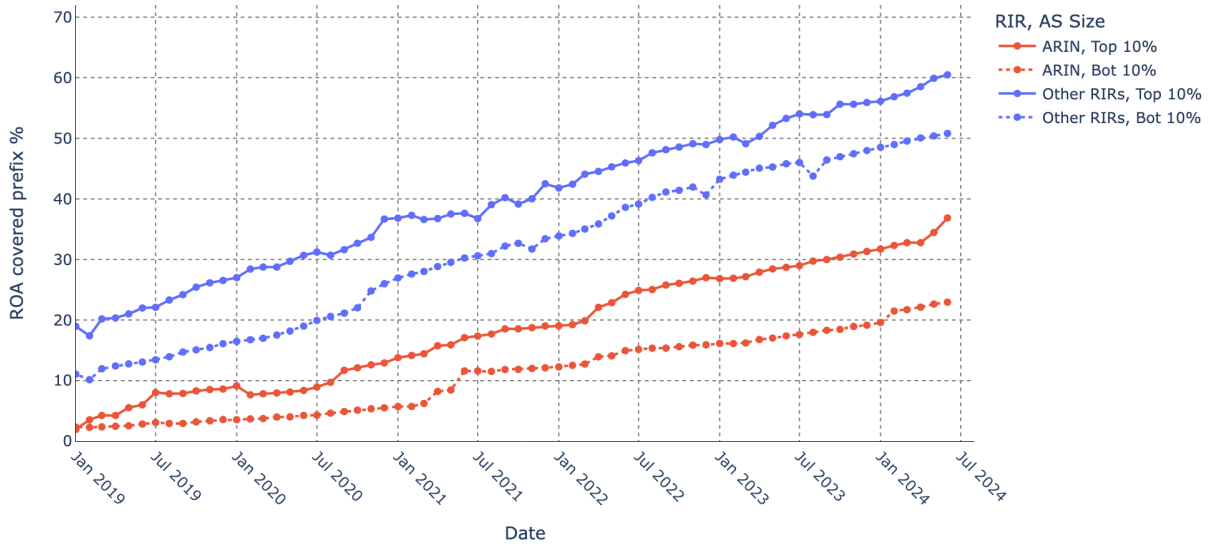


ARIN ROA Statistics

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ROA Coverage of ARIN prefixes vs other RIR prefixes



Dataset :

The BGP prefixes were collected using BGPStream. Information from all BGP route collectors were used. Prefixes with low visibility (seen by less than 4 collectors) were filtered out to ignore prefixes used for local traffic engineering.

The RPKI status of BGP prefixes was fetched from the [RIPE FTP archive](#). The ROA data is published daily and we fetch data for one day every month.

Methodology : We consider the size of an AS as the size of the IPv4 address space (in /24-block equivalent) it originates on a particular date. Thus, depending on the size of the prefixes originated by an AS on a particular date, the size of an AS can change over time. We find the 10th quantile and 90th quantile value of the /24-equivalent size of prefixes originated by an AS for each date. For instance, the quantile values are 1 and 72 respectively for 1st September 2023.

With the quantile values, we categorize ASes into top 10% and bottom 10%. For each of these categories, we find the ROA coverage and plot them.

We also categorize ASes by the number of prefixes (not number of /24 blocks) they originate. We create 5 bins as shown in the table below. For each category, we count the number of ROAs & prefixes registered for ARIN and the total number of ROAs registered and prefixes originated.

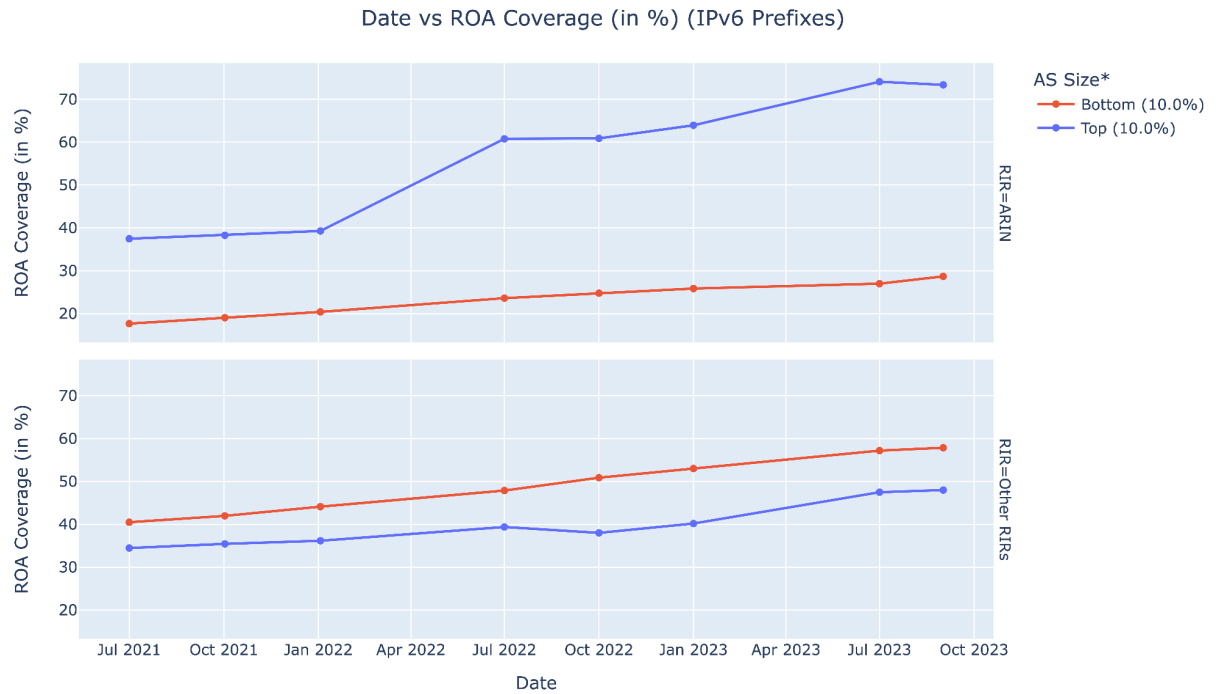
IPv4 Statistics [to be updated]

# Prefixes per AS	# ARIN prefixes covered by ROAs	# ARIN prefixes	# prefixes covered by ROAs (All RIRs)	# prefixes (All RIRs)
[1,5)	3342	23600	36609	94549
[5,10)	2203	16967	29891	76324
[10,25)	4527	31201	43545	104611
[25,50)	4076	25244	37853	86048
[50, inf)	54419	168622	289183	596675

* Data on 1st September 2023; IPv4 only

IPv4 Statistics				
RIR	AS Size	ROA Coverage in July 2021 (in %)	ROA Coverage in Sept 2023 (in %)	Percentage Change
ARIN	Bottom (10.0%)	11.2	17.56	156.78
	Top (10.0%)	17.66	29.63	167.78
Other RIRs	Bottom (10.0%)	29.57	46.18	156.17
	Top (10.0%)	37.51	54.13	144.31

IPv6 Statistics [to be updated]



IPv6 Statistics			
RIR	AS Size	ROA Cover in June 2021	ROA Cover in Sept 2023
ARIN	Bottom (10.0%)	17.64	28.67
	Top (10.0%)	37.46	73.37
Other RIRs	Bottom (10.0%)	40.49	57.87
	Top (10.0%)	34.46	47.99

# Prefixes per AS	# ARIN ROAs	# ARIN Prefixes	# Total ROAs	# Total Prefixes
[1,5)	1371	4785	17605	39196
[5,10)	636	1872	9176	16742
[10,25)	1024	2650	10886	17624
[25,50)	737	1739	6395	10737
[50, inf)	11072	17577	59803	107495

* Data on 1st September 2023; IPv6 only