

ICANN

VIRTUAL POLICY FORUM

68



DNSSEC and Security Virtual Workshop

ICANN68

Dan York, Internet Society

22 June 2020



Program Committee

- ⊙ Mark Elkins, DNS/ZACR
- ⊙ Jean Robert Hountomey, AfricaCERT
- ⊙ Jacques Latour, CIRA
- ⊙ Russ Mundy, Parsons
- ⊙ Ondřej Filip, CZNIC
- ⊙ Yoshiro Yoneya, JPRS
- ⊙ Fred Baker, ISC
- ⊙ Dan York, Internet Society
- ⊙ Andrew McConachie and Kathy Schnitt, ICANN

Support

The DNSSEC Workshop and associated activities at ICANN are an organized activity of the:

- **ICANN Security and Stability Advisory Committee (SSAC)**



with additional assistance from the:

- **Internet Society**



DNSSEC Workshop – Zoom:

1000 – 1015 (0200 – 0215UTC) – Presentation: Dan York, *DNSSEC Workshop Introduction, Program, Deployment Around the World – Counts, Counts, Counts*

1015 – 1050 – Regional Panel

Moderator: **Jacques Latour, CIRA**

1015 – 1025 – Ms. Mastura Mukhtar, Acting Lead of IT Services at .my (MYNIC): DNSSEC Deployment for ccTLD's

1025 – 1035 – Mr. Molay Ghosh , Reliance Jio: DNSSEC Deployment for Network Operators

1035 – 1050 – Mr. Yuya Nagai and Mr. Yoshikazu Kojima, GMO Internet, Inc: DNSSEC Deployment for Registrars

1050 – 1105 (0250 – 0305 UTC) – Kim Davies, ICANN: KSK Rollover Update

1105 – 1120 (0305 – 0320 UTC) – Dan York, ISOC: Open Standards Everywhere Project

1120 – 1135 (0320 – 0335 UTC) – Wes Hardaker, ISI: Update on localroot

1135 – 1215 (0335 – 0415 UTC) DNSSEC Provisioning Panel Discussion:

Moderator: **Steve Crocker, Shinkuro, Inc.:** DS Updates and Multi-Signer Coordination

Shumon Huque, Salesforce, Inc.: Multi-Signer DNSSEC

Paul Ebersman, Neustar: Support for Multi-Signer DNSSEC

Brian Dickson, GoDaddy: GoDaddy DNSSEC Signing and DS Updates

Jothan Frakes, PLISK: Managing DNSSEC via API

Jaromír Talíř, CZ.NIC: Automated DNSSEC in CZ

Oli Schacher, SWITCH: Support for and adoption of CDS in .CH and .LI

1215 – 1230 (0415 – 0430 UTC) Q&A

DNSSEC, DANE & RPKI Deployments Around the World

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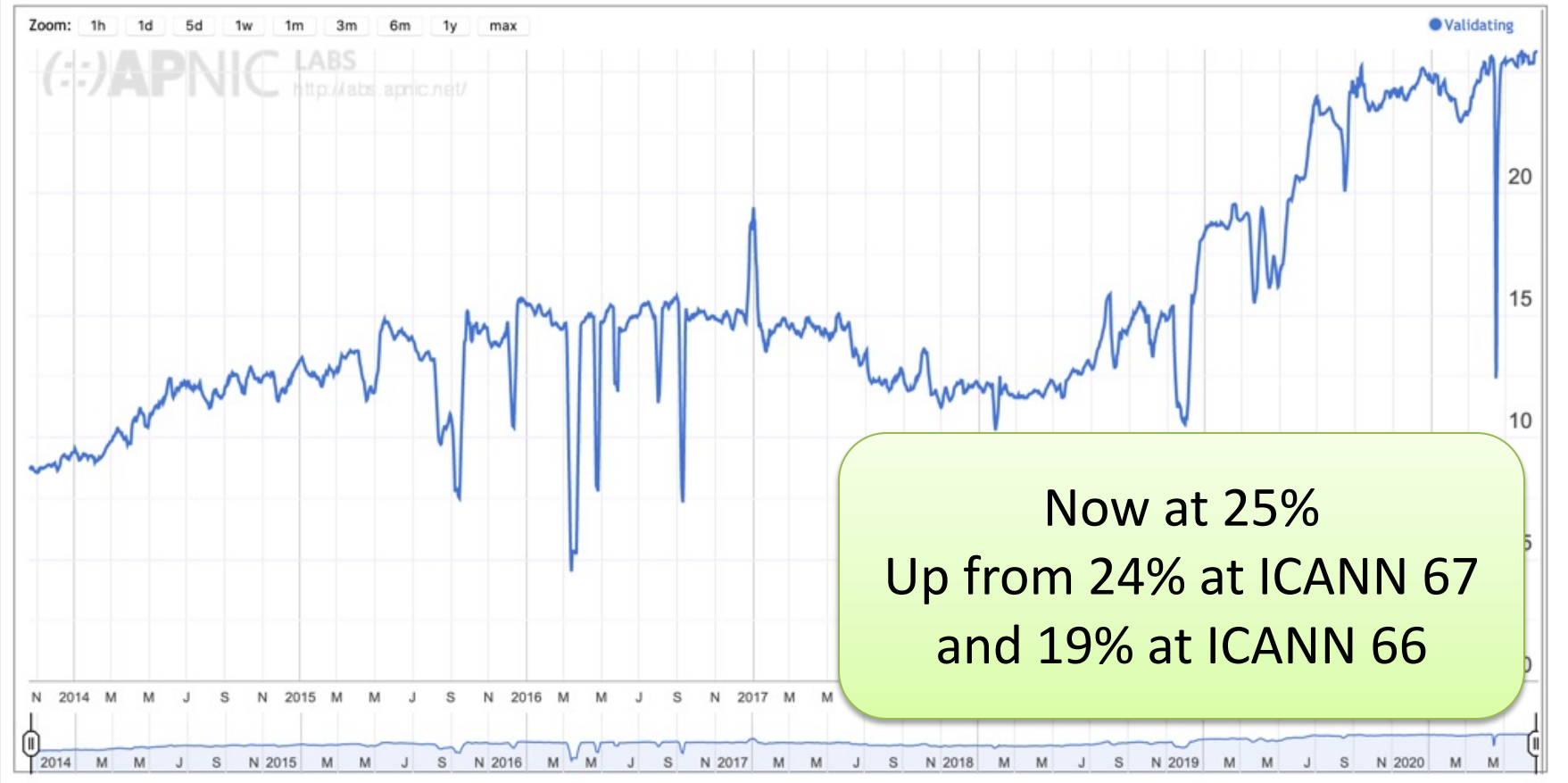
Dan York, ISOC

22 June 2020



DNSSEC Validation

Use of DNSSEC Validation for World (XA)

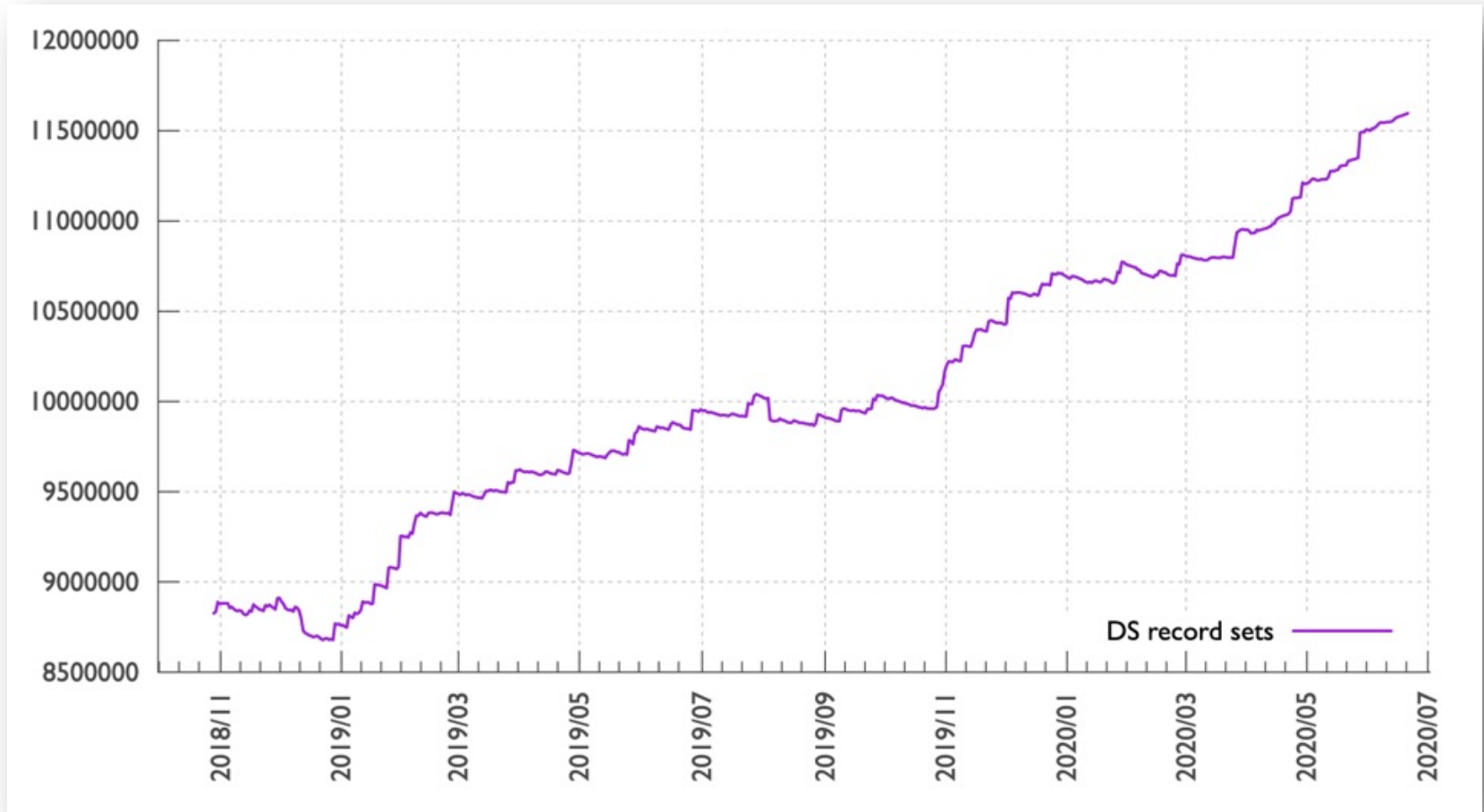


<https://stats.labs.apnic.net/dnssec/XA?hc=XA&hx=0&hv=1&hp=0&hr=1&w=7>

Code	SubRegion	DNSSEC Validates
QR	Micronesia, Oceania	67.52%
QS	Polynesia, Oceania	60.45%
QQ	Melanesia, Oceania	57.50%
XK	Southern Africa, Africa	53.85%
XV	Western Asia, Asia	48.26%
QO	Western Europe, Europe	48.22%
XT	Southern Asia, Asia	47.34%
XR	Central Asia, Asia	40.77%
QP	Australia and New Zealand, Oceania	38.15%
XP	South America, Americas	36.50%
QM	Northern Europe, Europe	32.83%
XQ	Northern America, Americas	27.88%
XW	Eastern Europe, Europe	24.82%
XH	Eastern Africa, Africa	24.77%
XJ	Northern Africa, Africa	21.45%
XN	Caribbean, Americas	20.84%
XI	Middle Africa, Africa	17.92%
QN	Southern Europe, Europe	17.12%
XU	South-Eastern Asia, Asia	15.60%
XL	Western Africa, Africa	15.25%
XO	Central America, Americas	9.03%
XS	Eastern Asia, Asia	2.96%

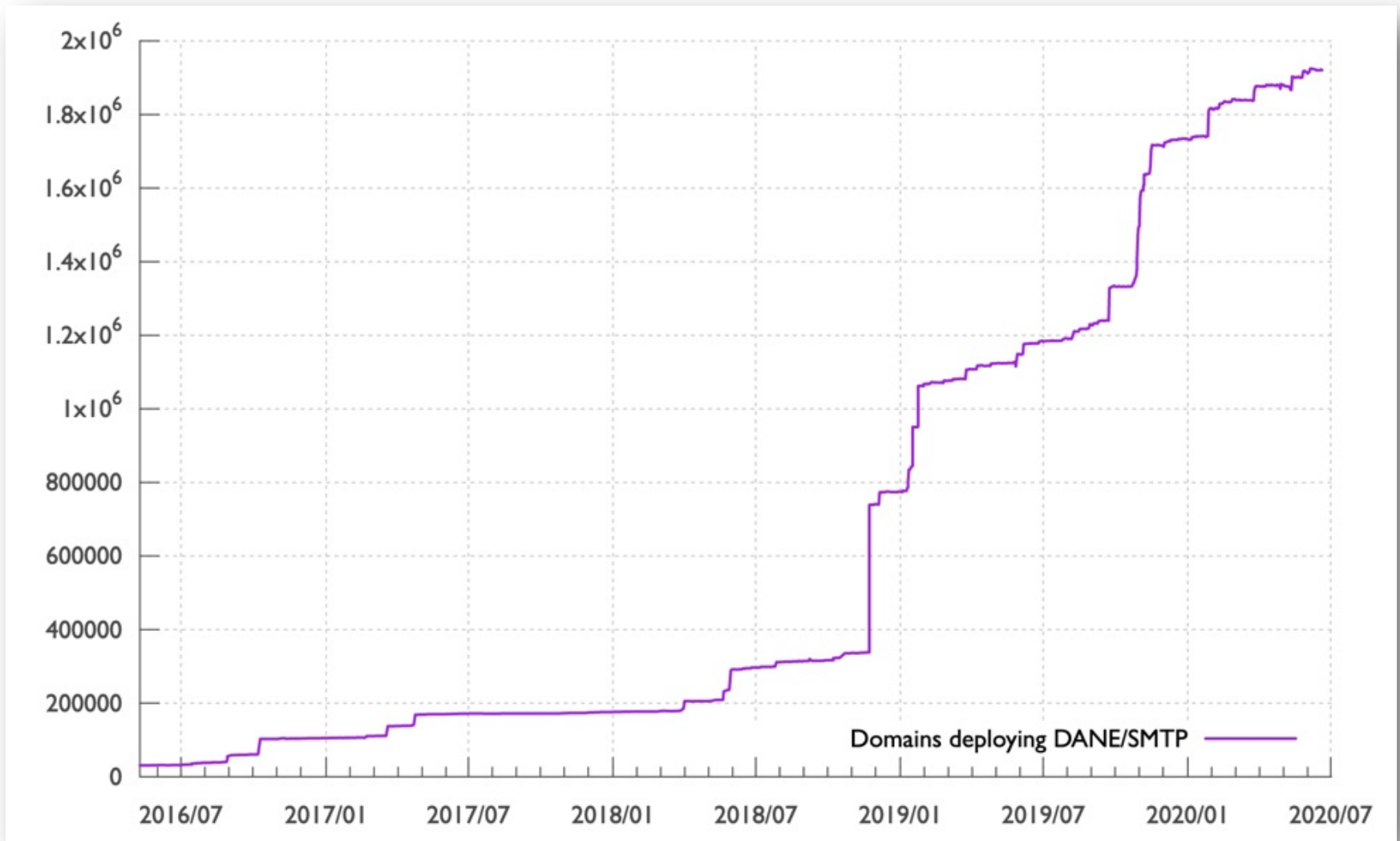
<https://stats.labs.apnic.net/dnssec/XA?hc=XA&hx=0&hv=1&hp=1&hr=1&w=7&p=0>

Observed DS Record Count Growth



<http://stats.dnssec-tools.org/#dnssec>

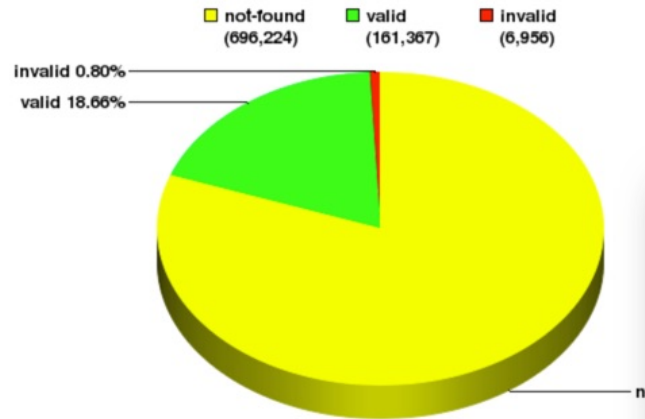
Domains with signed MX and DANE records



stats.dnssec-tools.org

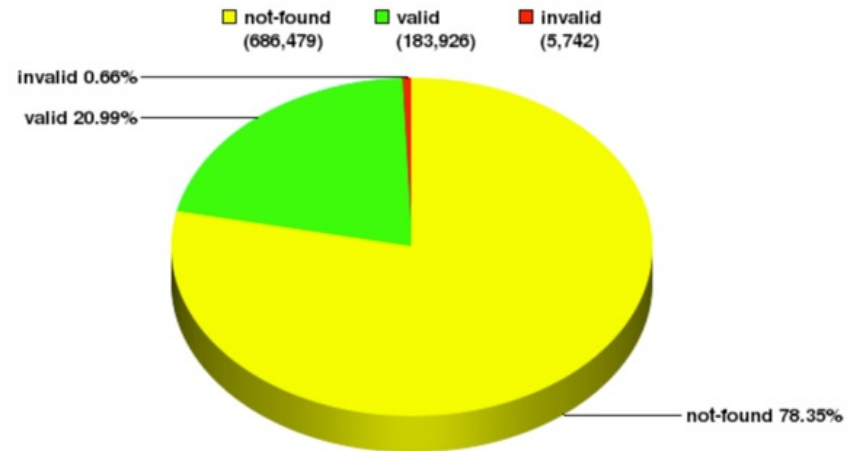
RPKI Global IPv4 Prefixes

Global: Validation Snapshot of Unique P/O pairs
864,547 Unique IPv4 Prefix/Origin Pairs



NIST RPKI Monitor 2020-03-09

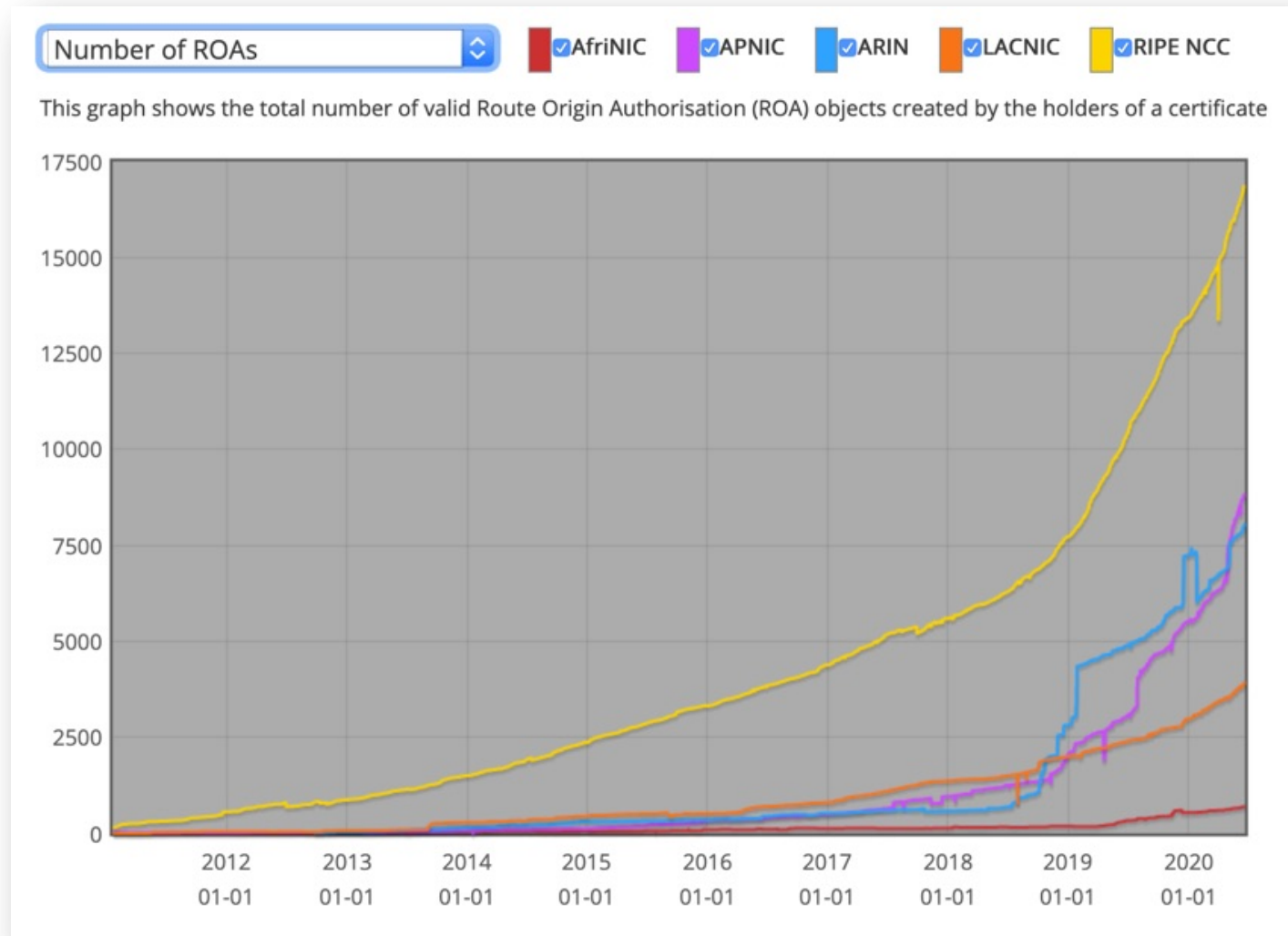
Global: Validation Snapshot of Unique P/O pairs
876,147 Unique IPv4 Prefix/Origin Pairs



NIST RPKI Monitor 2020-06-20

<https://rpki-monitor.antd.nist.gov/>

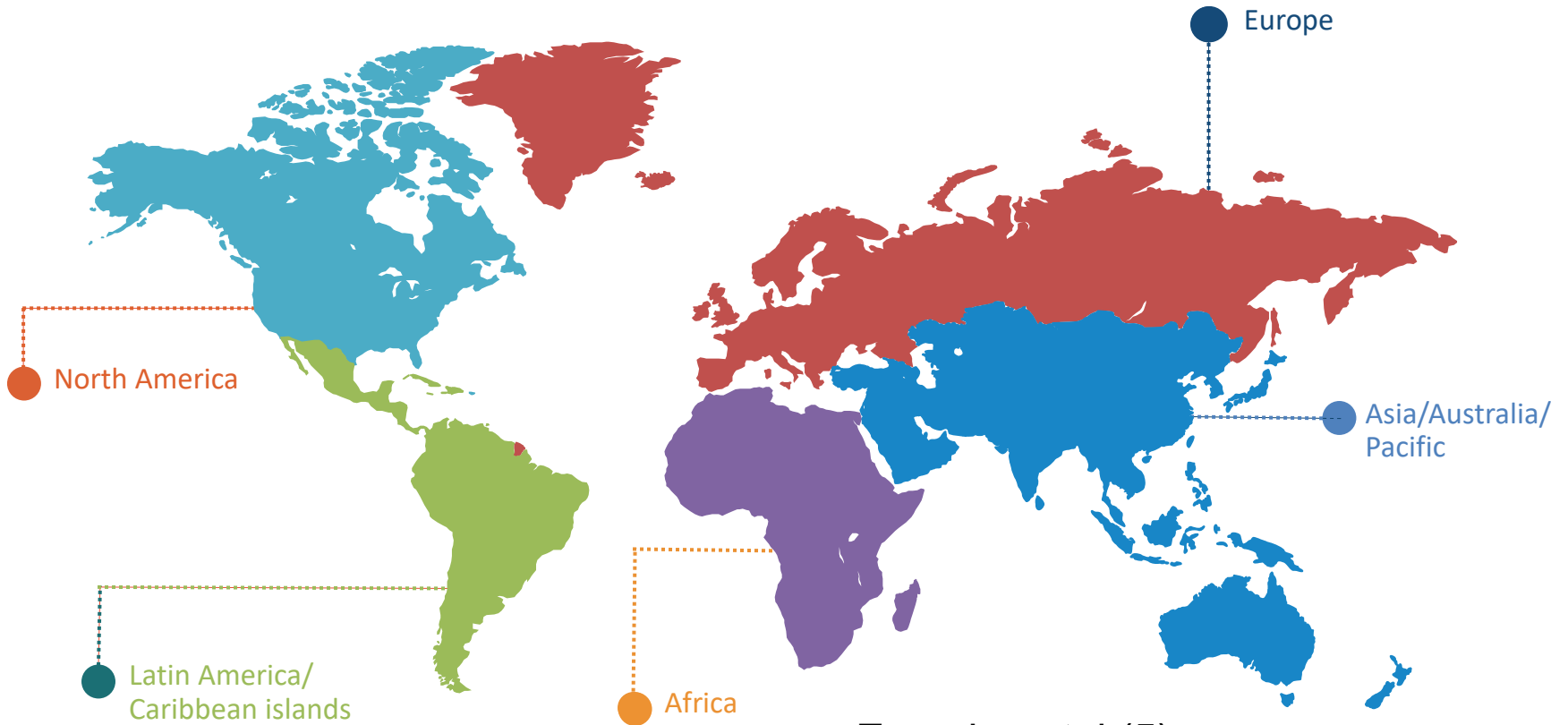
RPKI Covered IPv4 Prefixes by RIR



<https://certification-stats.ripe.net/>

ccTLD DNSSEC Deployment Status

ccTLD DNSSEC Status 2020-06-21



Experimental (5)
Announced (4)
Partial (3)
DS in Root (51)
Operational (86)

Questions & Answers

DNSSEC Resources

www.dnssec-tools.org

stats.dnssec-tools.org

www.internetsociety.org/ose/

www.dnssec-deployment.org

stats.labs.apnic.net/dnssec

RPKI Resources

rpki-monitor.antd.nist.gov

certification-stats.ripe.net

www.securerouting.net

Thank You