

Concentration of Authoritative Services

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IDS

Authoritative DNS services

- Many domain owners don't run their own servers
 - Maybe because running server is hard,
 - Maybe because small servers are easy targets for DDOS attacks
 - Who knows...
- Authoritative services
 - Publish DNS zones on behalf of the domain owner
 - May publish DNS records for large number of domains
- Our topic, concentration of services

ITHI M9: Measuring authoritative DNS

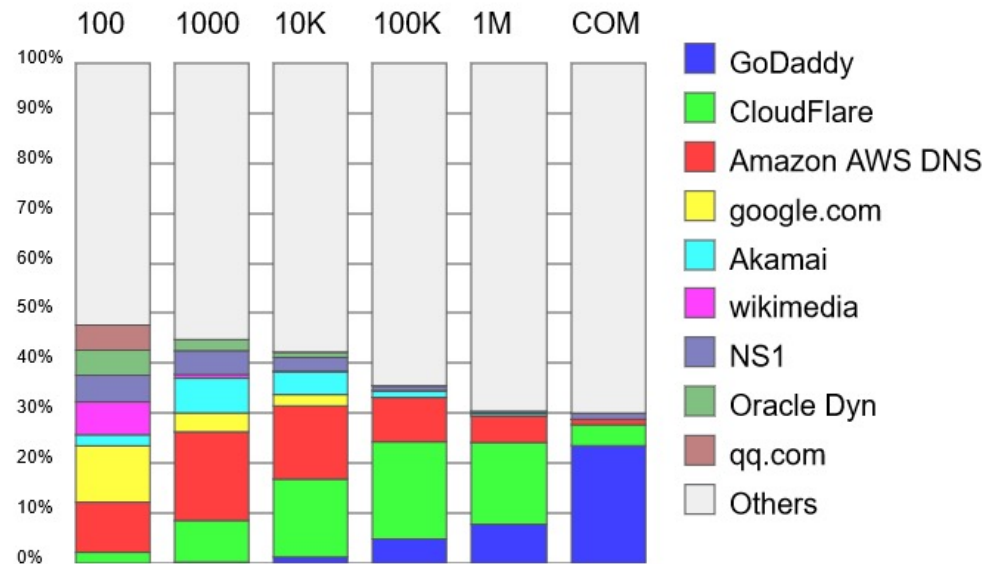
- Start with list of names
- For each name, find zone and NS record
- Identify server behind record
 - Group based on FQDN of server
 - Group servers based on common domain prefix
 - Manual grouping of name patterns, e.g. AWS servers
- Draw statistics
 - Market share of specific service
- Question: which list of names?
 - Different list of names generate different answer.

Majestic Million and COM zone

- Start with the “Majestic Million” list
 - <https://majestic.com/reports/majestic-million>
- Slicing the top 1 Million servers
 - Top 100
 - 101 to 1,000
 - 1,001 to 10,0000
 - 10,001 to 100,000
 - 100,001 to 1M
- Also measuring the entire COM zone, for reference.

Different Datasets Produce Different Results

M9: Concentration of Authoritative Services
2022/10



- GoDaddy serves largest share of the COM Zone
 - And some of the top 1M as well
- Cloudflare and AWS serve largest shares of “middle size” servers
- Cumulative share of big servers never exceeds 50%

Concentration of Authoritative DNS Services: Not Increasing

N for 50%	January 2022	October 2022
1-100	8	8
101-1000	10	9
1001-10K	13	16
10001-100K	19	31
100001-1M	33	34
COM	12	12

- Tracking concentration with “50%” metric
 - Number of services required for 50% of domain names in category
- Very little evolution between January and October 2022
- Metric does not indicate growing concentration