

IANA Update

ARIN 52

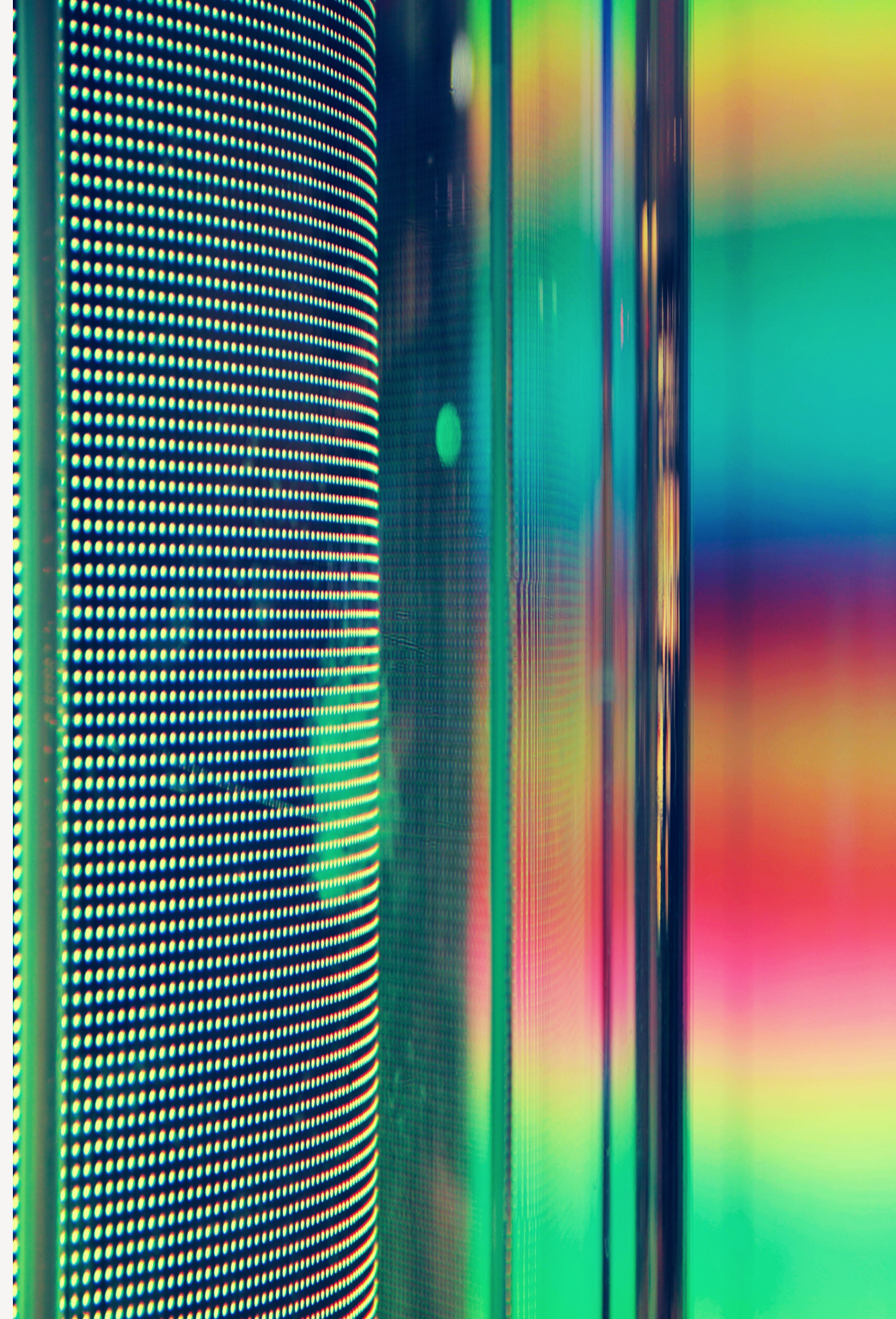
Aaron Foley

Senior Cryptographic Key Manager, IANA

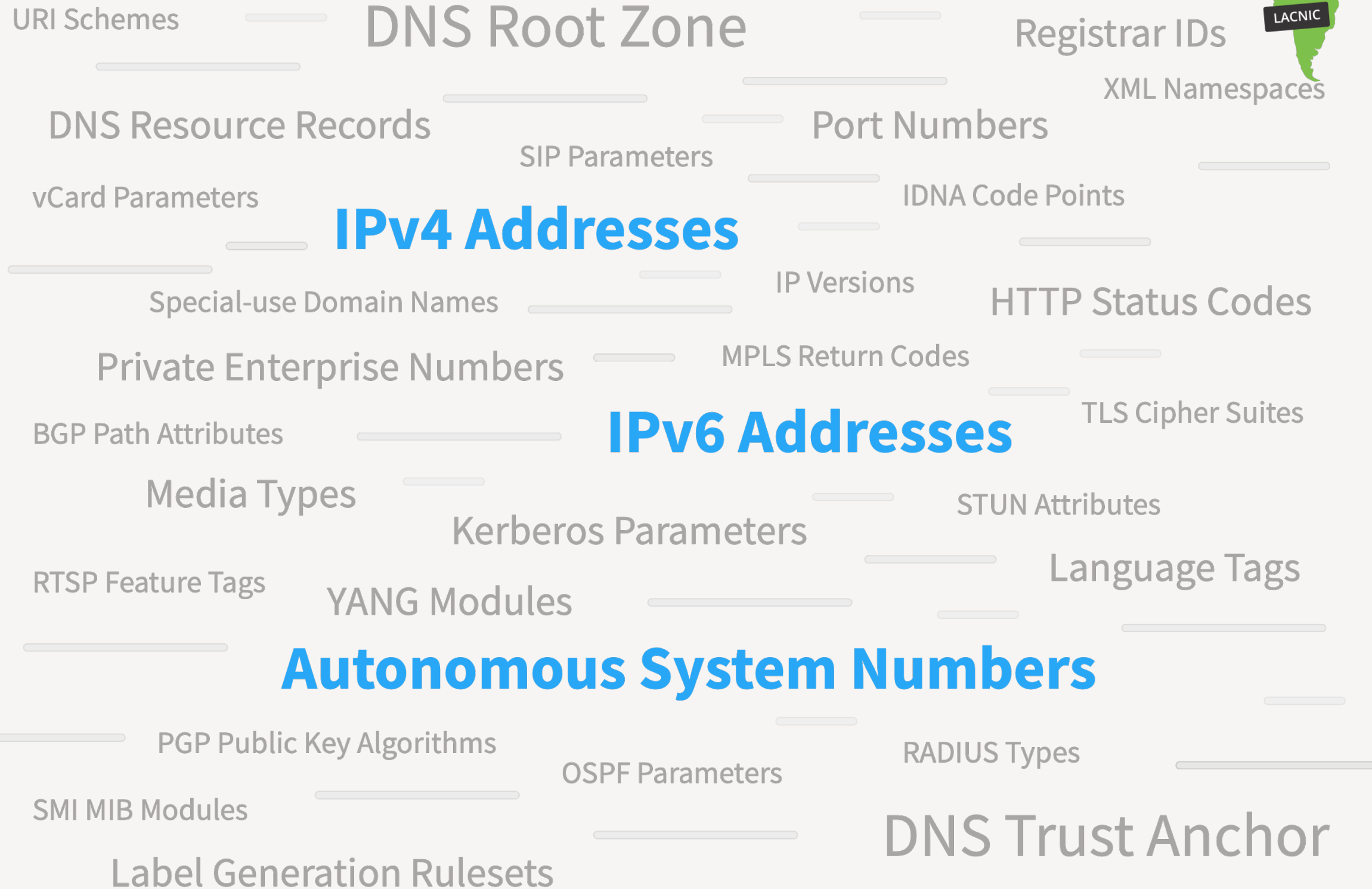
San Diego

20 October 2023

PTI | An ICANN Affiliate



Number Resource Services

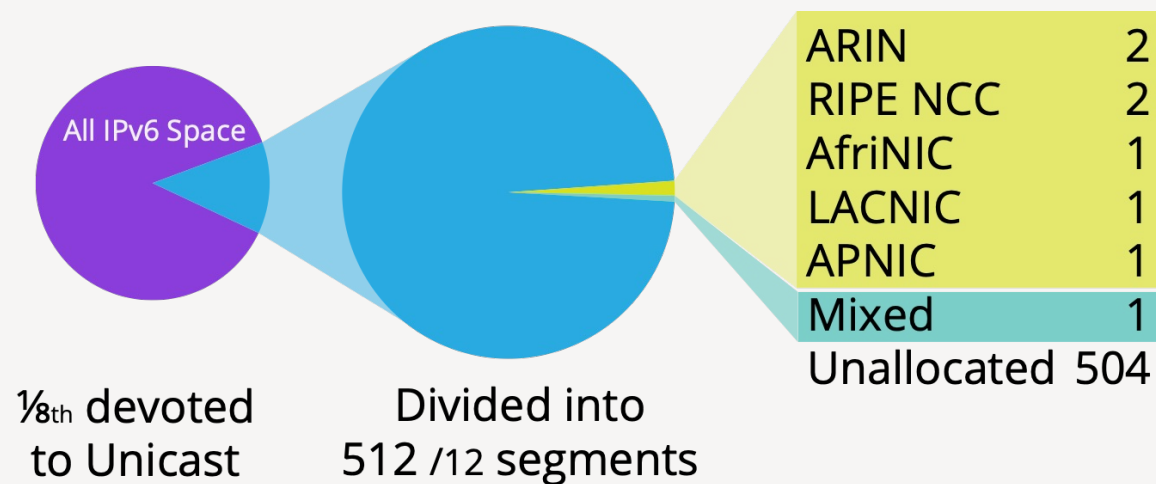
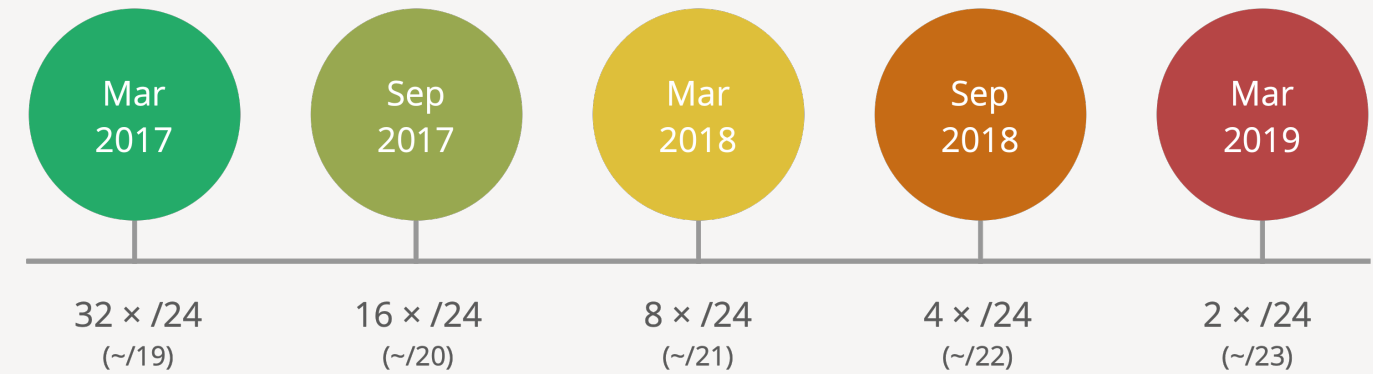


Address allocation status

IPv4 Addresses

- 222 /8s designated for unicast use (≈86%)
- The last 5 of these /8s were allocated on 3 February 2011 to the RIRs
- Recovery pool active 2017—2019, now exhausted

Prefix	Designation	Date	WHOIS	RDAP	Status	Note
000/8	IANA - Local Identification	1981-09			RESERVED	
001/8	APNIC	2010-01	whois.apnic.net	https://rdap.apnic.net/	ALLOCATED	
002/8	RIPE NCC	2009-09	whois.ripe.net	https://rdap.db.ripe.net/	ALLOCATED	
003/8	Administered by ARIN	1994-05	whois.arin.net	https://rdap.arin.net/registry	LEGACY	
004/8	Level 3 Parent, LLC	1992-12	whois.arin.net	https://rdap.arin.net/registry	LEGACY	
005/8	RIPE NCC	2010-11	whois.ripe.net	https://rdap.db.ripe.net/	ALLOCATED	
006/8	Army Information Systems Center	1994-02	whois.arin.net	https://rdap.arin.net/registry	LEGACY	
007/8	Administered by ARIN	1995-04	whois.arin.net	https://rdap.arin.net/registry	LEGACY	
008/8	Administered by ARIN	1992-12	whois.arin.net	https://rdap.arin.net/registry	LEGACY	
009/8	Administered by ARIN	1992-08	whois.arin.net	https://rdap.arin.net/registry	LEGACY	
010/8	IANA - Private Use	1995-06			RESERVED	
011/8	DoD Intel Information Systems	1993-05	whois.arin.net	https://rdap.arin.net/registry	LEGACY	
012/8	AT&T Bell Laboratories	1995-06	whois.arin.net	https://rdap.arin.net/registry	LEGACY	
013/8	Administered by ARIN	1991-09	whois.arin.net	https://rdap.arin.net/registry	LEGACY	
014/8	APNIC	2010-04	whois.apnic.net	https://rdap.apnic.net/	ALLOCATED	
015/8	Administered by ARIN	1994-07	whois.arin.net	https://rdap.arin.net/registry	LEGACY	
016/8	Administered by ARIN	1994-11	whois.arin.net	https://rdap.arin.net/registry	LEGACY	
017/8	Apple Computer Inc.	1992-07	whois.arin.net	https://rdap.arin.net/registry	LEGACY	
018/8	Administered by ARIN	1994-01	whois.arin.net	https://rdap.arin.net/registry	LEGACY	
019/8	Ford Motor Company	1995-05	whois.arin.net	https://rdap.arin.net/registry	LEGACY	
020/8	Administered by ARIN	1994-10	whois.arin.net	https://rdap.arin.net/registry	LEGACY	
021/8	DDN-RVN	1991-07	whois.arin.net	https://rdap.arin.net/registry	LEGACY	

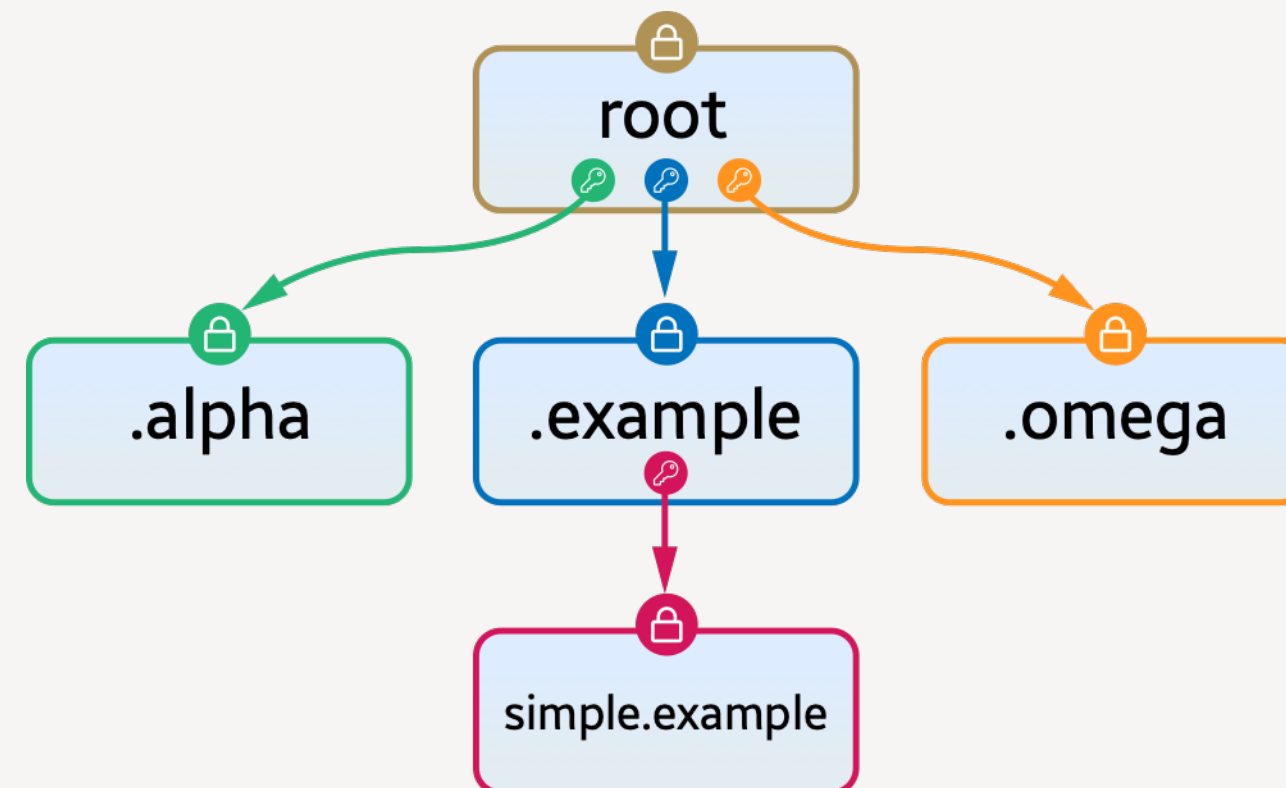


IPv6 Addresses

- Minimal allocation to date of available space (≈1.2% of unicast, ≈0.1% of total)

DNS Trust Anchor

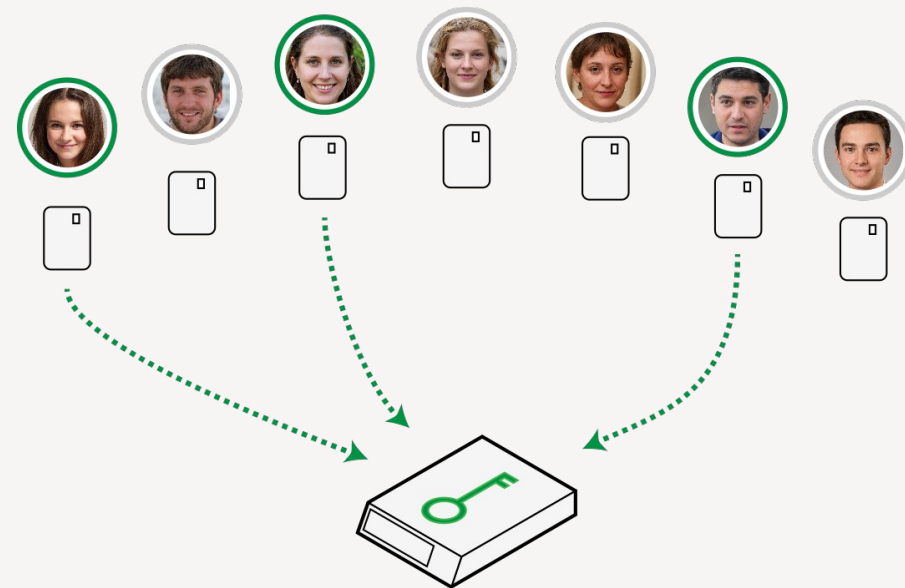
- Security for the DNS (DNSSEC) is a hierarchical system of public key cryptography that matches the hierarchical delegation of the DNS itself.
- The apex key is the **Root Zone Key Signing Key (KSK)**, which serves as the singular trust anchor for the system.
- We manage the key in a highly transparent manner, with public key signing ceremonies and an open design model.



Trusted Community Representatives

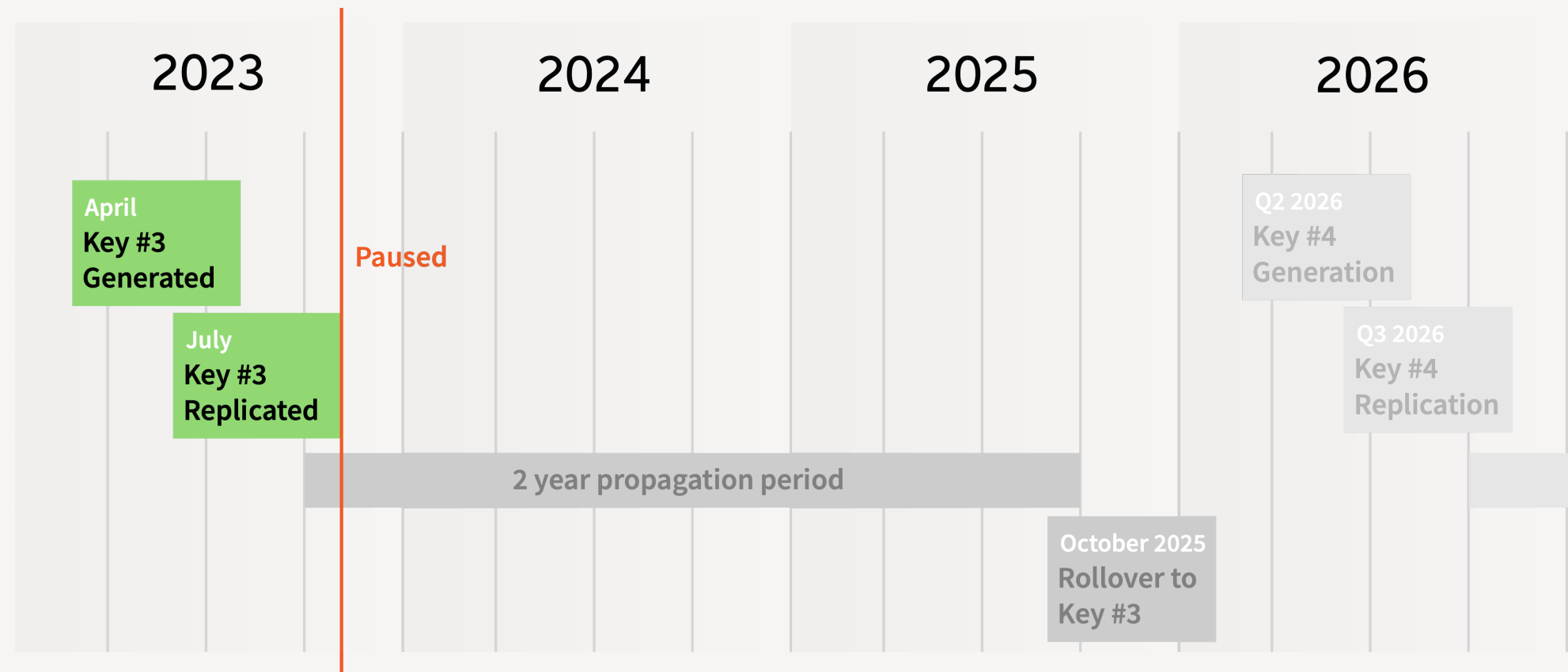
- Community members are a key part of how we protect the key and build trust.
- Participate in and oversee ceremonies
- Maintain credentials required to activate the key.
- Diversity is important — including geography, skills, and gender
- We're looking for volunteers to apply from Asia and Africa

<https://iana.org/tcr>



Updating the key

- We've embarked on the 2nd ever replacement of the key
 - Highly orchestrated event, propagation to all validators through vendor updates etc.
- Stalled due to the need to replace our hardware security modules, will restart soon and regenerate a new key
- Community work on algorithm rollover requirements for public comment soon (e.g. elliptic curve algorithm)



Thank you!
aaron.foley@iana.org