

**.INTERNAL**

andrew.mcconachie@icann.org

RIPE 89

October 2024

**.INTERNAL will never exist in the DNS root zone**

The End

## Just kidding ...

- ICANN Board Resolution 2024.07.29.06 (July 29, 2024)

Resolved, the Board reserves .INTERNAL from delegation in the DNS root zone permanently to provide for its use in private-use applications. The Board recommends that efforts be undertaken to raise awareness of its reservation for this purpose through the organization's technical outreach.

# Purpose

- To provide a designated place for private-use names
- Analogous to private use in the numbers space
  - IPv4 (RFC 1918)
  - IPv6 (RFC 4193)
  - ASNs (RFC 6996)
- *Hopefully* over time network administrators will start using .INTERNAL instead of the myriad other names that are currently being used for these purposes.

# Usage

- “Using sub-domains of registered public domain names is still the best practice to name internal resources. ... However, this is not always feasible and there are legitimate use cases for private-use TLDs.”
  - SAC113: SSAC Advisory on Private-Use TLDs
- .INTERNAL requires no special handling in resolvers
  - DNSSEC validation will always fail for names under .INTERNAL

# Example Use Cases

- To prevent DNS name resolution from relying on external parties
  - Some organizations may wish DNS queries for private resources do not leave their network.
- To ensure private resources can be resolved in case of Internet disruption
- To develop and test devices on disconnected networks
  - Home routers, IoT devices, captive portal networks, etc.
- *And more ...*

# Comparison to Similar TLDs

- **.INTERNAL**
  - For use in local DNS contexts
- **.ALT**
  - For use in non-DNS contexts (RFC 9476)
  - example → GNU.ALT
- **.HOME.ARPA**
  - For use with the Home Networking Control Protocol (RFC 8375)
- **.LOCAL**
  - For use with multicast DNS (RFC 6762)



# The End

*for real this time*