IANA Activities Update

Naela Sarras | ARIN 35 San Francisco | 14 April 2015

Agenda

- ⊙ IPv4 Allocation

- ⊙ RDAP Implementation

- ⊙ Audits

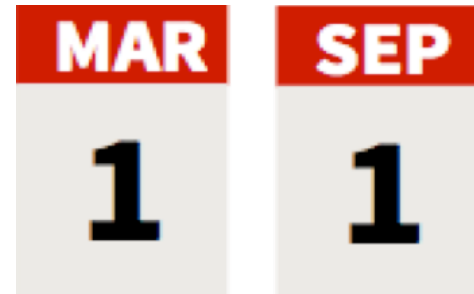- ⊙ Performance Reports

IPv4 Allocation
Global Policy Implementation

IPv4 Allocation

Allocate twice per year

Allocations happen on a pre-defined schedule

MAR 1

SEP 1

Use formula posted online

ICANN publishes **the software** used to make selection as open source available for anyone to inspect github.com/icann/ipv4-recovery-algorithm

```python
def find_best_match(self, amount, allocatee):

    candidates = {}
    for block in self.recovered.entries:
        score = float(math.log(len(block), 2))/32
        if block.preference == allocatee:
            score += 0.8
        if len(block) == amount:
            score += 0.2
        candidates[block] = score
    for block in reversed(sorted(candidates.iteritems(), key=operator.itemgetter(1))):
        size = block[0].end - block[0].start + 1
        if size > amount:
            return (block[0].start, IPv4Address(block[0].start + amount - 1))
        else:
            return (block[0].start, block[0].end)
```

March 2015 Allocation

- Third allocation under global policy made on 2 March 2015
  in-line with ASO AC advice

- Each RIR received 524,288 IPv4 addresses (a /13 equivalent)

Start address ☒	End address ☒	Designation ☒	Date ▲	Whois ☒	Status ☒
45.8.0.0	45.15.255.255	RIPE NCC	2015-03	whois.ripe.net	ALLOCATED
45.68.0.0	45.71.255.255	LACNIC	2015-03	whois.lacnic.net	ALLOCATED
45.4.0.0	45.7.255.255	LACNIC	2015-03	whois.lacnic.net	ALLOCATED
45.72.0.0	45.79.255.255	ARIN	2015-03	whois.arin.net	ALLOCATED
45.248.0.0	45.255.255.255	APNIC	2015-03	whois.apnic.net	ALLOCATED
45.240.0.0	45.247.255.255	AFRINIC	2015-03	whois.afrinic.net	ALLOCATED

http://www.iana.org/assignments/ipv4-recovered-address-space

Registration Data Access Protocol (RDAP) Update

RDAP Update

- RFC [7484](#) "Finding the Authoritative Registration Data (RDAP) Service" was published in March 2015

- The IANA Department completed the creation of registries specified in the RFC

- Currently working with the RIRs to design a process to add and maintain the RDAP entries in the relevant registries.

RDAP Entries apply to the following IANA Registries:

1. [IANA IPv4 Address Space Registry](#)

2. [IPv6 Global Unicast Address Assignments](#)

3. [Autonomous System (AS) Numbers](#)

IANA IPv4 Address Space Registry

Prefix ⊠	Designation ⊠	Date ⊠	WHOIS ⊠	RDAP ⊠	Status [1] ⊠	Note ⊠
000/8	IANA - Local Identification	1981-09			RESERVED	[2]
001/8	APNIC	2010-01	whois.apnic.net		ALLOCATED	
002/8	RIPE NCC	2009-09	whois.ripe.net		ALLOCATED	
003/8	General Electric Company	1994-05	whois.arin.net		LEGACY	
004/8	Level 3 Communications, Inc.	1992-12	whois.arin.net		LEGACY	
005/8	RIPE NCC	2010-11	whois.ripe.net		ALLOCATED	
006/8	Army Information Systems Center	1994-02	whois.arin.net		LEGACY	
007/8	Administered by ARIN	1995-04	whois.arin.net		LEGACY	
008/8	Level 3 Communications, Inc.	1992-12	whois.arin.net		LEGACY	
009/8	IBM	1992-08	whois.arin.net		LEGACY	
010/8	IANA - Private Use	1995-06			RESERVED	[3]
011/8	DoD Intel Information Systems	1993-05	whois.arin.net		LEGACY	
012/8	AT&T Bell Laboratories	1995-06	whois.arin.net		LEGACY	

The above is a screen cap from the IANA IPv4 registry:
http://www.iana.org/assignments/ipv4-address-space/ipv4-address-space.xhtml

Service Organization Control Audits

Service Organization Control Audits

- ICANN recently retained the Service Organization Control (SOC) 3 certification of its Domain Name System Security Extensions (DNSSEC) Root key Signing Key systems for the fifth consecutive year

- Also completed the second SOC2 audit, which evaluates key systems used to support IANA transaction processing functions

- Undergoing independent audits helps assure we have appropriate internal controls in place to meet availability, processing integrity and security service levels for the IANA functions

- Audits are conducted every year and help us to constantly monitor and improve our systems

Performance Reports

Performance Reports

- Regular monthly reports are published at http://www.iana.org/performance
- Performance standards were developed collaboratively with the community
- We routinely meet or exceeds all performance targets

Reporting on Performance

IANA seeks to provide an excellent, reliable and performant service of its various registration roles. To achieve this, IANA regularly reviews its procedures and liaises with its user communities to optimise performance.

More formally, the IANA Service Level Targets are defined in part by the contract for IANA performance with the US Department of Commerce, as well as in the Memorandum of Understanding with the IETF.

Report	Description
IETF Statistics Report	Documentation of the performance of the protocol assignments roles performed by ICANN for the IETF community. (Monthly)
Performance Standards Metric Report	A report of performance standard metrics for discrete IANA functions. (Monthly)
Internet Draft Processing Status	Information on pending Internet Draft actions being evaluated by IANA staff. (Daily)
Root Zone Audit Data	A report of all root zone related changes transacted. (Monthly)
Root Processing Times	Snapshots of average processing times for root zone related changes. (Monthly)

Allocation of Internet Numbering Resources

Key Performance Indicators

| Metric	Target	Actual	Target Met
Accuracy (1) — Policy is correctly implemented.	100%	100%	✅
Accuracy (2) — Registry is updated before notifying requestor of allocation.	100%	100%	✅
Timeliness and Process Quality (1) — For a specific request, ICANN does not need to seek more than two iterations of clarification from the requesting Regional Internet Registry in order to correctly apply the registration policy.	100%	100%	✅
Timeliness and Process Quality (2) — Requests are to be completed within 7 days.	100%	100%	✅
Transparency (1) — Public announcement of an allocation is made on the same day as the allocation being recorded in the IANA registry.	100%	100%	✅
Transparency (2) — An implementation schedule for a new global policies under C.2.9.3 will be posted following ratifications within 14 days for simple policies, and 30 days for complex policies.	100%	100%	✅

Requests Performed

No requests were completed during the reporting period.

Global Policy Implementation

No global policy changes were completed during the reporting period.
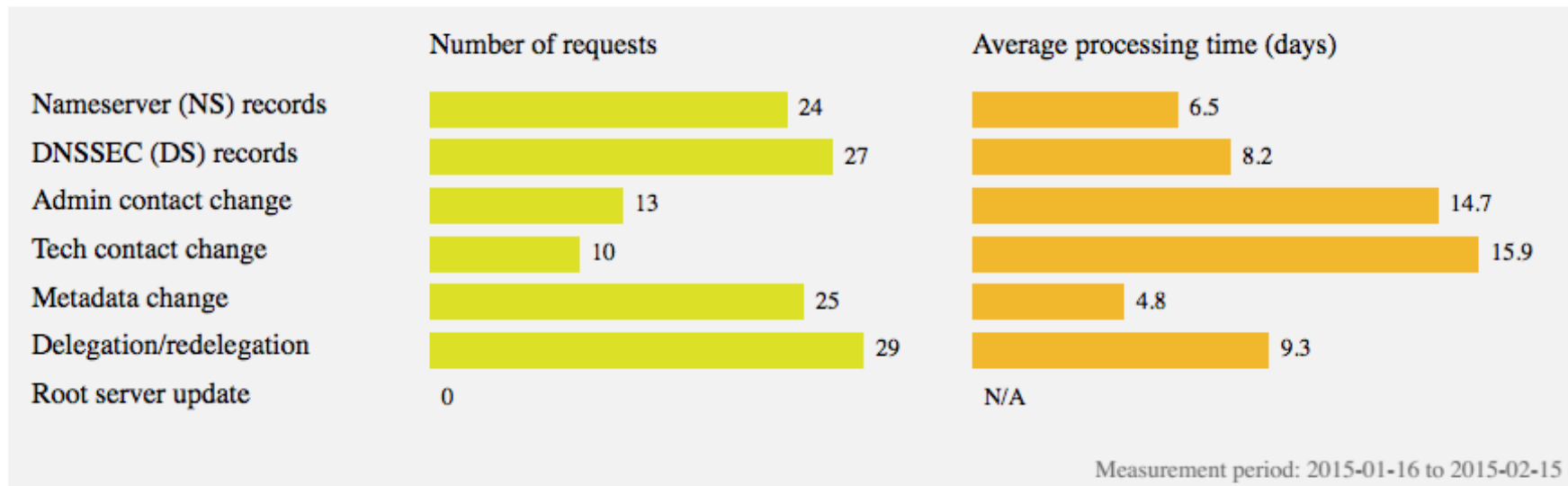
Protocol Parameters

ICANN's IANA Department IETF SLA Performance 2014
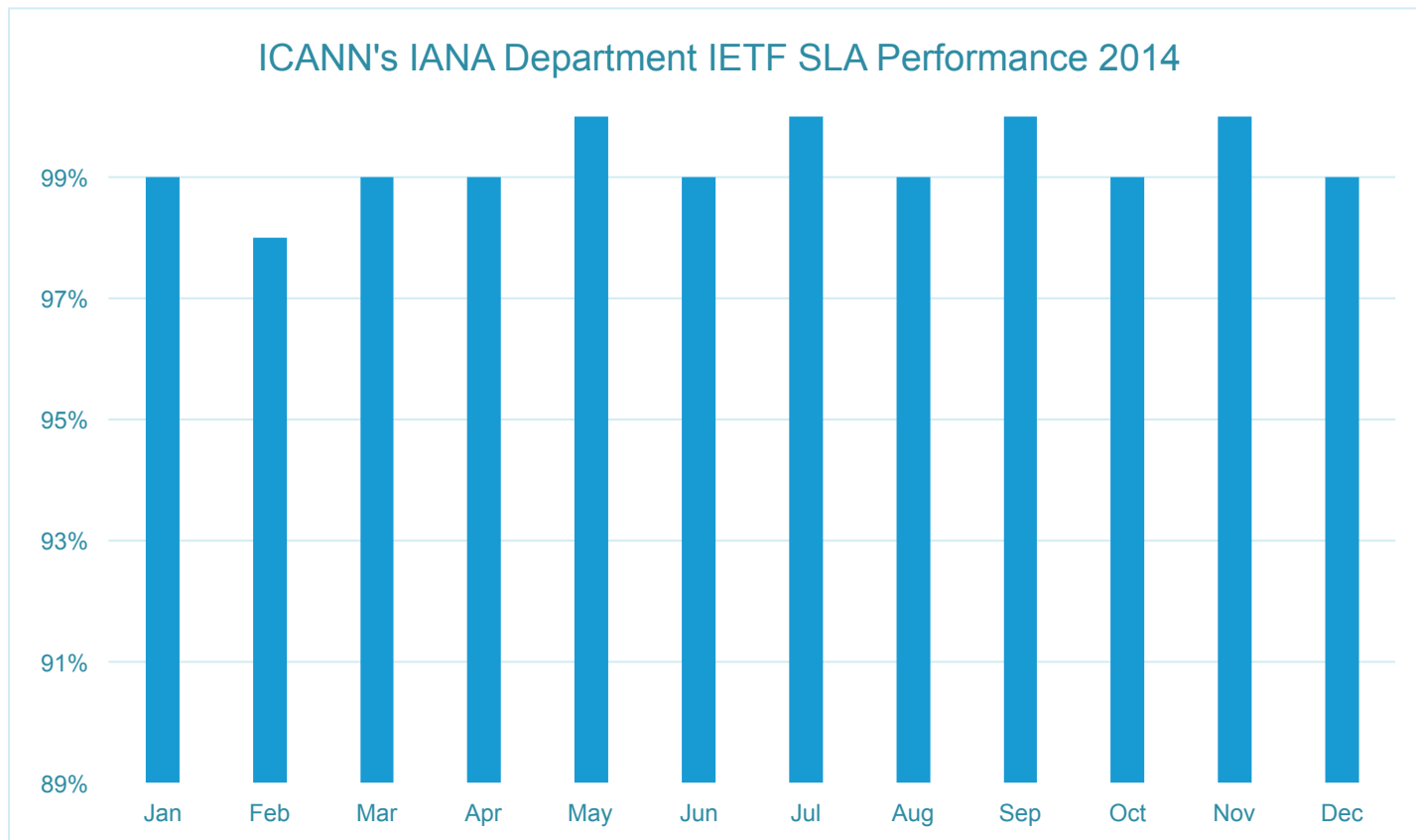
Root Processing Times

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

	Number of requests	Average processing time (days)
Nameserver (NS) records	24	6.5
DNSSEC (DS) records	27	8.2
Admin contact change	13	14.7
Tech contact change	10	15.9
Metadata change	25	4.8
Delegation/redelegation	29	9.3
Root server update	0	N/A

Measurement period: 2015-01-16 to 2015-02-15

This graph was generated on 2015-02-17.

Engage with ICANN

Thank You and Questions

Reach us at:
Email: naela.sarras@icann.org
Website: icann.org

twitter.com/icann

facebook.com/icannorg

linkedin.com/company/icann

youtube.com/user/icannnews

gplus.to/icann

weibo.com/ICANNorg

flickr.com/photos/icann

slideshare.net/icannpresentations