

APNIC

54

rIGF2022

APSIG 2022

SGNOG 9

Overview of delegations, IPv6, RPKI status among NIRs

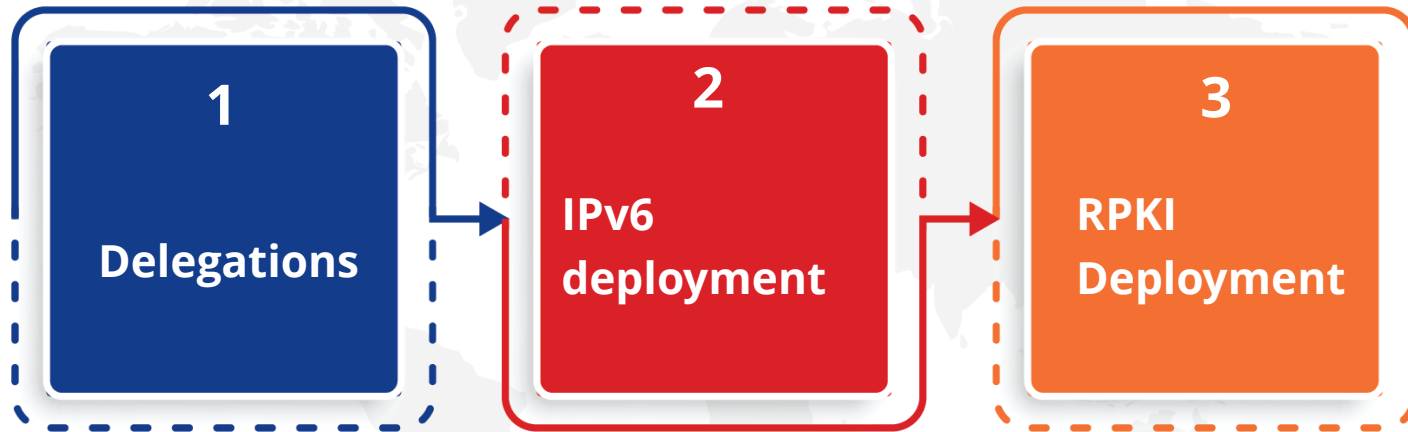
NIR SIG Forum

#apnic54

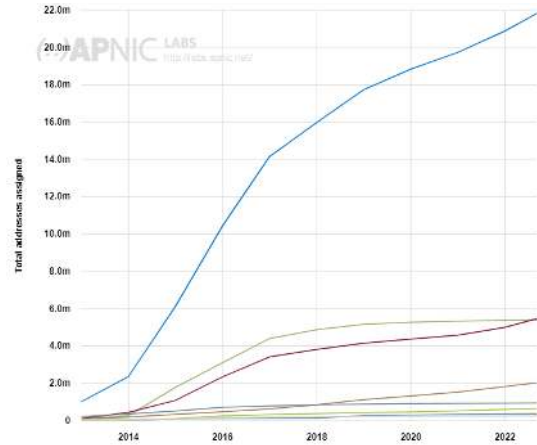


SINGAPORE
8 - 15 September 2022

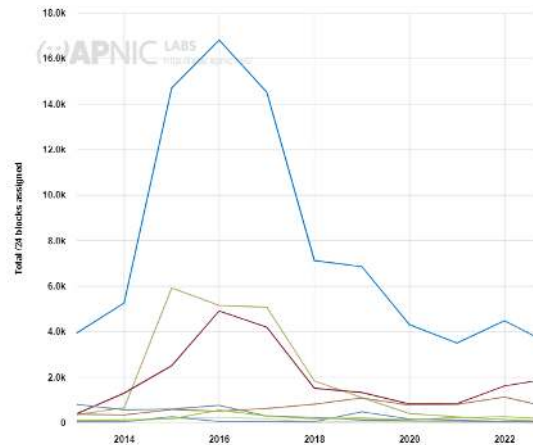
Contents



Delegations – IPv4



- China
- India
- Indonesia
- Japan
- Taiwan
- Viet Nam
- South Korea
- Asia Pacific

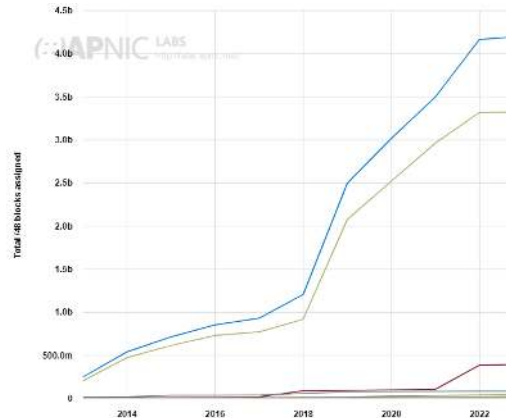


- China
- India
- Indonesia
- Japan
- South Korea
- Taiwan
- Viet Nam
- Asia Pacific

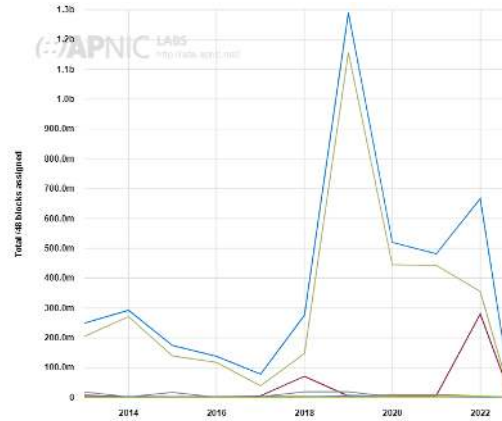
IPv4 delegations among APNIC, NIRs (Source: APNIC Lab)

APNIC and NIRs+	IPv4 addresses assigned in 2022
APNIC	960,256
China (CNNIC)	20,992
India (IRINN)	475,136
Indonesia (IDNIC)	205,568
Japan (JPNIC)	7,680
South Korea (KRNIC)	3,840
Taiwan (TWNIC)	11,264
Viet Nam (VNNIC)	49,920

Delegations – IPv6



China
India
Indonesia
Japan
Taiwan
Viet Nam
South Korea
Asia Pacific

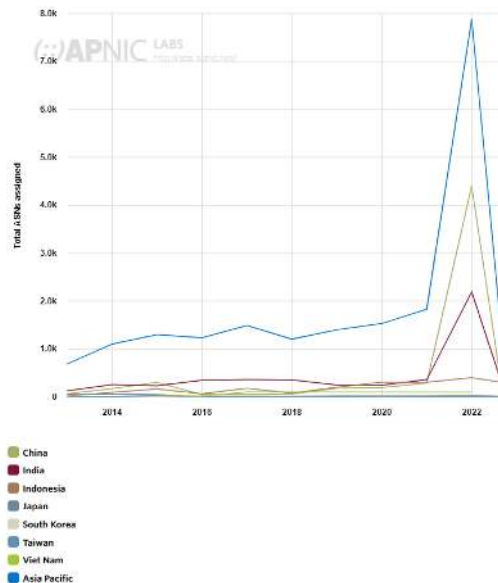
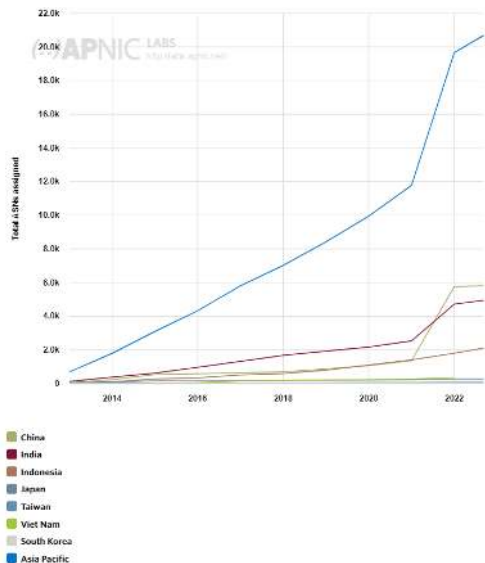


China
India
Indonesia
Japan
South Korea
Taiwan
Viet Nam
Asia Pacific

IPv6 delegations among APNIC, NIRs (Source: APNIC Lab)

APNIC and NIRs+	IPv6 delegations in 2022
APNIC	881
China (CNNIC)	46
India (IRINN)	248
Indonesia (IDNIC)	71
Japan (JPNIC)	21
South Korea (KRNIC)	4
Taiwan (TWNIC)	22
VietNam (VNNIC)	61

Delegations – ASN



APNIC and NIRs+	IPv6 delegations in 2022
APNIC	1032
China (CNNIC)	55
India (IRINN)	226
Indonesia (IDNIC)	301
Japan (JPNIC)	7
South Korea (KRNIC)	1
Taiwan (TWNIC)	4
VietNam (VNNIC)	0

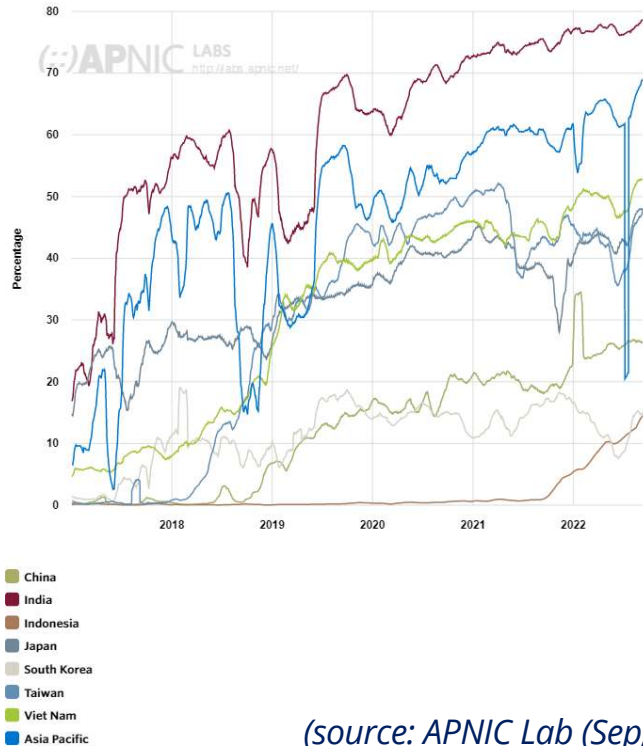
ASN delegations among APNIC, NIRs (Source: APNIC Lab)

Internet numbers Resources

APNIC and NIRs+	Total IPv4	Total IPv6 (/48)	Total ASN	Internet users	IPv4 (address) per internet user	IPv6 (/56) per internet user
China (CNNIC)	327,464,199	3,938,320,519	6,494	1,020,000,000	0.32	988.44
India (IRINN)	40,137,731	400,557,082	5,477	658,000,000	0.06	155.84
Indonesia (IDNIC)	19,355,393	48,956,514	2,781	277,700,000	0.07	45.13
Japan (JPNIC)	139,790,964	799,572,176	1,062	49,500,000	2.82	4135.16
South Korea (KRNIC)	106,522,370	343,736,334	953	50,290,000	2.12	1749.78
Taiwan (TWNIC)	29,478,665	173,408,273	392	21,720,000	1.36	2043.85
VietNam (VNNIC)	16,134,656	14,614,742	586	72,100,000	0.22	51.89

IP/AS and Internet users (source: APNIC Lab (Sep., 2022), Digital Social Report 2022)

IPv6 Deployment



APNIC and NIRs+	The use of IPv6	12/2021 - 9/2022
APNIC Region	69%	+ 9%
China (CNNIC)	27%	+ 4%
India (IRINN)	79%	+ 2%
Indonesia (IDNIC)	15%	+10%
Japan (JPNIC)	48%	+ 7%
South Korea (KRNIC)	15%	~ 0%
Taiwan (TWNIC)	48%	+ 3%
VietNam (VNNIC)	53%	+ 5%

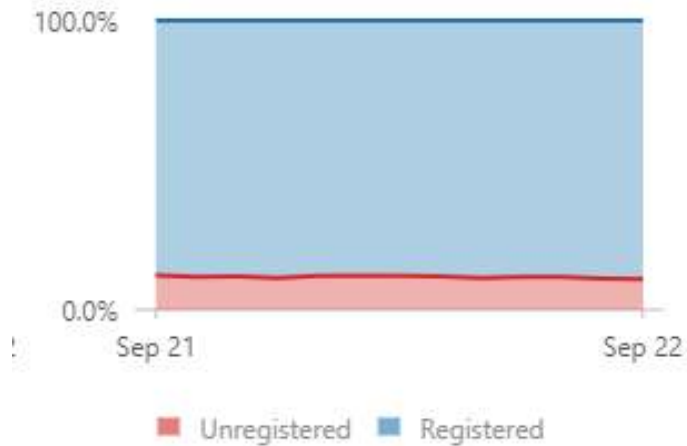
RPKI Deployment

APNIC and NIRs+	ROV	The change of ROV (12/2021 - 9/2022)	ROA	The change of ROA (12/2021 - 9/2022)
APNIC Region	8%	- 3%	47%	+ 9%
China (CNNIC)	7%	- 3%	2.5%	+ 0.5%
India (IRINN)	3%	- 3%	68%	+ 10%
Indonesia (IDNIC)	17%	+ 7%	39%	- 1%
Japan (JPNIC)	20%	From 20% - 50% - 20%	61%	+ 10%
South Korea (KRNIC)	5%	-10%	1%	+ 0.5%
Taiwan (TWNIC)	71%	+ 56%	87%	+ 1%
VietNam (VNNIC)	12%	+ 5%	62%	+ 46%

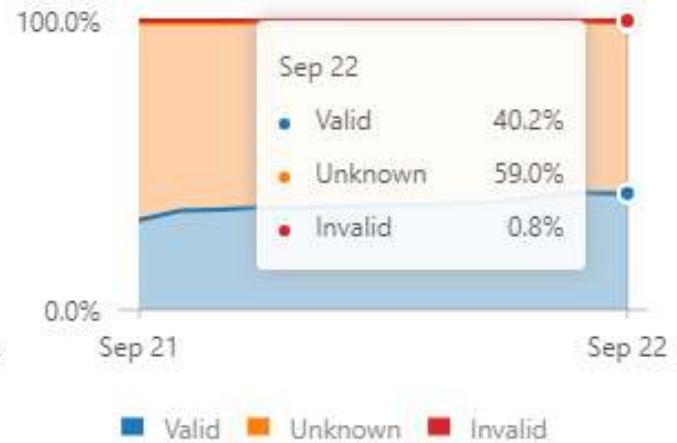
source: APNIC Lab (Sep, 2022)

Routing Databases – APNIC region

Routing completeness (IRR) i



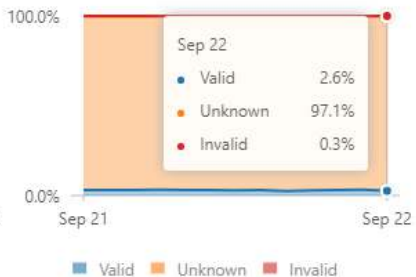
Routing completeness (RPKI) i



source: <https://observatory.manrs.org/>

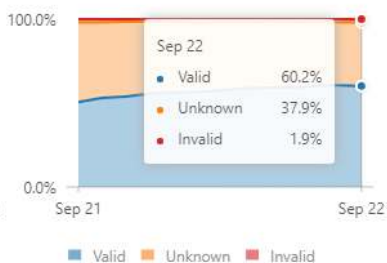
Routing Databases – NIRs' Economies

Routing completeness (RPKI) ⁱ



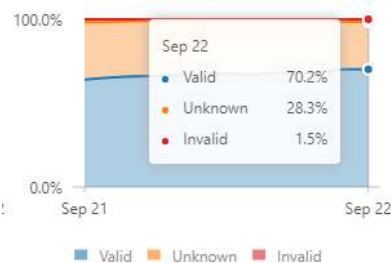
China (NIR - CNNIC)

Routing completeness (RPKI) ⁱ



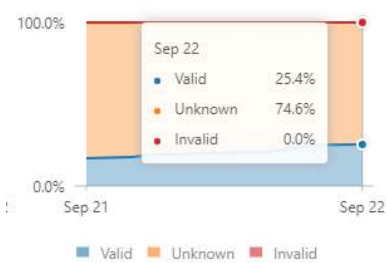
India (NIR - IRINN/NIXI)

Routing completeness (RPKI) ⁱ



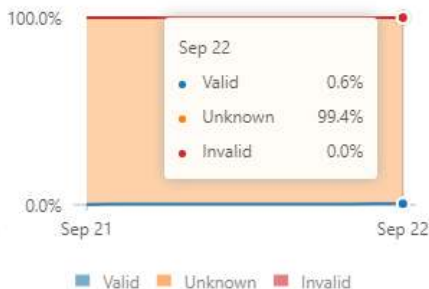
Indonesia (NIR - APJII/ IDNIC)

Routing completeness (RPKI) ⁱ



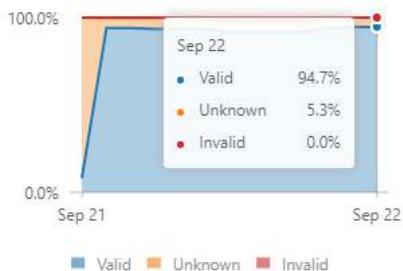
Japan (NIR - JPNIC)

Routing completeness (RPKI) ⁱ



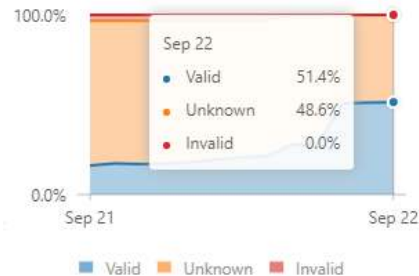
Korea (NIR - KISA/KRNIC)

Routing completeness (RPKI) ⁱ



Taiwan (NIR - TWNIC)

Routing completeness (RPKI) ⁱ



Viet Nam (NIR - VNNIC)

source: <https://observatory.manrs.org/>

APNIC

54

SINGAPORE

8 - 15 September 2022

#apnic54

APrIGF 2022

APSIG 2022

SGNOG 9