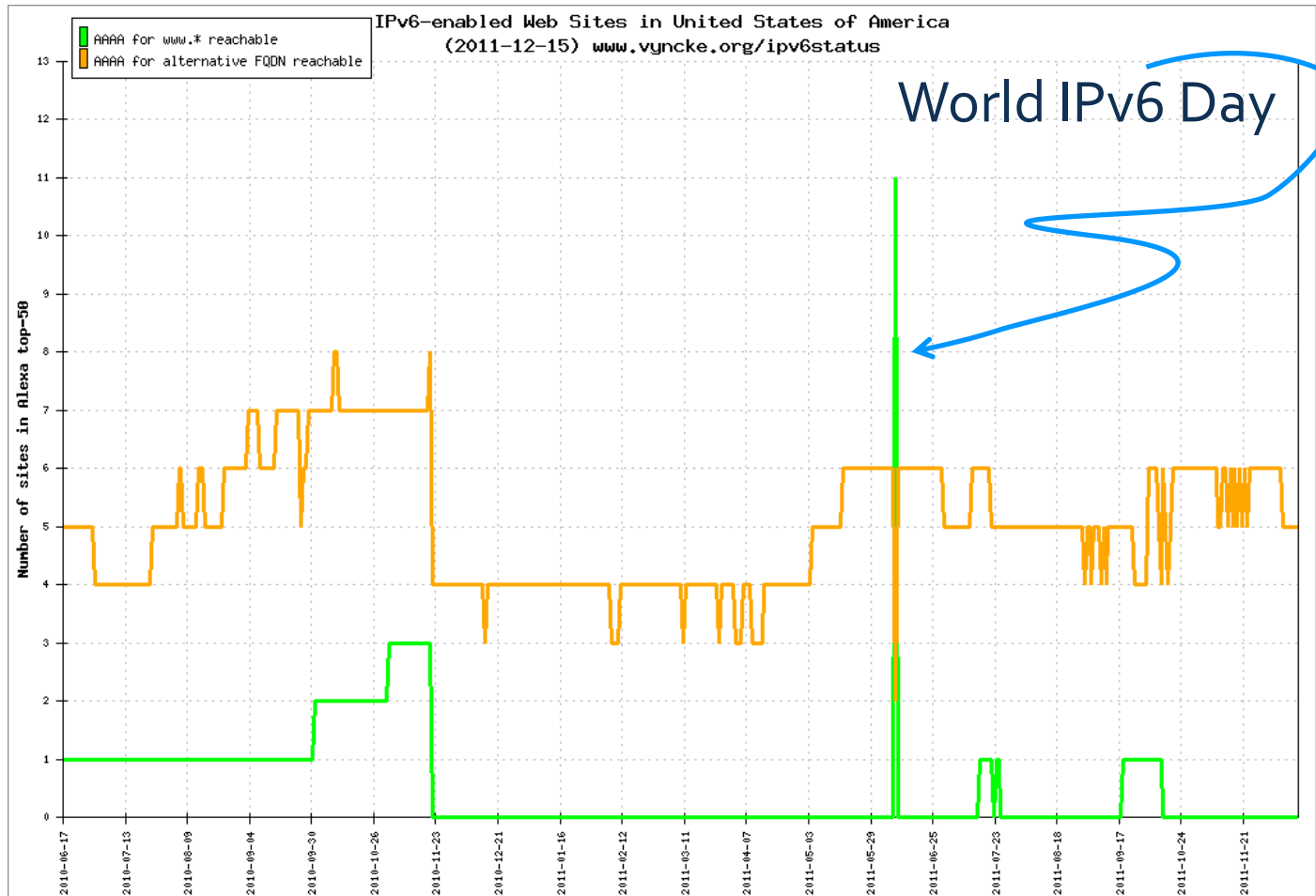


source: GNKS 2011

Top-50 US Sites with IPv6 HTTP (Web)



~10% of top 50 sites IPv6 accessible

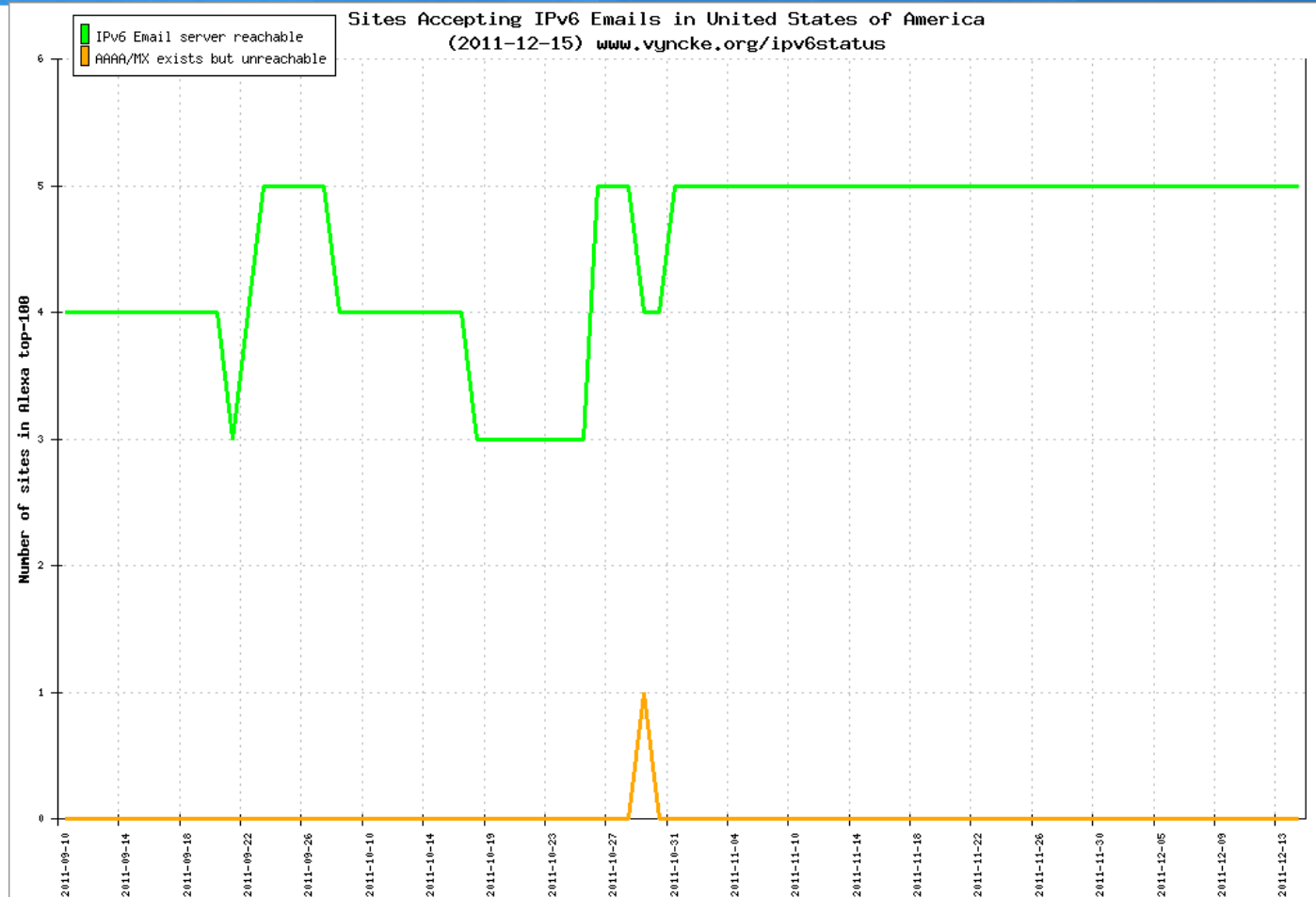


World IPv6 Day

Top-100 US Sites with IPv6 SMTP (Email)



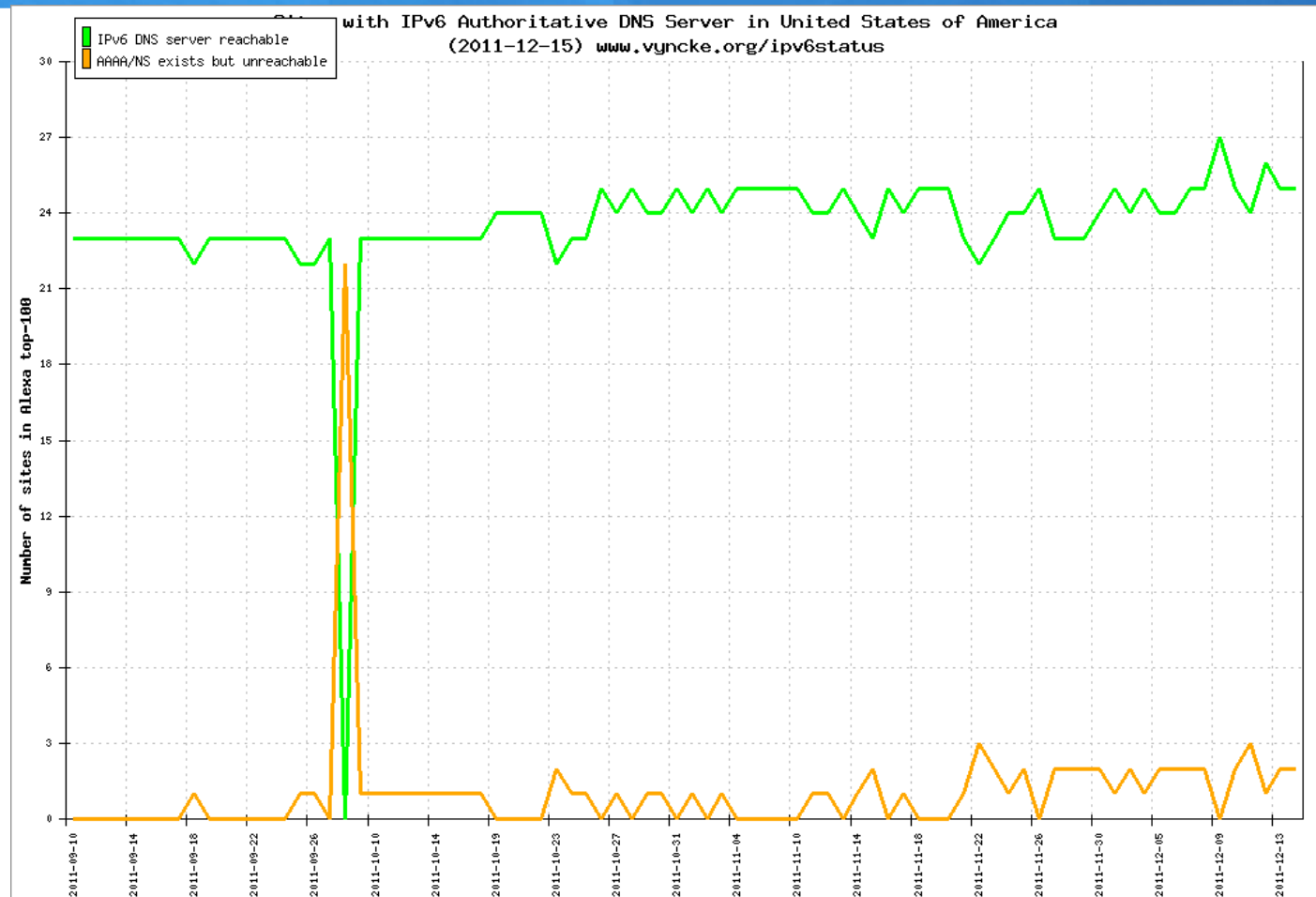
~5% of top 100 sites IPv6 accept Email





Top-100 US Sites with DNS AAAA

~25% of top 100 sites advertise IPv6
→ Most are not accessible





Inhibitors / Drivers for IPv6

- + ARIN still has IPv4 allocations available
- + IPv4 addresses available for transfer
- + Large, consumer ISPs running out of address space
 - + Carrier-grade NAT (NAT44)
 - + Very poor customer experience due to port exhaustion
 - + Hard to meet US requirements for CALEA (Lawful Intercept)



IPv6 Availability in US

- + Comcast (Broadband), T-Mobile (4G Wireless) lead
 - + Comcast, Time Warner Cable Participated in World IPv6 Day
- + Consumer:
 - + Comcast in trials today
 - + Cox available today
- + Business:
 - + Cox, Verizon

Not an exhaustive list



Transition Technologies

- + Almost all native services are Dual Stack
- + Almost all backbones have IPv6
 - + Split between NAT64 and Tunneling
- + World IPv6 Day
 - + Numerous transport providers
 - + Google, Facebook, Yahoo!, Akamai, Limelight totally IPv6 accessible
 - + 858 other web sites participated
 - + Highlighted a lot works, some glitches in routing, DNS, timeouts

<http://www.worldipv6day.org/>

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谢谢

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