Proposed

Name Collision Analysis Workflow

As of 10 November 2021

Proposed Name Collision Analysis Workflow

1. Review risk of applying
2. Application submission
3. Controlled Interruption
    a. Board decision regarding controlled interruption
    b. Capture a picture of the collisions
    c. Applicant/Tech Review Team prepare addendum to application
4. Honeypot
    a. Board decision regarding honeypot
    b. Capture a picture of the collisions
    c. Applicant/Tech Review Team prepare addendum to application
5. Board gets final package for review

Capturing a picture of collisions (1 of 3)

- Picture 1 as part of application
  - Assumes passive data generally available
  - DNS-based only

- Picture 2 after controlled interruption
  - Trusted third party to conduct CI
  - DNS-based only

- Picture 3 after honeypot
  - Trusted third party to conduct HP
  - DNS and whatever becomes visible

Capturing a picture of collisions (2 of 3)

- Critical Diagnostic Measurements
  - Query Volume
  - Query Origin Diversity
    - IP distribution
    - ASN distribution
  - Query Type Diversity
  - Label Diversity - expect diminishing value
  - Other characteristics - variable value
    - Open Source Intelligence (OSINT) of string being used

Capturing a picture of collisions (3 of 3)

- Develop assessment of impact as a function of both volume and diversity
- Find the **impact**
  - Do we know why it's leaking?
  - What is the source of the collision?
  - When did collisions start? - time window for analysis
  - What could and would the impact be if delegation is approved?
- For pictures 2 and 3
  - What did happen?
  - Conduct outreach and report

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1. Review risk of applying

- Are name collisions present?
  - Review public information
    - Pre-publish top N list
    - ITHI
    - IMRS Hedgehog
  - DITL data review
  - Other near-real-time data?

- What should applicant include in their analysis?

2. Application submission

- Technical package with name collision analysis must be included
  - Only if name collisions present?
  - Draft mitigation plan?
  - Draft remediation plan?
  - Trending data?
- *Subsequent procedures and applicant guidebook process drives at this point*
  - *Out of scope for discussion group*

3. Controlled Interruption

- Board decision regarding controlled interruption
  - Requirement is nothing in the root without visibility by the Board
  - Does not guarantee approval of permanent delegation
  - When relative to contention sets?
- Conduct Controlled Interruption
  - Trusted third party
  - Temporary delegation - need process to revert
- Capture a picture of the collisions
  - Provides data to both Applicant and Technical Review Team
  - Applicant prepares addendum to application
  - Technical Review Team prepares addendum to application

4. Honeypot

- Board decision regarding honeypot
  - Requirement is nothing in the root without visibility by the Board
  - Does not guarantee approval of permanent delegation
  - When relative to contention sets?
- Conduct Honeypot
  - Trusted third party
  - Temporary delegation - need process to revert
- Capture a picture of the collisions
  - Provides data to both Applicant and Technical Review Team
  - Applicant prepares addendum to application
  - Technical Review Team prepares addendum to application

5. Board gets final package for review

- Final package contains
    - All application materials defined elsewhere
    - As many as (three $\times$ two) name collision assessments
- At least one (more?) assessment from applicant must include
    - Mitigation proposal
    - Remediation proposal
- At least one (more?) assessment from Tech Review Team regarding:
    - Mitigation proposal
    - Remediation proposal
- Board makes final decision