Activity and Incident Report for L-root

Prepared by L-root Engineering Department

For the Reporting Period of 2024-9-01 - 2024-9-30

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1 Executive Summary

This monthly report provides operational and statistical information on the L-root Server, known within the Domain Name System (DNS) as `L.ROOT-SERVERS.NET`.

L-root is a collection of servers and associated hardware with global presence managed, controlled and supervised by ICANN that provide information about the Root Zone, which is the apex of a hierarchical distributed database for the Domain Name System (DNS).

More information on the Root Server System and its organizations can be found at `https://root-servers.org`. and about L-root at `https://dns.icann.org/imrs`

A deeper understanding of the statistics in this document can be gained by accessing the L-root Statistics dashboard at `https://stats.dns.icann.org`.

For this reporting period:

- There were no outstanding issues related to security or unplanned downtime.
- There were no observed anomalies in DNS Traffic to L-root

2 Performance Indicators

2.1 DNS Queries for this Period

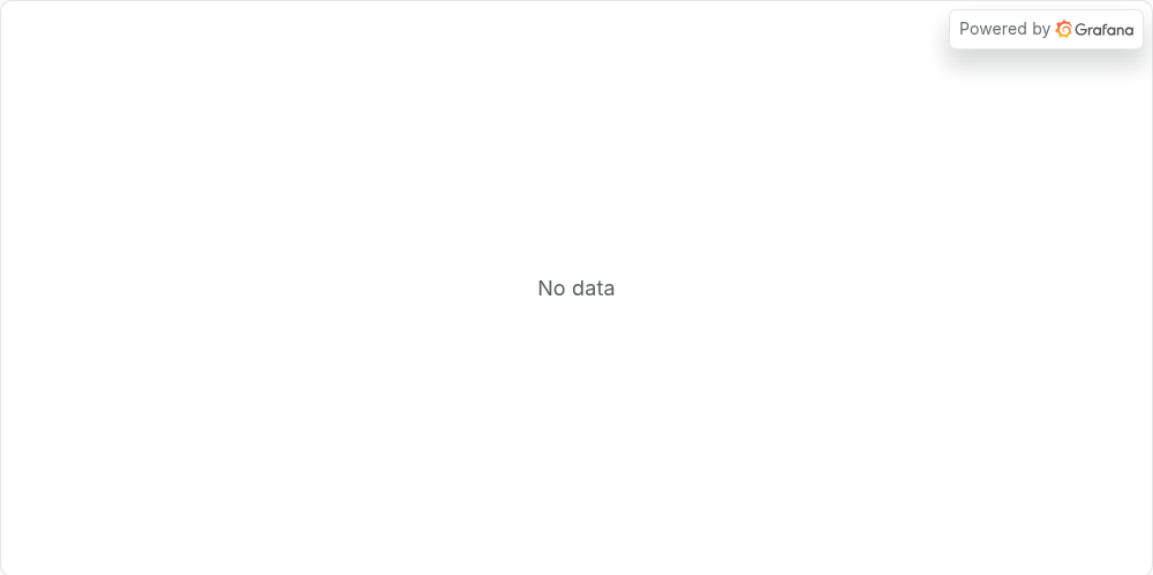


Figure 1: Number of daily DNS queries for this period

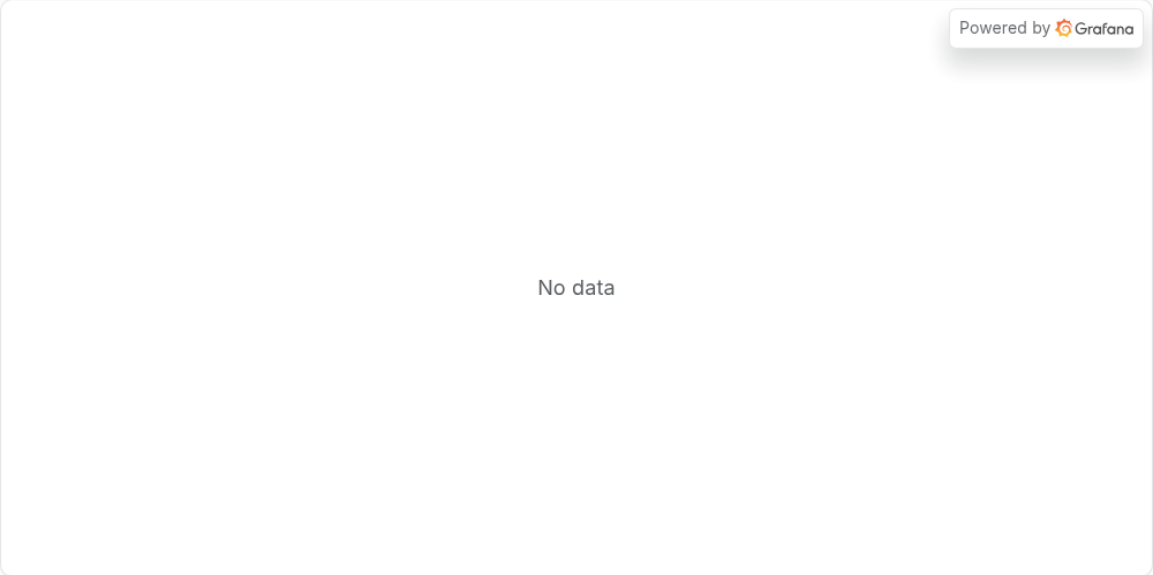


Figure 2: Total DNS queries distribution

2.2 DNS Query Distribution Trends

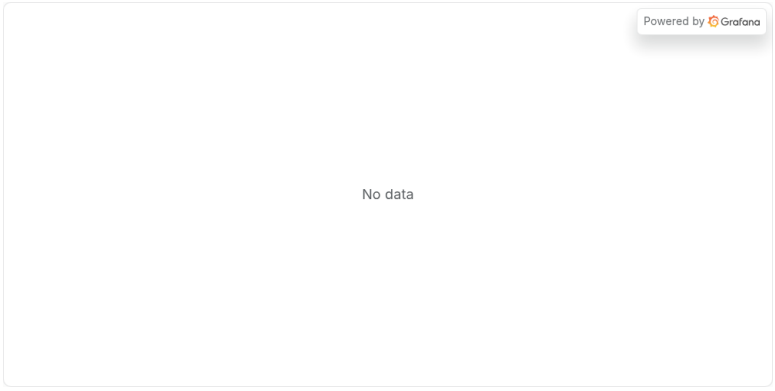


Figure 3: Query origins per ICANN Region



Figure 4: Query distribution percentage per ICANN region

3 Operational Indicators

3.1 Security Incidents related to L-root

- During this period, no security incidents were reported, recorded nor published

For transparency, ICANN publishes a log of Information Security events at `https://www.icann.org/cybersecurityincidentlog`

3.2 Non-scheduled downtime events

- During this period, no irregular or unplanned downtime was observed

4 Size and location of the L-root

4.1 Number of Instances

- 1 instance(s) were added in this period : Muscat (OM)
- 2 instance(s) were retired in this period : Ranchi (IN) and Seeb (OM)
- 274 instances are located in 85 countries at the end of this period

4.2 Number of L-root Cluster

A ”Cluster” is an L-root instance consisting of a set of servers and associated hardware providing the L-root service at a single location which is designed to serve a larger DNS query load, community, or specific region.

An L-root Cluster is completely managed, controlled and supervised by ICANN.

At the moment of writing this report, there are six (6) ICANN Cluster Instances located in:

- El Segundo, CA (US)
- Prague (CZ)
- Reston, VA (US)
- Singapore (SG)
- Nairobi (KE)
- Cairo (EG)

4.3 Number of countries that have at least one instance presence by ICANN region

- Africa (15)
- AsiaPacific (31)
- Europe (22)
- LatinAmericaCaribbean (13)
- NorthAmerica (4)

4.4 Location for L-root Instances by city

Abidjan (CI)
Alexandria (AU)
Amman (JO)
Anchorage (US)
Ancona (IT)
Apia (WS)
Arlington County (US)
Asuncion (PY)
Atlanta (US)
Baku (AZ)
Bangalore (IN)
Bangkok (TH)
Beijing (CN)
Beirut (LB)
Belem (BR)
Belgrade (RS)
Belo Horizonte (BR)
Blantyre (MW)
Bogota (CO)
Brasilia (BR)
Bratislava (SK)
Brazzaville (CG)
Brisbane (AU)
Brussels (BE)
Cacador (BR)
Cairo (EG)
Callao (PE)
Campinas (BR)
Cape Town (ZA)
Carire (BR)
Carolina (PR)
Changsha City (CN)
Chicago (US)
Chisinau (MD)
Christchurch (NZ)
Cochabamba (BO)
Colombo (LK)
Curitiba (BR)
Dakar (SN)
Dammam (SA)
Dar es Salaam (TZ)
Dubai (AE)
Dundee (GB)
El Prat de Llobregat (ES)
Erbil (IQ)
Ezeiza (AR)
Florence (IT)
Florianopolis (BR)
Fortaleza (BR)
Geneva (CH)
Guwahati (IN)
Hagatna (GU)
Haikou (CN)
Hamburg (DE)
Harare (ZW)
Helsinki-Vantaa (FI)
Heraklion (GR)
Honiara (SB)
Honolulu (US)
Incheon (KR)
Islamabad-Rawalpindi (PK)
Jaipur (IN)
Johannesburg (ZA)
Kalamazoo-Battle Creek (US)
Kiev (UA)
Kolonia (FM)
Koror (PW)
Kunming City (CN)
Kuwait City (KW)
Latina (IT)
Lawrence (US)
Leeds-Bradford (GB)
Londrina (BR)
Longwood (US)
Los Angeles (US)
Madrid (ES)
Mahe (SC)
Majuro (MH)
Mandalay (MM)
Mangere (NZ)
Mascot (AU)
Maseru (LS)
Melbourne (AU)
Minsk (BY)
Mohali (IN)
Monterrey (MX)
Montevideo (UY)
Moroni (KM)
Moscow (RU)

Mumbai (IN)
Nadi (FJ)
Nairobi (KE)
Natal (BR)
New Taipei (TW)
Noumea (NC)
Odessa (UA)
Otopeni (RO)
Ouagadougou (BF)
Papeete (PF)
Paris (FR)
Perth (AU)
Plaisance (MU)
Port Moresby (PG)
Portland (US)
Porto (PT)
Porto Alegre (BR)
Prague (CZ)
Punta Caucedo (DO)
Quito (EC)
Rabat (MA)
Ramallah (PS)
Ranchi (IN)
Rarotonga (CK)
Reno (US)
Reston (US)
Rio de Janeiro (BR)
Rostov-on-Don (RU)
Saint Petersburg (RU)
Salvador (BR)
San Jose (CR)
San Jose (US)
San Juan (PR)
San Miguel de Tucuman (AR)
San Salvador (SV)
Sana'a (YE)
Santiago (CL)
Sao Jose dos Campos (BR)
Sao Paulo (BR)
Seeb (OM)
Semey (KZ)
Shanghai (CN)
Singapore (SG)
Sofia (BG)
Stockholm (SE)
Suva (FJ)
Tampere (FI)
Toronto (CA)
Uberlandia (BR)
Vancouver (CA)
Wilmington (US)
Winnipeg (CA)
Wuhan (CN)
Xining (CN)
Yangon (MM)
Yogyakarta (ID)
Zhengzhou (CN)

Detailed information on L-root locations can be found at `https://www.dns.icann.org/imrs/locations/`