Progress in IPv6 Deployment

Marco Hogewoning

RIPE NCC

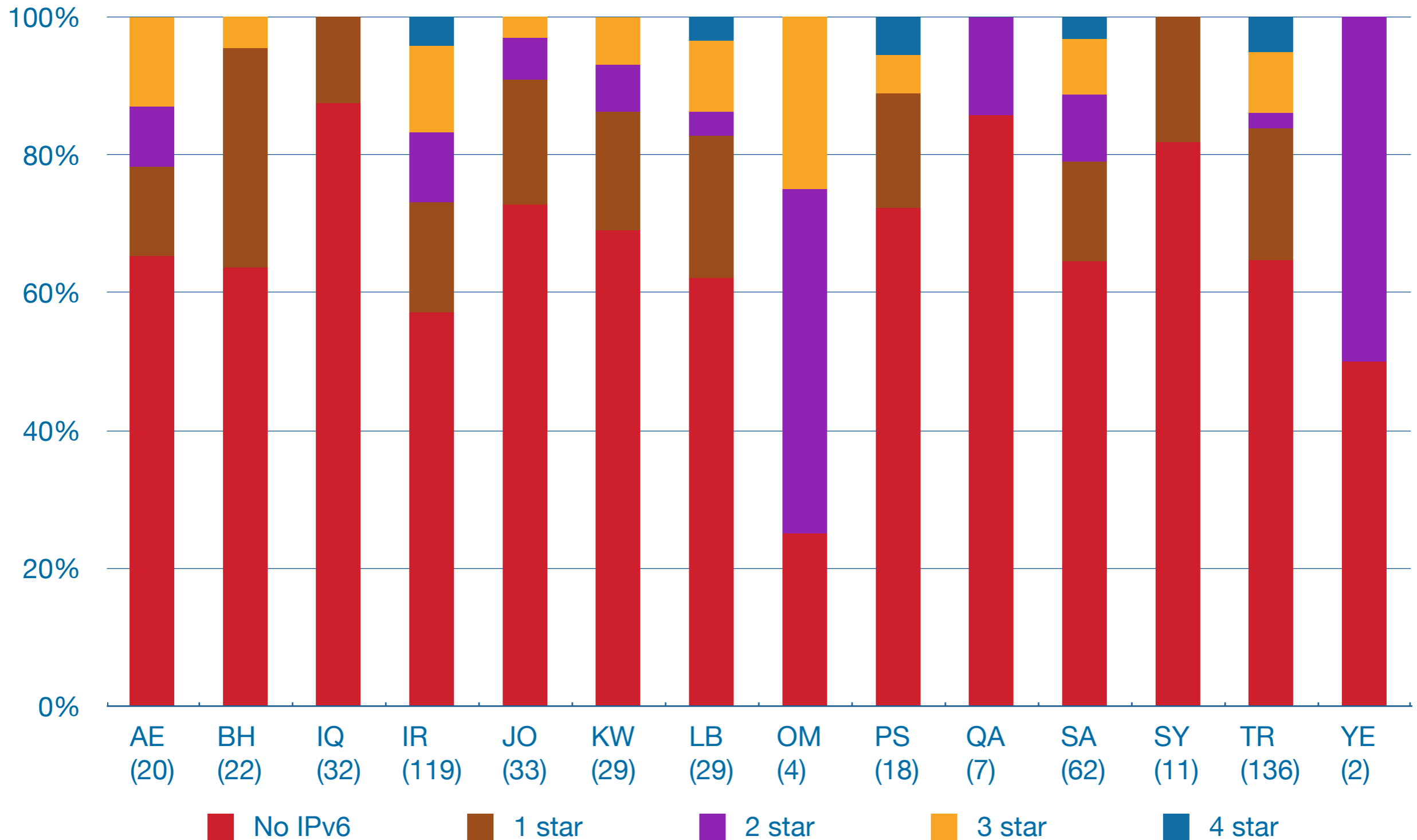# Because everybody likes statistics

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IPv6 RIPEness

- Rating system designed to monitor progress in the deployment of IPv6

- Four "stars" to earn, based on the level of deployment:
  - First star for getting an IPv6 allocation
  - Subsequent stars awarded for visibility, route objects and reverse DNS
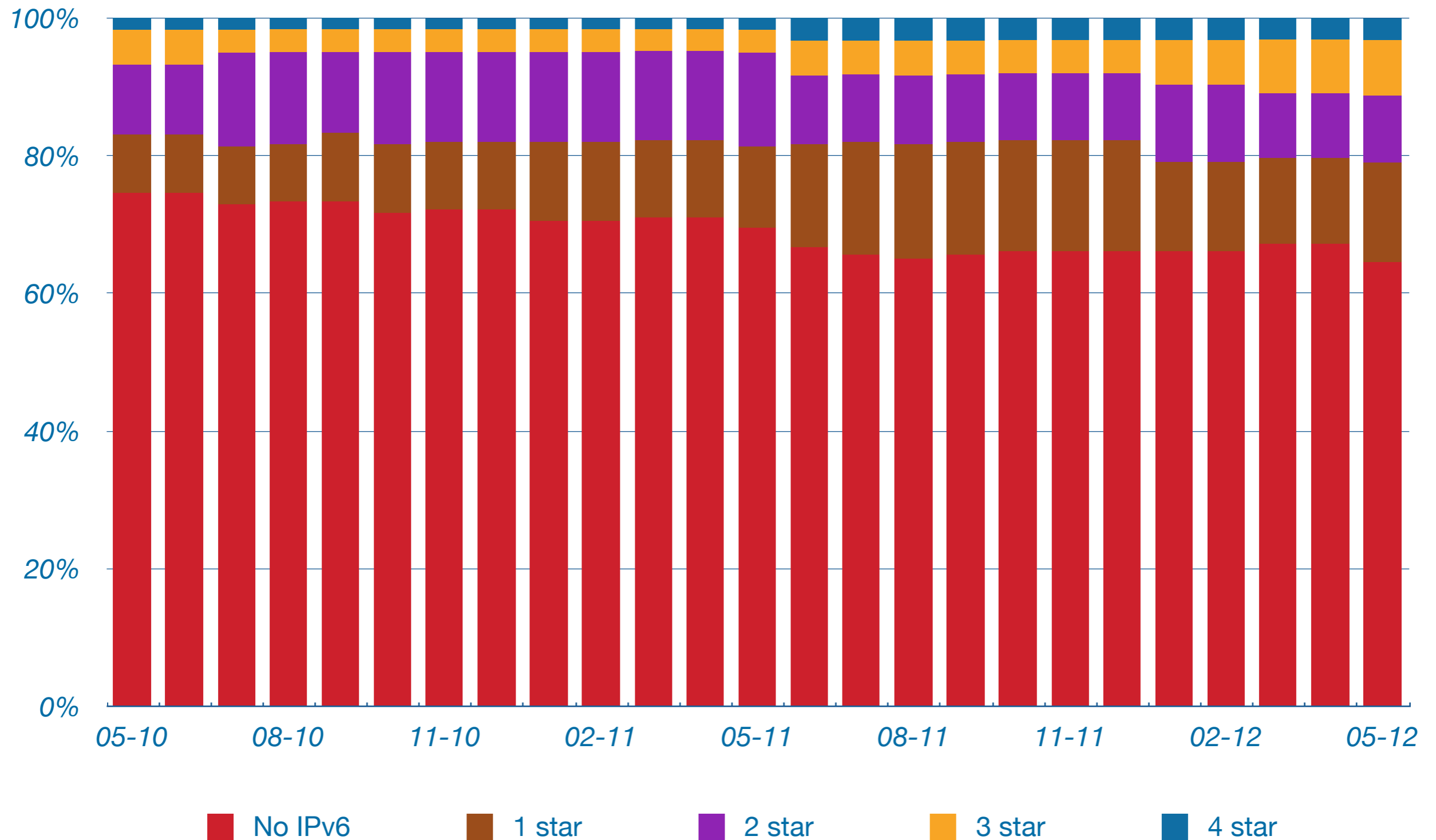
- Only lists RIPE NCC members

Middle East Region (September 2011)

No IPv6   **1 star**   **2 star**   **3 star**   **4 star**
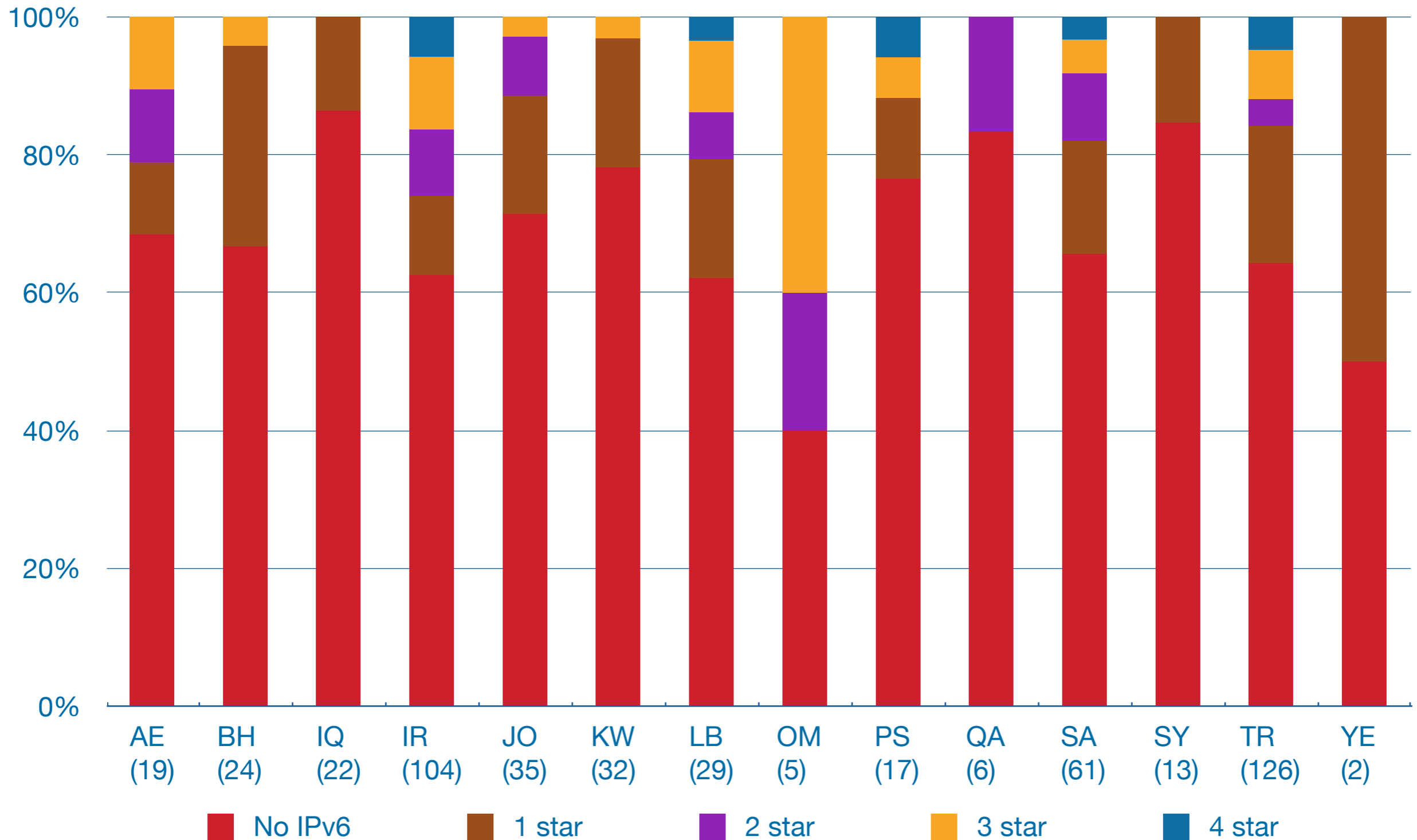
Middle East Region (May 2012)

Marco Hogewoning, CITC, May 2012

Saudi Arabia Over Time

Saudi Arabia Over Time (linear)

Legend: No IPv6 | 1 star | 2 star | 3 star | 4 star

Saudi Arabia Over Time (linear)
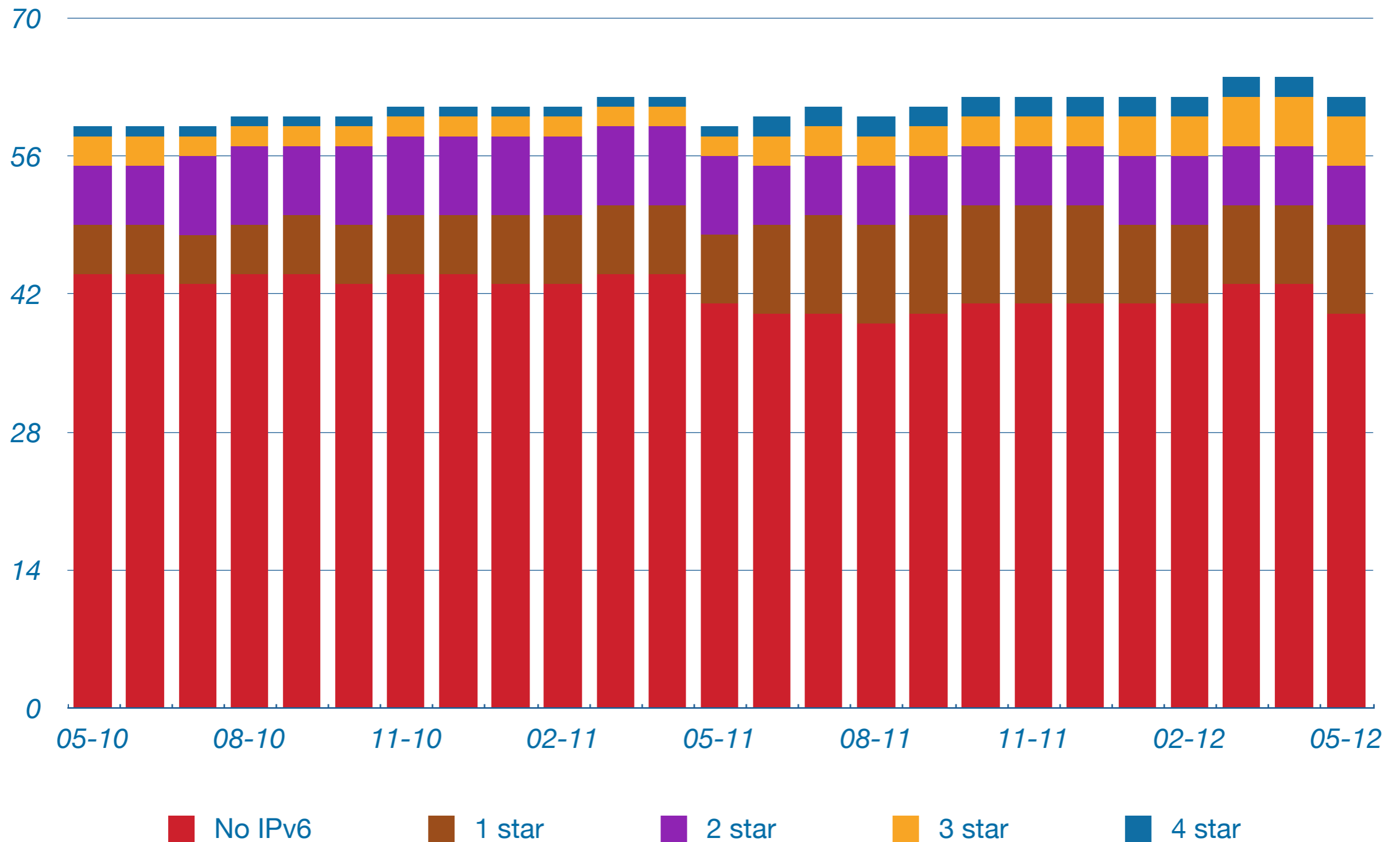
Legend: ■ 4 star ■ 3 star ■ 2 star ■ 1 star
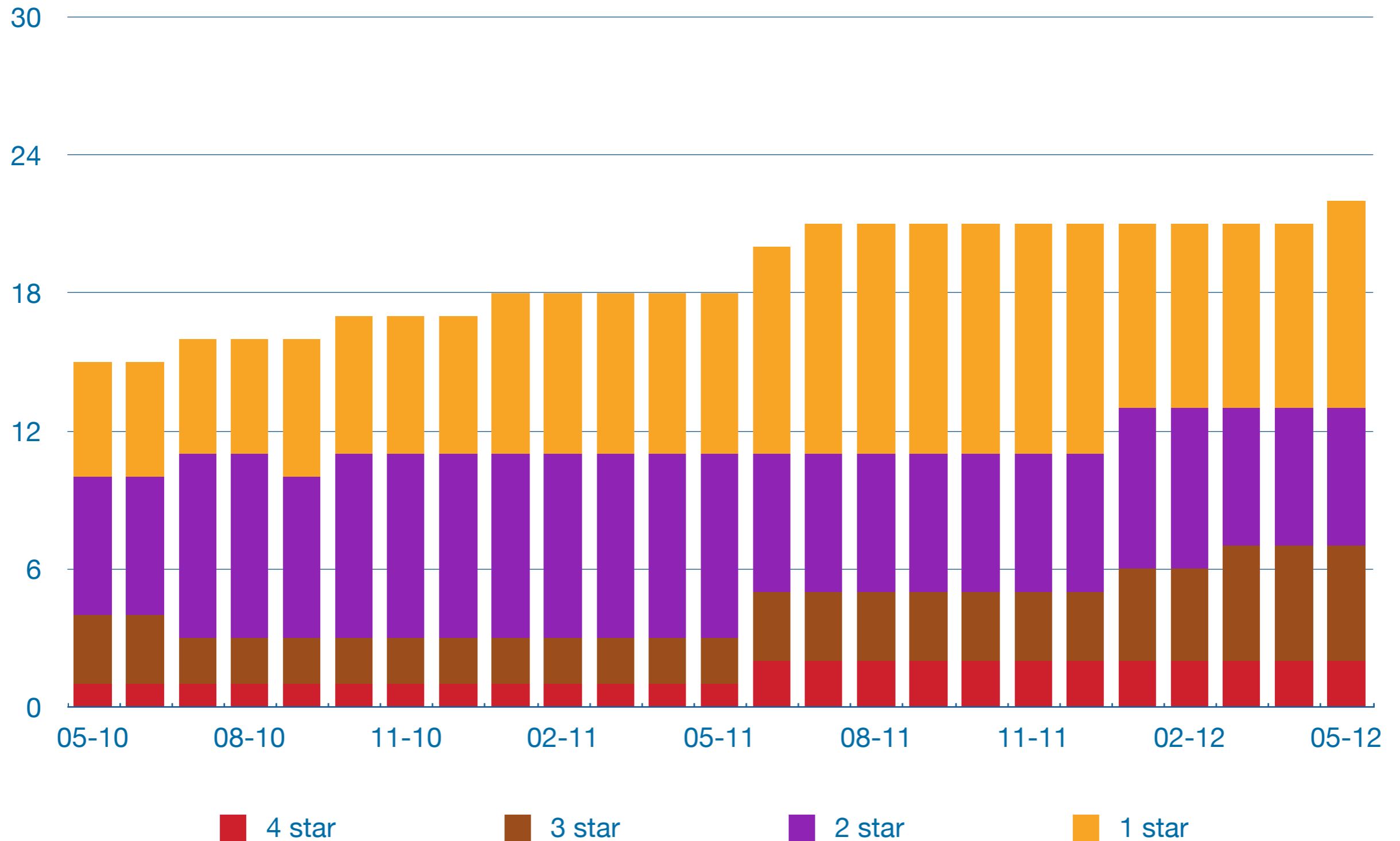
RIPE NCC Service Region over time

Legend: No IPv6, 1 star, 2 star, 3 star, 4 star

Y-axis: 0%, 20%, 40%, 60%, 80%, 100%
X-axis: 05-10, 08-10, 11-10, 02-11, 05-11, 08-11, 11-11, 02-12, 05-12
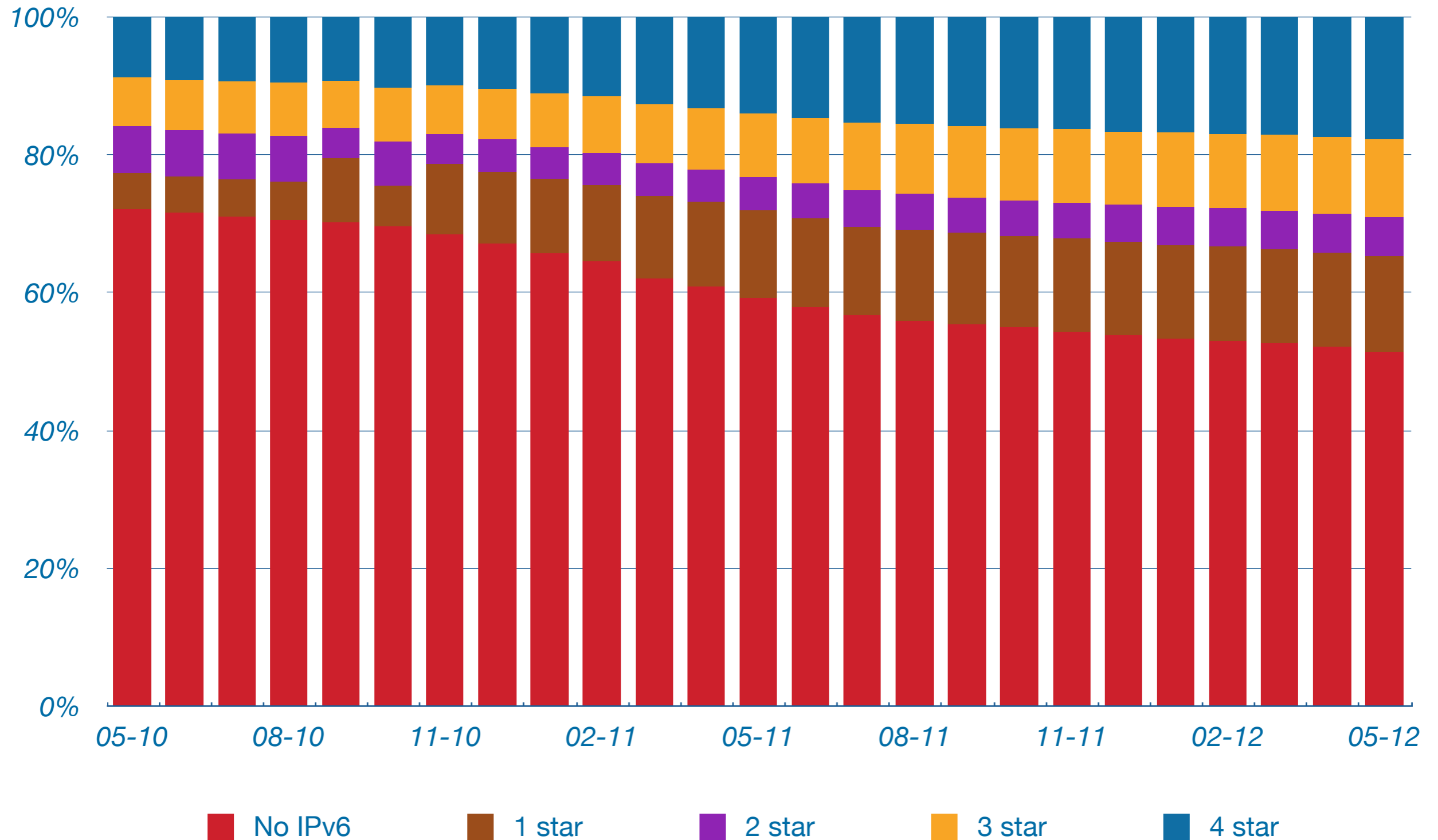
Is this really slowing down?

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IPv6 Allocations by the RIPE NCC
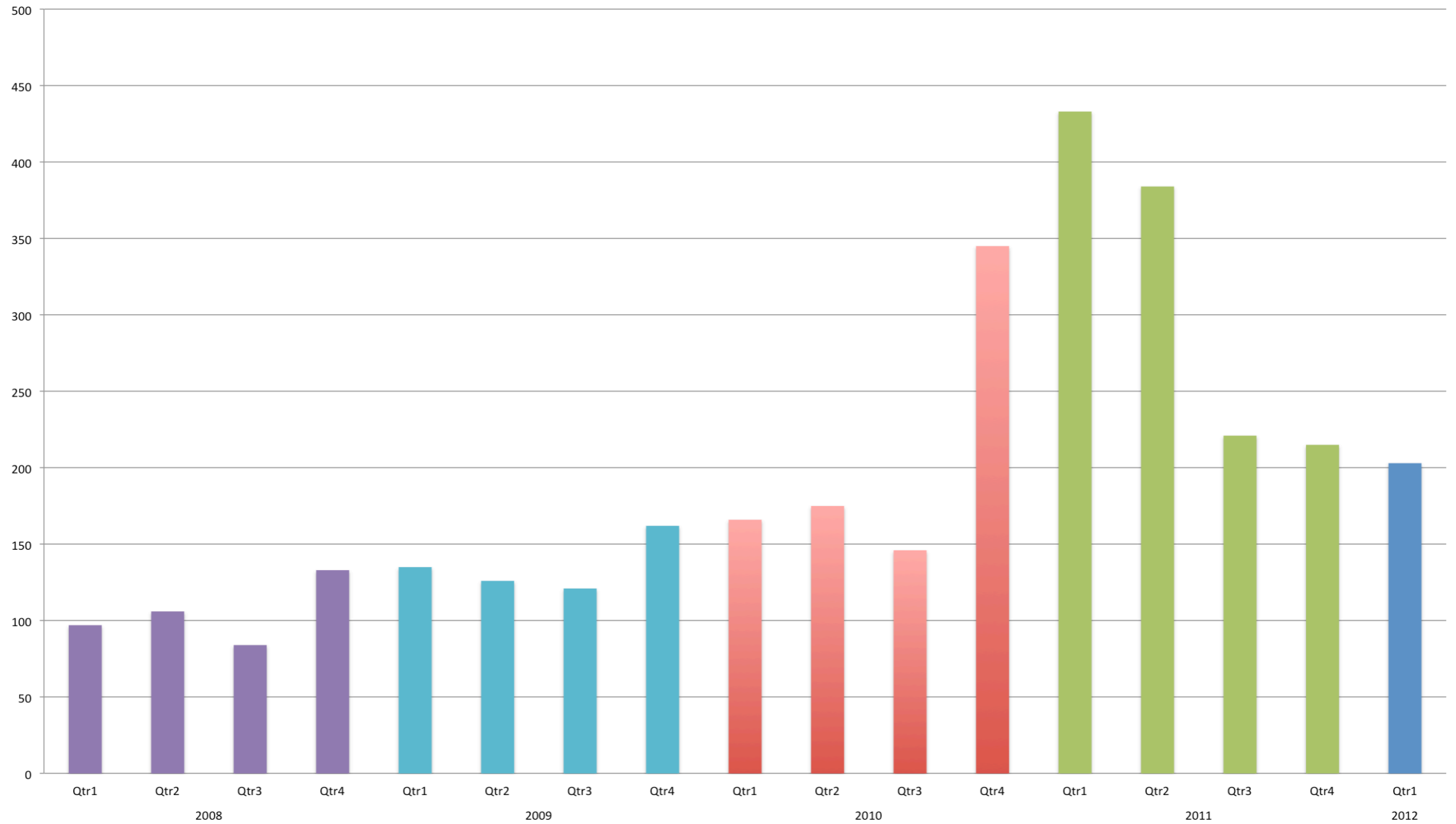
How about non-members?

Autonomous Systems and IPv6

http://v6asns.ripe.net
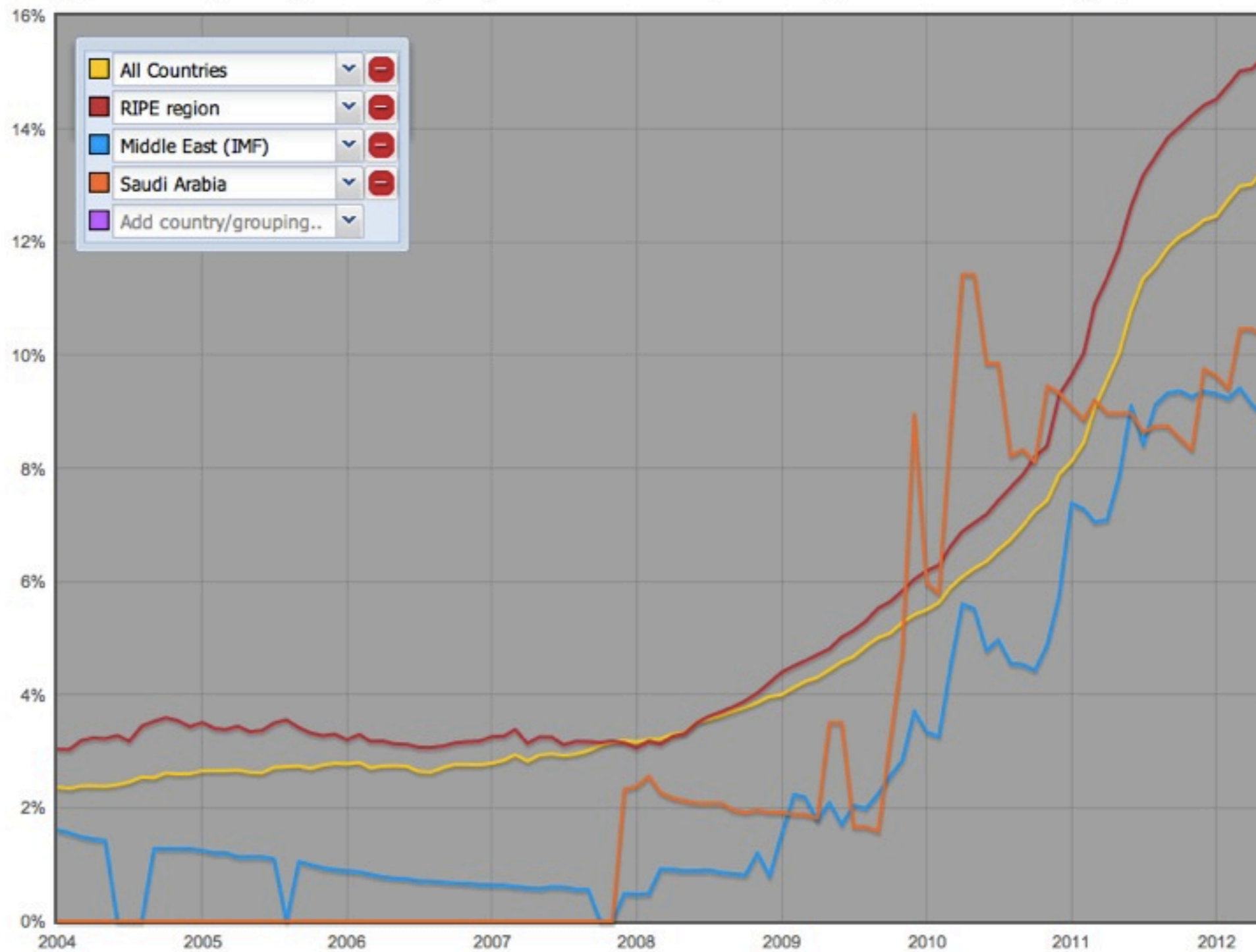
...one more graph

RIPE NCC IPv4 Pool

14 May 2012
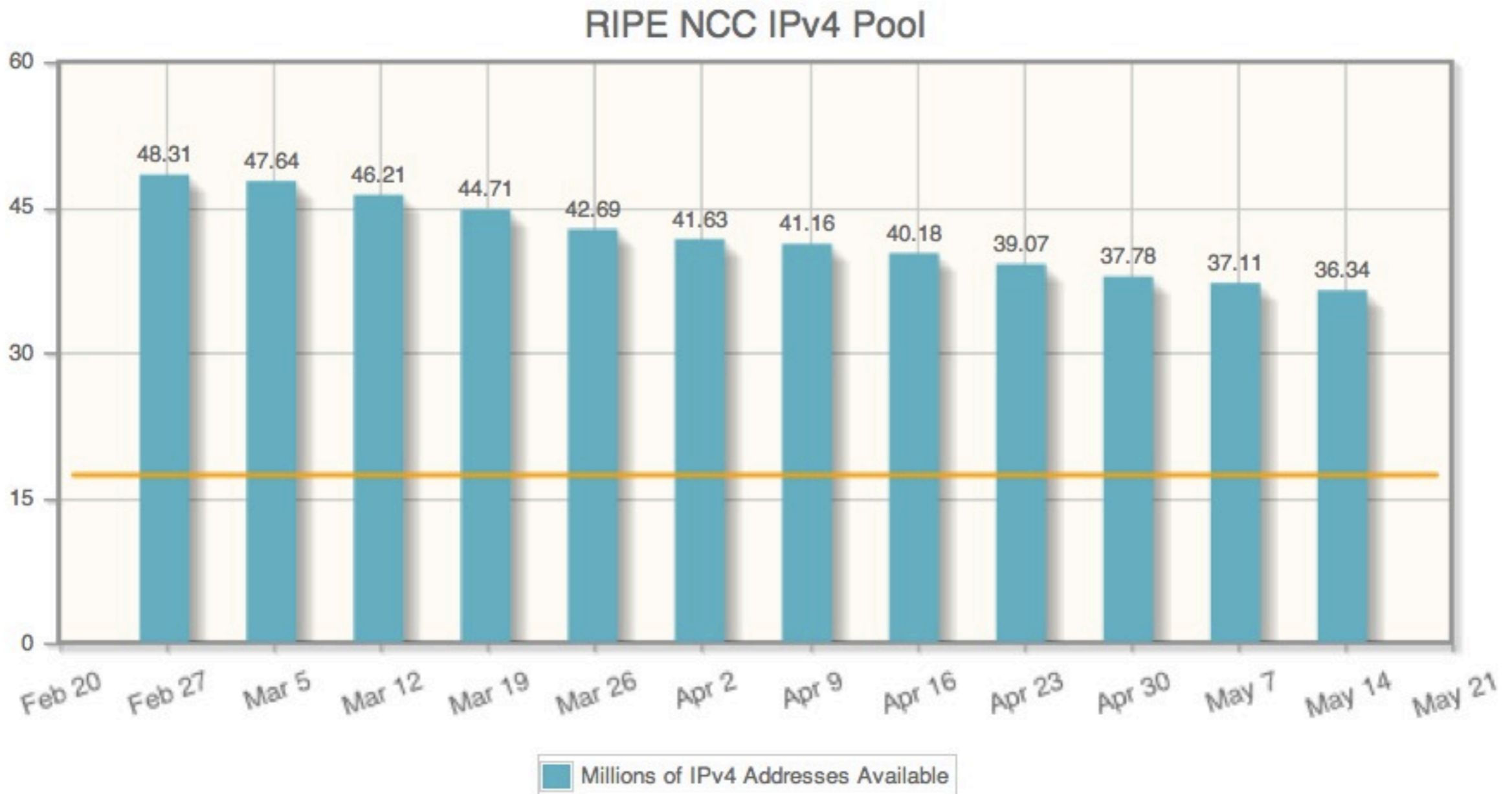
Is the IPv6 adoption rate slowing down?

Marco Hogewoning, CITC, May 2012

Update From the RIPE NCC

Policy Changes

- Recent changes on IPv6:

  - IPv6 PI multihoming requirement got removed

  - Minimum initial allocation size changed to /29

- Ongoing discussion about IPv4:

  - Reserve some IPv4 address space for IXPs

  - Provider Independent (PI) assignments from last /8

  - Inter RIR Address Transfers

PI Assignments from Final /8?

- When the RIPE NCC reaches the final /8:
  - Every member can get **one** /22 (1024 addresses)
  - If you already have IPv6
  - If you can prove you need them

- Policy does not allow for PI assignments

- Policy proposal 2012-04:
  - Change the final /8 policy
  - Allow for a /24 PI from the final /8

IPv4 Address Transfer

- We have a transfer policy for within the service region:

  - Members can transfer addresses to each other
  - If they are not in use
  - If the receiving party has a justified need
  - Minimum size is /21

- Somebody proposed to allow transfers to and from the RIPE NCC Service region as well

Inter RIR Transfer Proposal

- Original proposal received a lot of comments
  - People didn't like the idea of selling addresses
  - People didn't like inter RIR transfers at all

- Original proposal was revoked

- New proposal was drafted:
  - Allow for Inter RIR Transfers to/from RIPE NCC
  - If it matches the transfer policy of the loosing RIR
  - If the recipient qualifies for an address allocation according to the policy of the receiving RIR

Fixing the Current Transfer Policy

- To qualify for a transfer you have to match exactly the same rules as for a regular allocation
  - Evaluation period is 3 months

- This was an unintended side effect of the "run out fairly" proposal which lowered this value
  - It used to be 24 months

- Proposal to change it back to 2 years in case of address transfers

Join the Discussion

- Tell other people what you think about this

- Join the discussion on the mailing list:
  - **address-policy-wg@ripe.net**
    - **Warning**: you can only post after you are subscribed!

  http://www.ripe.net/ripe/policies/current-proposals

Outreach and Capacity Building

Activities towards IPv6 Adoption

- Outreach/PR:
  - Publishing Articles
  - Brochures
  - Website: http://www.ipv6actnow.org
  - Dedicated contact point: ipv6actnow@ripe.net

- Capacity Building
  - Training courses
  - IPv6 Roadshow (together with MENOG)
  - Conferences

Training

- RIPE NCC "IPv6 for LIRs Training Course"
  - One day training
  - Mix of technical and RIPE NCC related topics

- MENOG IPv6 Roadshow
  - 3 or 5 day training course
  - Learn how to configure IPv6 in your network

Training Locations 2010/2011

Training Locations 2012

Roadshow

IPv6 training course

Roadshow

Roadshow

Document Ripe-501

- Document contains an overview of what to ask for when requesting IPv6 support in equipment

- Useful for tenders and RFPs

- Best Current Practice

- Update is expected in a few weeks

  - Will get a new document number

  http://www.ripe.net/ripe/docs/ripe-501

Outreach

Outreach Activities

- Recently participated in Palestine IPv6 Forum

- CITC IPv6 Workshops

- MENOG Conference

- Government Roundtables

- First Arab IGF in Kuwait, October 2012

TRA Orientation at the RIPE NCC

- Staff from all Telecommunications Regulatory Authorities (TRA) from the Middle East will visit RIPE NCC for a 3 day orientation

- Formal proposal approved by GCC - Council of Ministers in February 2012

- Will cover IPv6 amongst other things

Summary

- We reach out to a lot of people:

  - Members of the RIPE NCC

  - Network operators

  - Governments

  - Regulators

  - Law enforcement agencies

What should be the next step?

World IPv6 Launch

- Initiative taken by ISOC, Google, Akamai, Cisco, Microsoft, XS4ALL, Comcast and a lot of others
- RIPE NCC participates in doing measurements
- Switch on IPv6 on 6-6-2012
  - And leave it on
- **www.worldipv6launch.org**

Who else to talk to?

- IPv6 adoption rate seems to be slowing down
  - Did we get all the "low hanging fruit"?
  - Did we really reach all operators?
  - Will Launch Day make the difference?
- How to get the other 60% to start with IPv6?
- What about your customers?
  - Enterprises
  - Residential users

How can we help you?

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