Name Collision Occurrence Management Framework

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Agenda

- Introduction & Background

- Name Collision Occurrence Management Framework

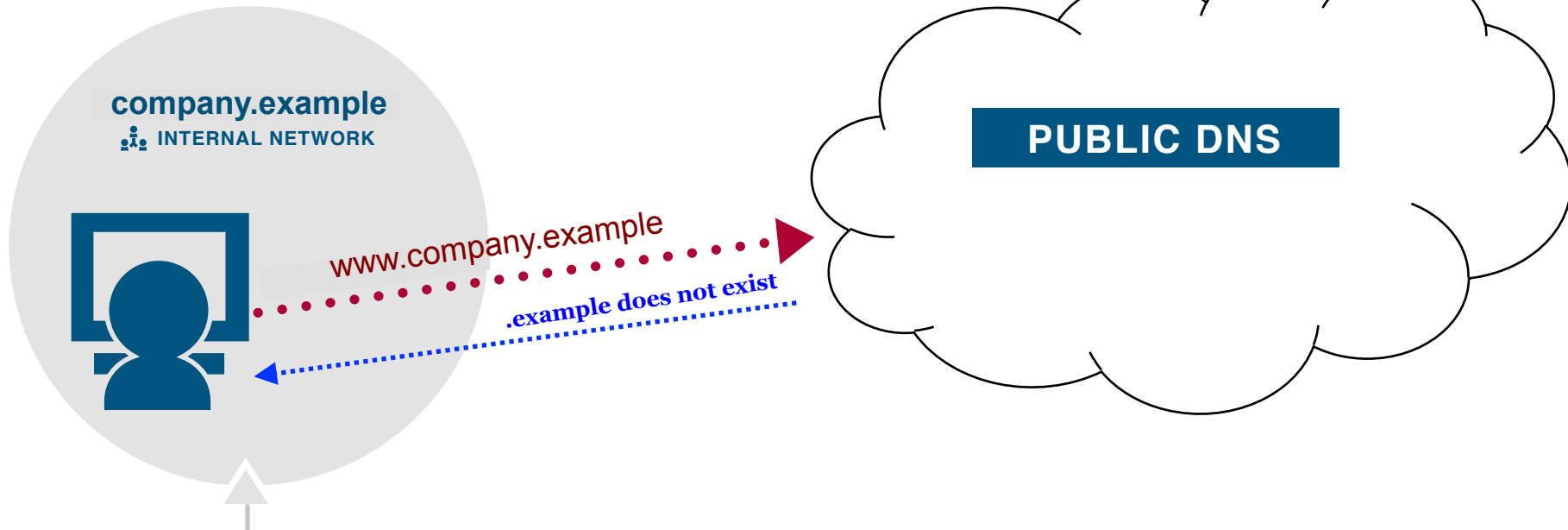- Name Collision Occurrence Assessment

- Next Steps

- Q&A

Introduction & Background

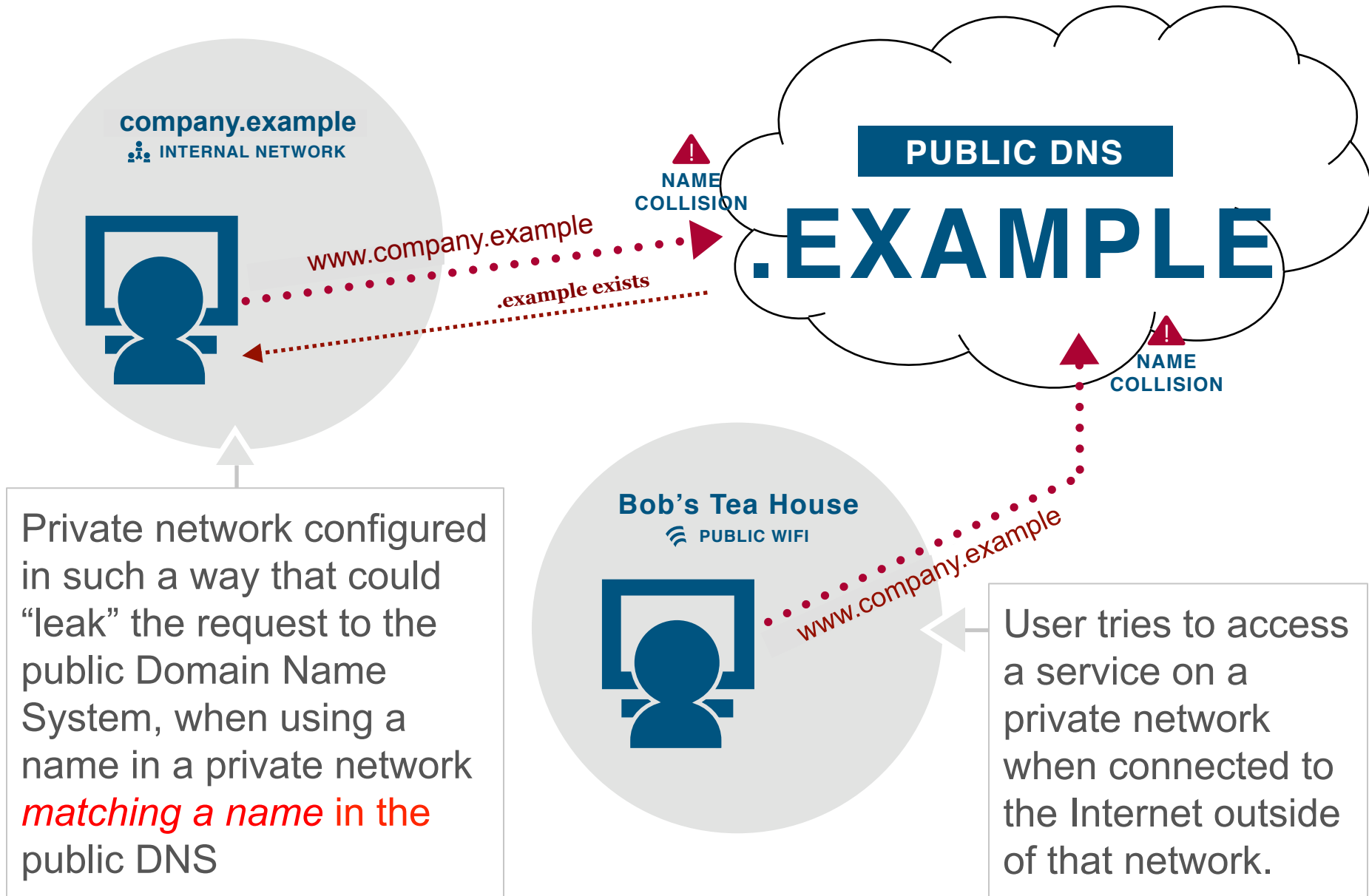# Question to the Audience:

What is Name Collision?

A prize for the easiest to understand answer

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Name Collision Basics

company.example
INTERNAL NETWORK

PUBLIC DNS

www.company.example

.example does not exist

Private network configured in such a way that could "leak" the request to the public Domain Name System, when using a name in a private network *that does not exist* in the public DNS

Name Collision Basics

company.example
INTERNAL NETWORK

www.company.example

.example exists

! NAME COLLISION

PUBLIC DNS

.EXAMPLE

! NAME COLLISION

Bob's Tea House
PUBLIC WIFI

www.company.example

Private network configured in such a way that could "leak" the request to the public Domain Name System, when using a name in a private network *matching a name* in the public DNS

User tries to access a service on a private network when connected to the Internet outside of that network.

Background

7 October 2013: NGPC adopted the New gTLD Collision Occurrence Management plan

- Plan Overview
  - Defer delegating *.home* and *.corp* indefinitely
  - Commission a study to develop a Name Collision Occurrence Management Framework ("the Framework")
  - Each new gTLD registry to implement a Collision Occurrence Assessment based on the Framework
  - Provide Alternate Path to Delegation for eligible strings
  - Conduct Outreach Campaign

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Name Collision Occurrence Management Framework

Developing the Framework

- November 2013: ICANN engaged JAS Global Advisors to develop draft Framework

- 26 February to 21 April 2014: Draft JAS phase one report underwent public comment

- 6 June 2014: SSAC Comment Concerning JAS phase one report (SAC066) published

- 10 June 2014: Final version of the JAS phase one report was published

- 30 July 2014: ICANN NGPC approved the Framework based on JAS proposal, incorporating public comment, and SSAC advice

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30 July NGPC Resolution

1. Adopts the Framework and directs its implementation

2. Directs undertaking a consultation re: RPM requirements for SLDs in block list, recorded in the TMCH, that were withheld from allocation during Sunrise or Claims

3. Consider policy work within GNSO re: long-term plan to manage name collisions

4. Share information and best practices with ccTLDs

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Question to the Audience:

What strings are deferred from delegation?

A prize for naming all

ICANN Implementation of the Framework

- Defer delegating .mail indefinitely (like .corp and .home) and work within the IETF to reserve those names permanently

- Produce information materials on name collision
  - Make this information available on key web searches

- Work within IETF to identify IPv6 option

- Work with root server operators to measure and store data that can be used for name collision study and prevention in the future

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ICANN Implementation of the Framework

- Limit emergency response regarding name collision where there is clear and present danger to human life

- EBERO-like mechanism to cover registry unresponsiveness in regard to name collision reports

- Last resort procedure to remove TLD causing harm (i.e., a dotless name) during the Controlled Interruption period

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Name Collision Occurrence Assessment

Name Collision Report Handling –

? Years and Hours ?

- Required for the first **?** years of the life of the TLD

- Respond within **?** hours of request from ICANN

- Requests to be delivered by ICANN to the Registry's emergency contacts by S/MIME signed email from <name-collision-report@icann.org>, followed by phone call

- Requests to temporarily:

  1. place a domain name in `serverHold` status; or

  2. remove wildcard records from DNS when doing wildcard controlled interruption

  In extraordinary circumstances, other remediation measures may be required

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Name Collision Report Handling

- Required for the first 2 years of the life of the TLD

- Respond within 2 hours of request from ICANN

- Requests to be delivered by ICANN to the Registry's emergency contacts by S/MIME signed email from <name-collision-report@icann.org>, followed by phone call

- Requests to temporarily:

  1. place a domain name in `serverHold` status; or

  2. remove wildcard records from DNS when doing wildcard controlled interruption

  In extraordinary circumstances, other remediation measures may be required

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Controlled Interruption - ? Days ?

- Implement Controlled Interruption for ? days
  - Continuous interruption (i.e., not intermittent)
  - Use loopback address (127.0.53.53)
  - Add IPv6 option when available
- Names can be allocated and undergo Sunrise and Claims during this period (subject to other applicable provisions)

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Controlled Interruption

- Implement Controlled Interruption for 90 days

  o Continuous interruption (i.e., not intermittent)

  o Use loopback address (127.0.53.53)

  o Add IPv6 option when available

- Names can be allocated and undergo Sunrise and Claims during this period (subject to other applicable provisions)

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TLD Wildcard Controlled Interruption

- Mandatory for TLDs delegated *on or after* 18 August 2014 (Alternate Path to Delegation no longer available)

- Option available to those delegated before 18 August 2014, only if TLD has no active names (other than "nic")

- Apex and wildcard `A`, `MX`, `SRV`, and `TXT` records

- No activation of names until after the 90-day controlled interruption has been completed

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SLD Controlled Interruption

- Aimed at TLDs delegated *before* 18 August 2014 that have activated names

- Uses A, MX, SRV, and TXT records for the SLDs in block list during, at least, 90 days

- No other DNS records can be added for the SLDs until after the 90-day controlled interruption has been completed

- A TLD cannot switch between SLD and TLD controlled interruption

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SLD Controlled Interruption Variations

- ICANN considered the following requests:

  ✓ Have wildcard records under the SLDs while in SLD controlled interruption

    ▪ Available since 22-Sep-2014 and **strongly recommended**

  ✓ Allow delegation of SLDs in block list to registry name servers that implement SLD controlled interruption

    ▪ Available since 17-Nov-2014

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Flat SLD CI

At first required "flat" SLD CI:

`<label>.<TLD>. 3600 IN A 127.0.53.53`

`<label>.<TLD>. 3600 IN MX 10 your-dns-needs-immediate-attention.<TLD>.`

`<label>.<TLD>. 3600 IN SRV 10 10 0 your-dns-needs-immediate-attention.<TLD>.`

`<label>.<TLD>. 3600 IN TXT "Your DNS configuration needs immediate attention see https://icann.org/namecollision"`

Wildcard SLD CI

Now strongly recommend adding "Wildcard":

```
*.<label>.<TLD>. 3600 IN A 127.0.53.53

*.<label>.<TLD>. 3600 IN MX 10 your-dns-needs-
immediate-attention.<label>.<TLD>.

*.<label>.<TLD>. 3600 IN SRV 10 10 0 your-dns-needs-
immediate-attention.<label>.<TLD>.

*.<label>.<TLD>. 3600 IN TXT "Your DNS configuration
needs immediate attention see https://icann.org/
namecollision"
```

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Controlled Interruption Variations

1. TLD Wildcard CI

2. SLD CI

    2.1. In-TLD-Zone, Wildcard SLD CI

    2.2. Delegation-to-Self, Wildcard SLD CI

    2.3. In-TLD-Zone, Flat SLD CI

    2.4. Delegation-to-Self, Flat SLD CI

http://newgtlds.icann.org/sites/default/files/agreements/name-collision-sld-controlled-interruption-12sep14-en.htm

Registry Agreement Waivers

1) Section 2.2 of Specification 6 (e.g., to allow the use of wildcard records); and

2) Section 1 of Exhibit A (e.g., to allow the use of A, MX, SRV, and TXT records in the zone apex and SLDs).

Waivers are only for purposes of implementing the controlled interruption and will cease upon termination of controlled interruption in the TLD.

Other obligations remain while in controlled interruption (e.g., DNSSEC, providing RDDS services at whois.nic.<tld>)

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Starting & Finalizing Controlled Interruption

- Registries do not need to inform ICANN of the start or end of their controlled interruption

- ICANN will monitor implementation and raise exceptions with the registry

- Monitoring will be done primarily using the zone files provided by registry

- Registries should ensure their zone file transfer to ICANN is working

Controlled Interruption Status Reports

From ICANN CI monitoring:

- 344 TLDs in SLD CI

- 74 TLDs in TLD Wildcard CI

- 6 TLDs have not yet started CI

- https://www.icann.org/sites/default/files/ci-monitoring/citld-current.csv

- https://www.icann.org/sites/default/files/ci-monitoring/citld-complete.csv

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Miscellaneous

- Strings not eligible for the Alternate Path to Delegation are eligible for delegation since 18 August 2014 (except .mail)

- The 120-day no activation of names from the date of Registry Agreement execution continues to apply and can run in parallel with controlled interruption

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Next Steps

Next Steps

✓ Share information and best practices with ccTLDs regarding managing name collision risks in new TLDs

✓ Reach out to GNSO regarding a long-term plan to manage name collisions

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Next Steps

- Work within the IETF to identify IPv6 option for controlled interruption

- Work within the IETF to reserve indefinitely .corp, .home, and .mail

- Work with root server operators to measure and store data that can be used for name collision study and prevention in the future

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Thank you
for attending
the Roadshow

Social Media

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https://www.facebook.com/icannorg

http://weibo.com/icannorg

http://www.linkedin.com/company/icann

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