

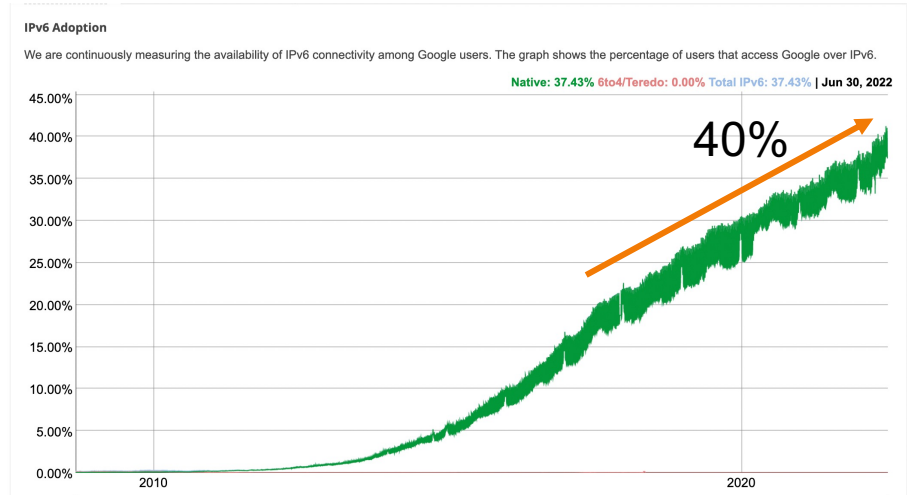
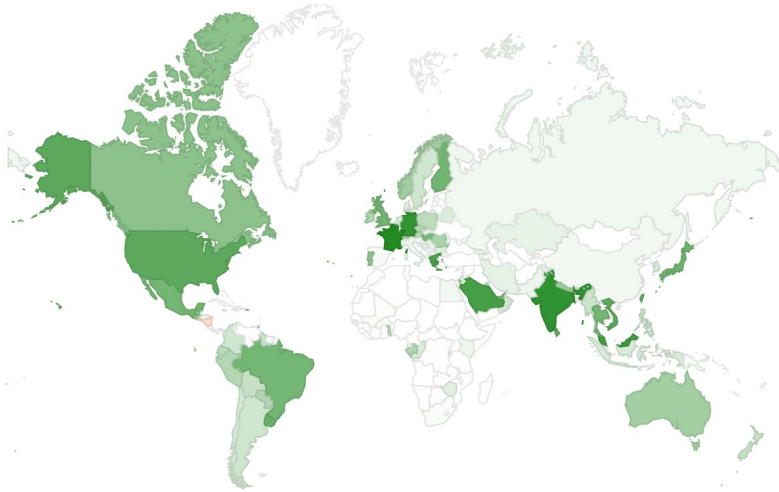
IPv6 Deployment in South Asia

SANOG38 | July 22, 2022

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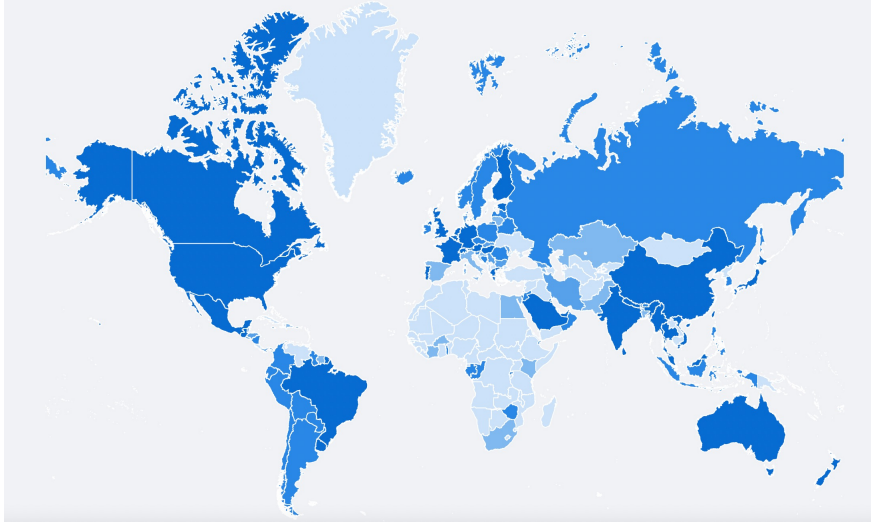
IPv6 end user Readiness; Google stats



- 30% to 40% increase during COVID times (2020 Jan – 2022 June)
- Steady linear growth since 2017

Source : www.google.com/ipv6

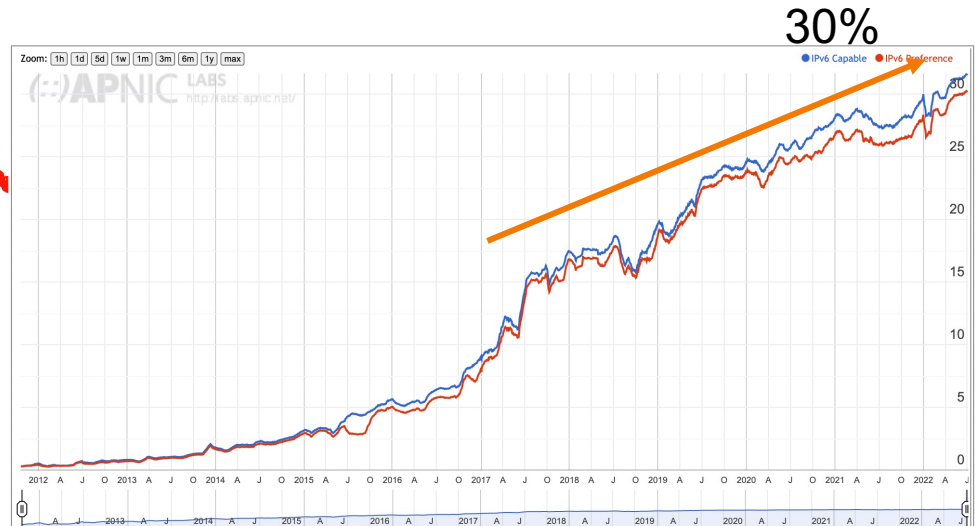
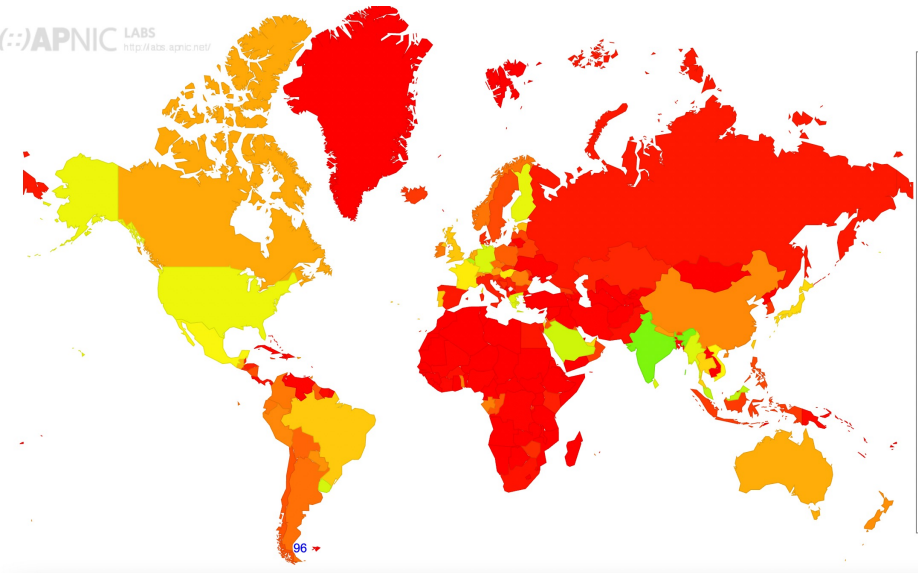
IPv6 end user Readiness; FB stats



- 25% to 35% increase during COVID times (2020 Jan – 2022 July)
- Once again, steady linear growth during last few years

Source : www.facebook.com/ipv6

IPv6 end user Readiness; APNIC stats



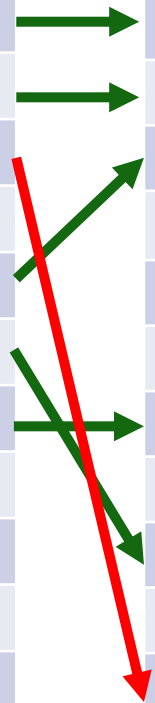
- 24% to 30% increase during 2020 Jan – 2022 June
- Still shows steady linear growth since 2017

Source : <https://stats.labs.apnic.net/ipv6>

IPv6 Table - World

2020 January

Economy	IPv6 capable (%)
India	63.79
Belgium	57.74
USA	56.74
Taiwan	45.29
Malaysia	45.07
Greece	44.17
Germany	40.96
France	38.21
Vietnam	38.14
Luxembourg	36.45
Japan	35.52
Switzerland	33.89



Economy	IPv6 Capable (%)	
India	76.19	
Belgium	66.04	
Malaysia	61.57	
Montserrat (Americas)	60.06	★
Saudi Arabia	59.65	★
Uruguay	57.18	★
Germany	55.75	
Sri Lanka	55.72	★
Greece	54.73	
Finland	52.37	★
USA	51.85	
Mexico	49.03	★

2022 July

A closer look at South Asia

Economy	IPv6 capable (%)
India	76.19
Sri Lanka	55.72
Nepal	30.01
Bhutan	11.54
Pakistan	3.30
Bangladesh	2.28
Maldives	0.06
Afghanistan	0.02

India

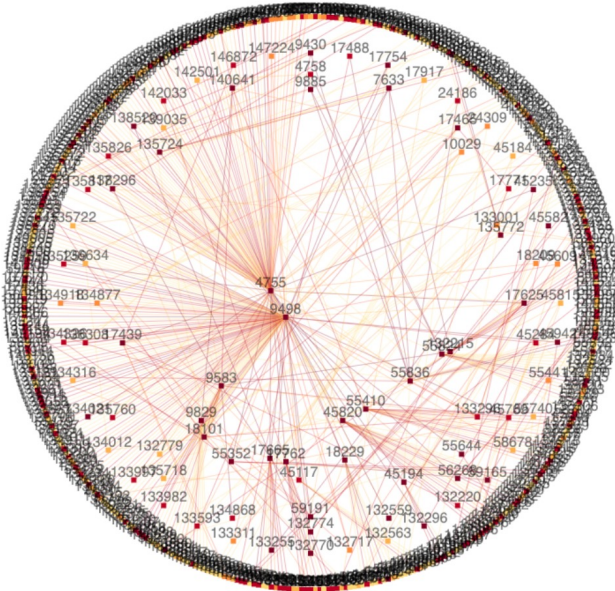
ASN	AS Name	IPv6 Capable	IPv6 Preferred	Samples
AS55836	RELIANCEJIO-IN Reliance Jio Infocomm Limited	97.51%	96.09%	45,586,812
AS45609	BHARTI-MOBILITY-AS-AP Bharti Airtel Ltd. AS for GPRS Service	81.99%	80.59%	23,447,809
AS38266	VODAFONE-IN Vodafone India Ltd.	80.62%	79.03%	5,989,652
AS45271	ICLNET-AS-AP Idea Cellular Limited	78.89%	77.66%	3,766,575
AS24560	AIRTELBROADBAND-AS-AP Bharti Airtel Ltd.	36.81%	36.05%	2,706,453
AS9829	BSNL-NIB National Internet Backbone	0.38%	0.31%	2,286,836
AS24309	CABLELITE-AS-AP Atria Convergence Technologies Pvt. Ltd. Broadband Internet Service Provider INDIA	7.17%	6.87%	591,113
AS133982	EXCITEL-AS-IN Excitel Broadband Private Limited	0.17%	0.07%	550,872
AS17488	HATHWAY-NET-AP Hathway IP Over Cable Internet	0.23%	0.09%	535,300
AS45916	GTPL-AS-AP Gujarat Telelink Pvt Ltd	0.27%	0.09%	516,120

Source : <https://stats.labs.apnic.net/ipv6>

India (network inter-connections)

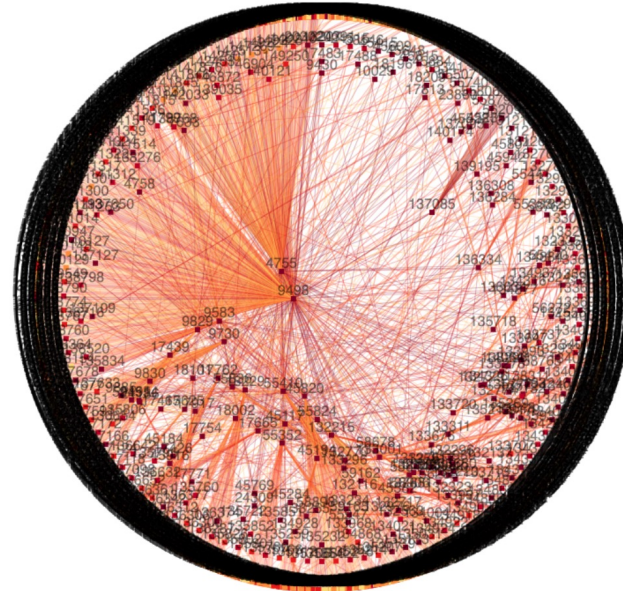
536 interconnections among
498 Autonomous Systems

🔍 Search ASN here



2750 interconnections among
2458 Autonomous Systems

🔍 Search ASN here



Source : <https://rex.apnic.net/vizas/>

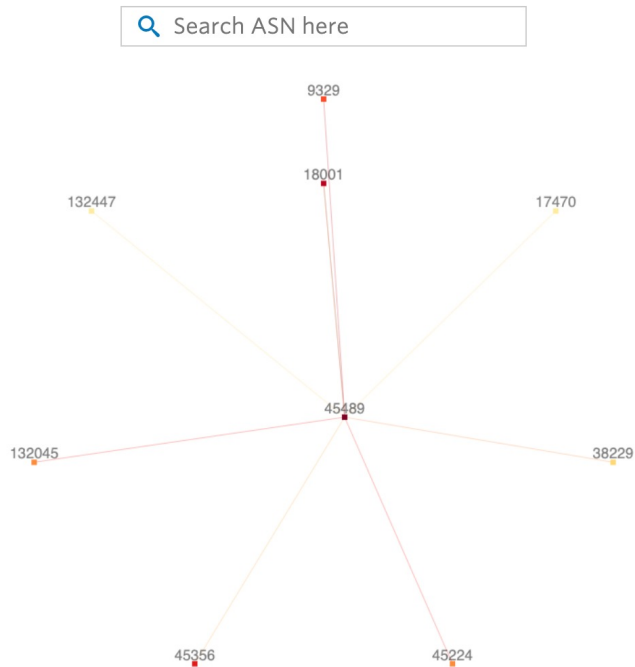
Sri Lanka

ASN	AS Name	IPv6 Capable	IPv6 Preferred	Samples
AS18001	DIALOG-AS Dialog Axiata PLC.	74.33%	73.85%	1,724,500
AS45356	MOBITEL-LK Mobitel Pvt Ltd	53.93%	53.55%	570,288
AS9329	SLTINT-AS-AP Sri Lanka Telecom Internet	46.17%	45.71%	569,458
AS132045	AIRTEL-AS-ISP Bharti Airtel Lanka Pvt. Limited	0.03%	0.03%	197,960
AS17470	HUTCHISON-LK Hutchison Telecommunications Lanka Private Limited	0.04%	0.03%	120,707
AS132447	HUTCHISON-LK 234	0.04%	0.04%	108,190
AS45224	BELLNET-AS-AP Lanka Bell Limited	0.29%	0.24%	18,609
AS38229	LEARN-LK Lanka Education & Research Network	15.76%	10.85%	10,441
AS5087	LANKA-COM Lanka Communication Services	0.94%	0.62%	4,485
AS132124	ICTA-LK Information and Communication Technology Agency of Sri Lanka	0.17%	0.14%	2,886

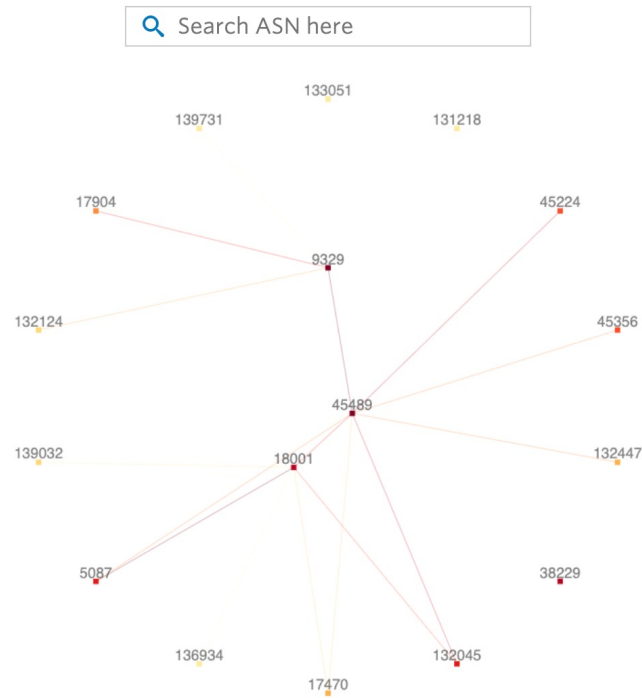
Source : <https://stats.labs.apnic.net/ipv6>

Sri Lanka

9 interconnections among
9 Autonomous Systems



16 interconnections among
17 Autonomous Systems



Source : <https://rex.apnic.net/vizas/>

Nepal

ASN	AS Name	IPv6 Capable	IPv6 Preferred	Samples
AS17501	WLINK-NEPAL-AS-AP WorldLink Communications Pvt Ltd	72.87%	71.17%	904,899
AS23752	NPTELECOM-NP-AS Nepal Telecommunications Corporation	0.26%	0.23%	314,996
AS45650	VIANET-NP Vianet Communications Pvt. Ltd.	6.60%	6.34%	245,827
AS4007	SUBISU-CABLENET-AS-AP Subisu Cablenet Pvt Ltd	11.31%	11.15%	219,916
AS38565	NCELL-AS-NP Ncell Pvt. Ltd.	0.07%	0.06%	165,074
AS139922	SMNPL-AS-AP Simple Media Network Private Limited	0.03%	0.03%	129,963
AS24550	WEBSURFERNP-AS-NP Websurfer Nepal Internet Service Provider	6.82%	6.75%	101,929
AS55915	CLASSIC-NP Classic Tech Pvt. Ltd.	62.69%	62.02%	97,817
AS58504	TECHMINDS-NP TECHMINDS NETWORKS PVT. LTD.	0.05%	0.04%	89,747
AS141767	CG-COMMUNICATION-AS-AP C G Communications Pvt. Ltd	0.03%	0.03%	45,740

Source : <https://stats.labs.apnic.net/ipv6>

Bhutan

ASN	AS Name	IPv6 Capable	IPv6 Preferred	Samples
AS18024	BTTELECOM-AS-AP Bhutan Telecom Ltd	12.64%	12.49%	59,855
AS137412	TASHICELL-MOBILE-AS Tashicell Domestic AS Thimphu Bhutan	7.60%	7.51%	12,625
AS23955	TASHICELL-DOMESTIC-AS Tashi InfoComm Limited	6.25%	6.17%	10,402
AS134715	DRUKREN-MOIC-AS Ministry of Information & Communications Thimphu	26.74%	26.59%	3,799
AS138529	DATANET-AS-AP DATANET WIFI	0.24%	0.00%	836
AS136039	NANO-AS-AP NANO	0.40%	0.40%	498
AS141680	SUPERNET1-AS-AP SuperNet Infocomm	0.27%	0.27%	368
AS38004	FASTLINK-ISP FastLink Wireless ISP	0.43%	0.00%	233
AS206092	SECFIREWALLAS	0.00%	0.00%	62
AS9009	M247	0.00%	0.00%	49

Source : <https://stats.labs.apnic.net/ipv6>

Bangladesh

ASN	AS Name	IPv6 Capable	IPv6 Preferred	Samples
AS24389	GRAMEENPHONE-AS-AP GrameenPhone Ltd.	9.12%	8.95%	4,537,626
AS24432	AXIATA-ROBI-AS-AP TM International Bangladesh Ltd.Internet service Provider	0.24%	0.24%	3,609,539
AS45245	BANGLALINK-AS Banglalink Digital Communications Ltd	0.40%	0.40%	1,898,179
AS63526	SSDTL-BD Systems Solutions & development Technologies Limited	0.09%	0.09%	369,244
AS23688	LINK3-TECH-AS-BD-AP Link3 Technologies Ltd.	1.39%	1.37%	363,558
AS58689	ICCNET-DHK-BD ICC Communication	0.07%	0.07%	258,462
AS58715	EARTHTELECOMMUNICATION-AS EARTH TELECOMMUNICATION Pvt LTD.	0.06%	0.06%	256,294
AS45925	TELETALK-BD ASN For Teletalk Bangladesh Ltd.	0.06%	0.06%	222,041
AS23956	AMBERIT-BD-AS AmberIT Limited	1.03%	1.01%	160,663
AS137449	SKYNETCHOWMUHANI-AS-AP SKYNET CHOWMUHANI	0.03%	0.03%	158,574

Source : <https://stats.labs.apnic.net/ipv6>

Pakistan

ASN	AS Name	IPv6 Capable	IPv6 Preferred	Samples
AS17557	PKTELECOM-AS-PK Pakistan Telecommunication Company Limited	0.02%	0.02%	3,611,787
AS59257	CMPAKLIMITED-AS-AP CMPak Limited	0.02%	0.02%	3,266,235
AS45669	MOBILINK-AS-PK PMCL LDI IP TRANSIT	0.02%	0.01%	2,379,932
AS9541	CYBERNET-AP Cyber Internet Services Pvt Ltd.	34.13%	33.91%	1,534,944
AS24499	TPP-AS-PK Telenor Pakistan	0.01%	0.01%	1,422,945
AS132165	CONNECT-AS-AP Connect Communications	1.03%	1.00%	801,257
AS56167	PTML-PK Plot No 181-186 Street	0.02%	0.02%	709,861
AS23674	NAYATEL-PK Nayatel Pvt Ltd	0.03%	0.03%	460,043
AS136969	KKNETWROK-AS-AP KK Networks Pvt Ltd.	0.01%	0.01%	294,733
AS58895	EBONE1-PK Ebone Network PVT. Limited	0.02%	0.02%	281,015

<https://stats.labs.apnic.net/ipv6>

Afghanistan

ASN	AS Name	IPv6 Capable	IPv6 Preferred	Samples
AS131284	ETISALATAFG-AS-AP Etisalat Afghan	0.02%	0.02%	63,413
AS132471	MTNAFGHANISTAN-AS-AP MTNAFGHANISTAN	0.03%	0.03%	46,064
AS55330	GCN-DCN-AS AFGHANTELECOM GOVERNMENT COMMUNICATION NETWORK	0.02%	0.02%	38,564
AS45178	ROSHAN-AF Main Street	0.02%	0.02%	30,381
AS38742	AWCC-AS-AP AWCC	0.02%	0.02%	25,851
AS135376	RAHANET-ISP-AS-AP Rahanet Internet Service Provider	0.01%	0.01%	7,366
AS55424	INSTATELECOM-AS-AP Instatelecom Limited	0.01%	0.01%	6,714
AS138322	AWCC-AS-AP Afghan Wireless	0.09%	0.09%	3,514
AS134134	NORTHTELECOM-AF North Telecom	0.00%	0.00%	3,496
AS133076	UAT-AF Unique Atlantic Telecommunication	0.05%	0.05%	1,961

Source : <https://stats.labs.apnic.net/ipv6>

Maldives

ASN	AS Name	IPv6 Capable	IPv6 Preferred	Samples
AS7642	DHIRAAGU-MV-AP DHIVEHI RAAJJEYGE GULHUN PLC	0.02%	0.02%	138,263
AS55944	OOREDOO-MV Ooredoo Maldives Plc	0.02%	0.02%	88,811
AS136238	SATLINKPVT LTD-AS-AP SatLink Pvt Ltd	0.03%	0.03%	6,233
AS24016	RAAJJEONLINE-AS Focus Infocom Private Limited	0.00%	0.00%	3,893
AS137477	VILLA-STC-AS-AP Villa Shipping and Trading Company Pvt. Ltd.	0.00%	0.00%	964
AS22363	PHMGMT-AS1	1.19%	0.79%	252
AS63930	READYSERVER-SG READY SERVER PTE LTD	0.00%	0.00%	218
AS139082	SEPCL-AS-AP Singha Estate Public Company Limited	0.00%	0.00%	141
AS137056	TREETOP-AS-AP Tree Top Health Pvt. Ltd.	0.00%	0.00%	108
AS13335	CLOUDFLARENET	100.00%	96.36%	55

Source : <https://stats.labs.apnic.net/ipv6>

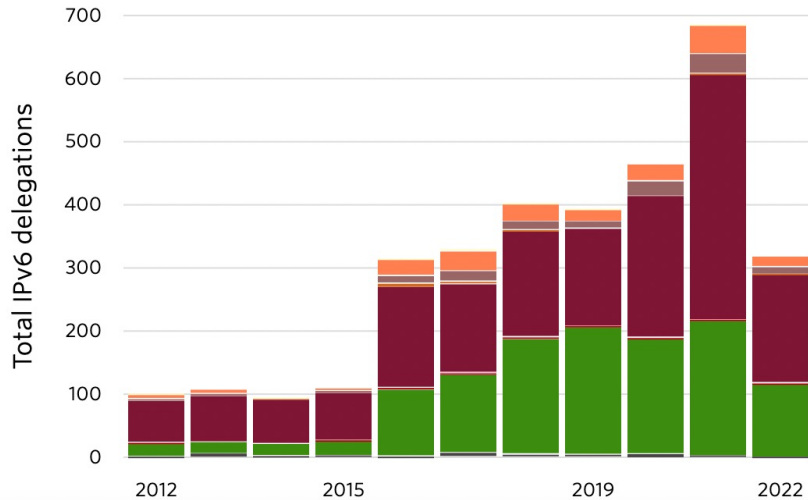
Demand for IPv6

IPv6 for Southern Asia



/48 prefixes /32 prefixes **Delegations**
454,100,648 6,929 **3,322**

Cumulative

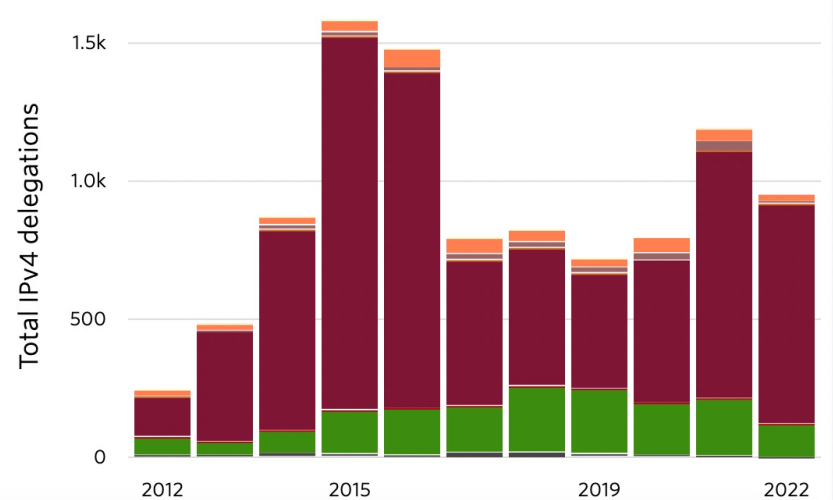


IPv4 for Southern Asia



IP addresses /24 prefixes **Delegations**
7,130,624 27,854 **9,955**

Cumulative



Have you started your IPv6 journey?



- Automatic eligibility to get IPv6, if you are eligible to get IPv4
- If you already have IPv4, you can get IPv6 in 5 minutes
- No extra cost, only IPv4 or IPv6 (whichever is higher) incurs cost

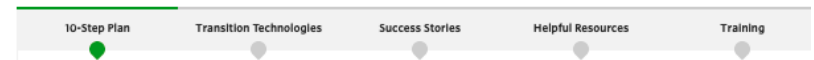
IPv6 @ APNIC

- Track, measure, report
 - End-user readiness,
 - Performance analysis
- Operational trainings
 - Direct country assistance (Gov)
 - Standalone workshops
 - NOGs
- Technical Assistance
 - Remote or F2F

Deploy IPv6



Deploying IPv6 can be a challenge but many organizations around the world have made the transition successfully. Here's some of the elements you'll need to consider for your organization's deployment of IPv6.



www.apnic.net/ipv6

IPv6 funding

isif  **asia**



2021 Funding Opportunities

IPv6 Deployment Grants

For small and mid-size network operators in developing economies
or large operators in underserved or remote areas.

USD 800k in total

Available for funding requests from USD 30k - 250k



Find out more: **www.isif.asia**

THANK YOU !