

ICANN

VIRTUAL COMMUNITY FORUM

73

DNSSEC & Security
Workshop
Wednesday, 09 March
2022

DNSSEC and Security Virtual Workshop

ICANN73

Dan York, Internet Society

09 March 2022



Program Committee

- Steve Crocker, Shinkuro
- Mark Elkins, DNS/ZACR
- 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 Org

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, DANE & RPKI Deployments Around the World

ICANN73

Dan York, Internet Society

09 March 2022



DNSSEC Validation

Roughly 27 - 30%

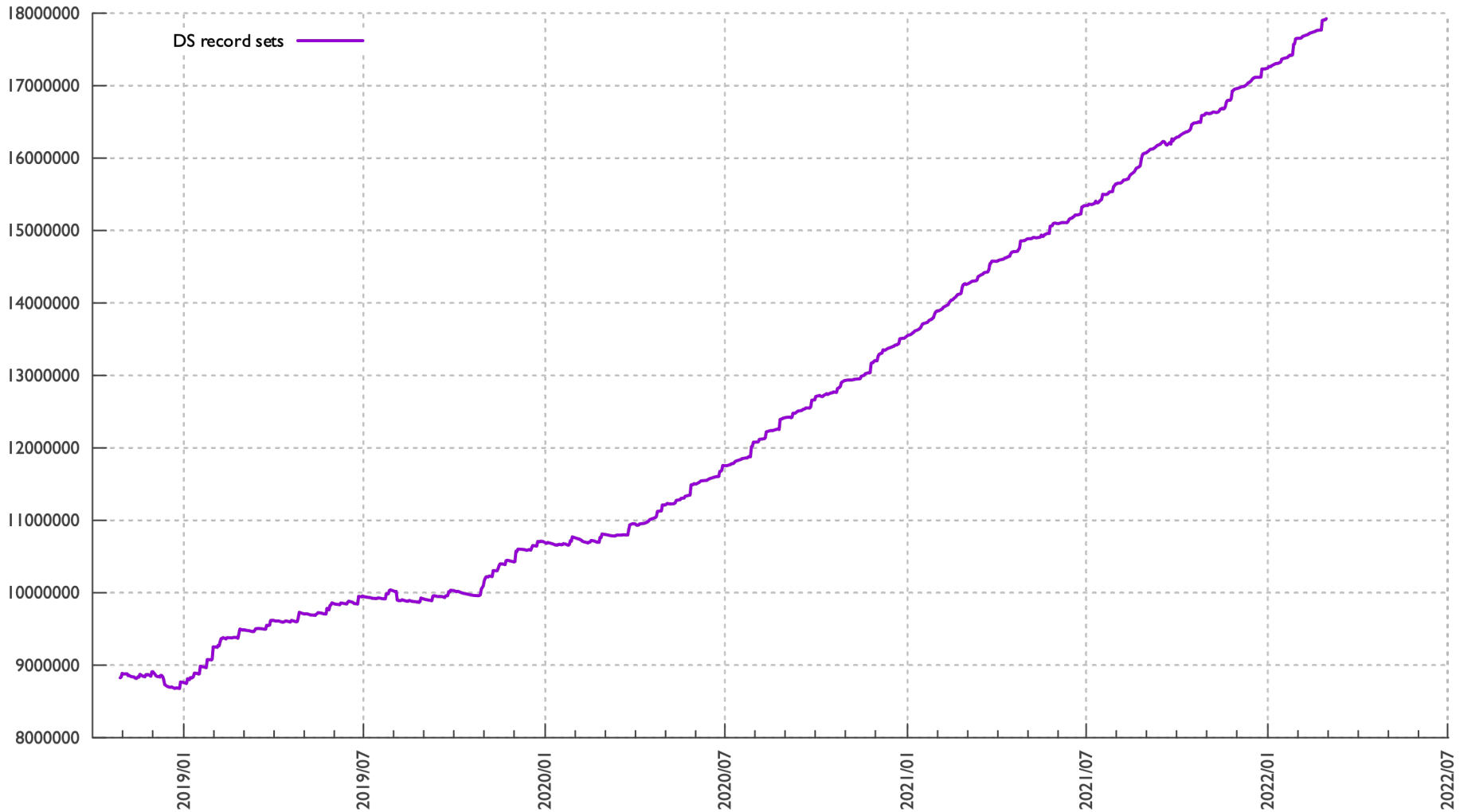


<https://stats.labs.apnic.net/dnssec/XA?hc=XA&hx=0&hv=1&hp=0&hr=1&w=7>

Code	SubRegion	DNSSEC Validates	Samples	Weight	Weighted Samples
QR	Micronesia, Oceania	88.18%	1,887	0.68	1,284
QQ	Melanesia, Oceania	63.80%	5,183	1.19	6,158
QS	Polynesia, Oceania	61.22%	1,488	0.76	1,137
QO	Western Europe, Europe	54.91%	199,527	2.39	475,900
XT	Southern Asia, Asia	52.76%	3,485,571	0.59	2,057,388
XV	Western Asia, Asia	48.09%	670,451	0.87	580,000
QP	Australia and New Zealand, Oceania	41.13%	47,433	1.59	75,571
QM	Northern Europe, Europe	40.62%	256,853	1.11	284,824
XP	South America, Americas	38.94%	720,555	1.23	883,540
XW	Eastern Europe, Europe	38.67%	631,006	1.01	639,471
XQ	Northern America, Americas	37.04%	837,535	0.96	806,213
XK	Southern Africa, Africa	36.96%	44,600	2.45	109,284
XR	Central Asia, Asia	30.74%	51,259	2.32	118,990
XI	Middle Africa, Africa	23.45%	26,924	2.83	76,084
XN	Caribbean, Americas	22.77%	130,569	0.5	64,809
XJ	Northern Africa, Africa	22.53%	515,975	0.69	357,950
XH	Eastern Africa, Africa	21.21%	232,237	1.15	268,136
QN	Southern Europe, Europe	20.47%	493,783	0.65	321,983
XL	Western Africa, Africa	18.81%	364,547	0.9	326,462
XU	South-Eastern Asia, Asia	17.46%	1,827,771	0.54	981,032
XO	Central America, Americas	12.81%	476,331	0.68	322,257
XS	Eastern Asia, Asia	4.18%	610,962	4.7	2,873,731

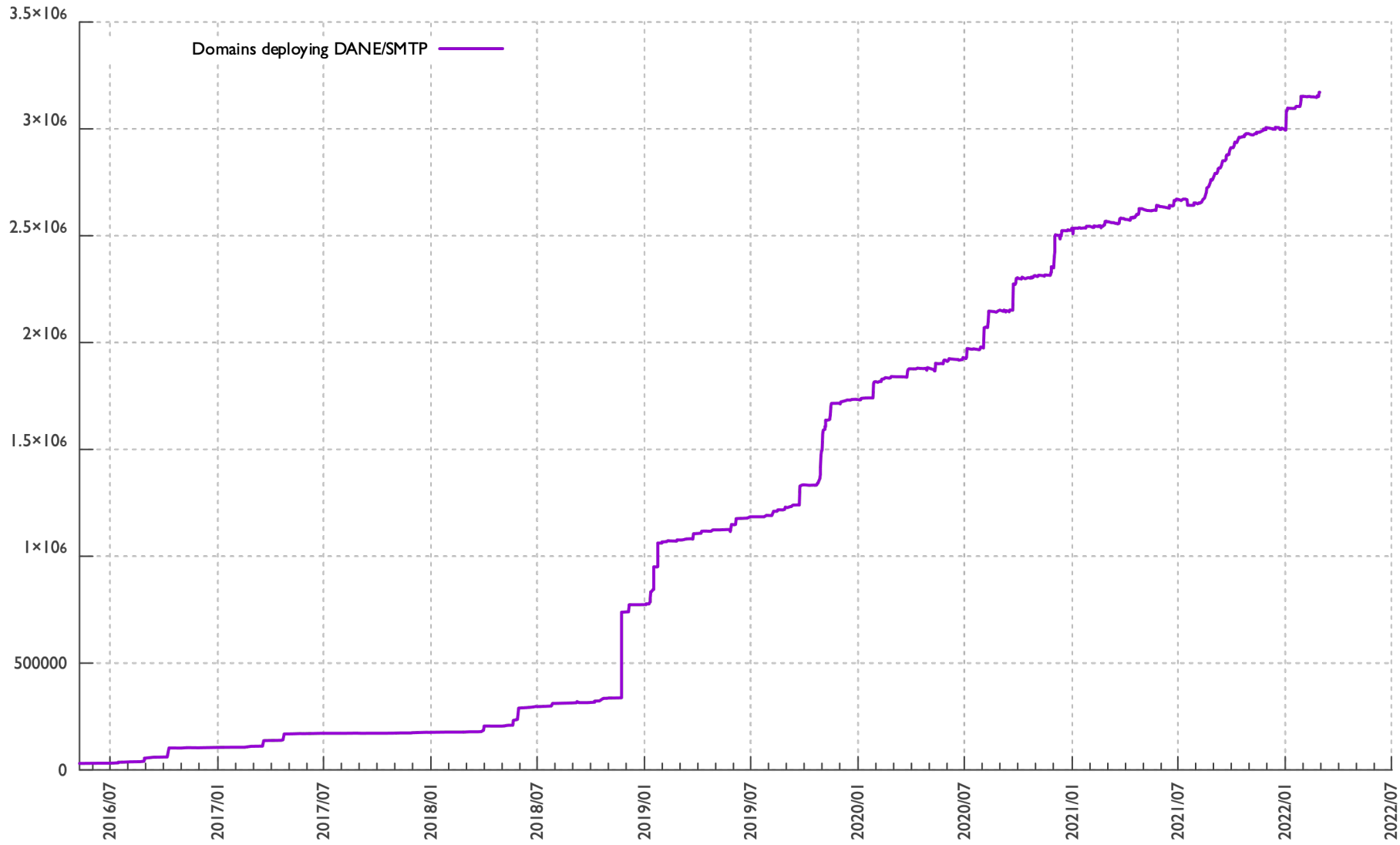
<https://stats.labs.apnic.net/dnssec/XA?hc=XA&hx=0&hv=1&hp=1&hr=1&w=7&p=0>

Observed DS Record Count Growth



<https://stats.dnssec-tools.org/>

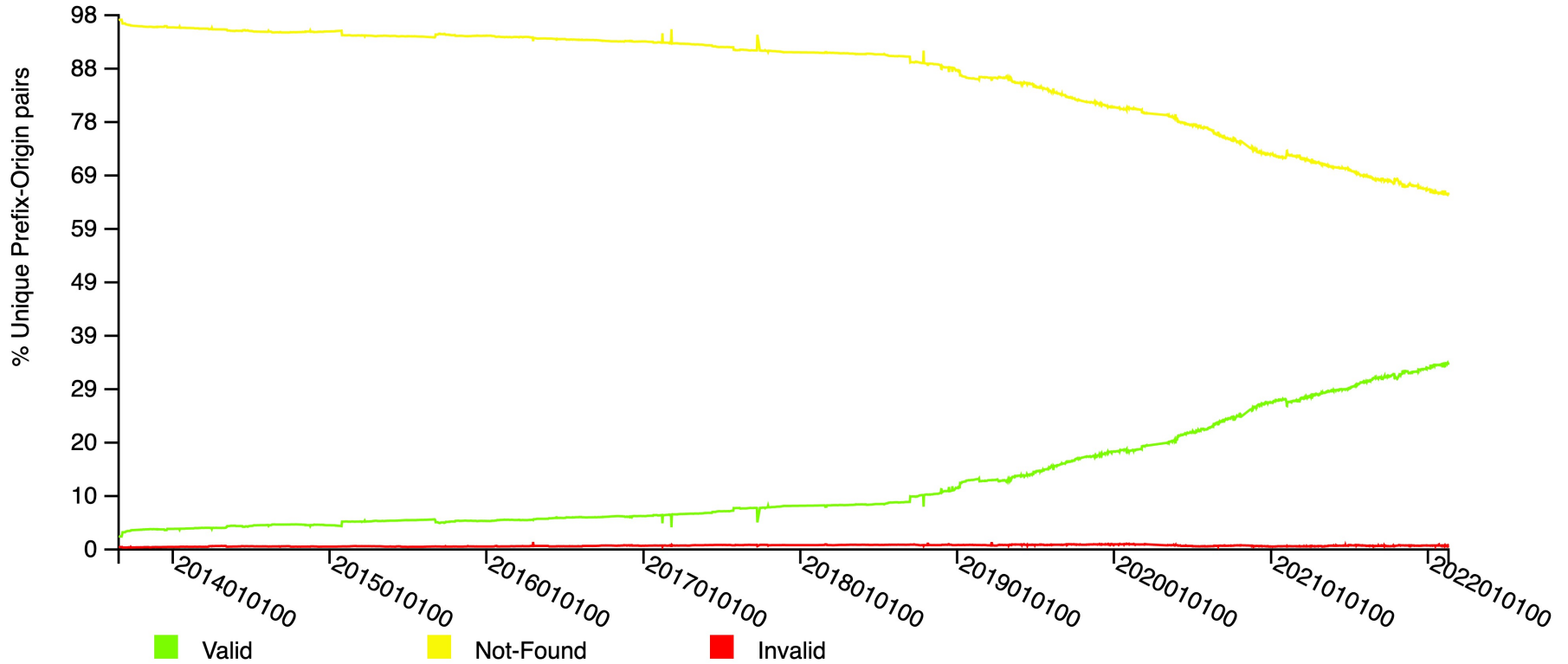
Domains with signed MX and DANE records



<https://stats.dnssec-tools.org/>

RPKI Global IPv4 Prefixes

RPKI-ROV History of Unique Prefix-Origin Pairs (IPv4)



NIST RPKI Monitor: RPKI-ROV Analysis

Protocol: IPv4

RIR: All

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

RPKI Covered IPv4 Prefixes by RIR

Number of ROAs



AfrinIC



APNIC



ARIN

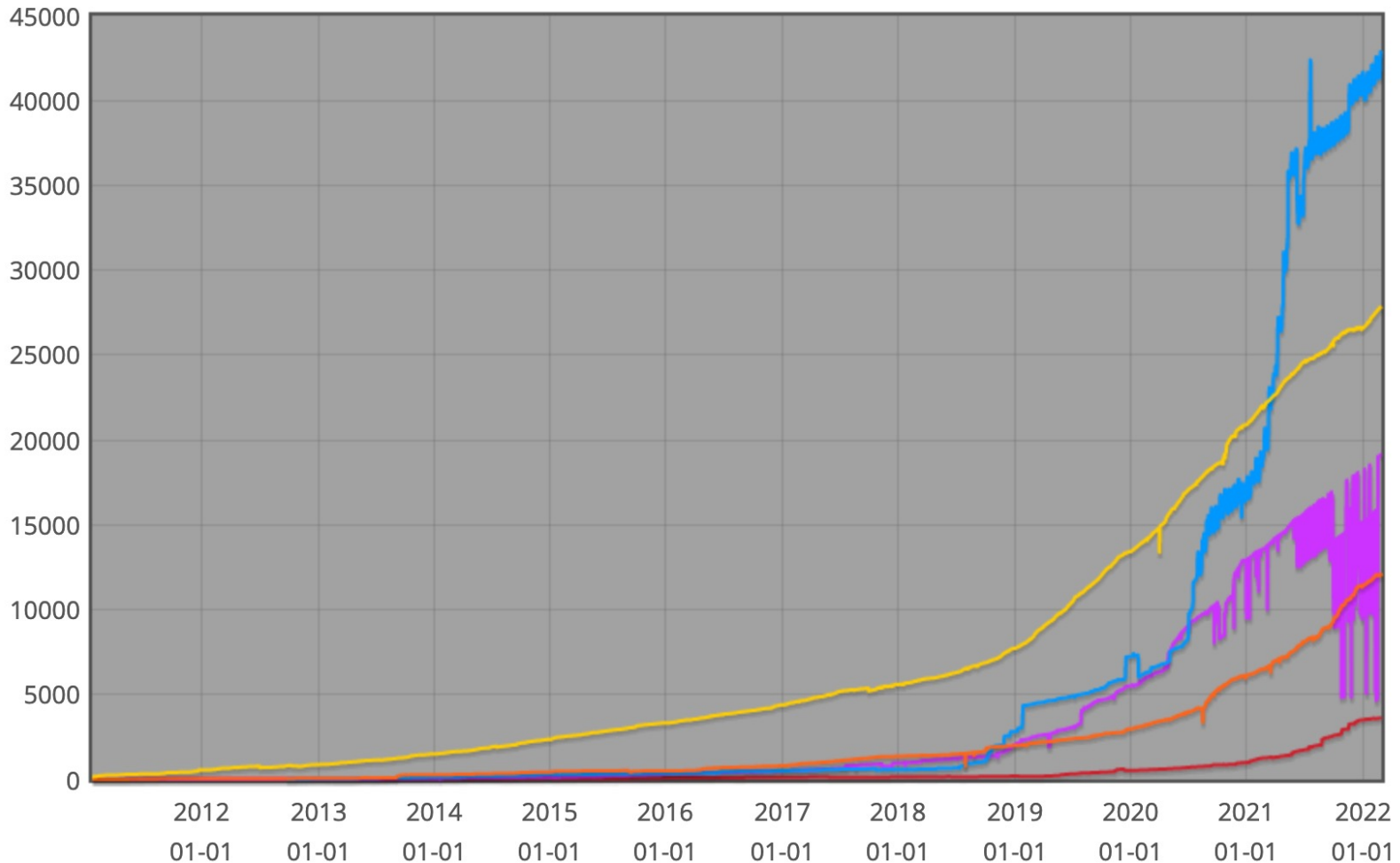


LACNIC



RIPE NCC

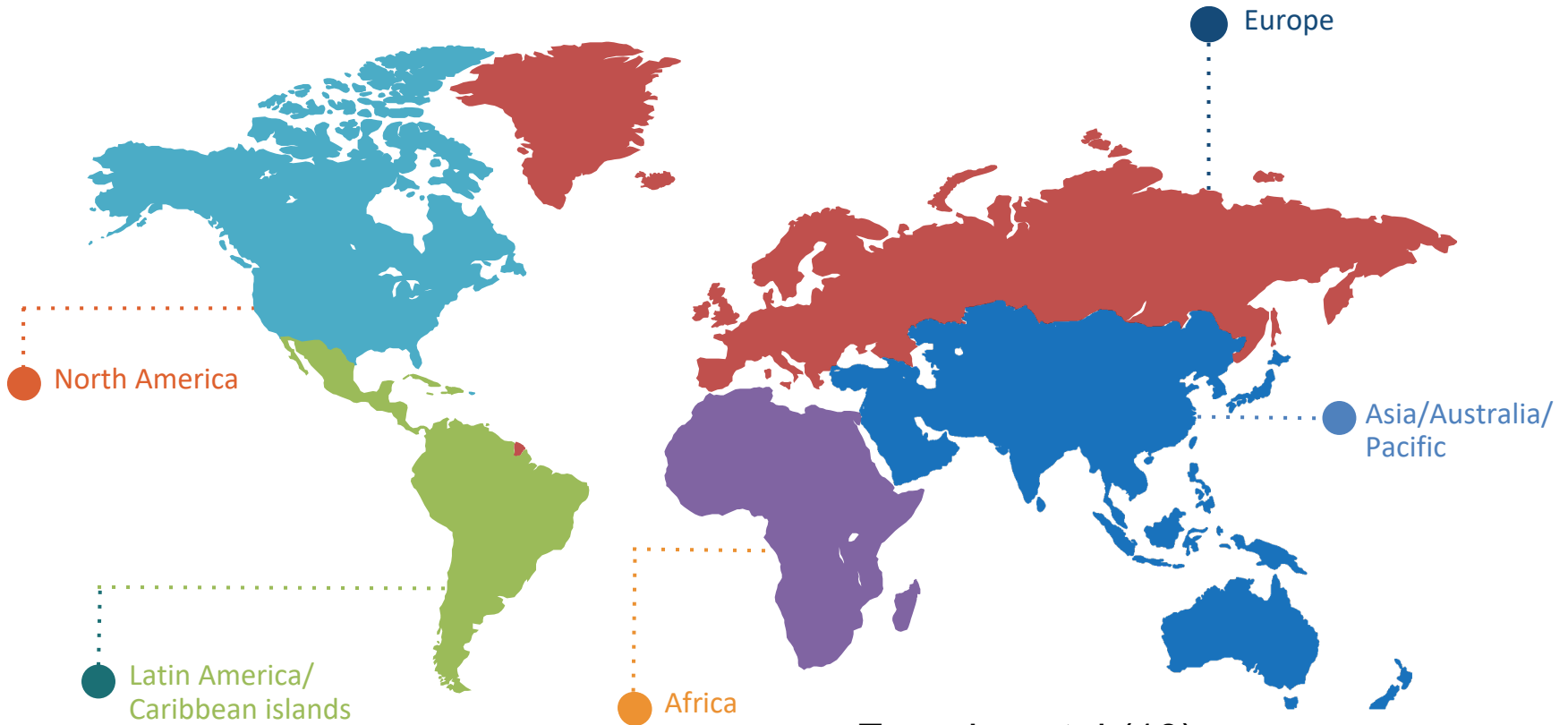
This graph shows the total number of valid Route Origin Authorisation (ROA) objects created by the holders of a certificate



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

ccTLD DNSSEC Deployment Status

ccTLD DNSSEC Status 2022-03-07



Experimental (10)
Announced (4)
Partial (1)
DS in Root (57)
Operational (78)
DS Automation (6)

Questions & Answers

DNSSEC Resources

www.dnssec-tools.org

stats.dnssec-tools.org

stats.labs.apnic.net/dnssec

RPKI Resources

rpki-monitor.antd.nist.gov

certification-stats.ripe.net

www.securerouting.net

Thank You