



.CO DNSSEC

Experiences and Challenges

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ICANN Meeting # 48 – DNSSEC Workshop

Buenos Aires, ARGENTINA, November 20th, 2.013

.CO DNSSEC Agenda

- Tech deployment overview
- EPP implementation update
- Awareness Strategy
- Status
- Challenges
- Q & A





.CO DNSSEC

Tech deployment overview

- NEUSTAR [NSR] (our IT and Security partner)
 - *Two (2) months (smooth) deployment (same as .US and .BIZ models)*
- Implementation startup announced during ICANN 45 (.CO): Dec. 2.010
- Press Release: March 1st, 2.011
- Policies:
 - *KSK's (2.048) rolled over annually and ZSK's (1.024) monthly*
 - *Signatures generated with RSA/SHA-256 (algorithm/hash), refreshed monthly*
 - *NSEC / NSEC3*
 - *No restrictions on transfers*
 - *WHOIS.CO does **NOT** indicate if domain name is signed*
 - ***No certification required from Registrars (DS records submit via EPP update)***
- Related information and news within our Registry online content



.CO DNSSEC EPP implementation update

- Registry update involves migrating from *secDNS-1.0* (defined by [RFC-4310](#)) to **secDNS-1.1** (defined by [RFC-5910](#))
- Deployment will occur through several phases to ensure Registrars have enough and appropriate time to deploy and test their systems.



.CO DNSSEC Awareness Strategy (1)

- **“.CO DNS Tech and Sec Day”**
 - *Annual event since 2.011*
 - *August 14th, 2.013 (cosponsor: CCIT, Colombian IXP administrator)*
 - In-place (50) and Remote (20) attendance
 - Live streaming via RENATA (Colombian Internet-2 academic network)
 - ISP’s, National CERT’s, Government, Academy, Financial Sector
 - Colombian ITC Ministry, ISOC, NIC.CL, LACNIC, KASPERSKY, RENATA
 - CO-DNS virtual community (<http://CO-dns.COInternet.com.CO>)
 - DNS Technology and Stability, Security and Resiliency (SSR) crowdsourcing
 - Be a member! – (now we are 50!)
- .CO Blog: **“DNSSEC in the .CO Zone”**



.CO DNSSEC Awareness Strategy (2)

- Working with Colombian ITC Ministry for including DNS Security baselines and policies in government IT related RFP's and contracts
 - *Major e-Government sites and portals using .CO signed domain names*
- Working with RENATA (Colombian Internet-2 academic network) for signing the EDU.CO domain names of its members (+155: major universities and research centers)
- Working along with ISP (Colombian branch) in a project for offering domain name signing service for their DNS customers.



.CO DNSSEC Status (1)



- February 2.012 (prior to ICANN 43 at .CR)
 - **59** / 1.2M domain names signed
- November 2.012 (prior to 7th WIGF at Baku)
 - **113** / 1.365M domain names signed
- March 2.013 (before ICANN 46 at .CN)
 - **139** / 1.470M domain names signed
- October 2.013 (before ICANN 48 at .AR)
 - **196** / 1.560M domain names signed



.CO DNSSEC Status (2)



- When we ask about DNSSEC to our .CO Registrants with signed domains:
 - *“Registrar provides me the service (added-value)”*
 - *“It’s a DNS security matter/issue”*
 - *“My website was compromised/hacked before ...”*
 - *When they refer other people to DNSSEC*
 - “What’s this thing?”
- **No Registrants signed by themselves without Registrar’s promotion of the product/service.**

.CO DNSSEC Challenges (1)



- Strong community and knowledge transfer interaction between relevant actors (Registry, ISP's, CERT's, Academy, Government and Private sector) regarding DNS tech and SSR issues
 - *ISP's and local Registrars interest and knowledge take time but is raising*
 - *Public and Private sector IT projects RFP's and contracts **must** include DNSSEC/DANE and DNS-SSR*
- Knowledge related with “domain names industry” is increasing
- Internet security awareness and proceedings (growing)
 - *Five (5) Colombian CERT's in FIRST.ORG (National CERT on the way)*
 - *National public policy on Cyber-Defense and Cyber-Security*

.CO DNSSEC Challenges (2)



- Combined with innovative solutions like OpenDNS “DNSCrypt” and latest version of BIND (“Inline Signing”, NXDomain Redirection)
 - *DNSSEC adoption may grow so that people can have more confidence in the entire DNS tech infrastructure*
- As IPv6 is relevant for Internet infrastructure, DNSSEC/DANE are required for Internet Stability, Security and Resilience (SSR).



¡Thank you!