

IANA Update to the ccNSO

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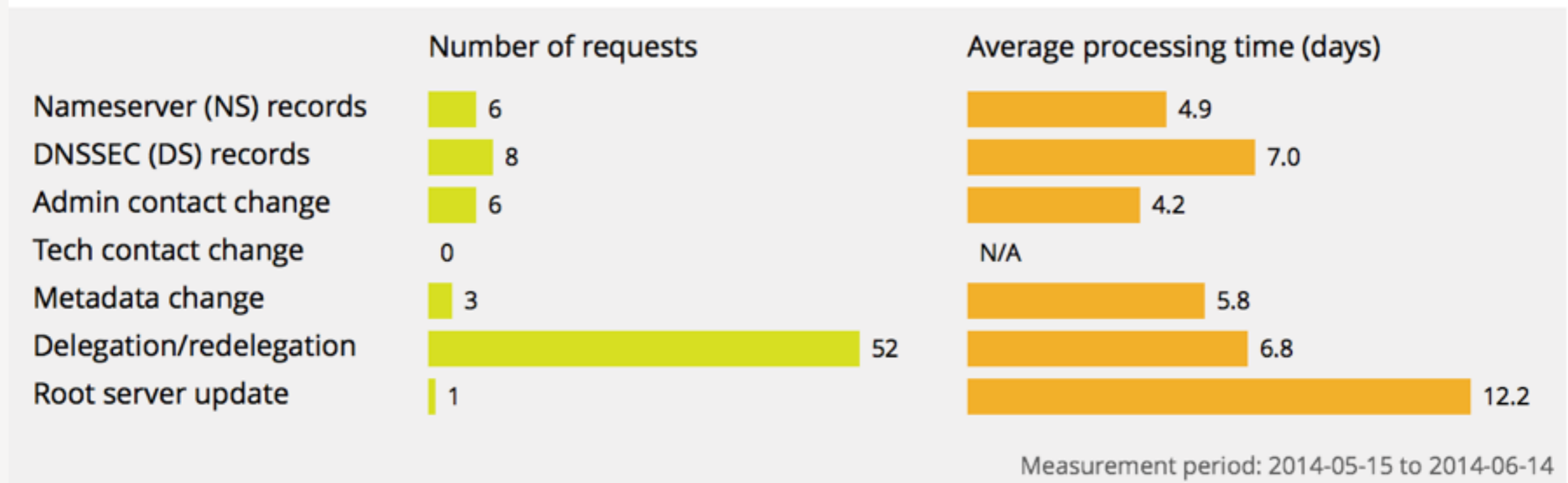
Topics

- Review of processing stats
- Trusted Community Representatives
- Evolving the Root Zone Management System

Root Processing Times

In accordance with Section C.4.3 of the IANA contract, this graph represents the number of requests received by type of change. Requests that involve changes to multiple categories will be counted in all categories.

Recent requests by type



This graph was generated on 2014-06-14.

C.2.9.2.a,b — Root Zone File and WHOIS Database Change Requests

Key Performance Indicators

Metric	Target	Actual	Target Met
Timeliness — End-to-end processing for changes pertaining to routine maintenance of delegated TLDs (such as NS changes, DS changes, point-of-contact changes, and other administrative updates) are performed within 21 days.	80%	100%	✓
Accuracy — The requests that have passed validation are implemented correctly at the conclusion of a change request.	100%	100%	✓

Trusted Community Representation

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NOTICE
ALL ACTIVITIES
MONITORED
BY VIDEO
CAMERA



Trusted Community Representation

- Community members who oversee our DNSSEC key signing ceremonies.
- 3 of 7 people visit each ceremony from a pool appointed in 2010.
- Recently performed a consultation on evolving how it works.

<https://www.icann.org/public-comments/tcr-dnssec-key-signing-2014-01-21-en>

TCR Consultation Conclusions

- ICANN will start funding TCR participation in FY15.
- ICANN will implement term limits and rotate the existing TCRs.
- ICANN will clarify TCR selection criteria and obligations, including minimum level of participation.
- ICANN plans to implement security system improvements that will allow the cap on the number of TCRs to be raised.
- Open question: Where should we solicit new volunteers from?

RZMS Evolution

RZMS Evolution

- Implemented new password constraints
- Looking at roadmap for future improvements to the system
- Seeking feedback from TLD managers on experiences, recommendations to help prioritize work.

Some ideas still being thought out

Technical/Security

- Reviewing the technical check process to be more insightful, reduce false positives
 - Focus areas: serial coherency, diversity checks, DNSSEC tests to catch new errors
- API
- Proactive notification of issues (opt-in notification of technical issues, sig expiry, etc.)
- Session tracking

Some ideas still being thought out

Administrative

- New contact model — longer term consideration of separating “authorising contacts” from published contacts.
- Contact normalisation and sanitization
- Correcting change requests in-flight
- Automated audits of email function

Authentication mechanisms

- Stronger authentication mechanism is desirable (e.g. 2FA)
- Increasing reliance on role accounts by strong authentication should be tied to individuals
- Users use the system infrequently — lose/forget credentials; staff turnover in intervening period.
 - But urgent changes shouldn't be held back due to lost credential.
- Ability to disable email authentication?
- How to implement an evolved model that doesn't add complexity without improvement (due to need to regress to current practice)?



THE ROOT ZONE DEMYSTIFIED

Here's the role of the root zone and how it helps the Internet function. It plays an important role, but it's really simple and transparent.

DRAFT

THE ROOT ZONE

The root zone is the highest level of the Domain Name System (DNS) structure. It contains the top-level domain names (TLDs) and their locations.

Despite its importance, the root zone file is small – less than a megabyte – and is available to anyone at www.iana.org/domains/root-zone.

Hundreds of root servers host the root zone file around the globe. They are operated by 12 different organizations keeping the root zone open, transparent, and always available.

ICANN maintains a root registry database that contains the administrative and operational contacts for root server operators and TLD administrators.

The Root Zone



The Root Servers



The Root File



This is a open domain. Here are addresses to find the zone database.

WHY IT MATTERS

The root name servers use the root file to translate readable text names into numeric Internet Protocol (IP) addresses. Without them, you would only be able to visit a website by entering its individual IP address, such as <http://192.0.2.252>.

Here's how it works:



HOW IT IS MANAGED



6 Update Root Zone Database
ICANN updates the root registry to reflect changes.

How is the root zone secured?
A layer of security called Domain Name System Security Extensions (DNSSEC) ensures integrity of the DNS by providing a "tamper-proof seal" to the contents. ICANN holds and manages the master key used to enable this security, called the "key signing key."
Every three months, ICANN holds a ceremony to use this master key to generate a set of operational keys, called "zone signing keys," that registrars will use for the following three months to sign and publish the root zone on a daily basis. The ceremony is public so that the operation is completely transparent.

How is policy made?
Policies applicable to the root zone are developed by the ICANN community, through its supporting organizations and advisory committees, as well as the Internet Engineering Task Force (IETF) and other parties. ICANN's staff implements these policies.

Further information
Internet Assigned Numbers Authority (IANA) Functions Website: www.iana.org
National Telecommunications and Information Administration (NTIA): www.ntia.gov
Internet Corporation for Assigned Names and Numbers (ICANN): www.icann.org
Storage: www.storage.com
www.root-servers.org

Thank you!

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