DNSSEC: Lessons From A Generic TLD

James Galvin
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Topics

- Know the Material
  - Algorithms and Parameters
  - Understanding Interactions
  - Making Choices
- New Processes
- Operations

Know The Material

- Need a good understanding
  - There are a lot of documents
- Security is being added
  - Changes everything
- Keep current
  - Ask for help

Algorithms and Parameters

- Algorithms
  - DSA vs RSA
  - SHA1 vs SHA2
  - next?
- Key lengths
- NSEC vs NSEC3
  - Zone walking vs performance

Understanding Interactions

- MaxSigLife: when a signature expires
- TTLs (DNSKEY, RRSIG)
- TTLs must be < signature lifetime
- When to re-sign zone
  - Before signatures expire

Making Choices

- TLDs will make a choice
- Registries should permit them all
- Registrars may make choices
- Registrants may want choices

New Processes

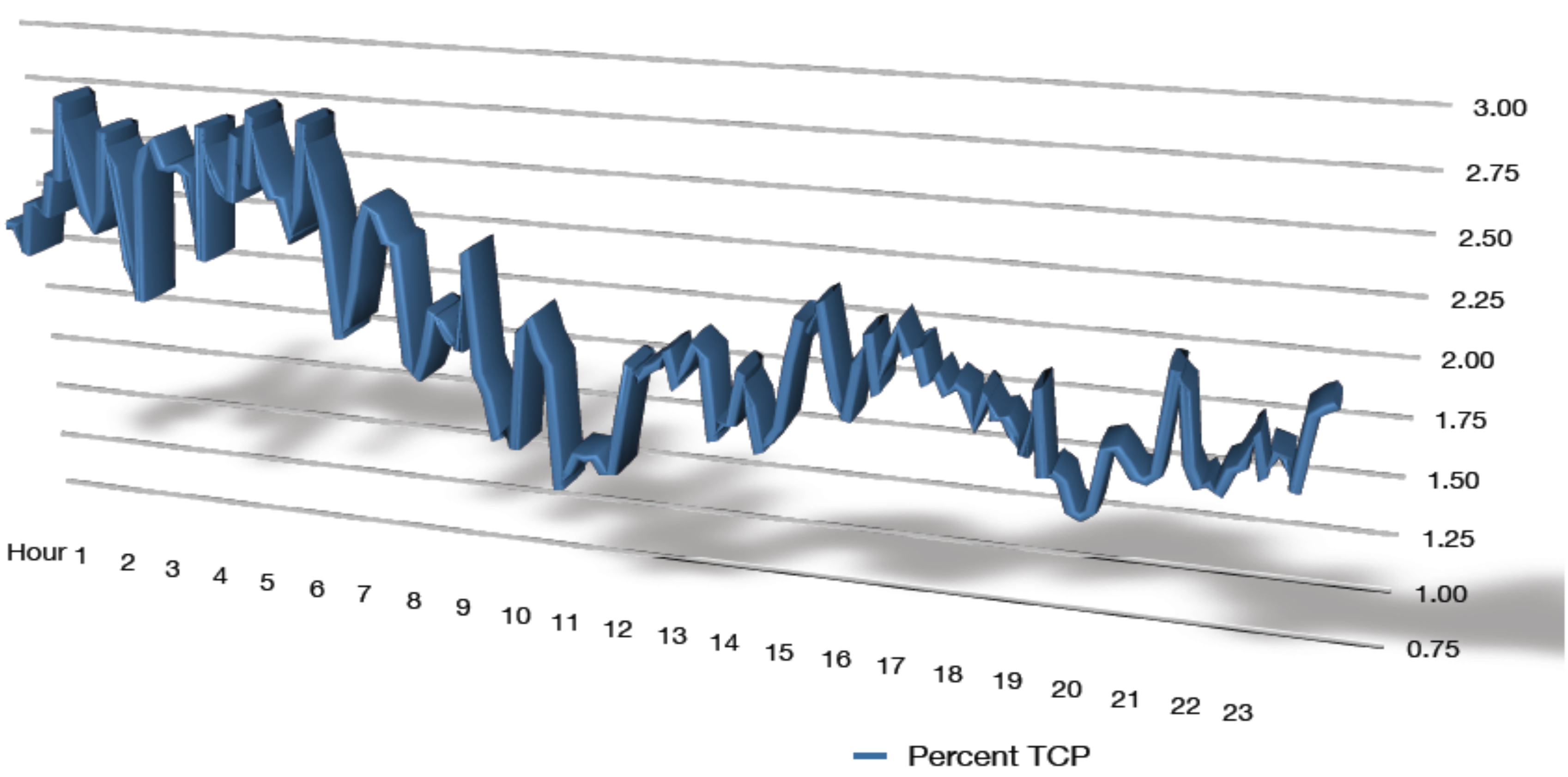
- KSKs and ZSKs
  - Should have more than one of each available at all times: active vs inactive
- Key Rollovers
  - Planned
  - Unplanned – early usage of “next”
  - Emergency – replace all

Operations - More Parts

- Last mile – validating resolvers
  - Not under your control
- Routers and firewalls
  - Sweden experience
  - Still at risk two years later
- Operational changes

Operations – TCP Replies

.ORG - TCP as Percentage of DNS Queries, 2009-08-27



Thank You!

- Questions and Discussion