DNSSEC @ .pt

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Agenda

• Objectives

• Initiatives and Support

• Developments on .pt

• Next Steps
• FCCN is
  – The manager of the Portuguese Research and Education Network
  – The manager of .PT
  – The operator of the GigaPIX

• We try
  – To deploy the most recent internet related technologies inside the country
  – Be a driver for innovation
• However

  – I’ll talk about this at the end 😊
Some Key Dates

- .PT started 1991
- Registrars – 2000
- IPv6 in domain registrations – Apr/2003
- ISO9000 - 2005
- IDNs – Jan/2005
- EPP – 2008, trials
- Today 300k .PT domains registered
- DNSSEC ...
Provide a more secure DNS service helping the Portuguese Internet Community with the DNSSEC adoption and usage
Goals

- Offer a better and more trustful service
- Promote DNSSEC implementations
- Share knowledge and experience
- Provide deployment documentation
- Support technicians developing DNSSEC implementations
- Apply best practices concerning to security and data protection
Initiatives and Support

• Tested several implementations since 2006

• Conferences, meetings and workshops for registrars

• Theoretical and technical documentation

• Press releases, flyers and online news

• Motivate organizations on the NREN and ISPs to adopt DNSSEC

• Try to convince banks, judicial and government entities
Initiatives and Support

Testebed (2009):

• Signed domain – dnssec.pt

• Free registration under dnssec.pt for testing purposes

• Requests and questions at dev@dnssec.pt and info@dnssec.pt respectively

• All information available in Portuguese and English at:

http://www.dnssec.pt
Directed to .pt Registrars:

- DNSSEC .pt Surveys
- DNSSEC Workshops
- Public Information Session: EPP and DNSSEC in .pt
- Support Technical documentation
- Direct access to DNSSEC mailing-lists and technical contact
DNSSEC Policy and Procedures Declaration:

- Document of reference to evaluate the level of confidence which the DNSSEC of the .pt conveys to the various intervening entities
- Participants and their respective scopes of responsibility
- Procedures and operational schemes, regarding the implementation of DNSSEC by .pt
- Management and storage of .pt zone keys
Installed infrastructure model with high level security, stability and performance:
• Hidden primary server runs BIND 9.7.0
  – Version compatible with the Hardware Security Module (HSM)
    • AEP Networks Keyper Professional Model 9720 version 1.8
    • PKCS#11 used to send signed zone to Primary Server

• Primary server runs BIND 9.6.1-P1

• NSEC3 opt out
Developments on .pt

Signed and in production since 4th of January 2010:
- We already have 24 domains signed under .pt
Next Steps

- DNSSEC Integration with the EPP system
- Automating the update of RRs (Dynamic Updates)
- Improve the knowledge of the ccTLD .pt team concerning to DNSSEC
- Continuing to host DNSSEC Workshops
- Participate in meetings and “spread the word” about DNSSEC@.pt
- Enhance of our system in regard to DNSSEC
• Bandwidth
  – Not a problem because we run the GigaPIX and the Research and Education Network (connections @10Gbps)

• Hardware updates
  – Not only for DNSSEC

• Portugal in a Seismic area
  – Replicas in Porto
• However

  – I’ll talk about this now 😞
Other Activities

- Operation of the Primary Nameservers for
  - Angola - .AO
    - Online system operated from Angola
  - Cape Verde - .CV
    - Primary now moving to Cape Verde
Obrigado