IPv6 deployment at eCG

Why 96 bits matter to us

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Agenda

- Who is eCG?
- Why do we want IPv6?
- IPv6 implementation at eCG
- World IPv6 launch – mobile.de participation
- Summary
- Q&A

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Who are we ?

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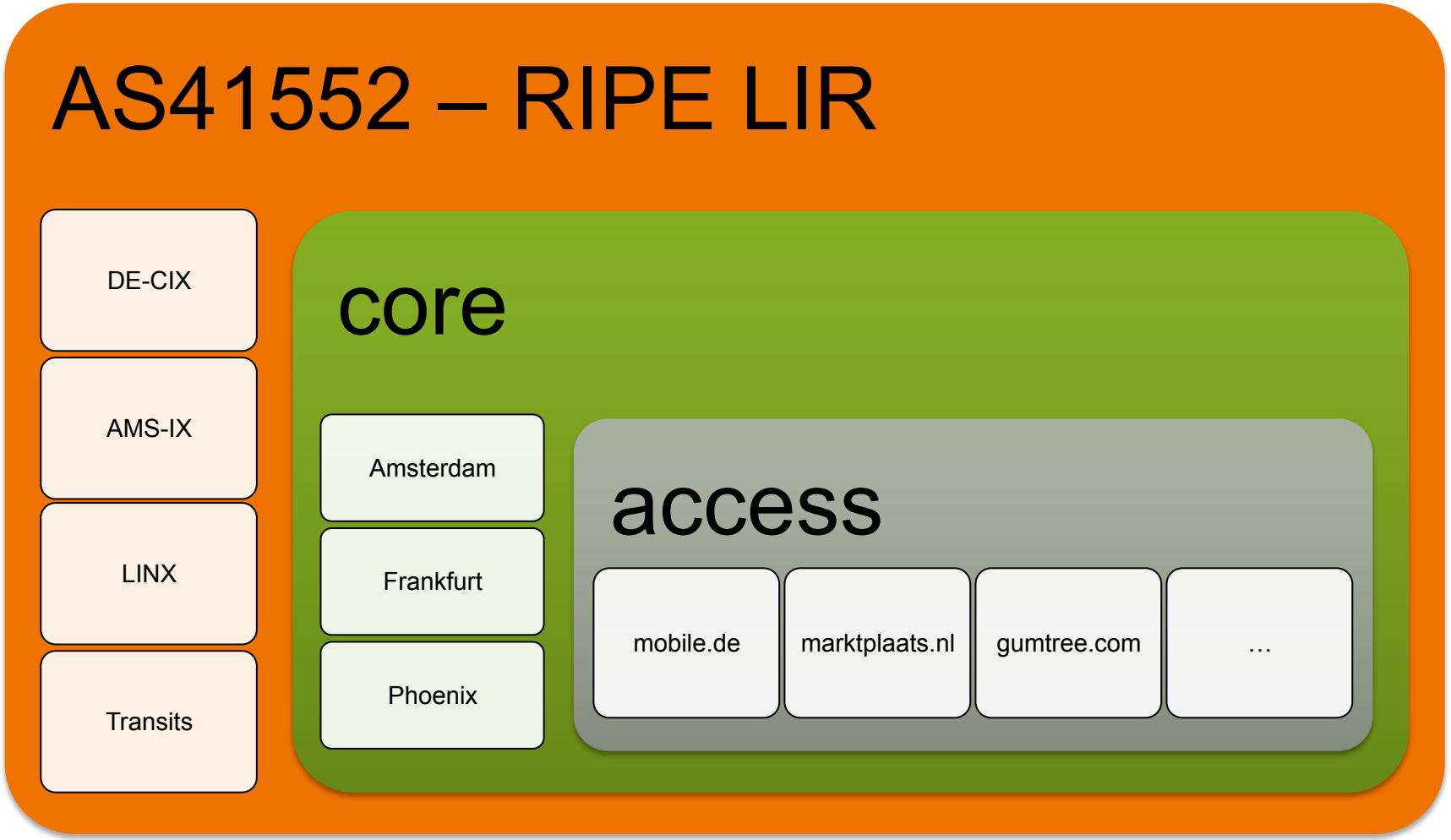
Our architecture



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Our technology stack

Hardware

Application

Tools

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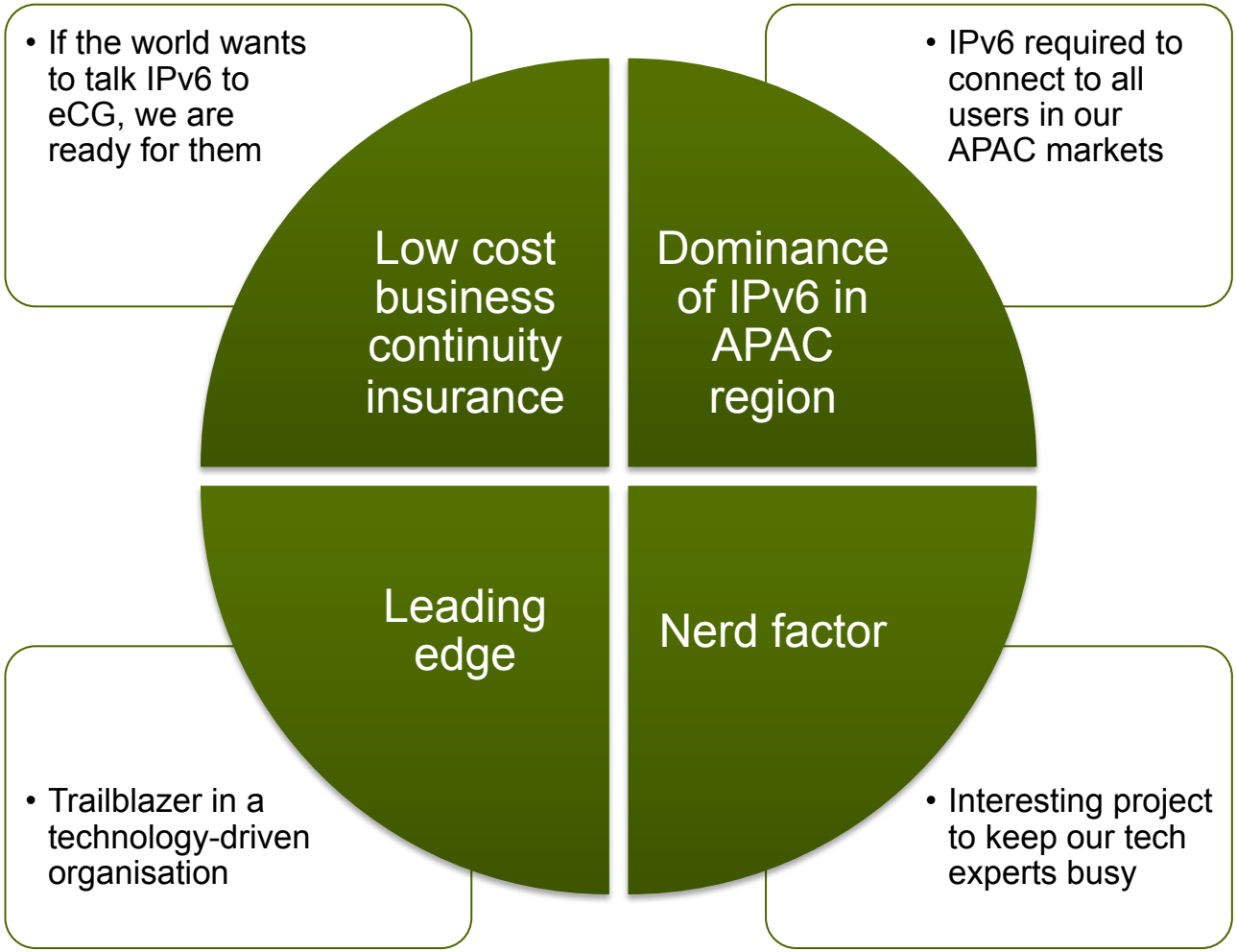
Why do we care? – Our motivation



2012 is the year when IPv6 really happens

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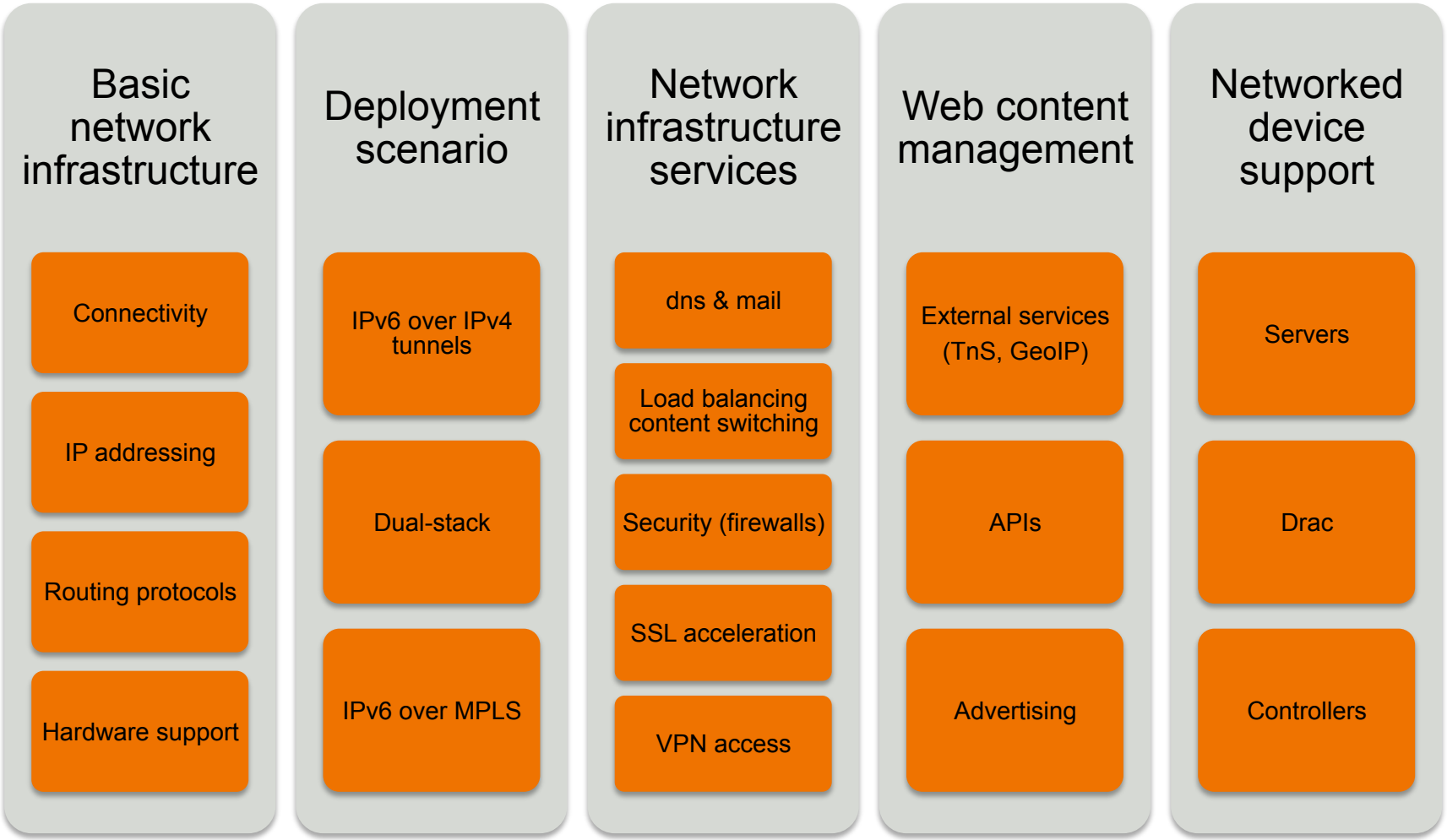
The scope of IPv6 deployment



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What did we do ?

- Enabled loadbalancer VIPs in IPv6
  - Netscaler V9.x supports it natively
- Deployed new GSLB loadbalancer to support IPv6
- Adapted postfix for new “mynetworks” config

```
% postconf mynetworks
mynetworks = [::1]/128 [fe80::]/10 [2001:76c:2d0::]/64
```

- Implemented reverse DNS for mail – “nibble”

```
domain: 0.d.2.0.c.7.6.0.1.0.0.2.ip6.arpa
descr: Marktplaats B.V.
org: ORG-MA199-RIPE
admin-c: MPCR1-RIPE
tech-c: MPCR1-RIPE
nserver: dns46-2.mobile.de
nserver: dns47-2.mobile.de
```

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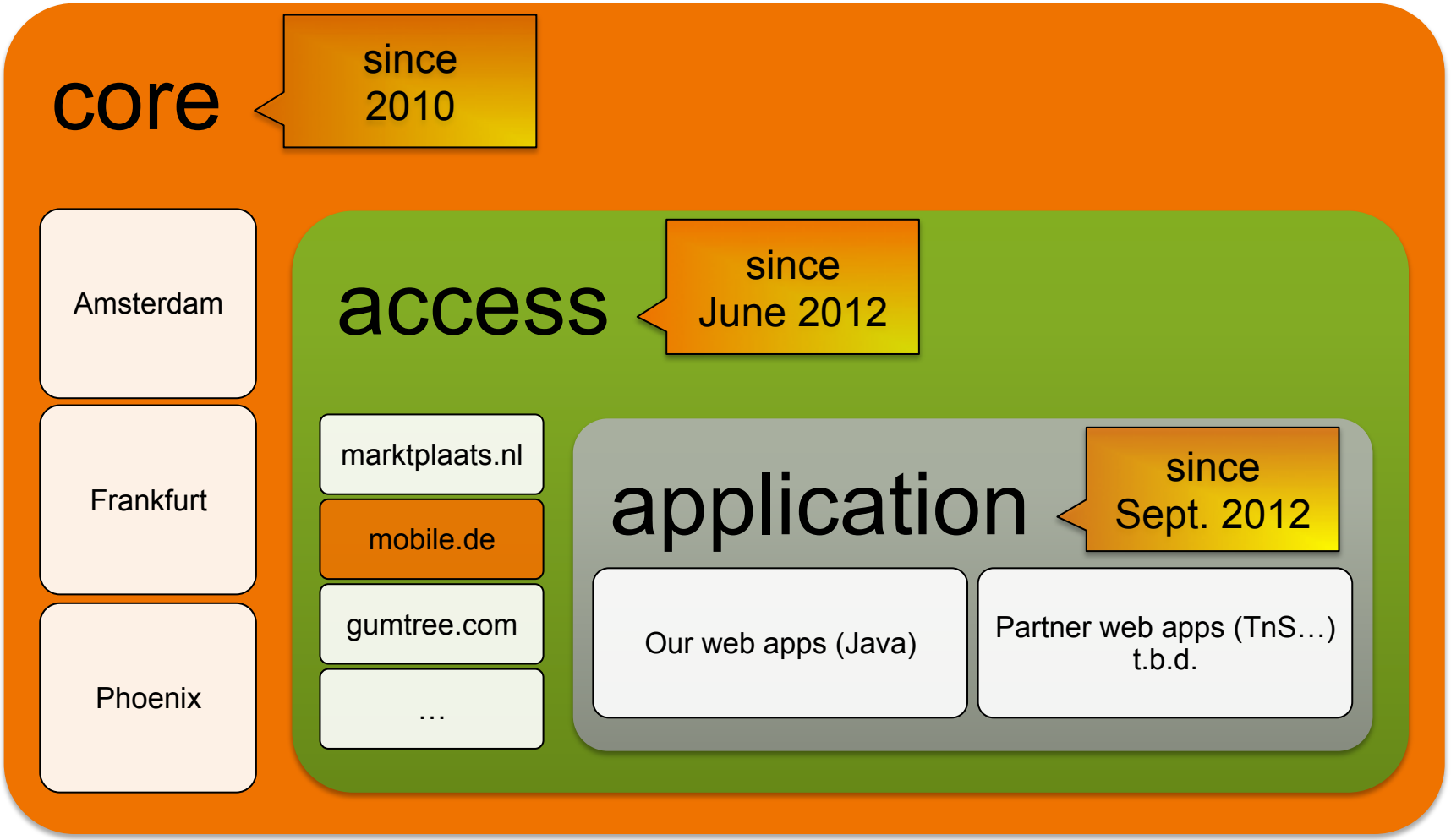
IPv6 implementation timeline



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Problems

- Equipment upgrades required
  - Buggy OS causes core router crashes due to malformed ipv6 packets (SRE2)
  - Still not all IOS features available for v6
  - Programme of software updates in core network to enable ospf for IPv6
  - Cisco GSLB firmware did not support ipv6 until Q4/2011
  - New hardware and software evaluation and deployment
  - Non-RFC implementations by OEMs (see next slide)
- Application upgrades
  - Size and type of DB fields
  - User input validation
    - Educate our developers

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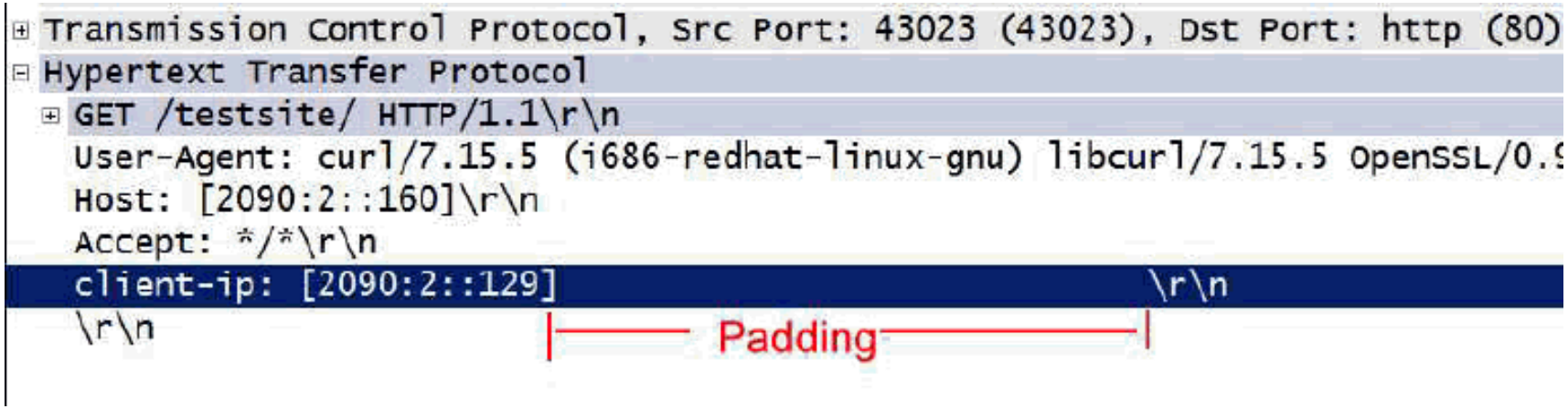
Vendor idiosyncrasy



- 42byte fixed-length field
- Padding added for RFC addresses
- Square brackets added (non RFC)!!
- Our solution: Apache rewrite rule to strip brackets

© www.citrix.com, document: CTX122753

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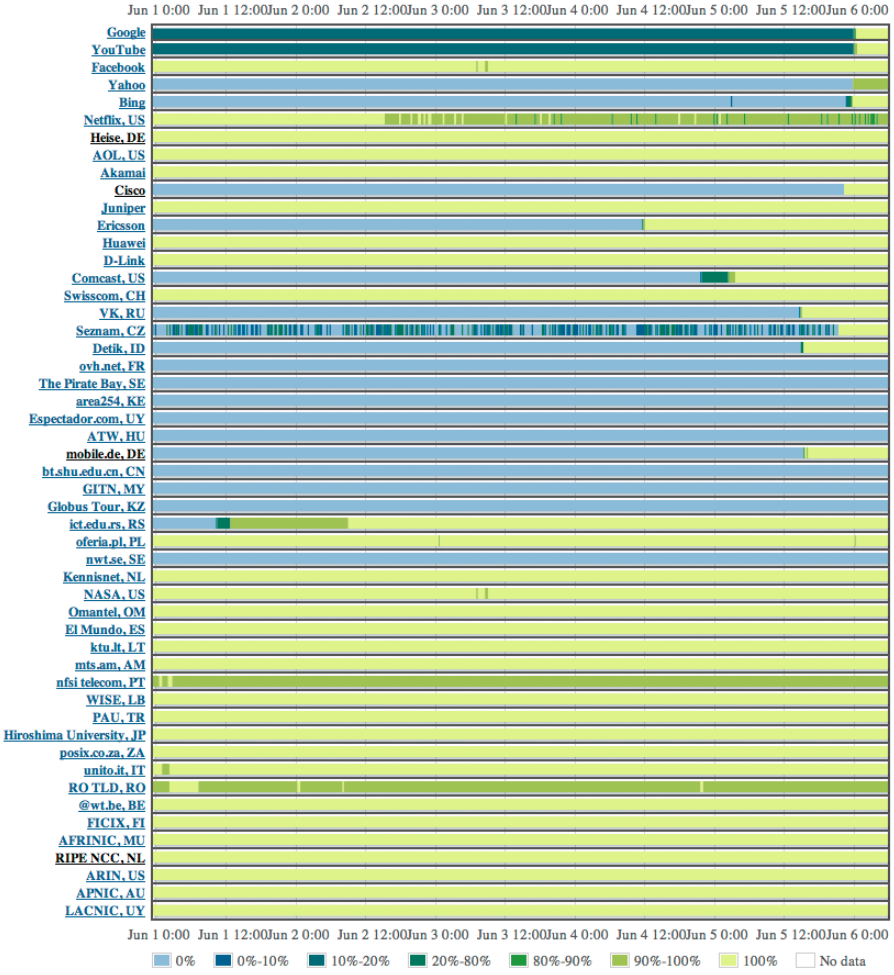
mobile.de IPv6 visibility on 6th June



© RIPE NCC

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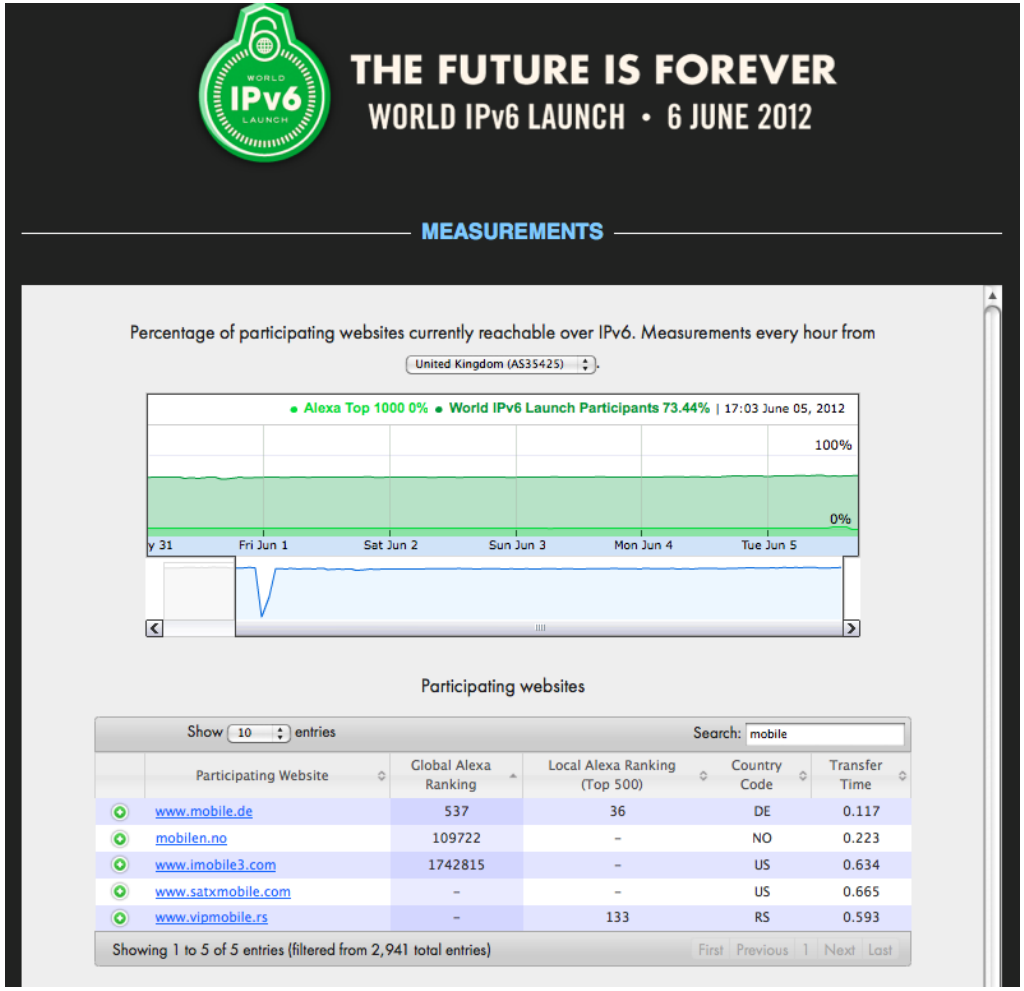

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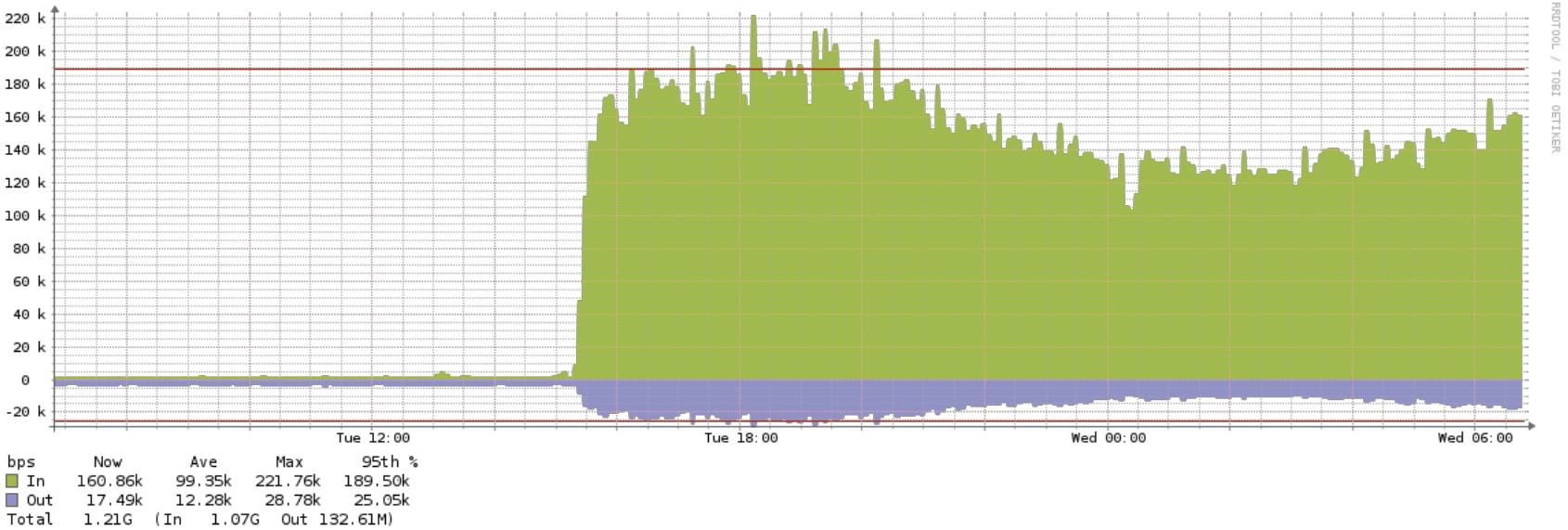
www.mobile.de - IPv6 traffic



Loadbalancer VIP – www.mobile.de in 1 DC

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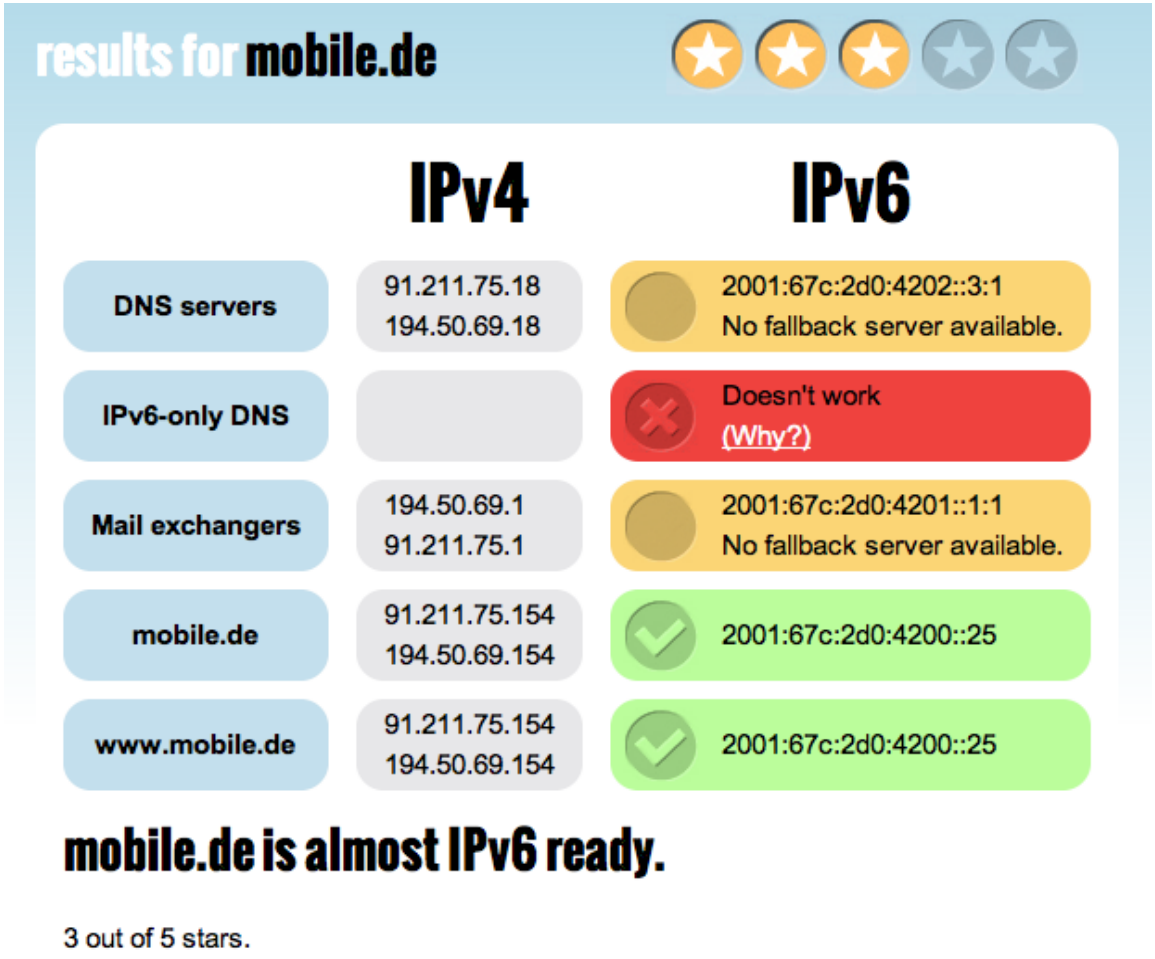
www.ip6.nl test result – tell it as it is



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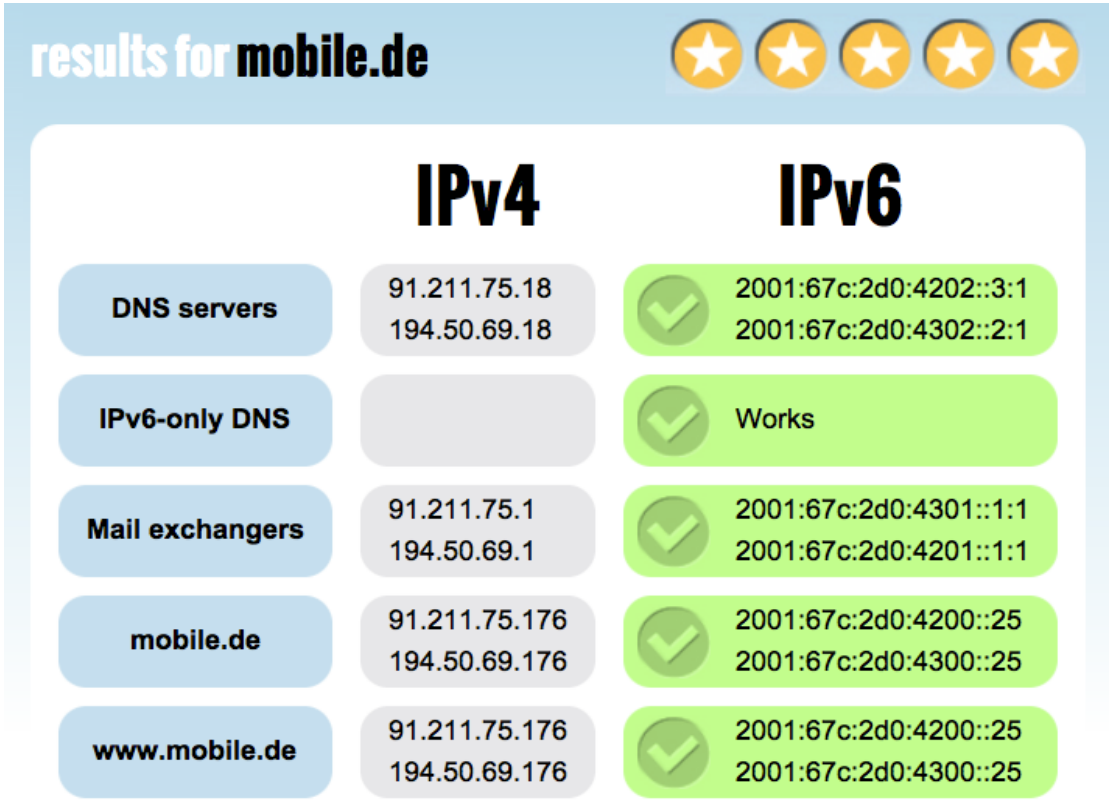

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Summary

- The internet did not break on June 6th
- Painless introduction for basic services on mobile.de
  - 4% of incoming mail
  - 8% of outgoing mail
  - 2% of users via IPv6
- Challenges
  - Vendor support
  - RFC compliance
  - Availability of services
- Migration of all services will take some time
- Next steps
  - Enable IPv6 on more platforms (Kleinanzeigen already done on 11th June)
  - Get partners to support IPv6 (e.g. advertising)

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Thank you – Questions?

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