A Top-level Domain for Private Use

draft-davies-internal-tld

Disclaimers

- I have some history, strong views (and frustration!) on this whole topic.
  - Please call me on it if I start frothing at the mouth…

- Co-author with Kim Davies (IANA) and Andrew McConachie (ICANN)
  - Clever bits are theirs, the stupid bits are mine…

How we got here...

- July 2017 - Wrote <u>draft-wkumari-dnsop-internal</u>
  - DNSOP (rightly!) told me this is ICANN work, and should be taken there.

- Sept 2020 – ICANN SSAC publishes "<u>SAC113 - SSAC Advisory on Private-Use TLDs</u>"
  - Recommends "ICANN Board ensure a string is [...] reserved at the top level for private use."

- Liaison from <u>ICANN to the IETF/IAB</u>
  - … and the <u>IETF/IAB reply</u>

How we got here...

- Jan 2023 — IANA publishes "Procedure for Selecting a Top-Level Domain String for Private Use"
  - And holds a public comment

- Jan 2024 — IANA follows procedure, identifies "INTERNAL" as meeting the criteria
  - And holds another public comment

- July 2024 — ICANN Board reserves .internal, and "recommends that efforts be undertaken to **raise awareness of its reservation** for this purpose through the **organization's technical outreach**."

DRAFT-DAVIES-INTERNAL-TLD

There are certain circumstances where private network operators may wish to use their own domain naming scheme that is **not intended to be used** or accessible by the **global domain name system (DNS)**, such as **within closed corporate or home networks**.

Should this be in the SUDN Registry?

- I believe yes…
- If people make private namespaces, better they do it here than squat on a random string…
  - Like .app or .dev…
- **Raise awareness**
  - **People place weight on the registry.**

- RFC6761 outlines what "special" means. Includes:
  - "The domains "example.", "example.com.", "example.net.", "example.org.", …
  - ".test", ".invalid"….

Should this be in the SUDN registry?

- Latest version contains answers to "the 7 questions"

- Stolen from RFC6761, Sec 6.1 which added the [*].in-addr.arpa names.

- **Caching DNS servers** SHOULD recognize these names as special and **SHOULD NOT, by default, attempt to look up NS records for them**, [...]. Instead, caching DNS servers SHOULD, by default, **generate immediate (positive or negative) responses** for all such queries. This is to avoid unnecessary load on the root name servers and other name servers.

7

Should this be in the SUDN registry?

DNS Statistics for Monday, 10 March 2025
(generated on Sunday, 16 March 2025)

☑ Hide delegated top-level domains
☐ Hide special-use top-level domains
☐ Hide other top-level domains

Magnitude ▼	Top-Level Domain ▲▼	status ▲▼	Daily Rank ▲▼	Query Volume ▲▼
8.717	local	special-use	9	928,449,542
8.210	internal		▼ 39	89,768,436
8.055	localdomain		▼ 55	51,701,035
7.811	lan		▼ 97	106,128,395
7.716	olk		▲ 119	1,306,118
7.540	home		156	114,628,775

Should this be handled in DnsOP?

- I think so, and pushed Andrew and Kim to do it here
  - Here is where the DNS knowledge is
- In theory, could possibly be ISE
  - But then SUDN reg would be very hard.
    - "Registration Procedure(s): Standards Action or **IESG Approval**"

- Preference for gettin' it done…

- Adopt, or go elsewhere?

Questions?