RSTEP Status Report

ICANN São Paulo || 6 December 2006

Registry Services Technical Evaluation Panel

http://www.icann.org/registries/rsep/rstep.html

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About RSTEP

Evaluate specific proposals for new gTLD registry services with respect to their potential impact on the security and stability of the Internet

- Established by ICANN to implement a GNSO consensus policy approved on 30 June 2005
  (http://gnso.icann.org/issues/registry-services/final-rpt-registry-approval-10july05.htm)

- Four-step registry service review process:
  – Registry operator uses on-line tool to submit proposal
  – ICANN staff post the proposal for public comment and determine whether or not an RSTEP review is necessary
  – RSTEP review team evaluates the proposal and reports to the ICANN Board; report is posted for public comment
  – Board decides whether or not to approve the proposal
    (http://www.icann.org/registries/rsep/rsep.html)

RSTEP Reviews

Since the effective date of the review process
(15 August 2006), two registry service proposals
have been evaluated by RSTEP review teams

- Tralliance "search.travel" wildcard proposal (18 Sep 2006)

- Global Name Registry proposal for the use of reserved
  2-character strings at the second level of .name (20 Oct 2006)

*Note that during this period other registry service proposals
have been processed by ICANN without RSTEP involvement*
(http://www.icann.org/registries/rsep/submitted_app.html)

Tralliance "search.travel" wildcard

- Review team formed 18 Sep 2006
  - Patrik Fältström (Cisco; Sweden)
  - Lars-Johan Liman (Autonomica; Sweden)
  - Cricket Liu (Infoblox; USA)
  - Mark McFadden (internet policy advisors, llc; USA; chair)
  - Paul Mockapetris (Nominum; USA)

- Review team report posted 9 Nov 2006
  (http://www.icann.org/registries/rsep/tralliance_report.pdf)

- Board resolution rejecting the proposal adopted
  22 Nov 2006
  (http://www.icann.org/minutes/resolutions-22nov06.htm)

The Tralliance Proposal

- Add a wildcard RR (RFC 1034) to the .travel zone
  - Any DNS query for a name string for which no exactly matching resource record can be found would receive, instead of a "does not exist" (*nxdomain*) response, a synthesized response containing the IP address of the Tralliance *search.travel* server.

- Deploy a "landing page" at *search.travel* which would:
  - advertise the availability of the name string for registration as a .travel domain name; and
  - provide a search box pre-loaded with the name string which, if used, would return .travel results with higher rankings than results from other TLDs.

The Review Team's Assessment

The proposed service would have meaningfully adverse effects on security and stability.

- Both security and stability risks were identified
- The wildcard would disable the technique that many applications use to detect (and potentially correct) erroneous or misleading input
- The effects would be felt by all current and future applications and protocols that rely on the DNS
  - the effects could not, given the current state of Internet standards and practice, be restricted to simple HTTP web traffic (the context in which the benefits of the service are intended to be realized)

Impact on Security and Stability

- Misaddressed mail could be delayed, perhaps by days
- Spam filters would become less effective
- The locally-optimized algorithms that some applications, including web browsers and proxies, use to decide what to do with a name string that does not correspond to a properly registered domain name would no longer operate correctly
- Some resolver search list algorithms would interact with the wildcard to inadvertently match non-existent domain names and produce erroneous or surprising results
- Easily detected errors in configuration files and clickable links would become difficult to find as the wildcard transformed hard errors into fake soft errors

GNR two-character .name SLDs

- Review team formed 20 Oct 2006
  - Rob Blokzijl (RIPE; The Netherlands)
  - Jordyn Buchanan (Google; USA)
  - Hiro Hotta (JPRS; Japan)
  - Glenn Kowack (Consultant; USA; chair)
  - Kurt Lindqvist (Internet Technology Advisors; Sweden)

- Review team report posted 6 Dec 2006
  (http://www.icann.org/registries/rsep/RSTEP-GNR-proposal-review-team-report.pdf)

- Board review and decision pending

The GNR Proposal

- Limited release of initially reserved two-character Second Level Domain names (SLDs) into the .name unsponsored generic Top-Level Domain (TLD).
  - allow for the registration of personal names with two-character family names; e.g., Guanghao Li and Tony Ng
  - not delegate two character SLDs directly, but allow registrations under those SLDs; e.g., <givenname>.li.name

- Potential confusion with two-character country codes used for ccTLD names
  - e.g., .li (Lichtenstein) and .ng (Nigeria)

The Review Team's Assessment

The proposed service would have no
meaningfully adverse effects on security or stability.

- Most TLDs already have two-character domains
  registered at the second level
  - very few operational issues have ever been reported
- Analysis of data from queries to a TLD that allows two-character SLDs shows that the proportion of erroneous queries that are for *.<TLD>.<TLD> is very small
- Data gathered from a "honeypot" experiment indicates that misdirected queries represent a microscopic fraction of overall traffic

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