# RIPE NCC DNS Update

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# Reverse and secondary DNS



- Three anycast sites with nine servers
- Internally load balanced with ExaBGP and Quagga
- Peak query rate: 100,000 q/s
- ~5,000 zones, including 76 ccTLDs
- Served by a mix of BIND, Knot and NSD
- Maintenance:
  - Refresh London site
  - Consider a fourth site

# Provisioning resiliency



- Two new servers ready
  - Stable IPv4 and IPv6 prefixes for Stockholm
- Slave zones will be moved first
  - Involves a lot of communication
  - Migration expected to last several months
- Reverse and manual zones scheduled for fourth quarter of 2015
  - RIPE Labs articles with ideas for synchronisation

# DNSSEC algorithm rollover



- Vendor support coming soon
- Tests this summer
- Full rollover planned for November 2015

# Periodic DNS checks



- Automatic monthly checks of all reverse DNS zones in the RIPE Database
- Fresh data for Assisted Registry Checks
- Results visible in RIPEStat

# AS112



- New server at AMS-IX
  - Announces two IPv4 and two IPv6 prefixes
- ~3,000 q/s
  - 300 q/s over IPv6
- Fully ready with support for DNAME redirection
  - RFC6304bis

# K-root expansion



- There have been several RIPE Labs articles announcing K-root expansion plans
- Starting today, we are open for new requests to host a K-root node locally
- Any organisation with an interest can apply

# K-root expansion (cont'd)



- Summary of a K-root hosted node:
  - Single Dell server in host's network
  - BGP peering with host router
  - IXP alternative: BGP peering to route servers + default route to host router

# K-root expansion (cont'd)



- The expansion will be budget-neutral
  - Local hosts to cover hardware cost
  - No expansion of RIPE NCC staff
- Need to 'pace' the handling of applications if there are many at once
  - Prioritise locations that are currently 'under-served'
  - Will base this on RIPE Atlas measurements
  - Emphasis on the RIPE NCC service region

# Want to know more?



- Further details about K-root expansion:
  - https://labs.ripe.net/Members/kranjbar/future-of-ripe-ncc-technical-services
  - https://labs.ripe.net/Members/romeo_zwart/k-root-expansion-plan
  - https://labs.ripe.net/Members/romeo_zwart/new-architecture-for-k-root-local-nodes
- Interested in hosting a node? Look for the announcement to the DNS WG list later today…

# DNSMON



- DNSMON is currently based on RIPE Atlas anchors for data collection
- In July 2014 we ended data collection in the old DNSMON system
- We still have the visualisations of the old data in place

# Remember this?



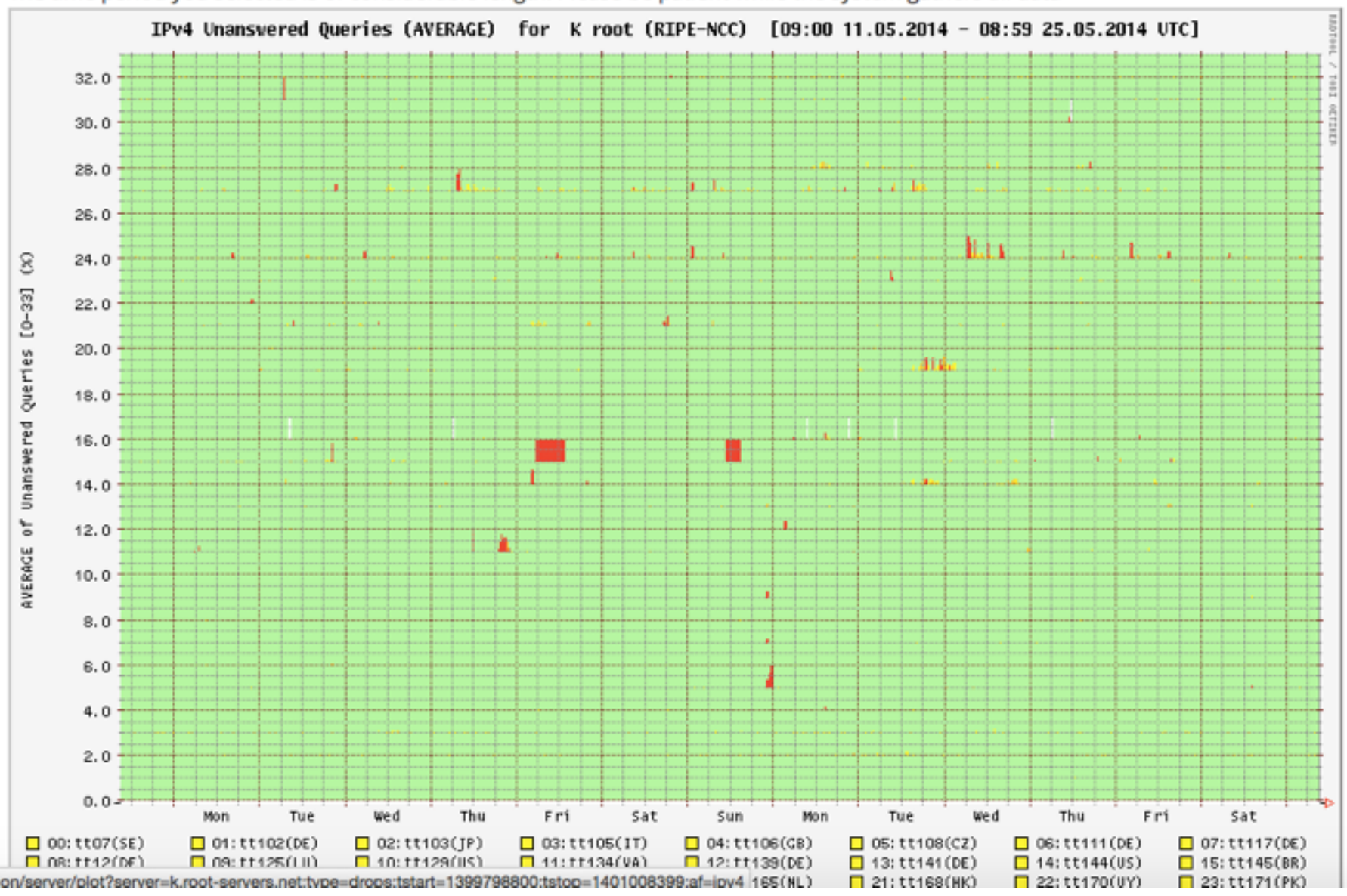
Home | **IPv4** / IPv6 | Domains | Servers | Probes | Contact | User Guide | About DNSMON | Login

drops of k.root-servers.net ipv4 from 11 . 5 . 2014 9 h : 00 m for 2 weeks SHOW

Show other time frame: p-day | -24h | -12h | -6h | +6h | +12h | +24h | n-day

Server plot for **k.root-servers.net** (ipv4) [ serving: root ]

The time period you selected is of considerable length. Please be patient while the system gathers all data






RIPE NCC

# DNSMON



- So, we still have the visualisations of the old data in place. But…
  - There is an operational burden
  - There are security risks (old code, old OS and library versions)
  - There is no real usage (robots, abandoned scripts, some occasional visitors)

# DNSMON



- We propose ending the visualisation of old DNSMON data at the end of 2015
- Raw data will continue to be available to all interested parties

# Questions?