



DNSSEC Workshop

Jacques Latour, CIRA | ICANN62 | June 2018

Program Committee

- Mark Elkins, DNS/ZACR
- Jean Robert Hountomey, AfricaCERT
- Jacques Latour, CIRA
- Xiaodong Lee, CNNIC
- Russ Mundy, Parsons
- Ondřej Filip, CZNIC
- Yoshiro Yoneya, JPRS
- Dan York, Internet Society
- Julie Hedlund, Andrew McConachie, and Kathy Schnitt, ICANN

DNSSEC Lunch Sponsors

- Afilias
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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 Deploy360 Programme**



Program

DNSSEC Workshop – Part I

0900-0915 – Presentation: Jacques Latour, CIRA -- DNSSEC Workshop Introduction, Program, Deployment Around the World – Counts, Counts, Counts

0915-0945 – Panel Discussion: DNSSEC Activities and Post Key Signing Key Rollover Preparation

Moderator: Jacques Latour, CIRA

Panelists:

Angie Bonilla, NIC.PA

Frederico Neves, .BR

Mauricio Oviedo, NIC.CR – DNSSEC at .CR: Continuous Improvement

0945-1015: Presentation: Just Another Algorithm Rollover, Ondřej Filip and Jaromír Talíř, CZNIC

1015-1030 -- Coffee Break

DNSSEC Workshop – Part II

1030-1130 -- Panel Discussion: KSK Rollover Data Collection and Analysis

Moderator: Russ Mundy, Parsons

Panelists:

Matt Larson, ICANN – Root KSK Rollover Update

Wes Hardaker, USC/ISI – RFC8145 / KSK-2010 Signal Analysis

Joe Abley – RFC8145 Fear and Loathing

1130-1145 – Presentation: DNSSEC: How Can I Help? Russ Mundy, Parsons

1145-1200 – The Great DNSSEC/DNS Quiz Jacques Latour, CIRA

1215-1315 DNSSEC/Tech Day Lunch -- TICKETS REQUIRED



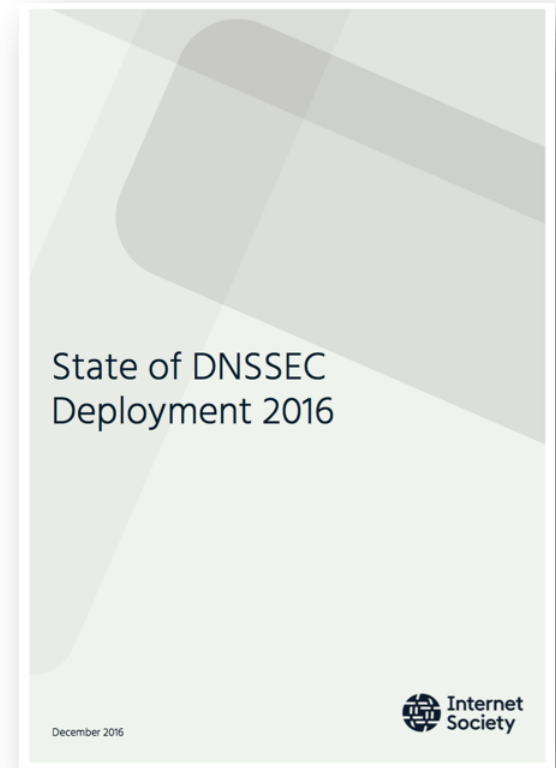
DNSSEC Deployment Around the World: Counts, Counts, Counts

Jacques Latour, CIRA | ICANN62 | June 2018

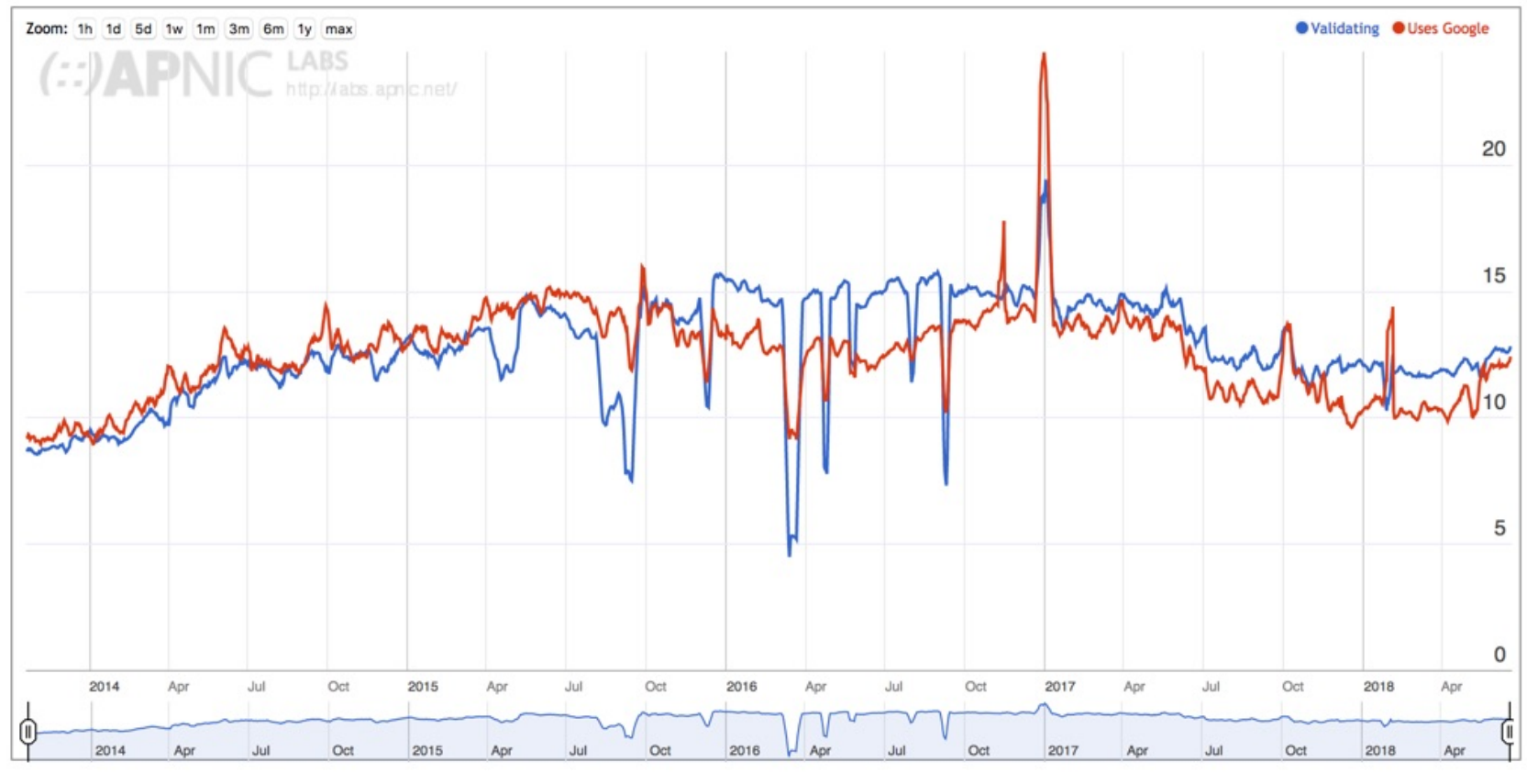
State of DNSSEC Deployment 2016

Detailed report on global deployment. Available for download now.

<https://www.internetsociety.org/doc/state-dnssec-deployment-2016>



Use of DNSSEC Validation for World (XA)



<http://stats.labs.apnic.net/dnssec/XA?c=XA&x=1&g=0&r=0&w=7&r=1>

Code	SubRegion	DNSSEC Validates	Uses Google PDNS
QR	Micronesia, Oceania	51.78%	45.39%
XK	Southern Africa, Africa	39.25%	18.87%
QO	Western Europe, Europe	36.25%	24.17%
QQ	Melanesia, Oceania	36.14%	40.89%
QM	Northern Europe, Europe	33.28%	18.42%
XR	Central Asia, Asia	31.93%	39.34%
QP	Australia and New Zealand, Oceania	27.83%	5.75%
XP	South America, Americas	25.25%	18.61%
XQ	Northern America, Americas	24.55%	8.29%
XW	Eastern Europe, Europe	22.41%	19.40%
XH	Eastern Africa, Africa	22.26%	25.90%
XJ	Northern Africa, Africa	16.76%	19.79%
QN	Southern Europe, Europe	15.73%	13.56%
XN	Caribbean, Americas	15.35%	22.42%
XV	Western Asia, Asia	13.44%	12.62%
XU	South-Eastern Asia, Asia	9.64%	15.35%
XI	Middle Africa, Africa	8.88%	24.04%
XO	Central America, Americas	8.76%	14.48%
QS	Polynesia, Oceania	7.98%	13.09%
XT	Southern Asia, Asia	6.40%	12.49%
XL	Western Africa, Africa	6.38%	32.41%
XS	Eastern Asia, Asia	2.50%	6.11%

Low % of Google PDNS usage means more DNSSEC support by local ISPs.

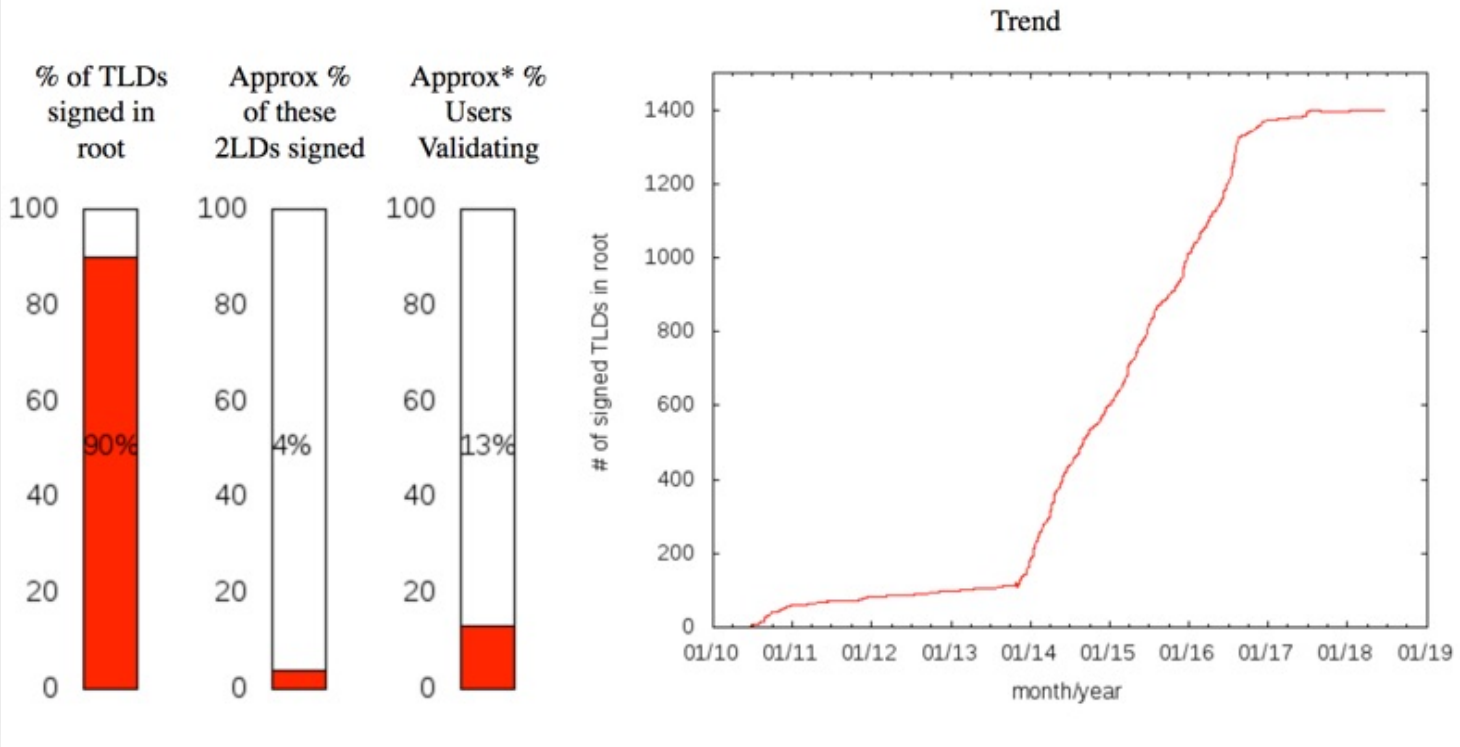
High % of Google PDNS usage means ISPs are using Google for DNS versus operating their own DNS servers.

<http://stats.labs.apnic.net/dnssec/XA?c=XA&x=1&g=1&r=0&w=7&r=1>

DNSSEC Deployment Report










Thu Jun 21 14:29:22 PDT 2018

Total TLDs: 1542 / Signed TLDs in root: 1399 / Recently added: vc. (06/15/2018)



<https://rick.eng.br/dnssecstat/>

Top TLDs in Number of Signed Domains

TLD		Description	DS Date	Sig	Signed/Total N/- are HLL* estimates ONLY	gNo:Count
nl.		SIDN (Stichting Internet Domeinregistratie Nederland)	11-NOV-2010	52.	3040275/5818213	
br.		Comite Gestor da Internet no Brasil	23-JUN-2010	26.	1048113/3964131	
com.		VeriSign Global Registry Services	31-MAR-2011	0.7	935552/133795623	16 2:29 1 5:7975 7:518068 14649 1152 27 193058 411 253:3 4:8
se.		The Internet Infrastructure Foundation	27-AUG-2010	48.	816461/1694251	3:4 201 6:1 957 76938 174 34183 1
cz.		CZ.NIC, z.s.p.o	24-JUN-2010	52.	685815/1313138	
eu.		EURid vzw/asbl	2-SEP-2010	-	518961/-	
no.		UNINETT Norid A/S	15-NOV-2014	58.	438901/756527	
de.		DENIC eG	8-JUN-2011	-	427334/-	
fr.		Association Franaise pour le Nommege Internet en Cooperation (A.F.N.I.C.)	29-SEP-2010	-	425181/-	
pl.		Research and Academic Computer Network	10-FEB-2012	-	361776/-	

Note: Only includes the TLDs for which Rick Lamb can get statistics. (Example, .GOV is not listed.)

<https://rick.eng.br/dnssecstat/>

TLD DNSSEC Implementation Status

Experimental – internal experiments

Announced – Public commitment to deploy

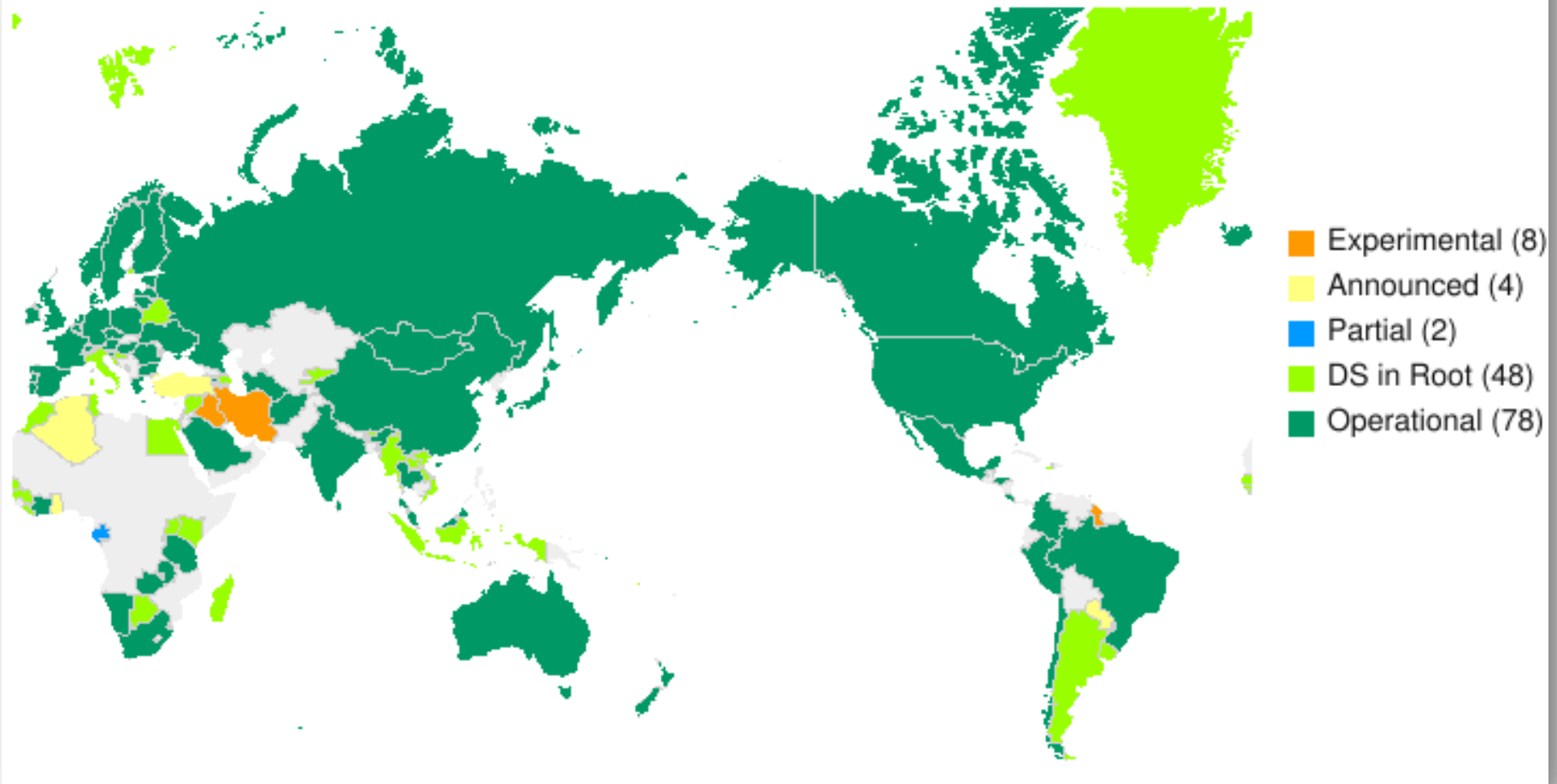
Partial – Zone is signed but not in operation

DS in Root

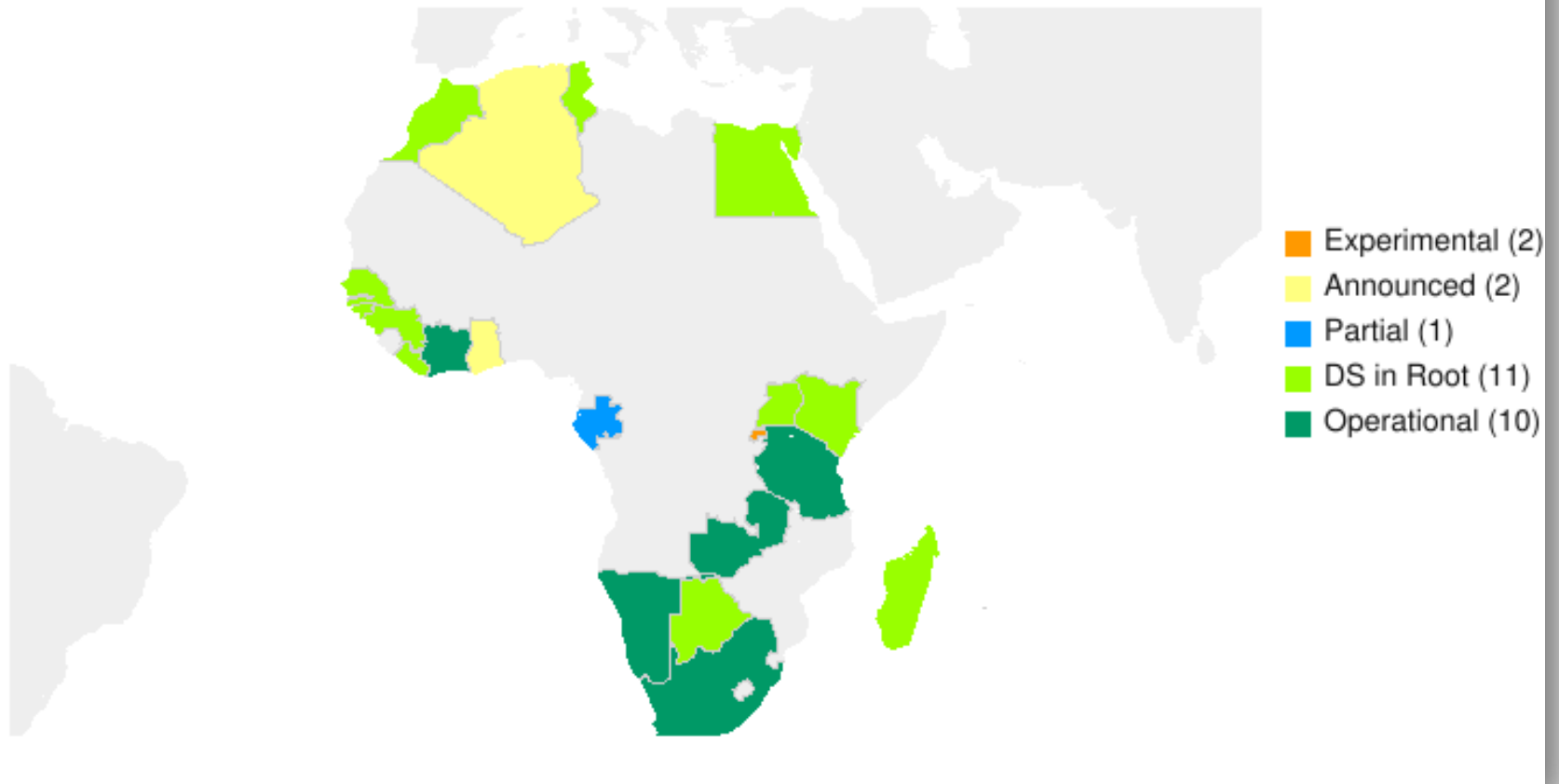
Operational – Accepting signed delegations



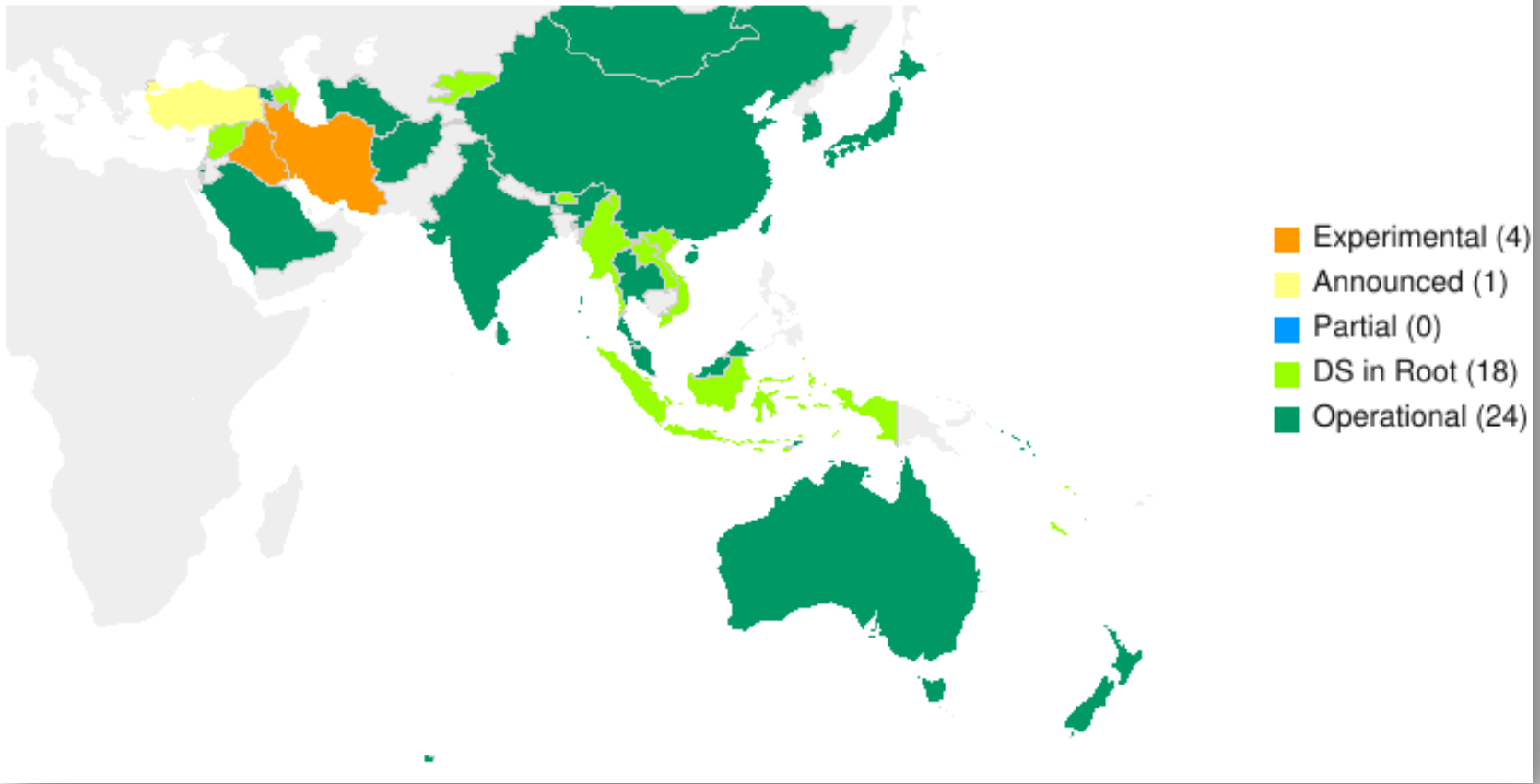
ccTLD DNSSEC Status on 2018-06-18



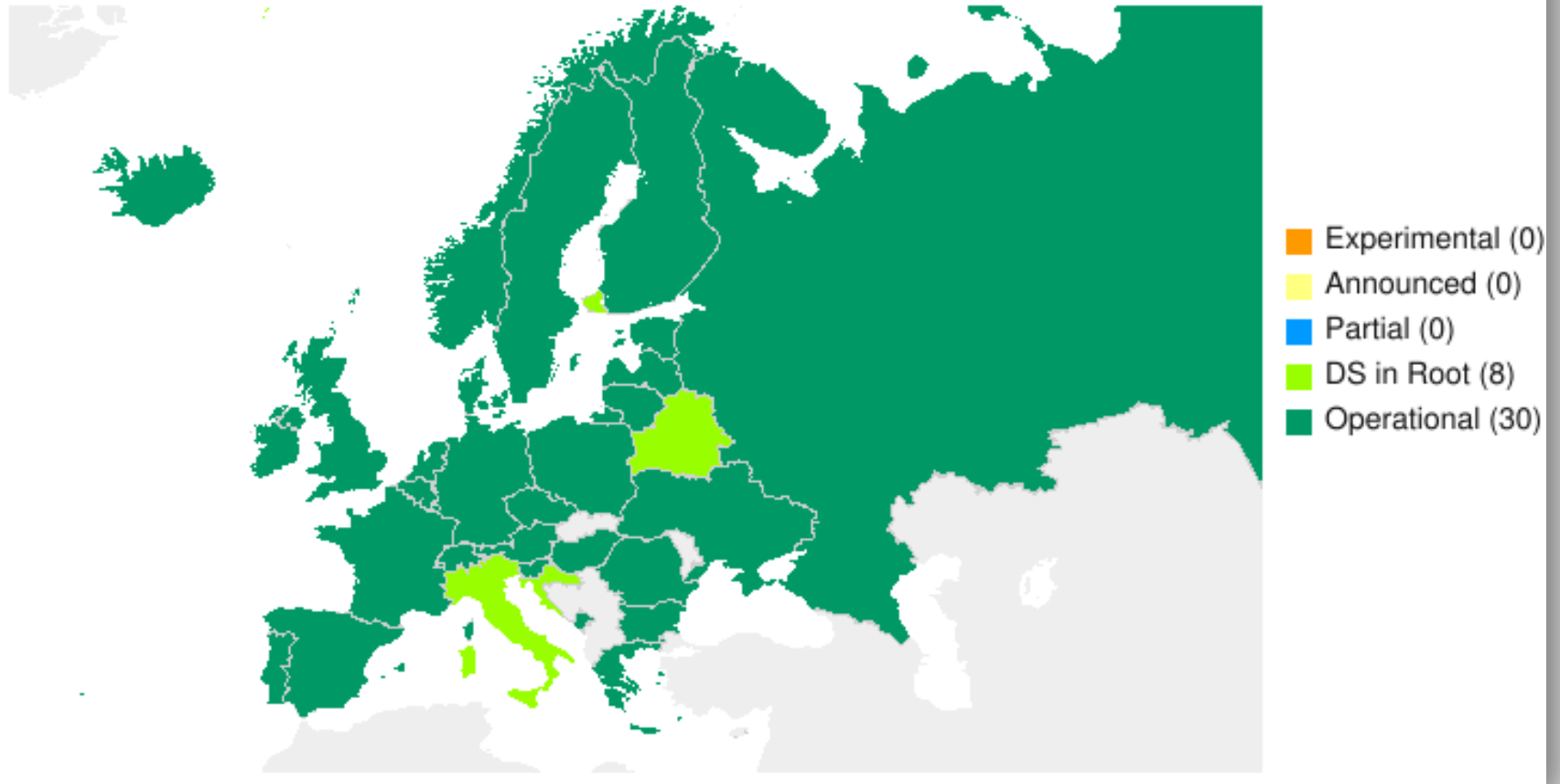
AF ccTLD DNSSEC Status on 2018-06-18



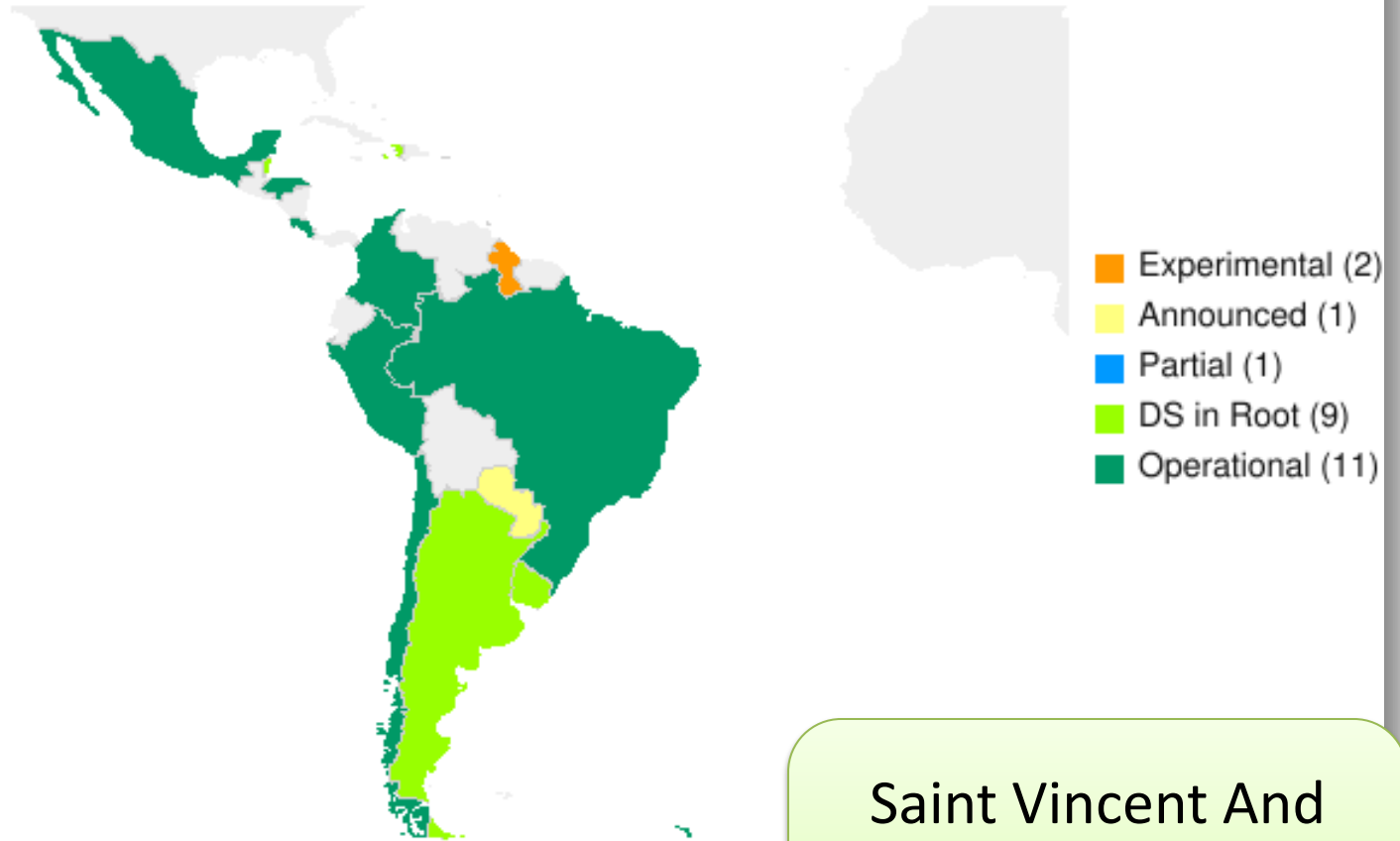
AP ccTLD DNSSEC Status on 2018-06-18



EUR ccTLD DNSSEC Status on 2018-06-18

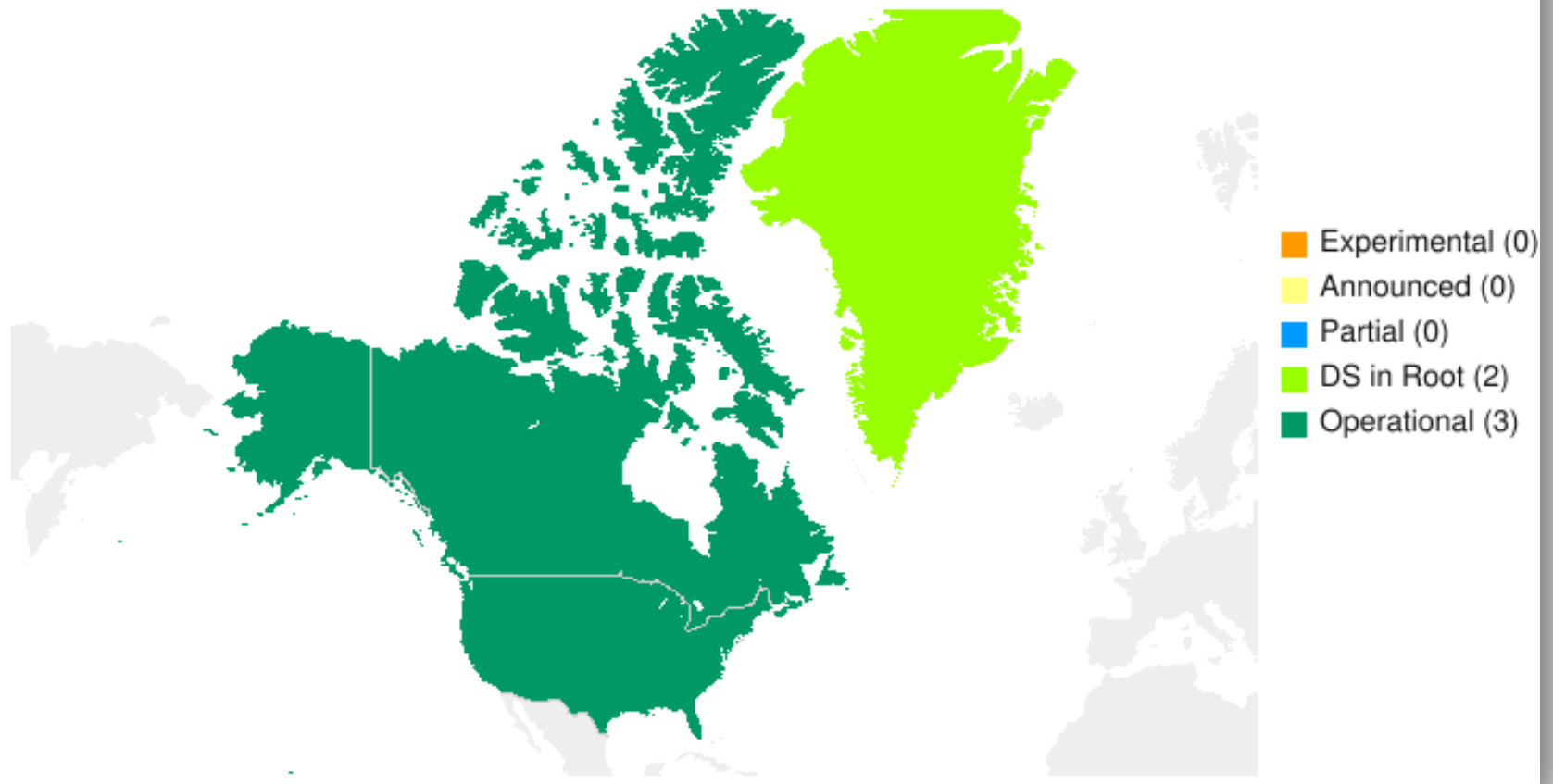


LAC ccTLD DNSSEC Status on 2018-06-18



Saint Vincent And
The Grenadines - .VC
June 2018

NA ccTLD DNSSEC Status on 2018-06-18



Receiving the DNSSEC Deployment Maps

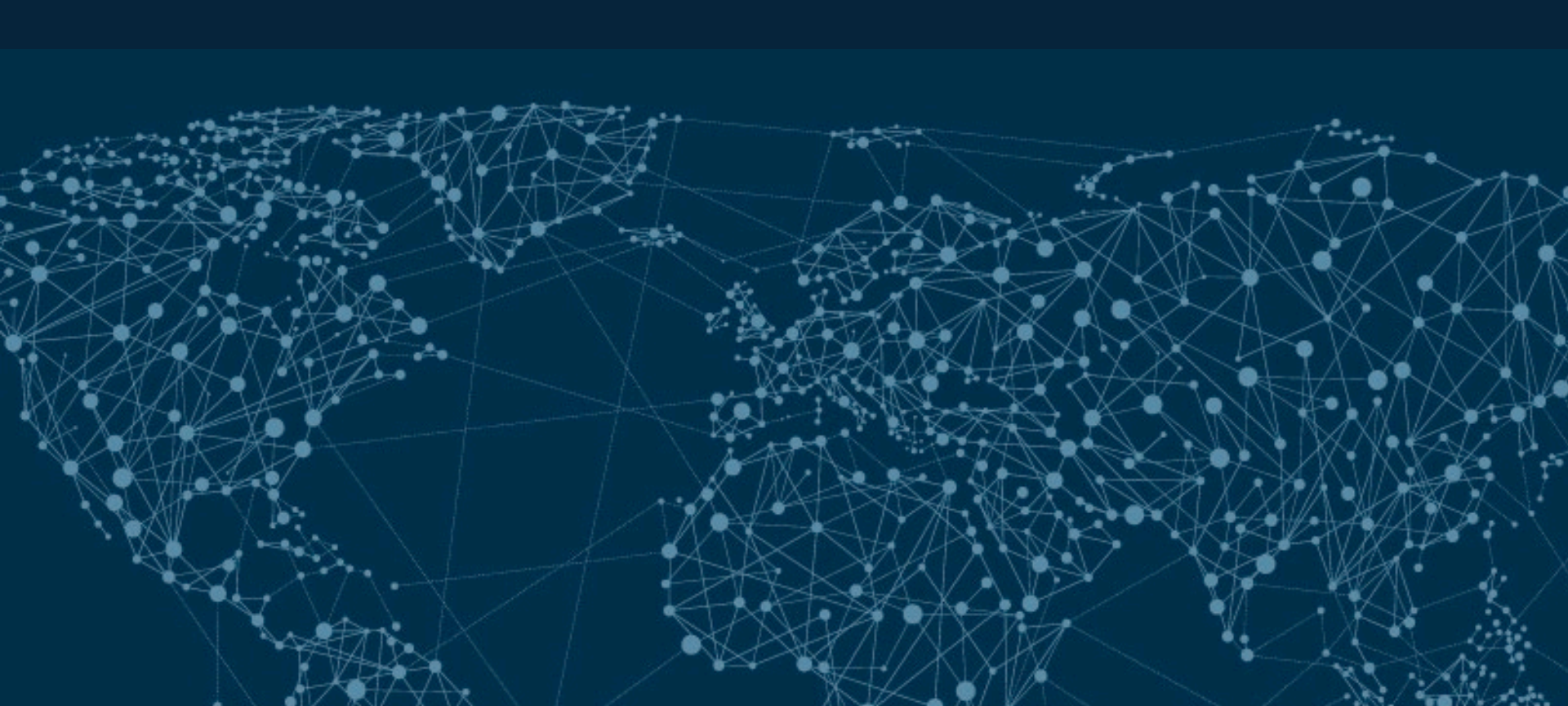
The DNSSEC Deployment Maps are published via email every Monday morning through the Internet Society Deploy360 Programme. To subscribe, visit:

www.internetsociety.org/deploy360/dnssec/maps/

DNSSEC History Project

The DNSSEC History Project is an ongoing project to collect and record the history of the work that went into bringing about the deployment of DNSSEC. To view – or to contribute – please see:

<https://www.dnssec-deployment.org/history/>



Thank you and Questions