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 draft-wkumari-dnsop-internal
  - DNSOP (rightly!) told me this is ICANN work, and should be taken there.
- Sept 2020 - ICANN SSAC publishes "SAC113 - SSAC Advisory on Private-Use TLDs"
  - Recommends "ICANN Board ensure a string is [...] reserved at the top level for private use."
- Liaison from ICANN to the IETF/IAB
  - … and the IETF/IAB reply

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.

Should this be in the SUDN registry?

DNS Statistics for Monday, 10 March 2025

(generated on Sunday, 16 March 2025)

- [x] 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

Source: https://magnitude.research.icann.org/

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?