IANA Update

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Overview

- Current Status

- What has improved

- What still needs improvement

- What are our plans

Current Status

- New IANA contract signed 14 Aug 2006

  - 1 Oct 2006 through 30 Sep 2007 (optional extensions to Sep 2011)

- Root Zone Management Services

  - "*IANA isn't the problem anymore*" - overheard at CENTR GA

  - Name Management Project Specialist position open

    - http://www.icann.org/general/jobs.htm#IANAProjectSpecialist

- IP Addressing Services

  - Global IPv6 policy executed (/12s allocated) and 32-bit ASNs allocated

  - ICANN and RIRs working on an agreement that defines IANA SLAs

  - Leo Vegoda hired as Numbers Liaison (started Dec 1)

- IETF Registry Services

  - Michelle Cotton promoted to IETF Liaison

  - IANA Service Level Agreement with IETF signed

One Year Ago vs. Today

| What	1 Year Ago	Today
Staff	5 FTE	10 FTE
Average Median Process Time	82.88 days	7.94 days
Median Queue Depth	21 reqs	4 reqs
24x7x365 "Hot line"	No	Yes
Screams of Outrage	Many	Fewer

What Has Improved

- Services (mostly) better
  - Improvement across the board
    - Not without some backsliding
- Sufficient operational staffing
- Formalization of project management
  - IANA has 48 projects underway
- Process documentation
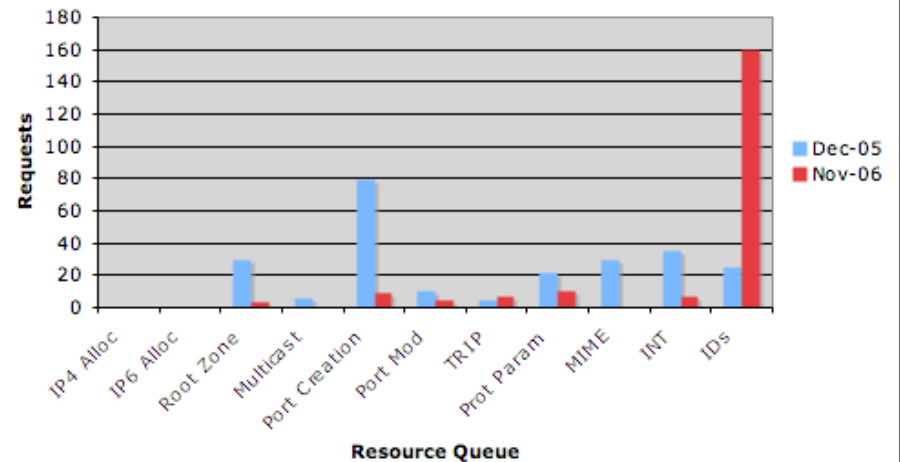 - Internal "Cookbooks" created for all processes

Service Improvement
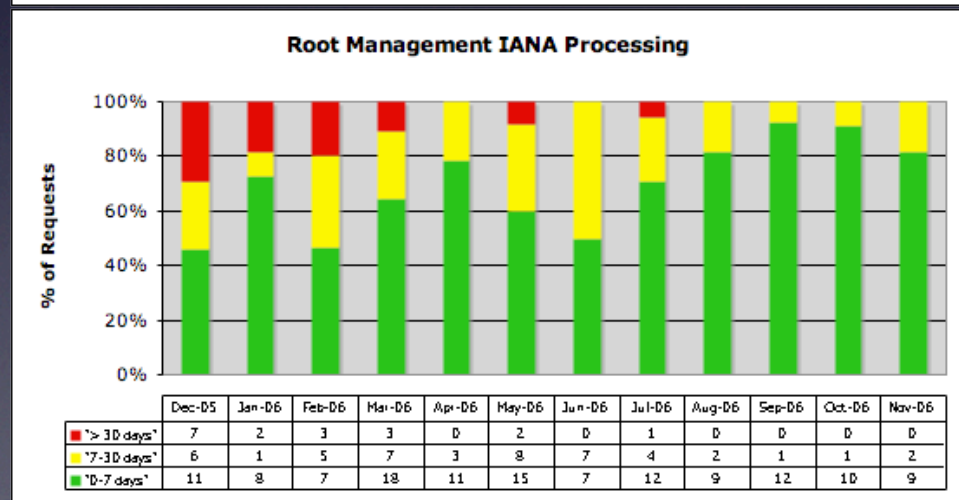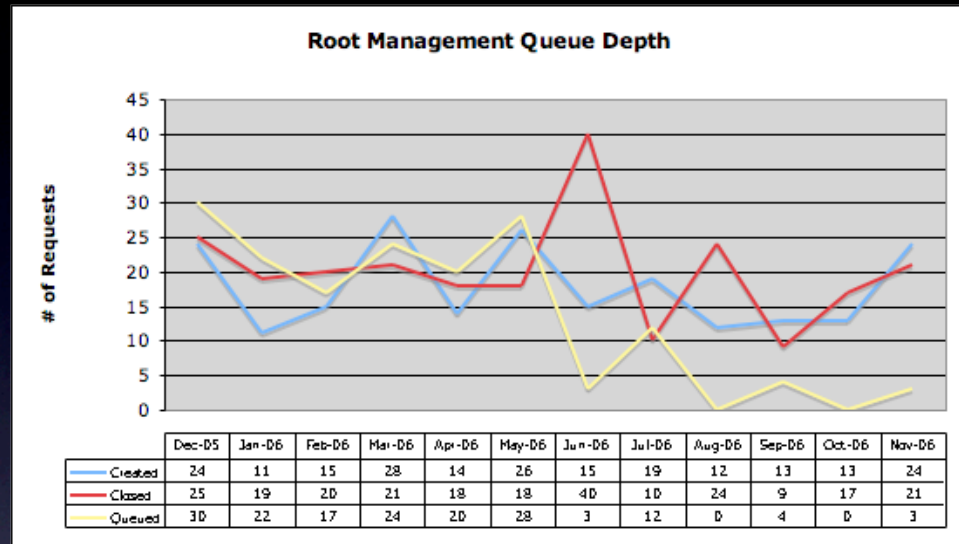## Dec 2005 (or earliest data availability) to Nov 2006
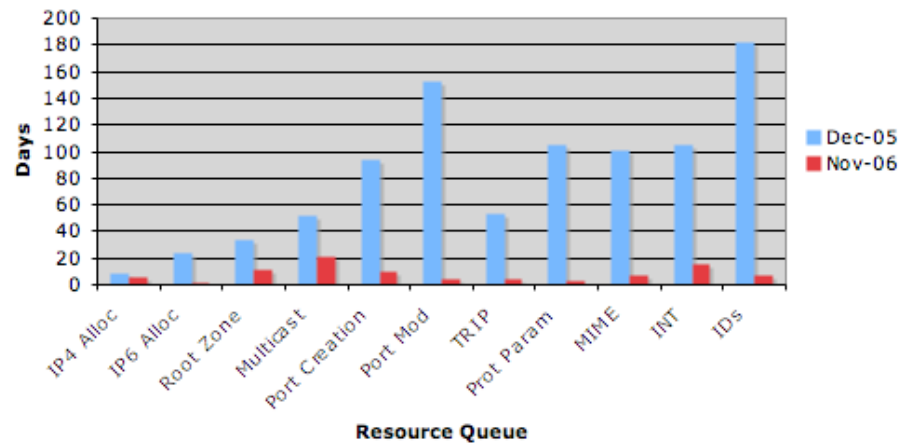
Sample Statistics

- Changes to the DNS root databases
- root-mgmt@iana.org

Days	12/2005	11/2006	Change
Average	65.70	13.03	80.17%
Std Dev	75.81	7.04	90.71%
Median	33.85	11.69	65.47%

Root Management Queue Depth

# of Requests

	Dec-05	Jan-06	Feb-06	Mar-06	Apr-06	May-06	Jun-06	Jul-06	Aug-06	Sep-06	Oct-06	Nov-06
Created	24	11	15	28	14	26	15	19	12	13	13	24
Closed	25	19	20	21	18	18	40	10	24	9	17	21
Queued	30	22	17	24	20	28	3	12	0	4	0	3

Root Management IANA Processing

% of Requests

	Dec-05	Jan-06	Feb-06	Mar-06	Apr-06	May-06	Jun-06	Jul-06	Aug-06	Sep-06	Oct-06	Nov-06
'> 30 days'	7	2	3	3	0	2	0	1	0	0	0	0
'7-30 days'	6	1	5	7	3	8	7	4	2	1	1	2
'0-7 days'	11	8	7	18	11	15	7	12	9	12	10	9

What Needs Improvement

- Visibility into IANA processes
  - Statistics need to be published automatically
  - Process documentation needs to be made publicly available
- Most IANA processes still too manual
  - Processes need to be simplified and normalized
  - Much more automation required
    - Software development taking (much) longer than anticipated
      - New project management methodologies will hopefully help
- Registry data correctness
  - Efforts underway to clean the data

Near-term Issues

- IETF SLAs imply the need for more automation of IETF services
  - Too much of IANA processing remains manual
  - Initiated a pilot project aimed at XMLizing some IANA registries
- Registries need to be cleaned and contacts validated
  - IPv4 and root zone in particular
- Stronger authorization/authentication needed
  - Driven by IANA contract with the USG, implemented first in eIANA
- Development and implementation of a "Computer Security Plan"
- DNSSEC signing .ARPA and associated infrastructure
  - Key management requires tools
- Deploying new IANA web site and eIANA software for testing

Lots of software development/deployment needed

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Mid-term Issues

- Automation

  - Deploy root zone management (eIANA) in production

  - Develop and deploy IETF-related registry creation/modification

- Addressing single points of failure in IANA processes

  - Both infrastructure and employees

- Increased IANA information availability

  - Real-time statistics, ticket status, interaction history, etc.

  - Online XMLized registry availability

- Working out transition from "USG approval required" model

  - First step: auditability of all IANA actions

Looking Forward

- Areas of interest/concern
  - Root DNSSEC deployment
    - Processes and procedures to be defined
  - Exhaustion of IPv4 free pool
    - Expected somewhere around 2010 - 2015
  - Routing system security and growth
    - Should IANA become X.509 address space CA?
    - What can IANA do to help constrain growth?
- IANA will be exploring what role it has (if any)

Conclusions

- **IANA "Crisis" period over**

  - Still work to be done

- IANA is undertaking many automation projects to continue to improve processes

- Additional work needed in improving visibility of IANA activities