## DNS Name Collisions: what's is in the plans for the future

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#### Introduction

- Why it happened
- Why it will happen again
- What this talk is about



#### Name collisions framework in 2012-round

- All 2012-round TLDs were required to pass a controlled interruption period and be able to respond within two hours for life-threatening collision reports, for the first two years of delegation
- During the controlled interruption period of 90 days, names would respond with an internal invalid address to warn affected users without exposing them
  - For APD lists, the same applied for those names in the list
- Current number of collision reports is 37 occurrences reported to ICANN, of which 0 were life-threatening
  - Other collisions might have been reported directly to registries, and some not reported at all



## Name Collisions: Reported collisions from 2012-round

- No human-life threatening collisions
- 18 unique TLDs represented in the 34 occurrences
  - 7 brand/exclusive-use TLDs
  - 1 GeoTLD/Governmental registry
    - Lower than expected occurrences with GeoTLDs
  - No IDN TLDs (as expected)
- Median of 3 occurrences per TLD
- Median of 22 days between the delegation and the report, with some very late reporting (maximum was 568 days)
- 23 cases reported as service disruption, 9 as networking errors; 21 cases affected company networks, 7 a single local computer, 2 application development environments, 1 web application



# Name Collisions: Reported collisions from 2012-round (cont.)

- In 24 cases the registry was not contacted
  - ICANN Org determined that contacting the registry was not necessary given that the reporter was able to fix the issue(s) in their network relatively quickly, or the reporter did not respond when asked if they approved ICANN to put them in contact with the registry.
- In 5 the registry was put in contact with the reporter, in 1 registry stopped controlled interruption, in 1 no action was taken
- Few data on outcomes; all 5 known outcomes that were reported were that the network was updated
- Some registries kept wildcard records afterwards



## Name collisions framework for subsequent procedures (aggregate proposal 1/2)

- Before the procedure, ICANN Org would provide a "do not apply" list (as they did in 2012) and a list of "exercise care" strings where they already expect a more detailed study to be required
- Every application, whether or not to those already identified "exercise care" strings, would be allowed to file a collision mitigation framework
- All applied-for strings would be evaluated as to their risk of collisions: low risk, aggravated risk, high risk
- A high risk finding terminates the application(s)
- An aggravated risk requires a non-standard mitigation framework to move forward
- All low risk strings would share a common framework, using wildcard controlled interruption, done by ICANN



## Name collisions framework for subsequent procedures (aggregate proposal 2/2)

- All low-risk strings could start controlled interruption right after their findings are published; ICANN Org could even contract DNS providers to do so before other evaluations, contention resolution or contract signing.
- Minimum 90-day interruption period (same as 2012)
- Mitigation frameworks would be evaluated by RSTEP
- No APD or other per-label lists, unless required by an specific collision mitigation (ex: [appname].TLD)
  - Label-specific non-wildcard responses, based on registry request and ICANN Org approval ?
- Data-driven decision making using trusted researchaccessible data (like DITL and ORDINAL)



## Name Collisions Framework: still to decide

Warning: no consensus calls so far, only general agreements

No general agreement or discussion yet on

- Readiness for collisions
- How to create the initial lists
- How to assess name collision risk for applied strings
- How to assess a mitigation framework for an specific acceptable risk string>
- Collision issues in legacy gTLDs (



### Name Collisions: how to be aware and participate

- SubPro WT4 Wiki page: <u>https://community.icann.org/display/NGSPP/4.6.3+Nam</u> <u>e+Collisions</u>
- Posting to DNS-OARC dns-operations mailing list
- Initial Report coming this April, final report CY18
- SSAC-led NCAP (Name Collision Analysis Project)

