ICANN | 52
Singapore

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ICANN

Congratulations to Registries!

500+

New generic top-level domains have been delegated as a result of the New gTLD Program.

Many more gTLDs are on the way.

Agenda

1 Issues and Solutions

2 Panel of Registry Operators

3 Questions & Answers

Introduction

Specification 10

Emergency Thresholds
EBERO may be invoked if any of these reaches 100%

SLA Thresholds
Service Level Requirements are defined in Specification 10 of Registry Agreement

SLA Monitoring

Software platform

Zabbix is the primary platform
Backup monitoring platform developed in-house

ICANN's probe node network

The probe node network consists of 40 probe nodes around the world

Spec 10 monitoring algorithm

Specification 10 monitoring algorithm is designed to lower the risk of false-positives

Escalation Algorithm

Email

Alerts are sent to the emergency and technical contacts at 10%, 25%, 50%, 75%, and 100%

Automated phone calls

Automated phone calls to the emergency contacts are initiated at 10%, 25%, 50%, 75%, and 100%

Escalation in ascending order (1-3), the call may be acknowledged by pressing "0"

Three tries per contact with call-memory

Escalation Algorithm

NOC

The NOC tries to get a positive acknowledge from a person at 10%, 50% and 100%

The NOC can provide the current service status from our monitoring platforms

Level 2 and 3 support

Provided by ICANN staff

Best-effort basis

Access to SLA Monitoring Data

SLA monitoring data

API will provide visibility to the information regarding the incidents to the registries

Registry Reporting Interface

Access will be provided through the RRI API

Issues and Solutions

IP Whitelisting

⚠ Problem

ICANN's probe node network is not whitelisted

Details: Rate-limiting thresholds are reached for services monitored by ICANN

🔧 Solution

Whitelist all probe node IP addresses

Full list available in the GDD portal

Monitoring From Internal Networks

Problem

Registry monitoring platform is monitoring from the internal network

Solution

Monitor from external networks

Alternately, you can implement the monitoring in such a way that the external appliances (i.e., firewalls, balancers) are monitored

DNSSEC Issues

⚠ Problem

- Lost access to private key (e.g., HSM failure)
- Expired signatures
- Signing platform issues
  - e.g. dynamic updates breaking NSEC or NSEC3, double signatures with crypto issues

🔧 Solution

Thoughtful testing of operational procedures including DNSSEC signing platform

nic.<tld> Issues

⚠ Problem

- DNS service for nic.<tld> is not working
- DNSSEC for nic.<tld> is not working
- nic.<tld> has not been allocated in the SRS

🔧 Solution

Maintain nic.<tld> using the same standards as for other critical names, and register it in the SRS

whois.nic.<tld> Issues

⚠ Problem

- DNS service for whois.nic.<tld> is not working
- DNSSEC for whois.nic.<tld> is not working
- Changing IP address(es) of whois.nic.<tld> without considering caching of the old one

🔧 Solution

Maintain whois.nic.<tld> using the same standards as for other critical names, and follow standard operational practices for updating IP address(es) of whois.nic.<tld>

IPv6 Issues

⚠ Problem

Intermittent IPv6 connectivity

🔧 Solution

Obtain IPv6 connectivity with the required quality to comply with SLA

NS Issues

⚠ Problem

- Failures on NSs with Unicast
- Using only 2 NSs and one NS is failing
- SRVFAIL responses / non-AA responses

🔧 Solution

Consider using DNS anycast and have more than 2 NSs; implement full monitoring of DNS service, including master zone transfer platform

Panel of Registry Operators

Engage with ICANN

Thank You and Questions

Reach us at:
Email: engagement@icann.org
Website: icann.org

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