Activity and Incident Report for the ICANN Managed Root Server

Prepared by ICANN's Security and Network Engineering Department

For the Reporting Period of 2020-5-01 - 2020-5-31

Contents

1 Executive Summary

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

IMRS 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 IMRS at `https://dns.icann.org/imrs`

A deeper understanding of the statistics in this document can be gained by accessing the IMRS 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 the IMRS

2 Performance Indicators

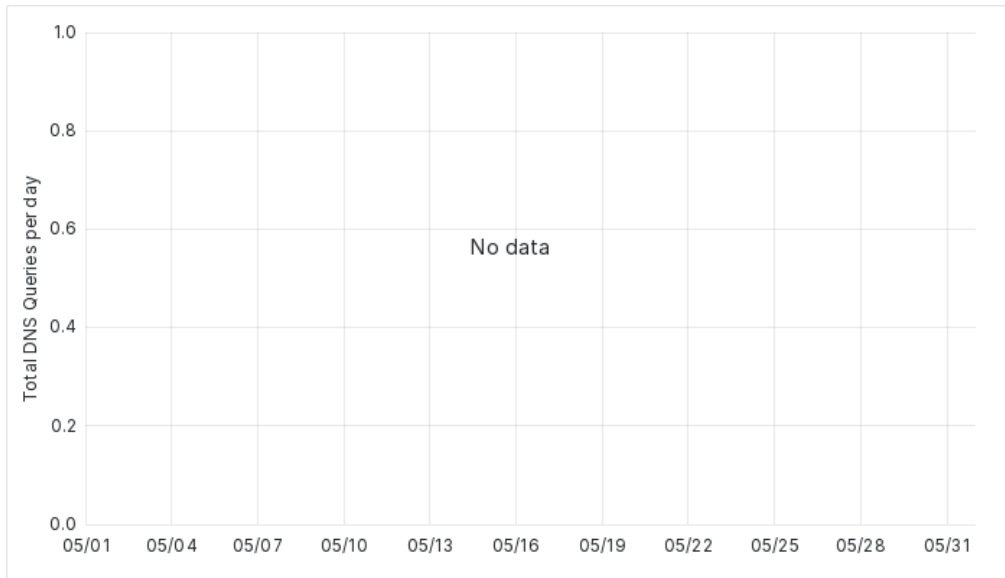## 2.1 DNS Queries for this Period

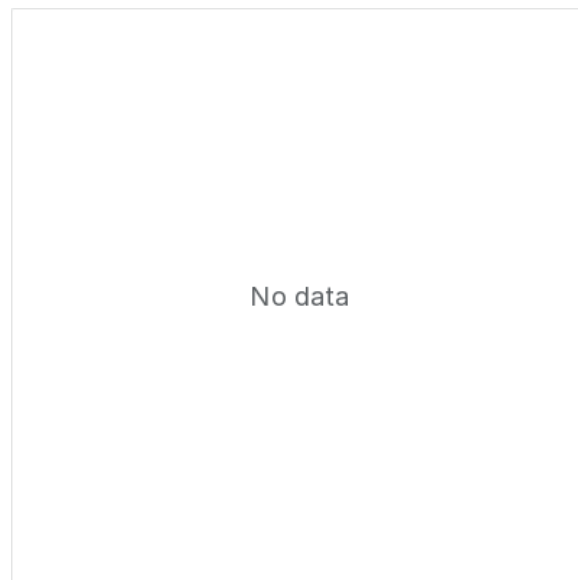Figure 1: Number of daily DNS queries for this period

Figure 2: Total DNS queries distribution

2.2 DNS Query Distribution Trends

Figure 3: Query origins per ICANN Region
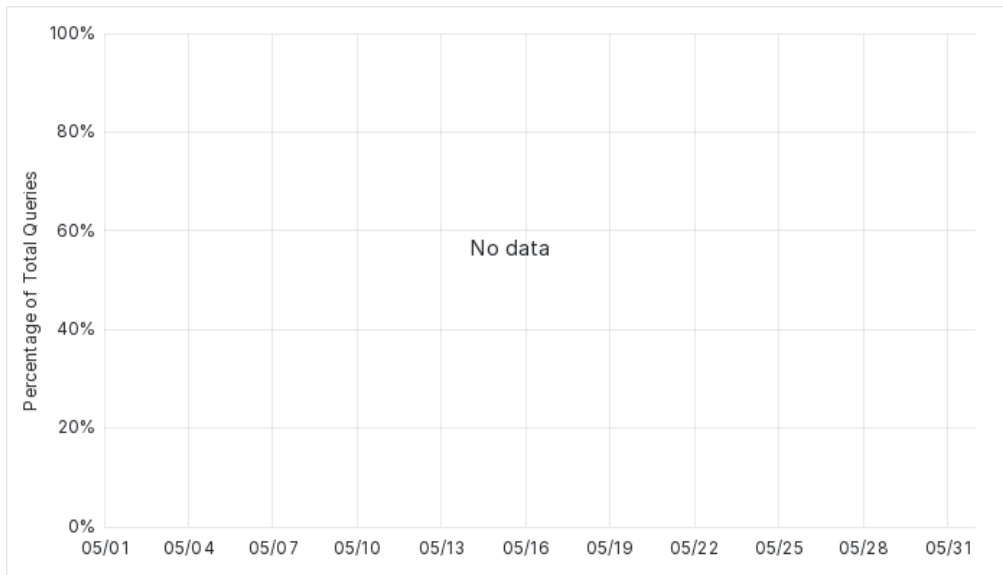
Figure 4: Query distribution percentage per ICANN region

3   Operational Indicators

3.1   Security Incidents related to IMRS

- 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 IMRS

4.1 Number of Instances

- 0 instance(s) were added in this period

- 0 instance(s) were retired in this period

- 165 instances are located in 81 countries at the end of this period

4.2 Number of IMRS Cluster Instances

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

An IMRS 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 (11)

- AsiaPacific (31)

- Europe (23)

- LatinAmericaCaribbean (13)

- NorthAmerica (3)

4.4 Location for IMRS Instances by city

Abidjan (Cote d'Ivoire)

Al Muharraq (Bahrain)

Amman (Jordan)

Anchorage (United States)

Ankara (Turkey)

Apia (Samoa)

Arlington County (United States)

Asuncion (Paraguay)

Atlanta (United States)

Baku (Azerbaijan)

Bangkok (Thailand)

Beijing (People's Republic of China)

Beirut (Lebanon)

Belem (Brazil)

Belgrade (Serbia)

Belo Horizonte (Brazil)

Blantyre (Malawi)

Bogota (Colombia)

Bouake (Cote d'Ivoire)

Brasilia (Brazil)

Bratislava (Slovakia)

Brisbane (Australia)

Brussels (Belgium)

Cacador (Brazil)

Callao (Peru)

Campinas (Brazil)

Cape Town (South Africa)

Carire (Brazil)

Chicago (United States)

Christchurch (New Zealand)

Cochabamba (Bolivia)

Colombo (Sri Lanka)

Copenhagen (Denmark)

Curitiba (Brazil)

Dakar (Senegal)

Dammam (Saudi Arabia)

Dar es Salaam (Tanzania)

Denver (United States)

Des Moines (United States)

Dortmund (Germany)

Dubai (United Arab Emirates)

Dundee (United Kingdom)

Dusseldorf (Germany)

El Prat de Llobregat (Spain)

Ezeiza (Argentina)

Florence (Italy)

Florianopolis (Brazil)

Fortaleza (Brazil)

Geneva (Switzerland)

Hagatna (Guam)

Hamburg (Germany)

Helsinki-Vantaa (Finland)

Heraklion (Greece)

Honiara (Solomon Islands)

Honolulu (United States)

Incheon (South Korea)

Islamabad-Rawalpindi (Pakistan)

Jakarta (Indonesia)

Johannesburg (South Africa)

Kalamazoo-Battle Creek (United States)

Kharkiv (Ukraine)

Kiev (Ukraine)

Kolonia (Federated States of Micronesia)

Kuwait City (Kuwait)

Lahore (Pakistan)

Latina (Italy)

Lawrence (United States)

Leeds-Bradford (United Kingdom)

London (United Kingdom)

Londrina (Brazil)

Los Angeles (United States)

Lyon (France)

Madrid (Spain)

Mahe (Seychelles)

Majuro (Marshall Islands)

Malmo (Sweden)

Mandalay (Myanmar)

Mangere (New Zealand)

Marseille (France)

Mascot (Australia)

Maseru (Lesotho)

Melbourne (Australia)

Metro Manila (Philippines)

Minsk (Belarus)

Mississauga (Canada)

Monterrey (Mexico)

Montevideo (Uruguay)

Moscow (Russian Federation)

Mumbai (India)

Muscat (Oman)

Nadi (Fiji)

Natal (Brazil)

New Taipei (TW)

Noumea (New Caledonia)

Odessa (Ukraine)

Otopeni (Romania)

Ouagadougou (Burkina Faso)

Papeete (French Polynesia)

Paris (France)

Paris-Orly (France)

Perth (Australia)

Plaisance (Mauritius)

Port Moresby (Papua New Guinea)

Portland (United States)

Porto (Portugal)

Porto Alegre (Brazil)

Prague (Czech Republic)

Punta Caucedo (Dominican Republic)

Quito (Ecuador)

Rabat (Morocco)

Ramallah (Palestine)

Reno (United States)

Reston (United States)

Rio de Janeiro (Brazil)

Rochester (United Kingdom)

Rostov-on-Don (Russian Federation)

Salvador (Brazil)

San Jose (Costa Rica)

San Jose (United States)

San Miguel de Tucuman (Argentina)

San Salvador (El Salvador)

Sana'a (Yemen)

Santiago (Chile)

Sao Jose dos Campos (Brazil)

Sao Paulo (Brazil)

SeaTac (United States)

Semey (Kazakhstan)

Shanghai (People's Republic of China)

Sofia (Bulgaria)

St Denis (Reunion)

Stockholm (Sweden)

Suva-Nausori (Fiji)

Tampere (Finland)

Toronto (Canada)

Tunis-Carthage (Tunisia)

Uberlandia (Brazil)

Vancouver (Canada)

Wilmington (United States)

Winnipeg (Canada)

Wuhan (People's Republic of China)

Xining (People's Republic of China)

Yangon (Myanmar)

Yekaterinburg (Russian Federation)

Yerevan (Armenia)

Yogyakarta (Indonesia)

Zhengzhou (People's Republic of China)

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