

Root Cause Analysis of ICANN Name Collisions Reports

TLDs Associated with ICANN Name Collisions Reports

network

ads

prod

dev

cloud

google

school

anz

app

cpa

csc

goo

kitchen

nyc

off

office

(in order of most frequently occurring)

Step 1: Reach Out to Affected Parties

- Contact information was included with submissions. BUT...
- Information is dated; and
- Out of respect for privacy, permission was required to reach out.

Step 1 (revised): Identify Search Suffixes

- Data set:
 - All (885) gTLDs delegated between August 2014 and June 2021
 - For each gTLD, 100 days of DNS responses since its delegation (i.e., controlled interruption period) using Farsight security's DNSDB
 - Effective result: queries issued for all of controlled interruption period
- Three primary methodologies:
 - Identify search suffixes using chrome NXDOMAIN probing
 - Identify search suffixes using wpad as first label
 - Identify search suffixes using isatap as first label

Quantify/Qualify Search Suffixes

- For Chrome probing:
 - Identify suffixes used in connection with Chrome NXDOMAIN probing, and rank them by count (number of appearances)
 - Use “h-index” (count \geq rank) to identify reasonable suffix candidates

	Median	90th percentile	95th percentile	99th percentile	Max
h-index	0.0	2.0	3.0	14.13	22
Total Suffixes	0.0	2.0	3.0	27.26	145

- For wpad probing:
 - Identify suffixes with wpad as the first label
- For isatap probing:
 - Identify suffixes with isatap as the first label

	Median	90th percentile	99th percentile	Max
wpad	0	3.0	37	223
chrome	0	3	40	240

Number of Search Suffixes - Initial Results

gTLD	ICANN Reports	chrome		wpad	isatap
		h-index	Total	Total	Total
network	7	19	60	86	115
ads	4	40	139	233	234
prod	4	16	32	64	66
dev	3	24	62	100	98
cloud	2	5	10	14	12
google	2	1	1	6	3
school	2	15	29	37	40
off	1	7	7	15	14
office	1	42	145	216	240