

Government and IGO Engagement at ICANN



Government and IGO Engagement
12 May 2022

Agenda

- Welcome & Introduction
- Overview of the ICANN GE Team
- Current Hot Topic - NIS2 Directive and the DNS
- Questions and Closing

Government and IGO Engagement Team

Mandy Carver

Government and IGO Engagement Team

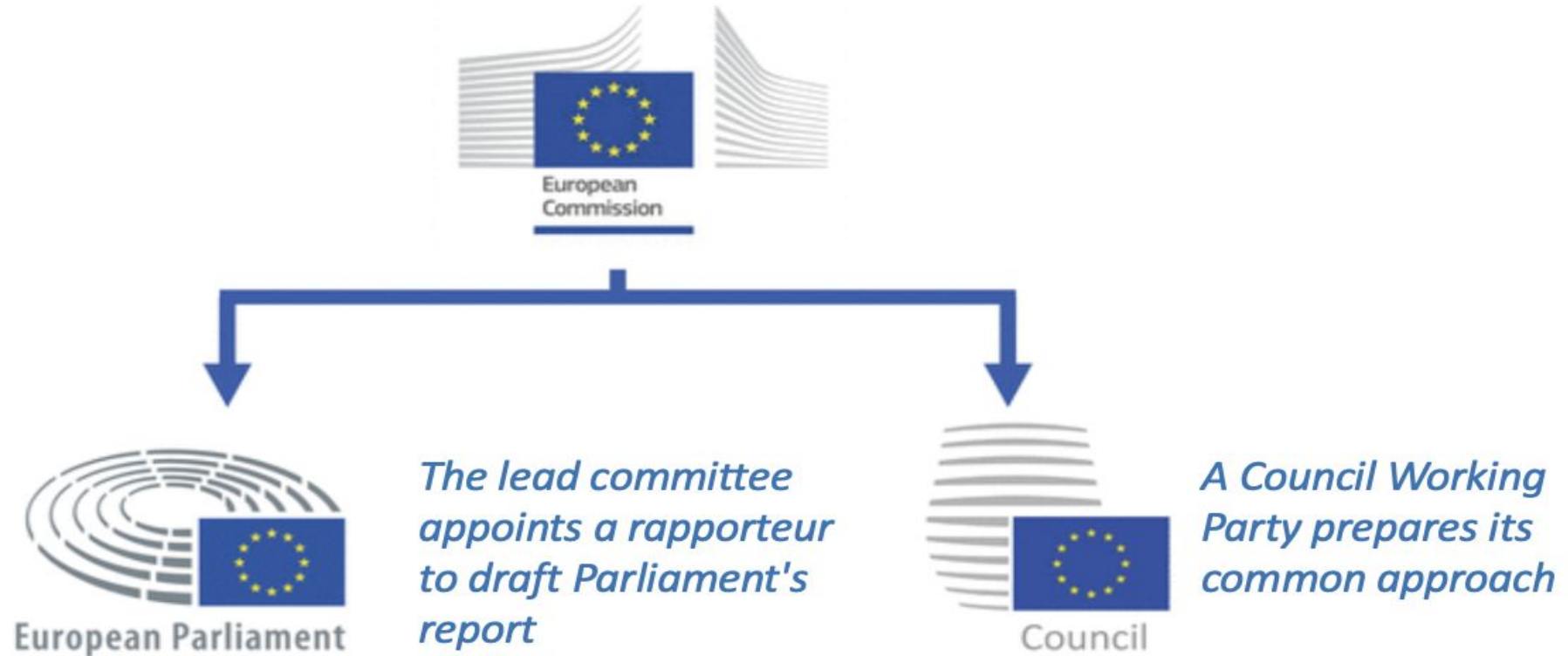
- Los Angeles
 - Mandy Carver, SVP
 - Becky McGilley, Director
 - Desiree Cabrera, Executive Assistant
 - Gary Johnson, Executive Assistant (Temp)
- New York
 - Veni Markovski, VP
 - Alexey Trepikhin, Manager
- Brussels
 - Elena Plexida, VP
 - Nora Mari, Manager
- Geneva
 - Laurent Ferrali, Senior Director
 - Vera Major, Manager



Current Hot Topic - NIS2 Directive

Elena Plexida

NIS2: the EU decision-making process



The Proposal is subject to negotiations between the co-legislators, notably the Council of the EU and the European Parliament.

Once the proposal is agreed and consequently adopted, Member States will have to transpose the NIS2 Directive within 18 months.

Background

- The NIS2 is a proposal to reform the 2016 NIS Directive
- The NIS Directive sets out cybersecurity requirements for services deemed “essential”, such as hospitals, public transport systems and telecom networks
- DNS providers were included in the 2016’s NIS as operators of essential services, but currently it is up to the EU Member States to identify operators of essential services within the DNS

The DNS in the context of the NIS2 Directive

- NIS2 will impose updated requirements on "essential" and "important" service providers in critical sectors. Companies are defined as either “essential” or “important”, with different sets of obligations.
- NIS2 applies to all providers of DNS services along the DNS resolution chain, including operators of root name servers, TLD name servers, authoritative name servers for domain names and recursive resolvers (cf. Rec 15 NIS2)
- They qualify as essential services, while there is no identification system by the EU Member States.
- Territorial scope similar to the GDPR: A DNS service provider must designate a representative under NIS2, in cases in which a DNS service provider not established in the EU offers services within the EU (cf. Art. 24 (3) NIS2)
- Moreover, the small and micro business exemptions do not apply to TLD name registries and DNS service providers (cf. Art 2 (2) NIS2)

The DNS in the context of the NIS2 Directive

- Main responsibilities for essential services under the NIS2 Directive are:
 - Implementation of appropriate and proportionate technical and organisational measures (Art. 18 NIS2)
 - Reporting obligations (Art. 20 NIS2)
 - Provide contact details for the registry of essential entities to ENISA (Art. 25 NIS2)
- Non-compliance includes fines.
- In addition, we have the registration data related provisions.

NIS2 Directive: scope of application on the DNS

Overly broad scope of application on the DNS

Recital 15 (*original EC proposal**)

- NIS2 applies to all providers of DNS services along the DNS resolution chain, **including operators of root name servers**, TLD name servers, **authoritative** name servers for domain names and **recursive** resolvers

Article 4 (14) (*original EC proposal*)

- ‘DNS service provider’ means an entity that provides **recursive** or **authoritative** domain name resolution services to internet end-users and other DNS service providers

* EC original proposal, see <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM%3A2020%3A823%3AFIN>.

Background

Two parts to the DNS

- Publication
- Lookup

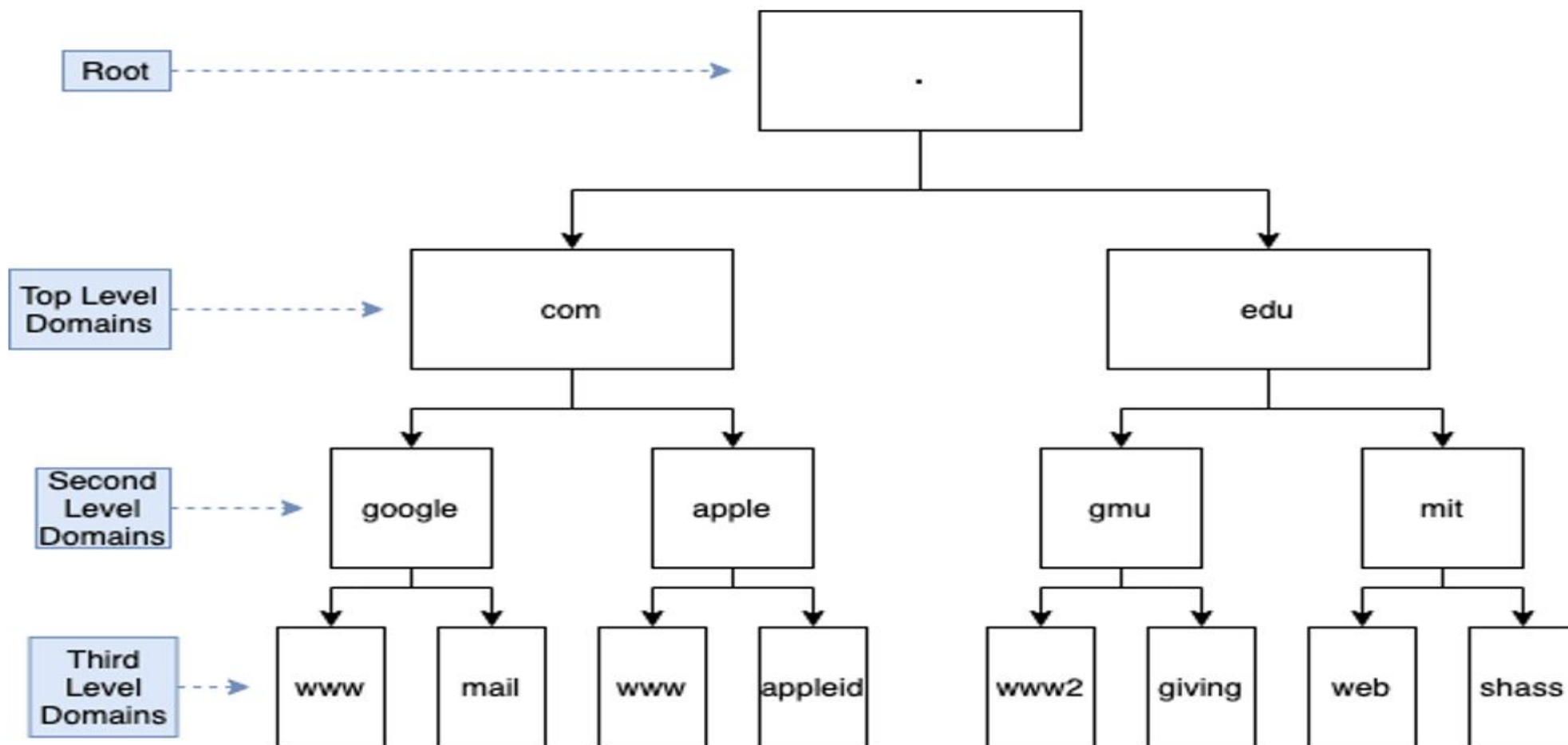
Publication includes:

- Obtaining a domain name
- Associating that domain name with various resources
 - IP addresses, mail servers, delegated sub-domains, etc.
- Using the DNS protocol to make that domain name and resources available
 - Digitally signing the data to make sure it isn't modified in transit

Lookup includes:

- Fetching the resources associated with a particular domain name
- Verifying the signatures to ensure the data hasn't been modified in transit

Background: Publication



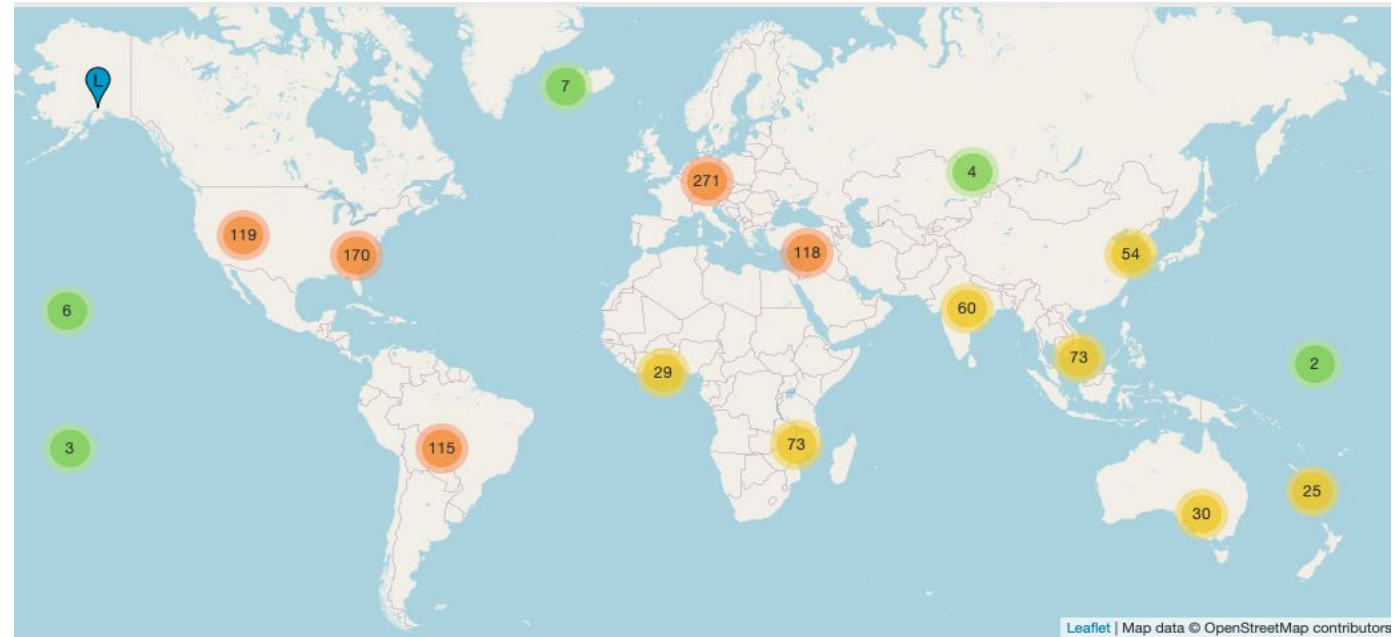
Graphic created by Blake Khan (blakekhan.com)

Background: Lookup

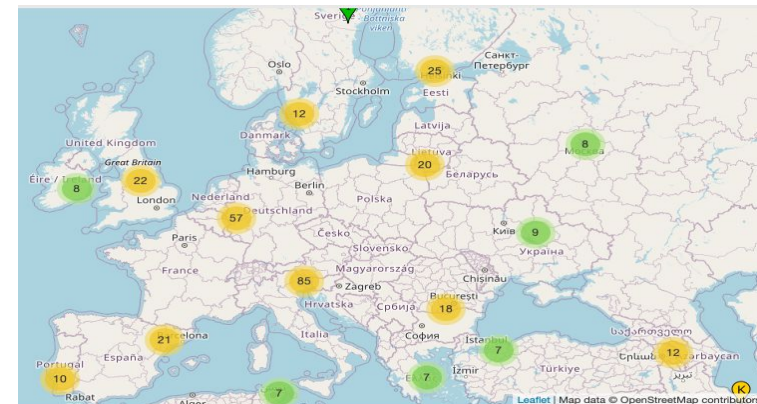


Background: Root Servers

- 13 Root Server “Identities”
 - Historically: “A” - “M” in ROOT-SERVERS.NET
 - 12 **Independent** Root Server Operators (RSOs)
 - Verisign(2), USC-ISI, Cogent, UMD, NASA, ISC, DISA, ARL, Netnod, RIPE-NCC, ICANN, WIDE
 - No contractual obligations for root service provision
 - Over 1,400 individual machines
 - Known as “instances”, each operated by one of the RSOs
- Root name service is a “cloud service”
 - All root server instances publish identical information
 - Any attempt by an RSO to change content would fail validation
- Root Servers only know:
 - Top-level domain names and name servers
 - “root-servers.net” contents
 - .ARPA names and name servers (12 of the 13)
- Root server governance currently being discussed
 - Questions, e.g.:
 - How to improve accountability while maintaining independence?
 - How to add/remove an RSO?
 - See RSSAC037



Leaflet | Map data © OpenStreetMap contributors
<https://root-servers.org>



Root Server Operators

A: Verisign

B: USC ISI

C: Cogent

D: University of Maryland

E: NASA - AMES

F: ISC

G: U.S. DoD

H: U.S. Army Research Lab

I: Netnod

J: Verisign

K: RIPE NCC

L: ICANN

M: WIDE

NIS2 Directive: scope of application on the DNS

The Council's text*

Article 4 (14)

*DNS service provider' means an entity that provides **recursive or authoritative domain name resolution services for third-party usage, with the exception of the root name servers***

The Parliament's text**

Recital (15)

*[...] Therefore, this Directive should apply to **top-level-domain (TLD) name servers, publicly available recursive domain name resolution services for internet end-users and authoritative domain name resolution services. This Directive does not apply to root name servers.***

Article 4 (14)

'DNS service provider' means an entity that provides:

(14a) open and public recursive domain name resolution services to internet end-users; or

(14b) authoritative domain name resolution services as a service procurable by third-party entities

* See, <https://data.consilium.europa.eu/doc/document/ST-14337-2021-INIT/en/pdf>

**See, https://www.europarl.europa.eu/doceo/document/A-9-2021-0313_EN.html

NIS2 Directive: article 23

- 1. [...] Member States shall ensure that TLD registries and the entities providing domain name registration services for the TLD shall **collect and maintain accurate** and **complete** domain name registration data in a dedicated database facility [...]

EC original proposal, see <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM%3A2020%3A823%3AFIN>.

- 2. Member States shall ensure that the databases of domain name registration data referred to in paragraph 1 contain relevant information to identify and contact the holders of the domain names and the points of contact administering the domain names under the TLDs, **including at least the following data:**
 - a) domain name
 - b) date of registration
 - c) registrant data, including:
 - (i) for individuals - name, surname and e-mail address;
 - (ii) for legal persons - name and e-mail address.

Council common approach, see <https://data.consilium.europa.eu/doc/document/ST-14337-2021-INIT/en/pdf>

Article 23 NIS2

- 3. [...]
- 4. Member States shall ensure that the TLD registries and the entities providing domain name registration services for the TLD **publish, without undue delay after the registration of a domain name, domain registration data which are not personal data.**

EC original proposal, see <https://eur-lex.europa.eu/legal-content/EN/TXT/?uri=COM%3A2020%3A823%3AFIN>.

- 5. Member States shall require TLD registries and entities providing domain name registration services to **provide access to specific domain name registration data, including personal data, upon duly justified requests of legitimate access seekers**, in compliance with Union data protection law. Member States shall require TLD registries and entities providing domain name registration services to reply without undue delay and in any event within 72 hours upon the receipt of the requests for access. Member States shall ensure that policies and procedures to disclose such data are made publicly available.

European Parliament report, see https://www.europarl.europa.eu/doceo/document/A-9-2021-0313_EN.html

Questions & Closing

Manal Ismail and Mandy Carver