APNIC Update

SANOG 27, Kathmandu

Vivek Nigam vivek@apnic.net

Tuan Nguyen tuan@apnic.net

Issue Date: 25/01/2016

Revision: 1

APNIC

Agenda

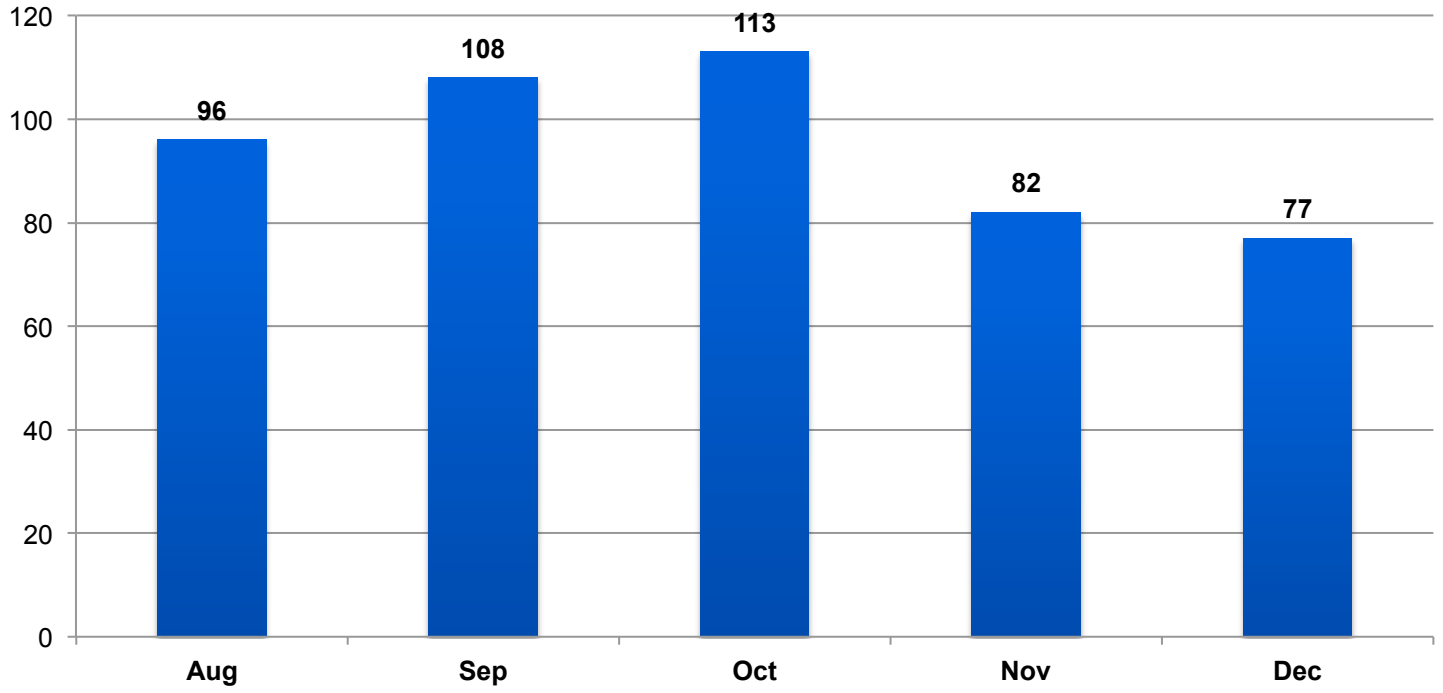
- Whois data quality improvement
- New APNIC Statistics tool

Why is the quality of whois data important?

- Supports the operation of the Internet
- Network troubleshooting and abuse
- Fulfills the goals of addressing policy

Do we need to improve whois data quality?

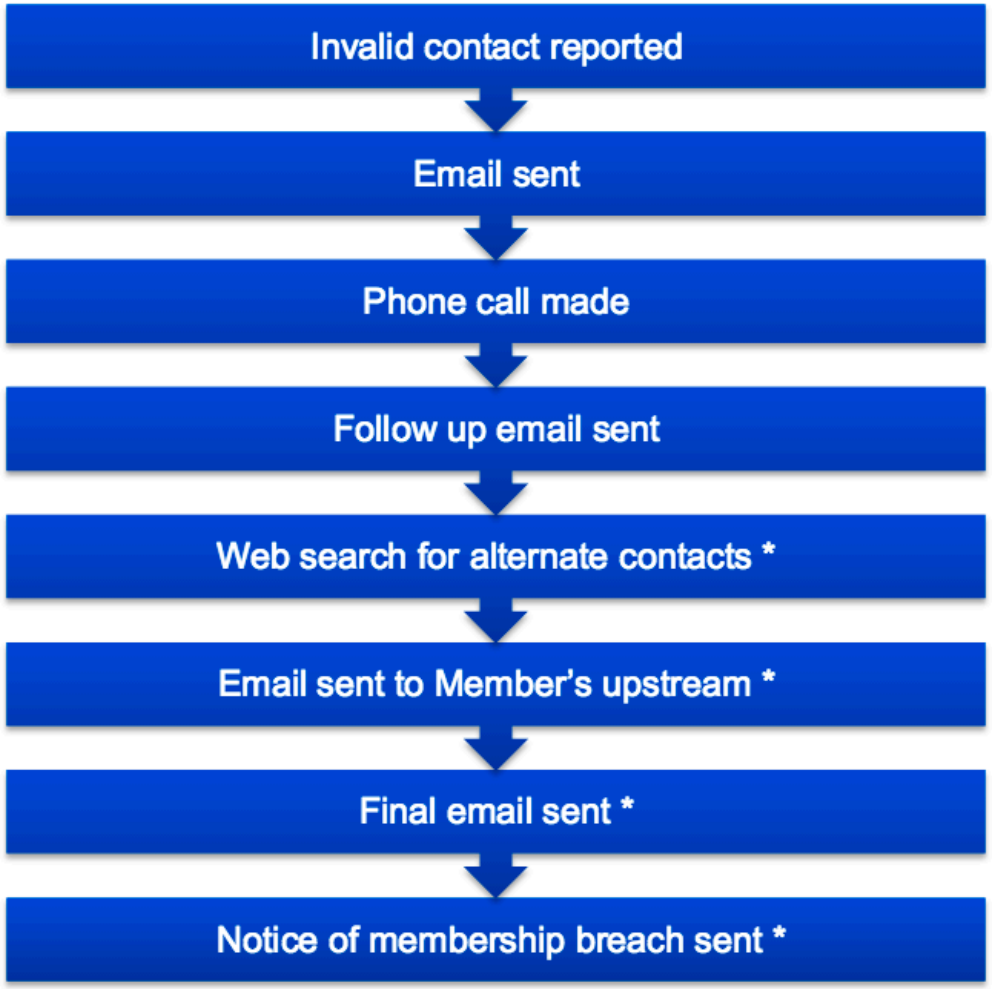
Invalid whois contacts reported



Processing invalid contact reports

- Email sent to technical contacts of Member account
- Email sent to all contacts of Member account
- Phone call made to Member organization
- Log details of invalid contacts that do not get updated

Case study


Invalid contact reported
Email sent
Phone call made
Follow up email sent
Web search for alternate contacts *
Email sent to Member's upstream *
Final email sent *
Notice of membership breach sent *

What are we doing about it?

Easier invalid contact reporting

Simplified process to report invalid contact

```
person:          Vivek Nigam
nic-hdl:         VN61-AP
e-mail:          vivek@apnic.net
address:         6 Cordelia Street
address:         South Brisbane 4101
phone:           +61 7 3858 3180
fax-no:          +61 7 3858 3180
country:         AU
changed:         zen@apnic.net 20130910
changed:         hm-changed@apnic.net 20130916
mnt-by:          MAINT-AU-VIVEK
changed:         hm-changed@apnic.net 20150211
changed:         hm-changed@apnic.net 20150225
source:          APNIC
```

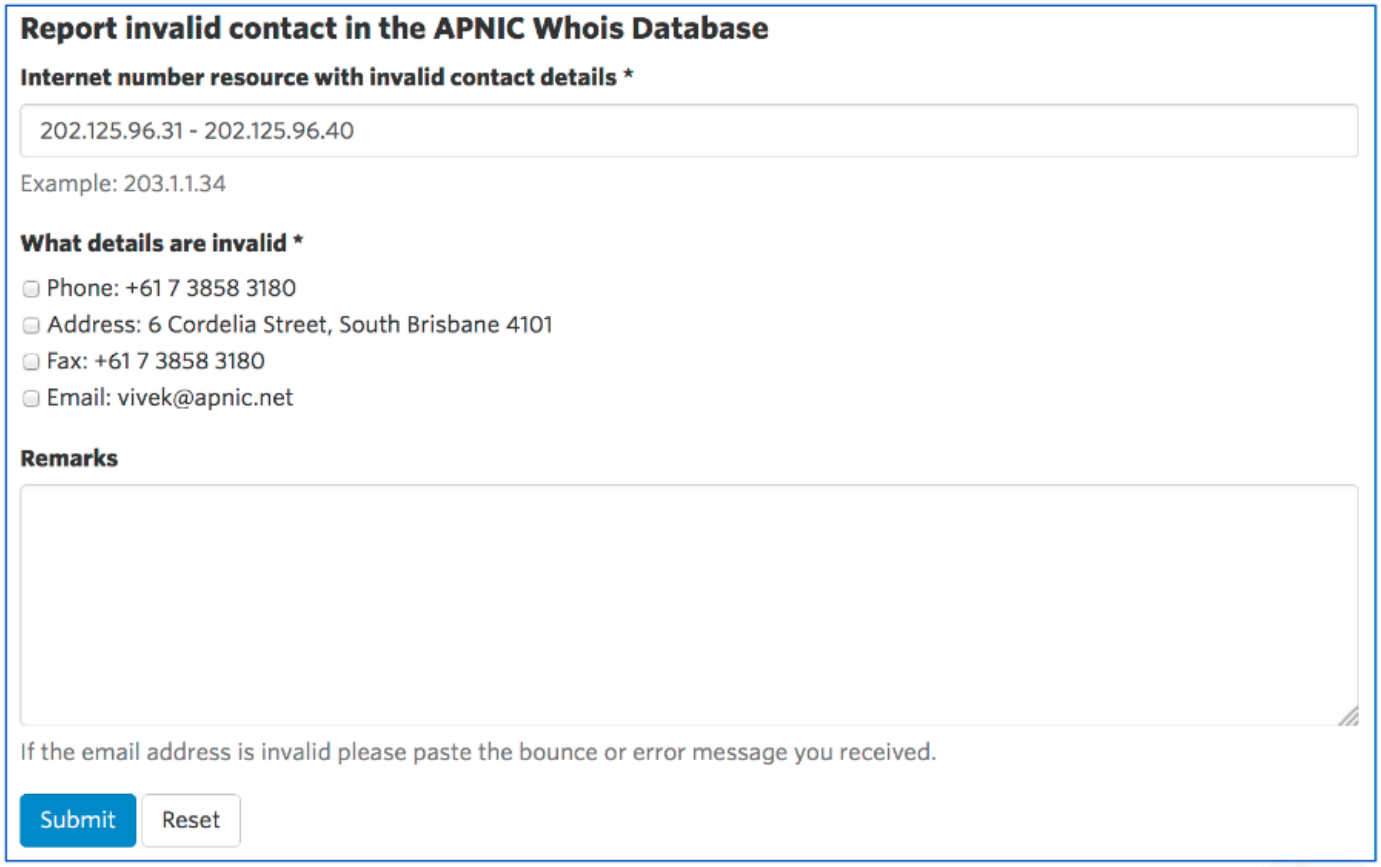
Report invalid contact

```
irt:             IRT-MYAPNIC-TEST-AP
address:         6 Cordelia Street test
address:         South Brisbane
address:         QLD 4101
e-mail:          vivek@apnic.net
abuse-mailbox:   helpdesk@apnic.net
admin-c:         VN61-AP
tech-c:          VN61-AP
auth:            # Filtered
mnt-by:          MAINT-AU-VIVEK
changed:         helpdesk@apnic.net 20101108
changed:         hm-changed@apnic.net 20110624
changed:         hm-changed@apnic.net 20150225
source:          APNIC
```

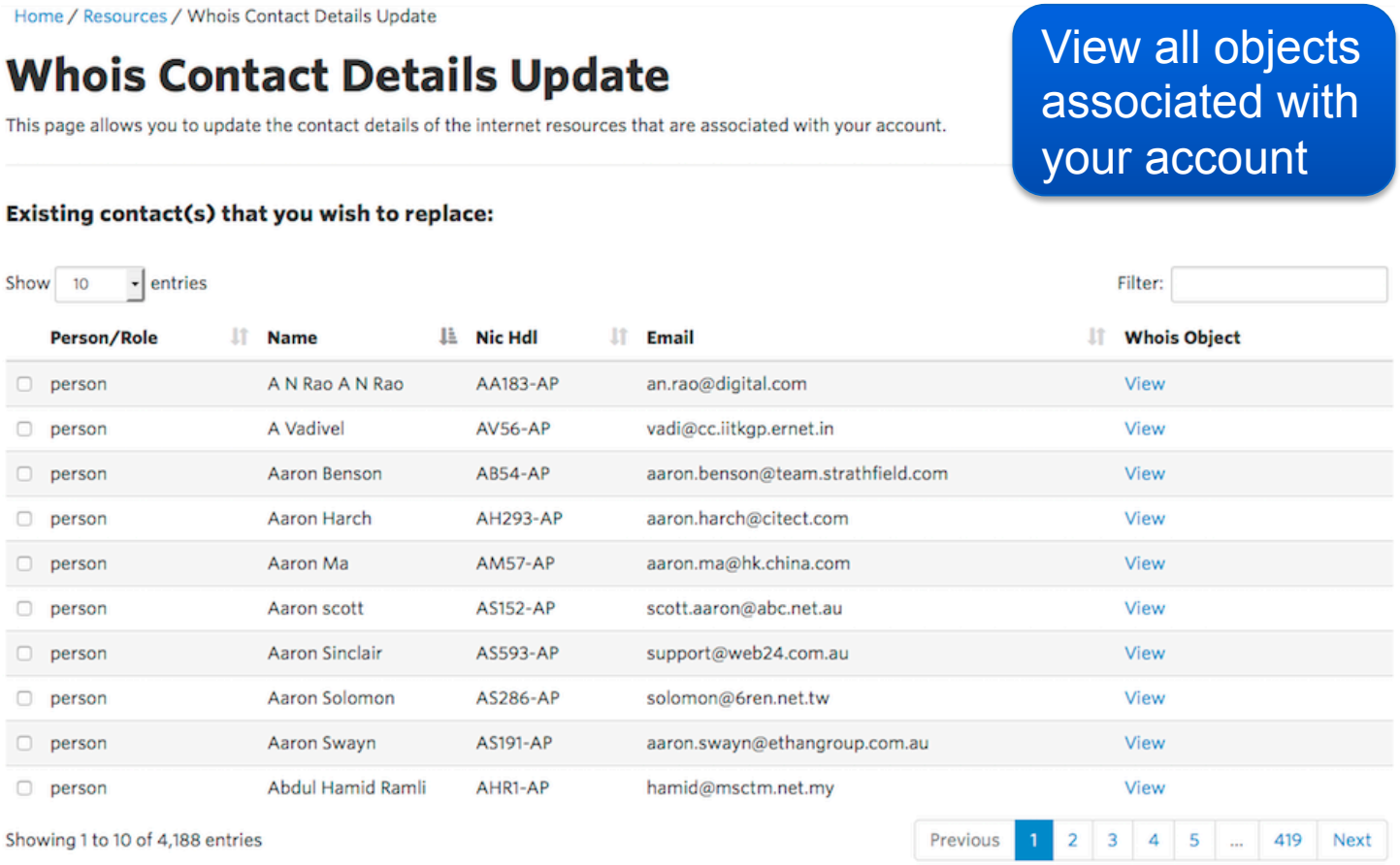
Report invalid contact

Easier invalid contact reporting

Eliminates incorrect reporting

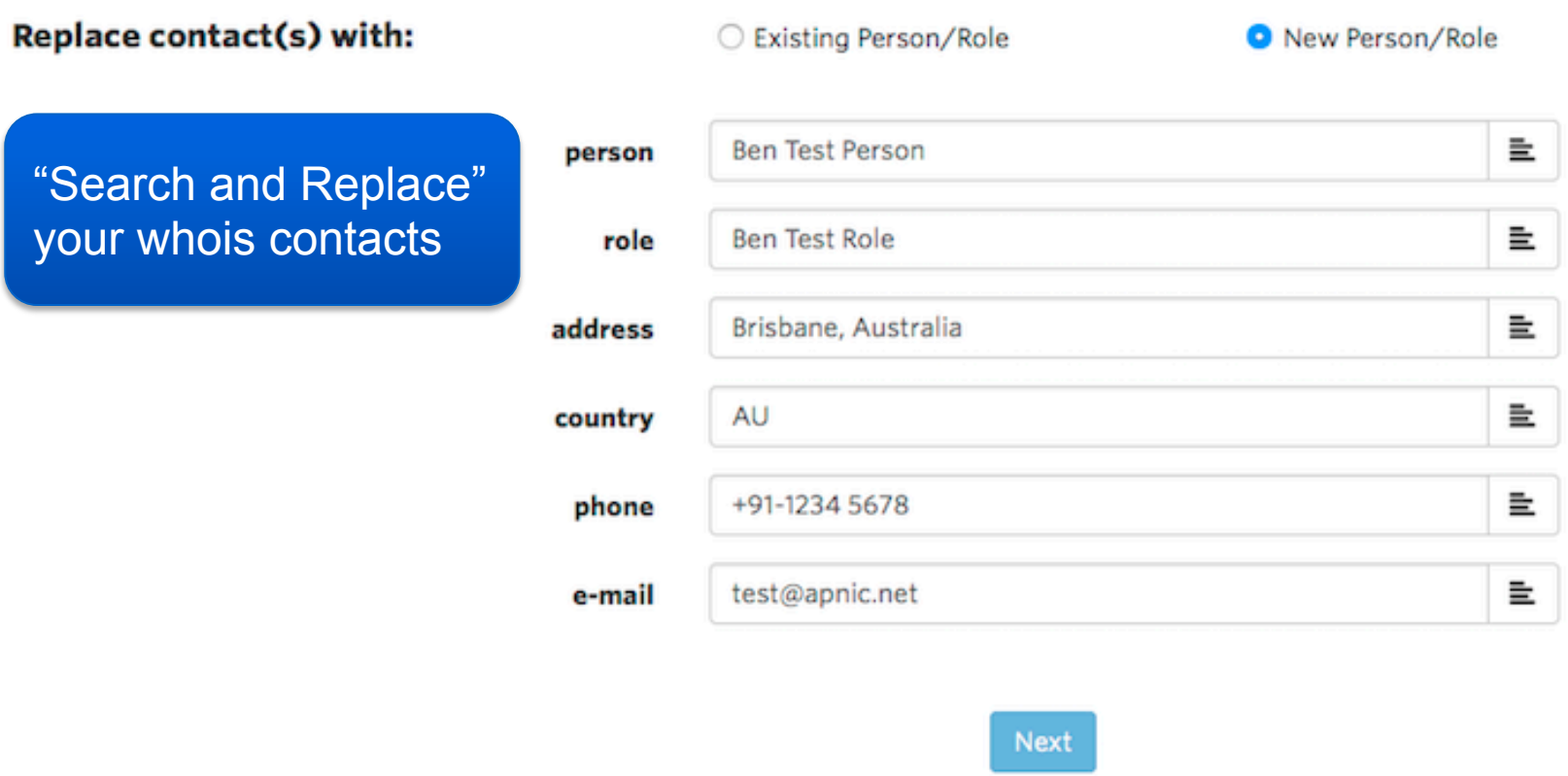


Simplified whois updates



View all objects associated with your account

Simplified whois updates



Unused whois objects clean-up

- Deletion of unreferenced person and role objects that are over 12 months old
- Script runs on the 15th of each month to delete unreferenced objects
- Deleted objects are backed up

IRT Object Campaign

- Incident Response Team
  - Improve network abuse contact information in whois
- Policy implemented 8 Nov 2010
  - Mandatory reference for inetnum, inet6num, and aut-num
- Multiple campaigns to promote adoption of this policy
  - Reminders to create IRT
  - Assist Members to create IRT
  - Get Members to verify IRT
  - Updated remarks attribute for all parent IP blocks

What's next?

- A simple and clear whois guide is on its way
- Review whois database training material
- Historical whois development (whowas)
- Upgrade whois database to version 4

What can you do to help?

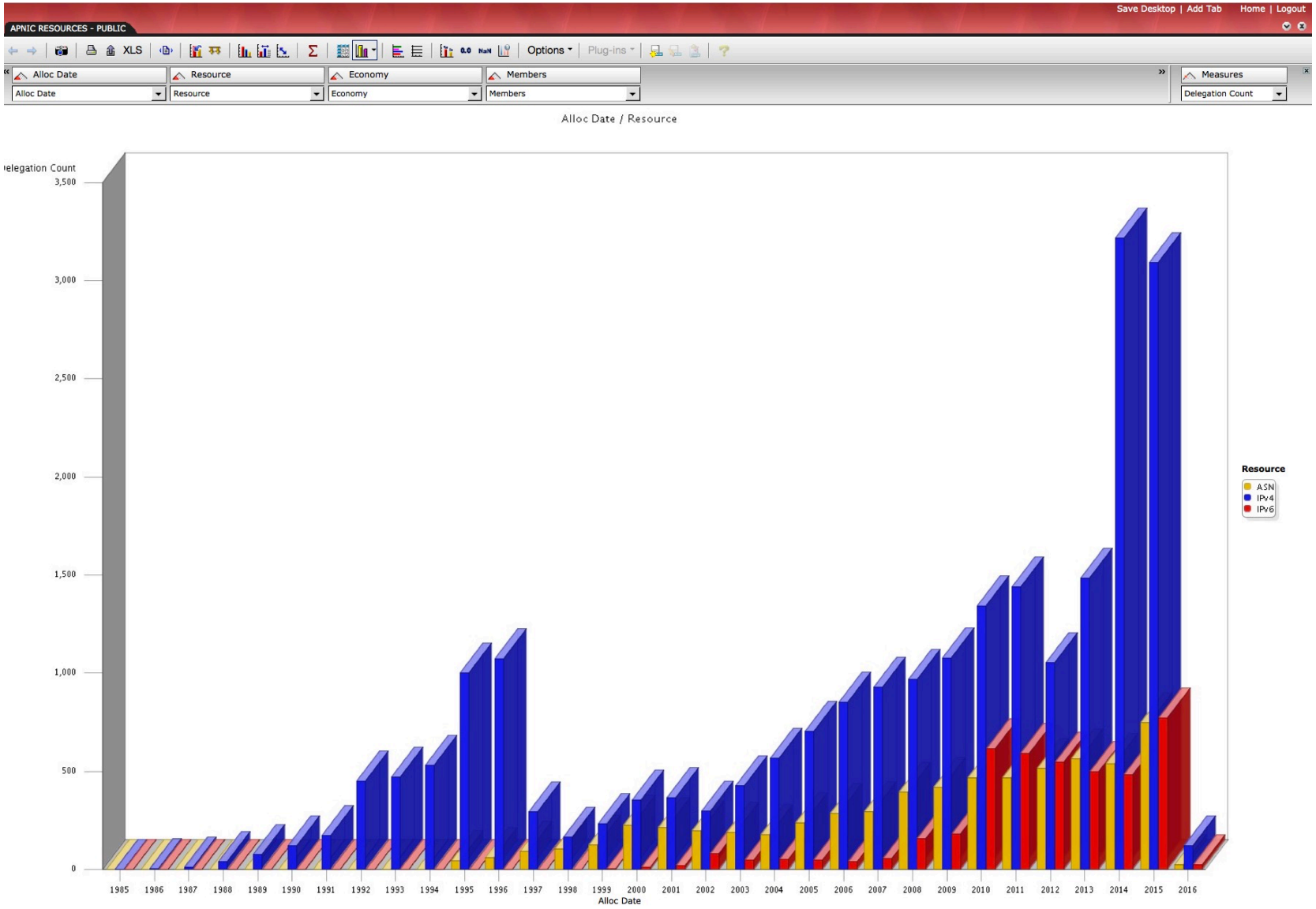
- Report any invalid whois contacts to APNIC
- Update your resource usage in the whois database
- Keep your whois contacts up to date
- Maintain your APNIC account contacts

New APNIC Statistics tool

APNIC

O3

APNIC


Save Desktop | Add Tab Home | Logout
APNIC RESOURCES - PUBLIC
XLS
Options
Plug-ins
Alloc Date
Resource
Economy
Members
Measures
Delegation Count
Alloc Date / Resource
Delegation Count
3,500
3,000
2,500
2,000
1,500
1,000
500
0
1985 1986 1987 1988 1989 1990 1991 1992 1993 1994 1995 1996 1997 1998 1999 2000 2001 2002 2003 2004 2005 2006 2007 2008 2009 2010 2011 2012 2013 2014 2015 2016
Alloc Date
Resource
ASN
IPv4
IPv6

New Statistics

APNIC

```
apnic|IN|ipv4|202.61.102.0|256|20101011|assigned
apnic|HK|ipv4|202.61.103.0|256|20101011|assigned
apnic|ID|ipv4|202.61.104.0|512|20101012|assig
apnic|PH|ipv4|202.61.108.0|256|20101013|assig
apnic|AU|ipv4|202.61.109.0|256|20101015|assig
apnic|SG|ipv4|202.61.110.0|256|20101018|assigned
apnic|IN|ipv4|202.61.111.0|256|20101019|assigned
apnic|NZ|ipv4|202.61.114.0|512|20101021|assigned
apnic|AU|ipv4|202.61.116.0|256|20101021|assigned
apnic|IN|ipv4|202.61.117.0|256|20101022|assigned
apnic|PH|ipv4|202.61.118.0|256|20101026|assigned
apnic|AU|ipv4|202.61.119.0|256|20101027|assigned
apnic|IN|ipv4|202.61.120.0|512|20160108|allocated
apnic|AU|ipv4|202.61.122.0|256|20101028|assigned
apnic|ID|ipv4|202.61.124.0|512|20101028|assigned
apnic|ID|ipv4|202.61.126.0|256|20101101|assigned
apnic|AU|ipv4|202.61.128.0|32768|20030707|allocated
apnic|FJ|ipv4|202.62.0.0|2048|19940604|allocated
apnic|ID|ipv4|202.62.8.0|1024|20041025|allocated
apnic|ID|ipv4|202.62.12.0|1024|20041025|allocated
apnic|ID|ipv4|202.62.16.0|4096|20040714|allocated
apnic|AU|ipv4|202.62.32.0|8192|20000309|allocated
```

ftp stats

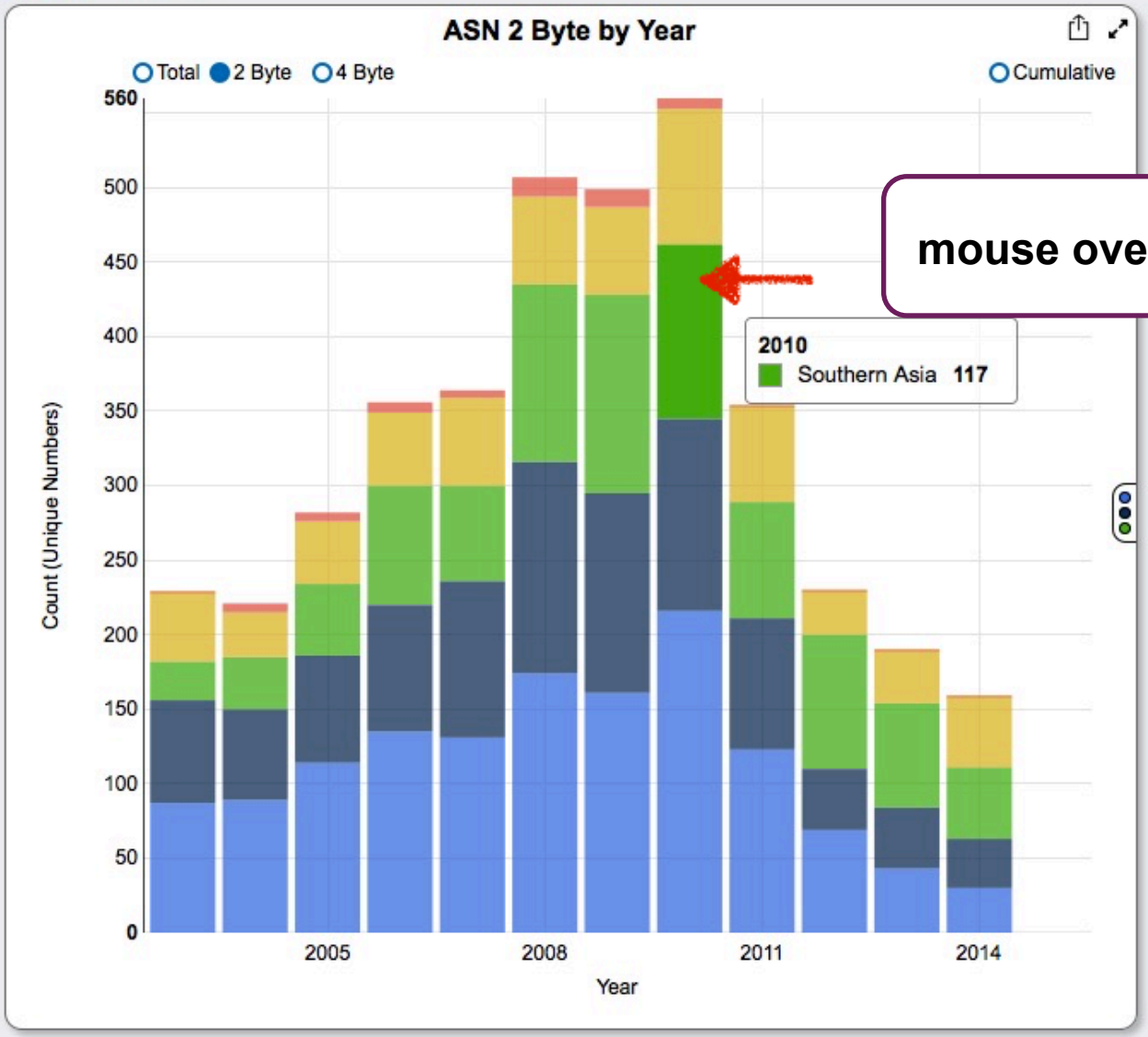
https://ftp.apnic.net/stats/apnic/

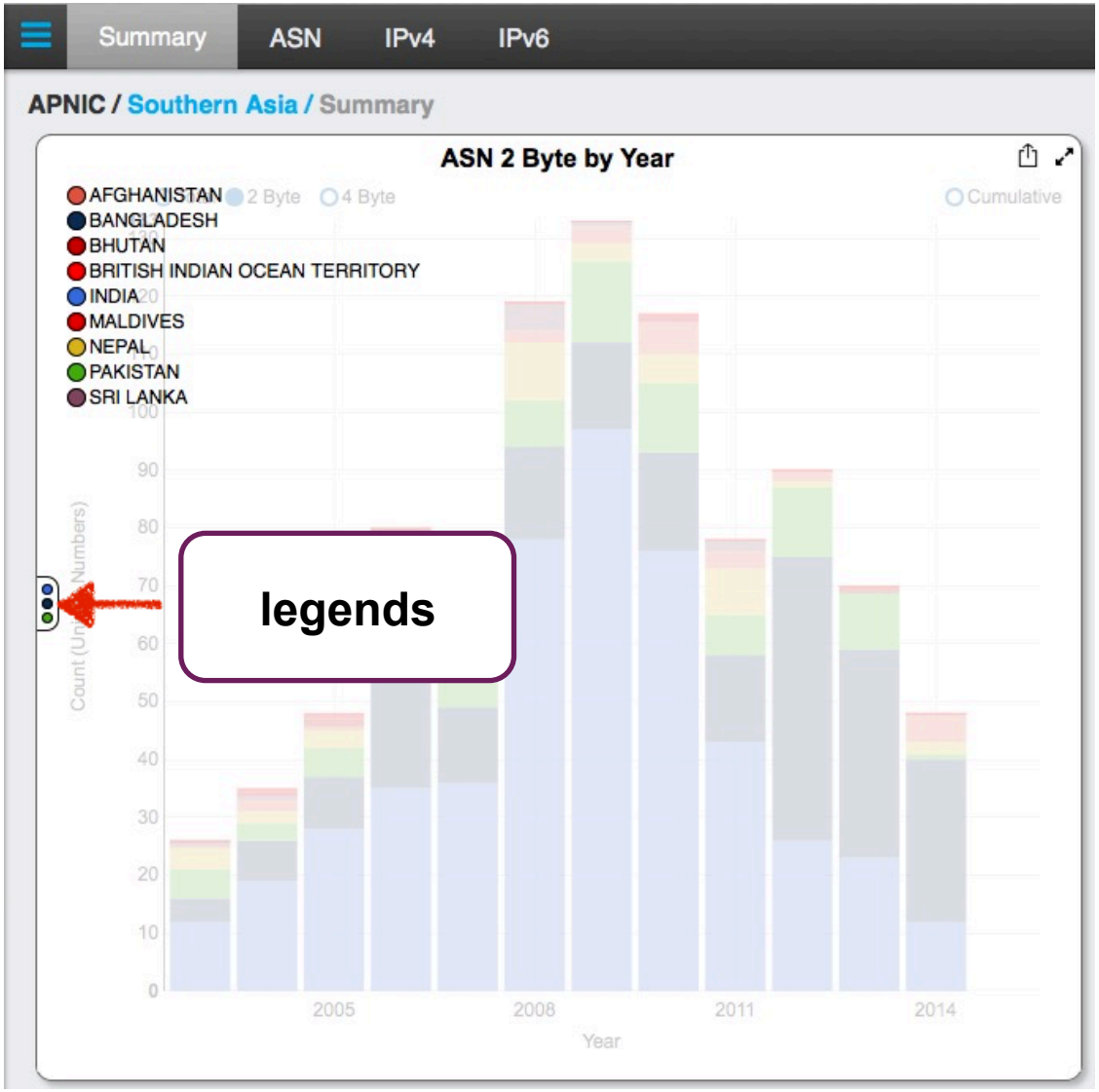
Demo

APNIC

APNIC
Summary
ASN
IPv4
IPv6
Filter Regions
APNIC
Eastern Asia
Oceania
South-Eastern Asia
Southern Asia
APNIC / Summary
ASN 2 Byte by Year
Total
2 Byte
Cumulative
Count (Unique Numbers)
Year
IPv4/24 by Year
Total
/24
Delegations
Cumulative
Count (Thousands of Unique Addresses)
Year
IPv6/32 by Year
/32
/48
Delegations
Cumulative
Count (Thousands of Unique Addresses)
Year
summary
ASN by Subregion
IPv4 by Subregion
IPv6 by Subregion
Powered by elafent

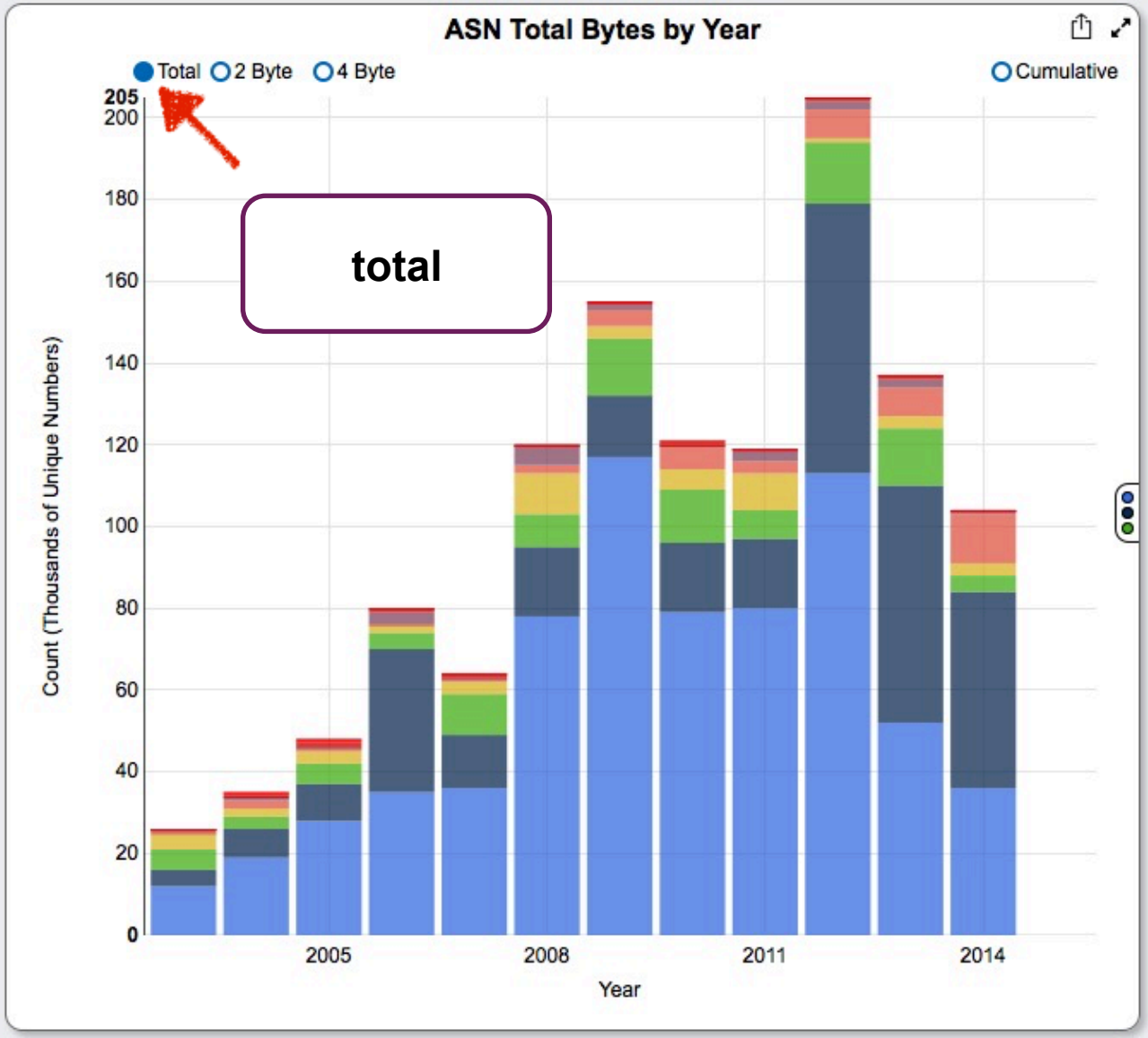
APNIC / Summary

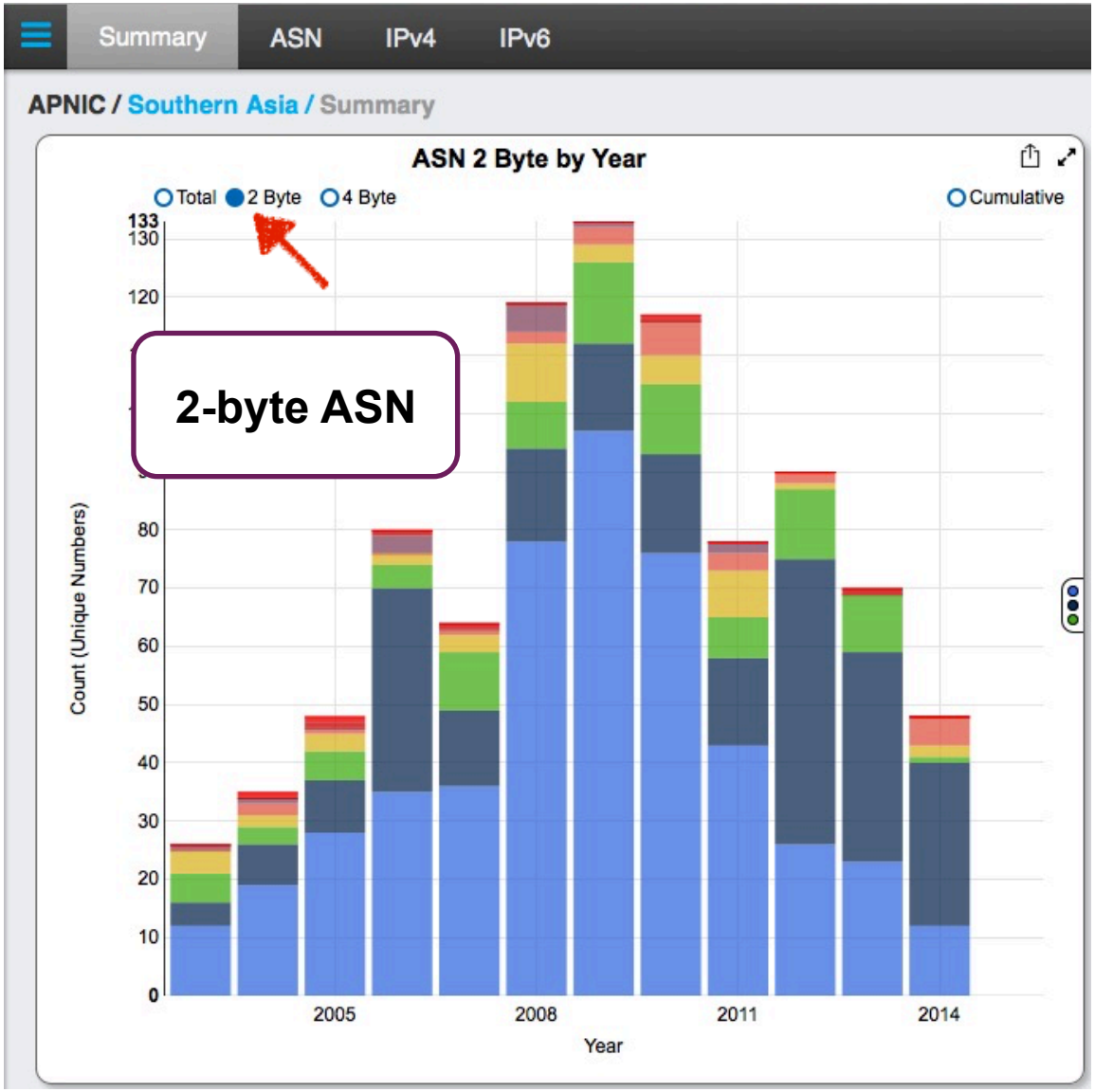


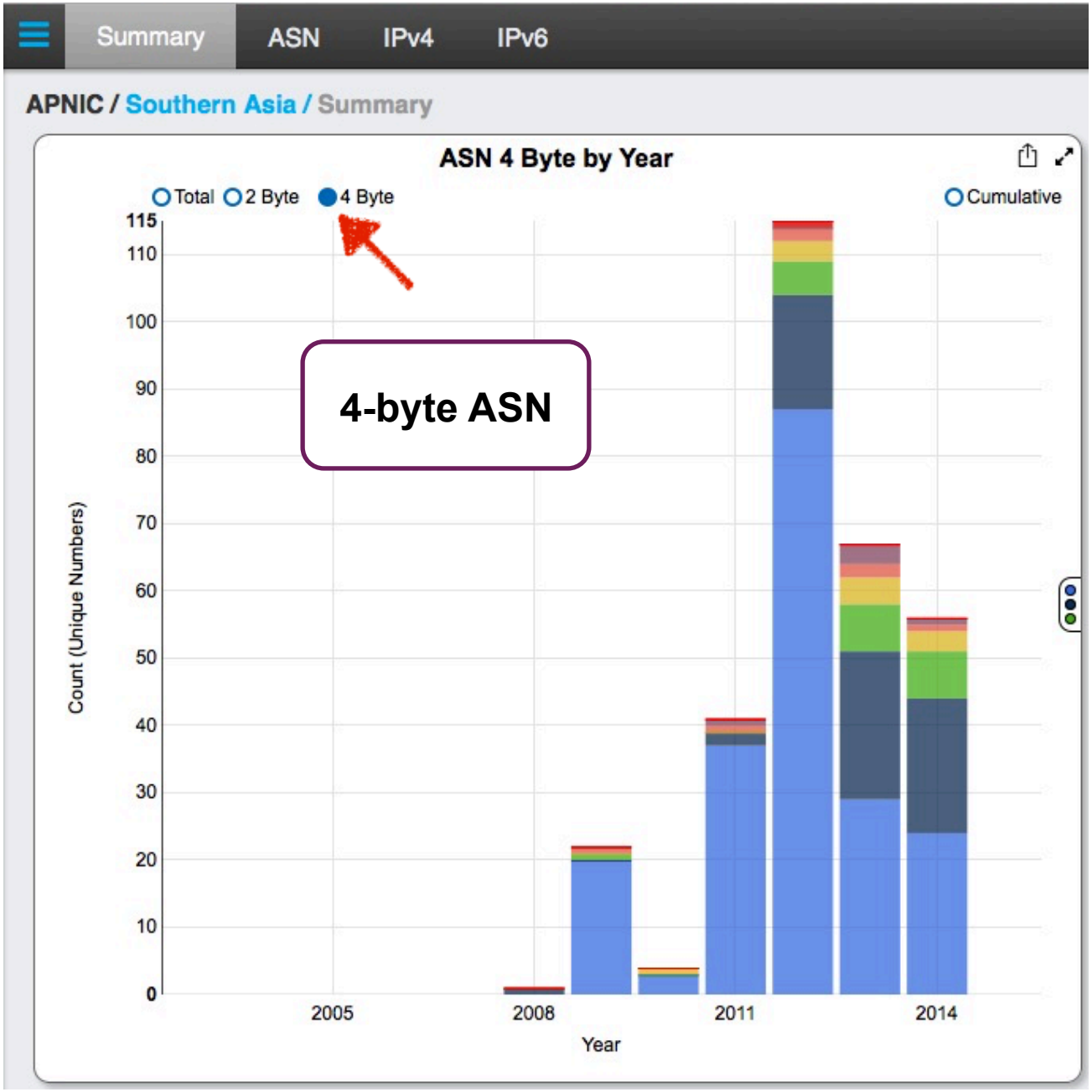

Summary
ASN
IPv4
IPv6
APNIC / Southern Asia / Summary
ASN 2 Byte by Year
2 Byte
4 Byte
Cumulative
AFGHANISTAN
BANGLADESH
BHUTAN
BRITISH INDIAN OCEAN TERRITORY
INDIA
MALDIVES
NEPAL
PAKISTAN
SRI LANKA
Count (Unique Numbers)
0
10
20
30
40
50
60
70
80
90
100
2005
2008
2011
2014
Year
legends

Summary ASN IPv4 IPv6

APNIC / Southern Asia / Summary

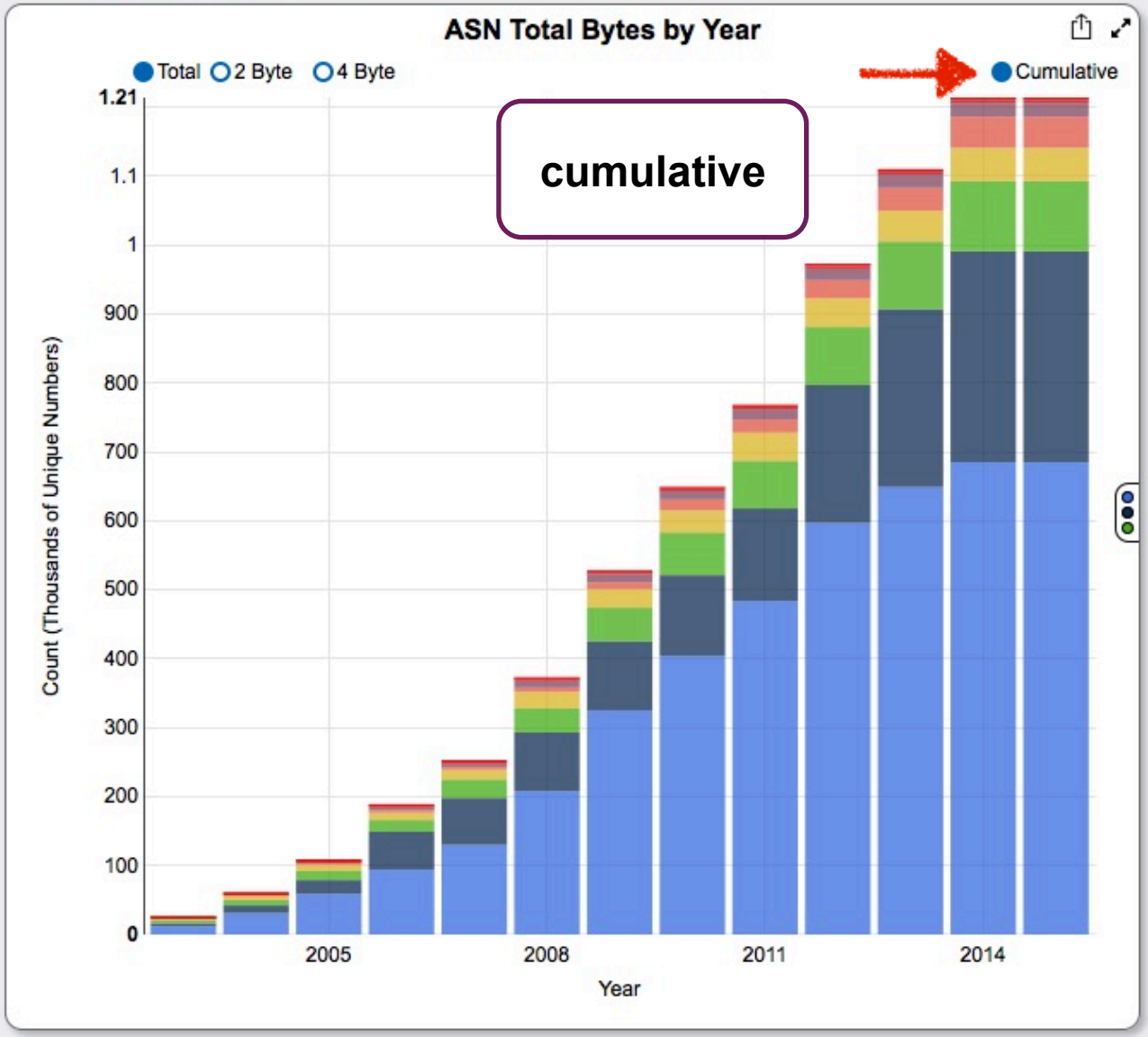


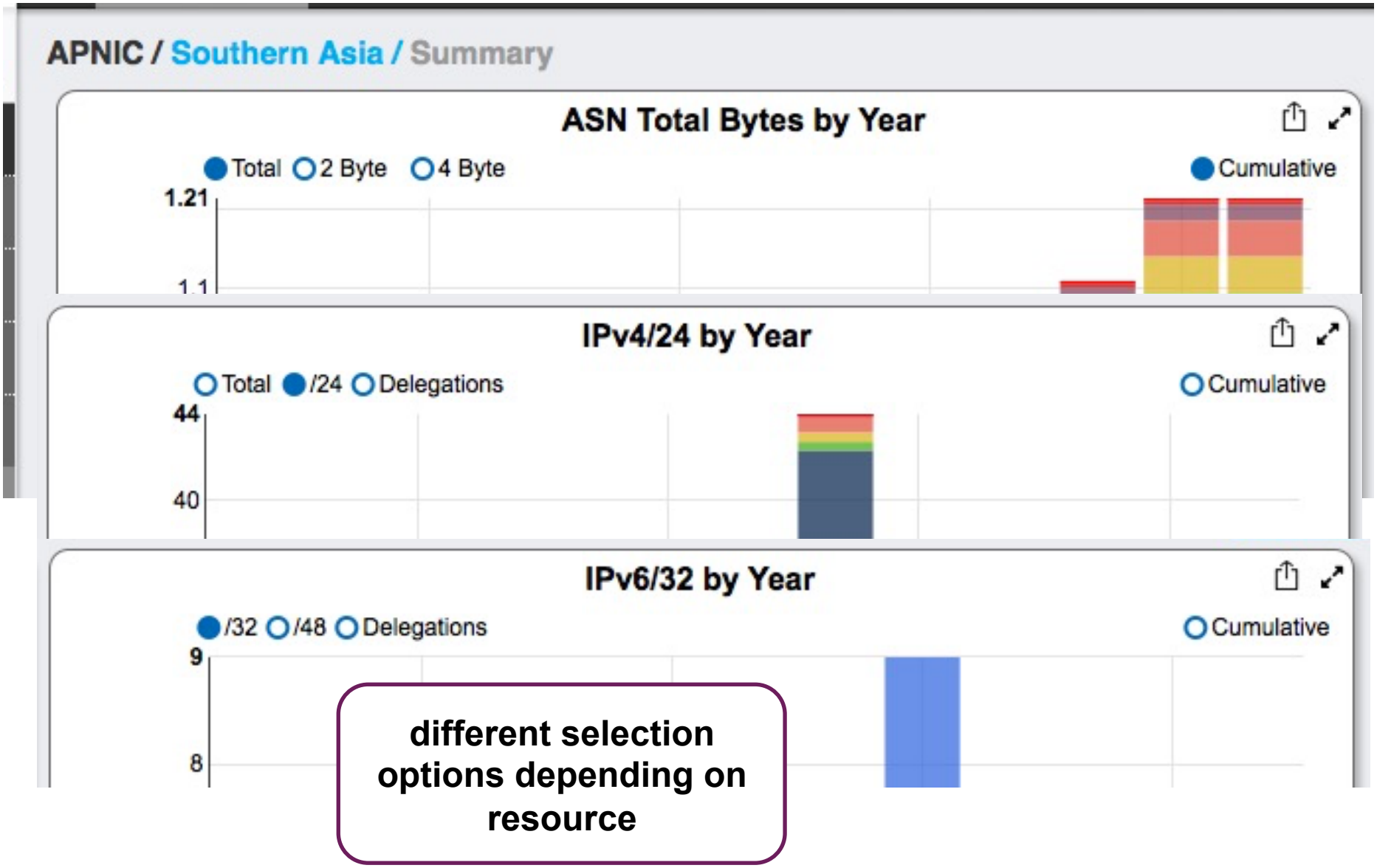

Summary
ASN
IPv4
IPv6
APNIC / Southern Asia / Summary
ASN 2 Byte by Year
Total
2 Byte
4 Byte
Cumulative
2-byte ASN
Count (Unique Numbers)
133
130
120
80
70
60
50
40
30
20
10
0
2005
2008
2011
2014
Year


Summary
ASN
IPv4
IPv6
APNIC / Southern Asia / Summary
ASN 4 Byte by Year
Total
2 Byte
4 Byte
Cumulative
4-byte ASN
Count (Unique Numbers)
115
110
100
90
80
70
60
50
40
30
20
10
0
2005
2008
2011
2014
Year

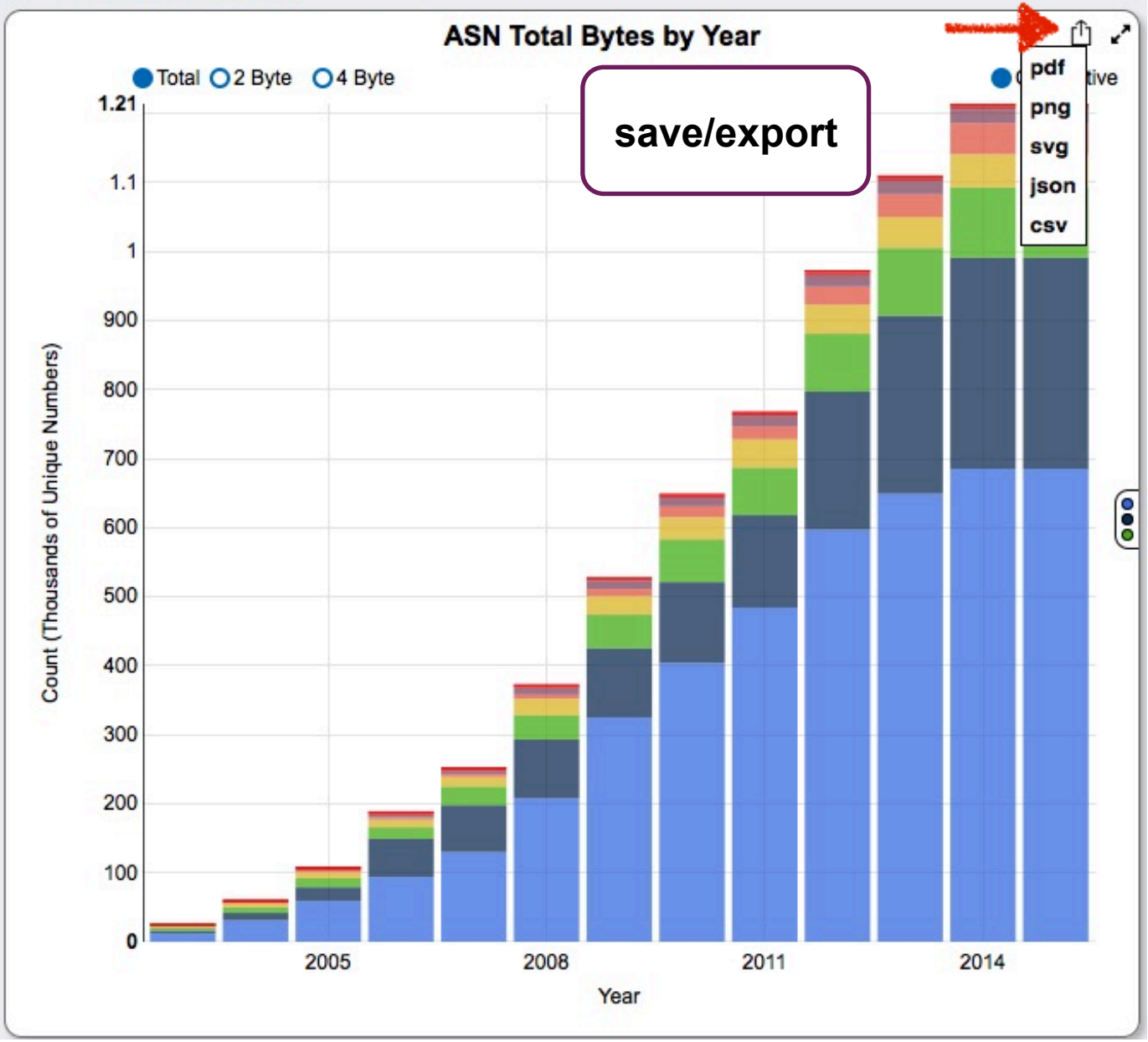
Summary | ASN | IPv4 | IPv6

APNIC / Southern Asia / Summary




APNIC / Southern Asia / Summary
ASN Total Bytes by Year
Total
2 Byte
4 Byte
Cumulative
1.21
1.1
IPv4/24 by Year
Total
/24
Delegations
Cumulative
44
40
IPv6/32 by Year
/32
/48
Delegations
Cumulative
9
8
different selection options depending on resource

APNIC / Southern Asia / Summary



	A	B	C	D	E	F
37	2012	84	PAKISTAN	#47ad1f	asn	total
38	2013	98	PAKISTAN	#47ad1f	asn	total
39	2014	102	PAKISTAN	#47ad1f	asn	total
40	2015	102	PAKISTAN	#47ad1f	asn	total
41	2003	4	NEPAL	#dab52f	asn	total
42	2004	6	NEPAL	#dab52f	asn	total
43	2005	9	NEPAL	#		
44	2006	11	NEPAL	#		
45	2007	14	NEPAL	#		
46	2008	24	NEPAL	#		
47	2009	27	NEPAL	#		
48	2010	32	NEPAL	#		
49	2011	41	NEPAL	#		
50	2012	42	NEPAL	#		
51	2013	45	NEPAL	#		
52	2014	48	NEPAL	#		
53	2015	48	NEPAL	#		
54	2003	0	AFGHANISTAN	#		
55	2004	2	AFGHANISTAN	#		
56	2005	3	AFGHANISTAN	#		

Southern Asia ASN Tot

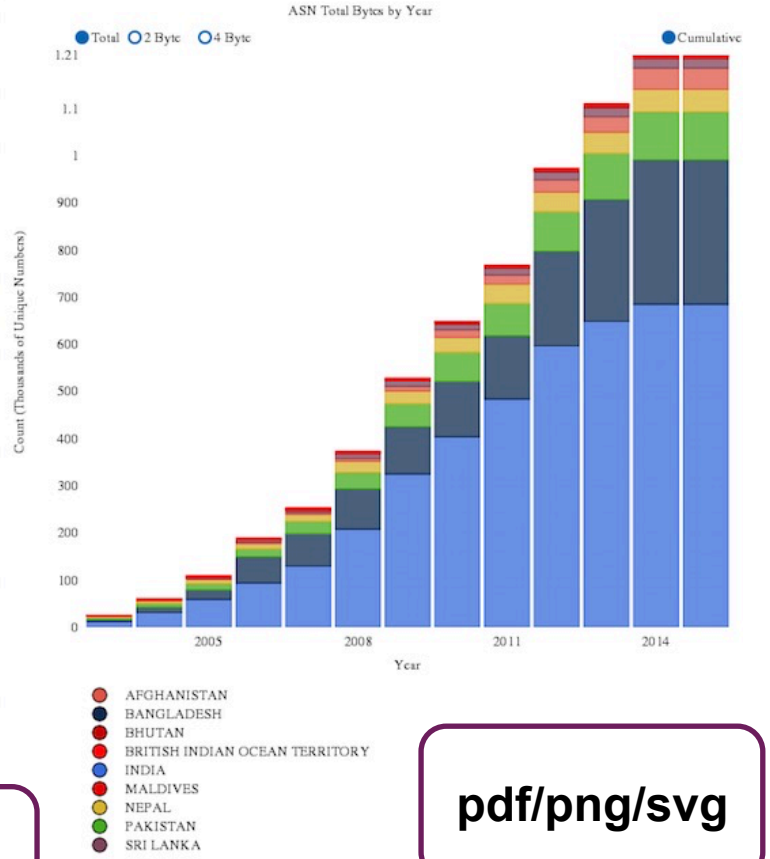
Normal View | Ready

csv

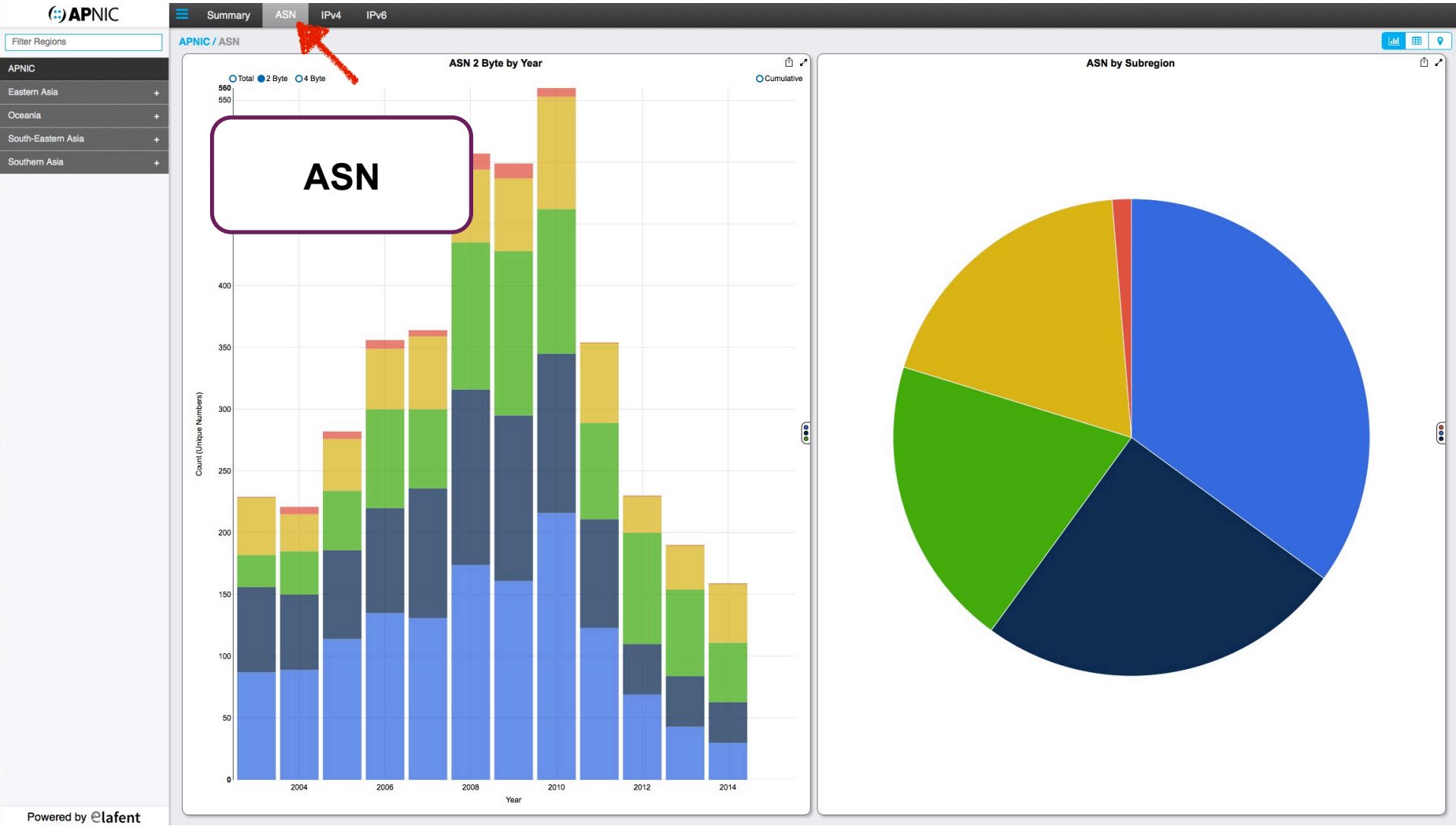
Southern Asia ASN Total Byte

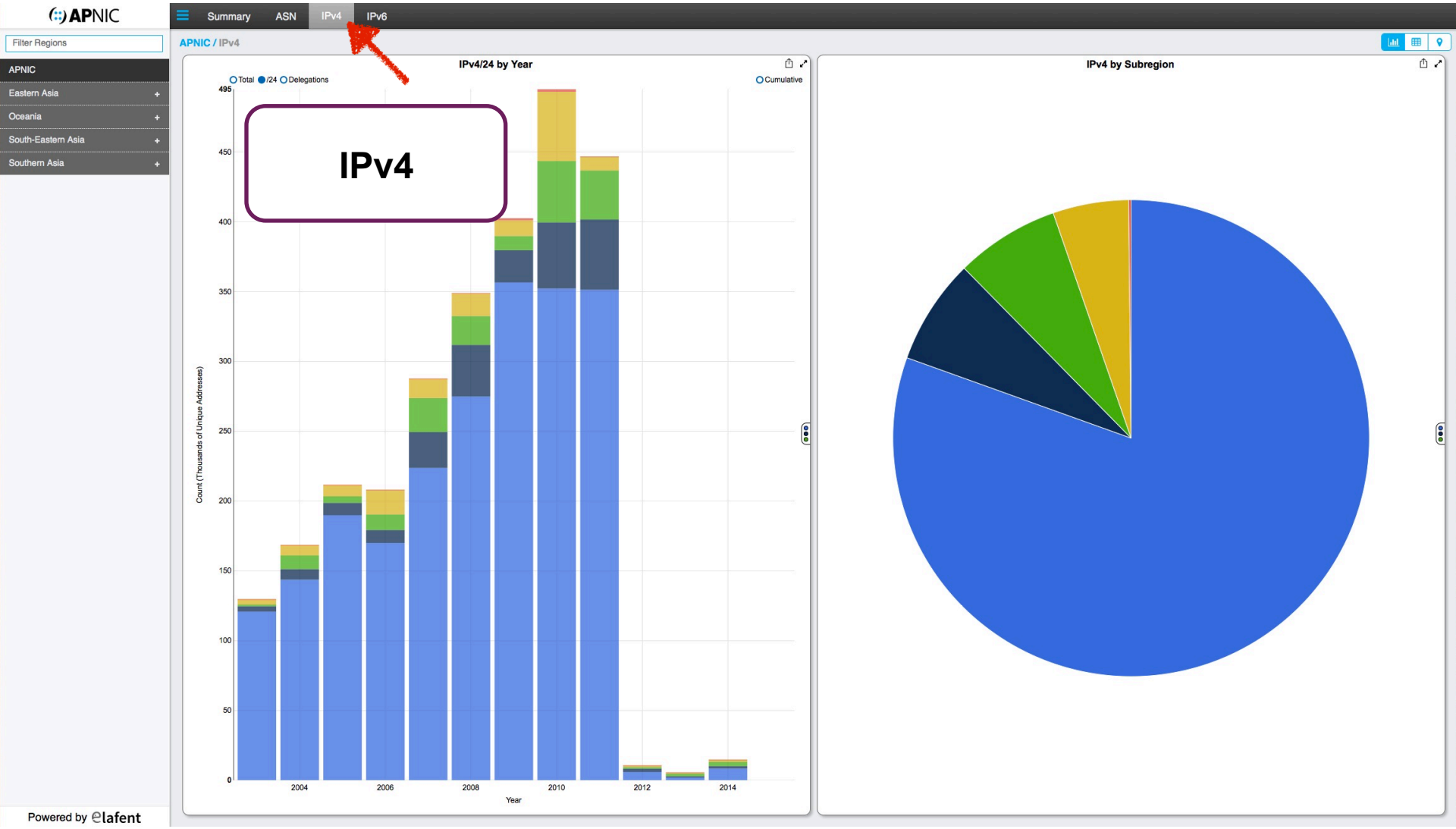

```
  "key": "INDIA",
  "size": 325,
  "y1": 325
},
{
  "x": "2010",
  "totalY": 79,
  "cumulativeY": 404,
  "y0": 0,
  "y": 404,
  "series": 0,
  "key": "INDIA",
  "size": 404,
  "y1": 404
},
{
  "x": "2011",
  "totalY": 80,
  "cumulativeY": 484,
  "y0": 0,
  "y": 484,
  "series": 0,
  "key": "INDIA",
  "size
  "y1":
},
{
  "x":
  "tota
  "cumulativeY": 597,
  "y0": 0,
  "y": 597,
  "series": 0,
  "key": "INDIA",
  "size": 597
```

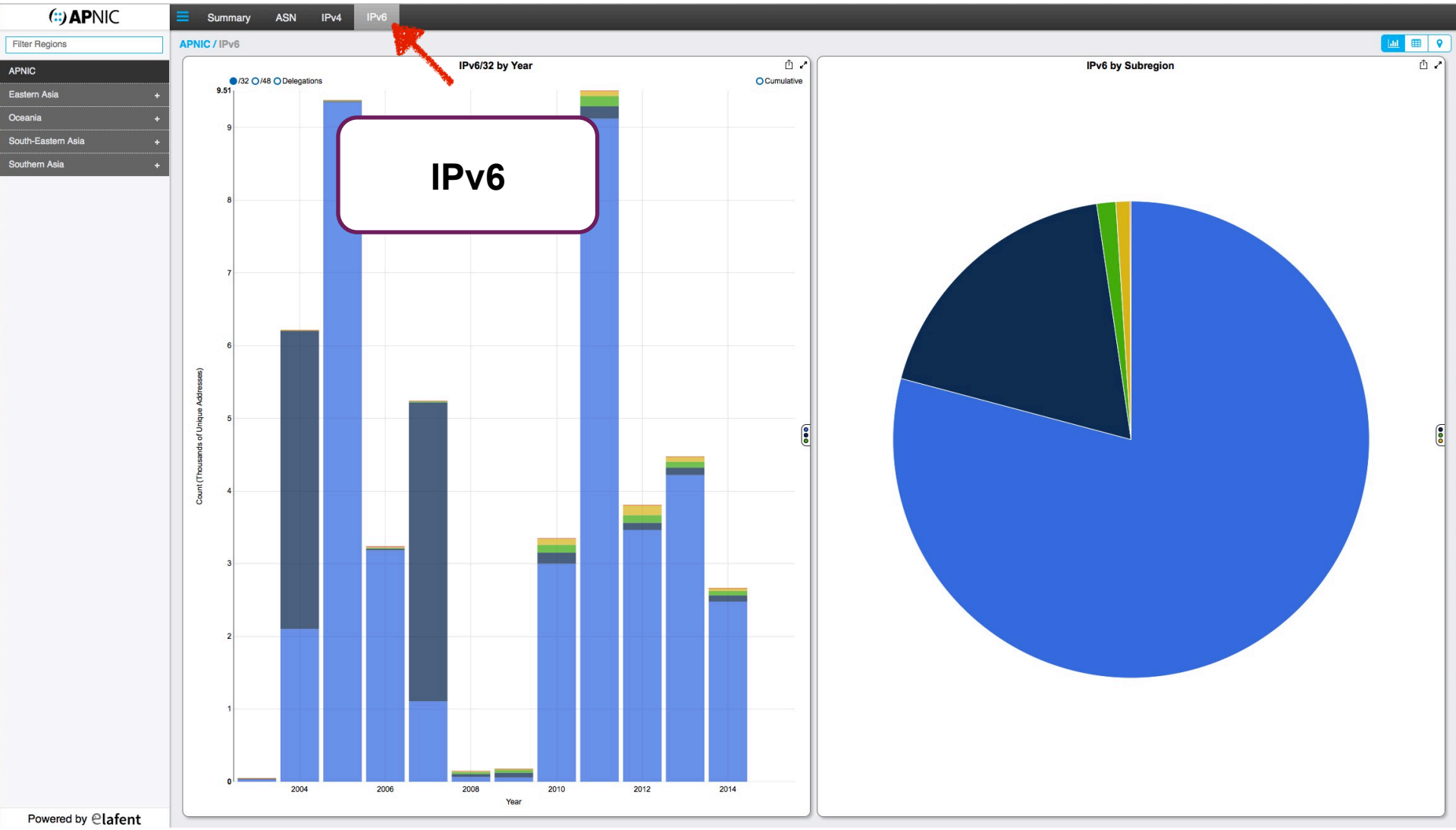

json

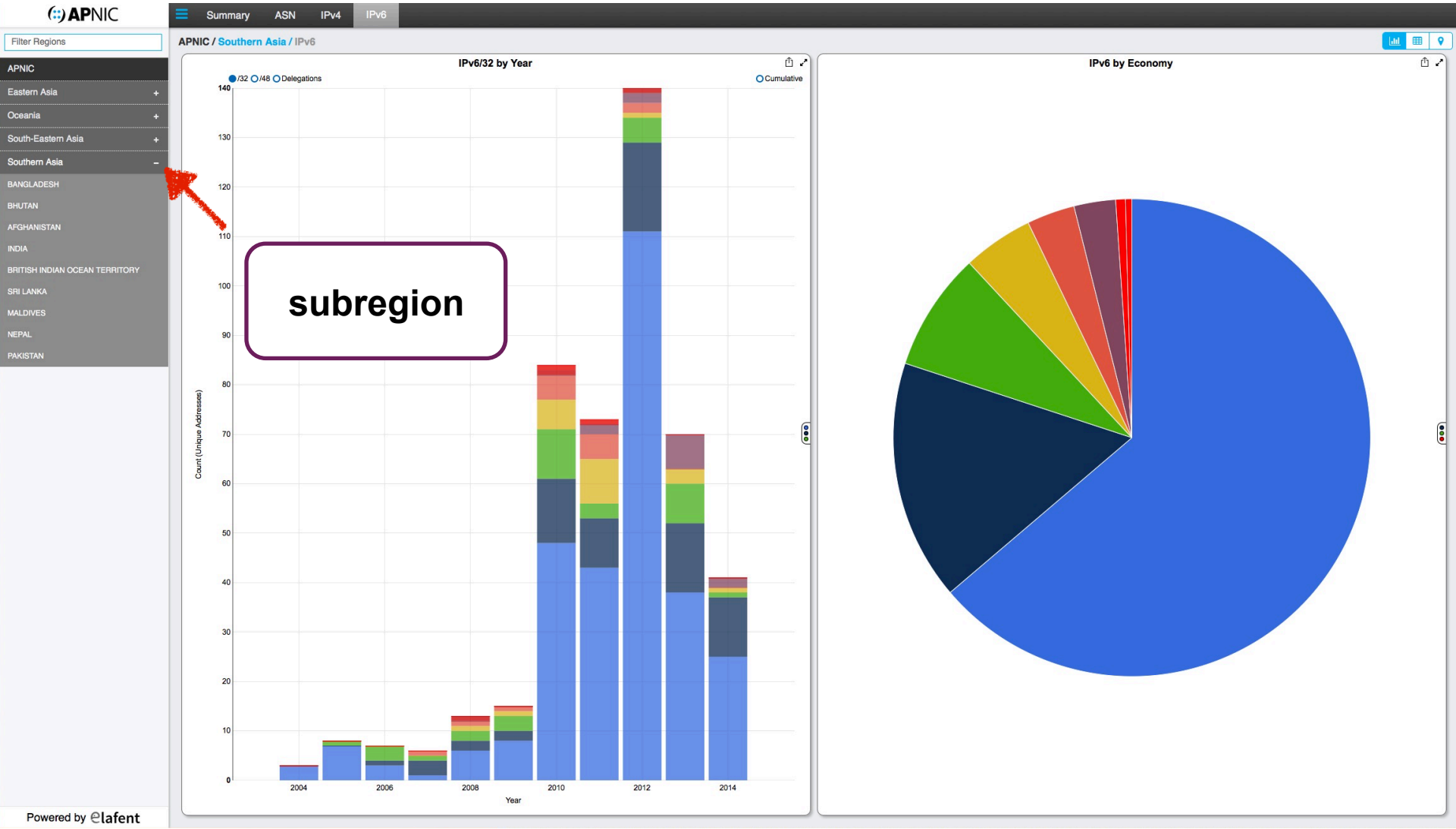


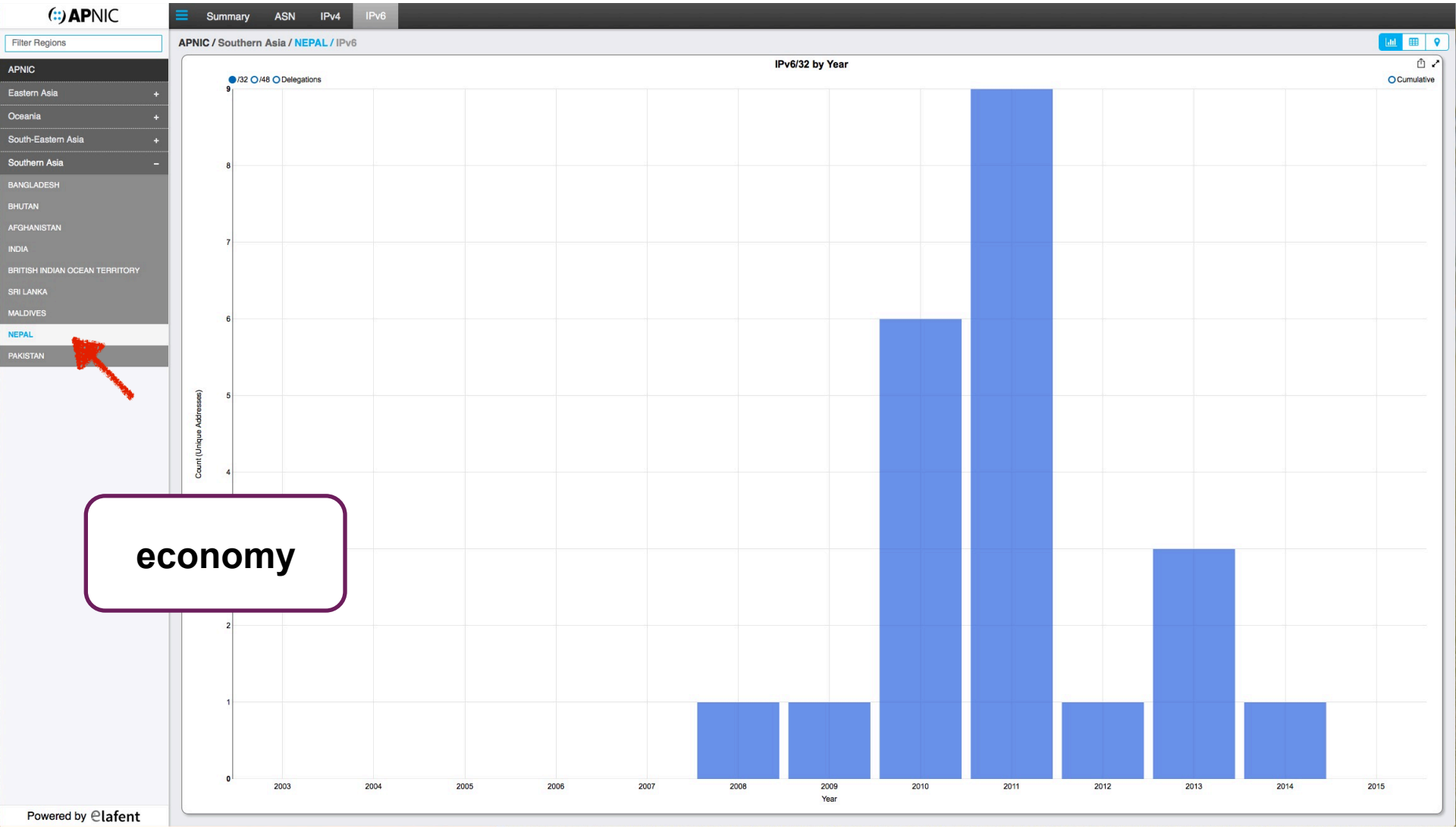
pdf/png/svg

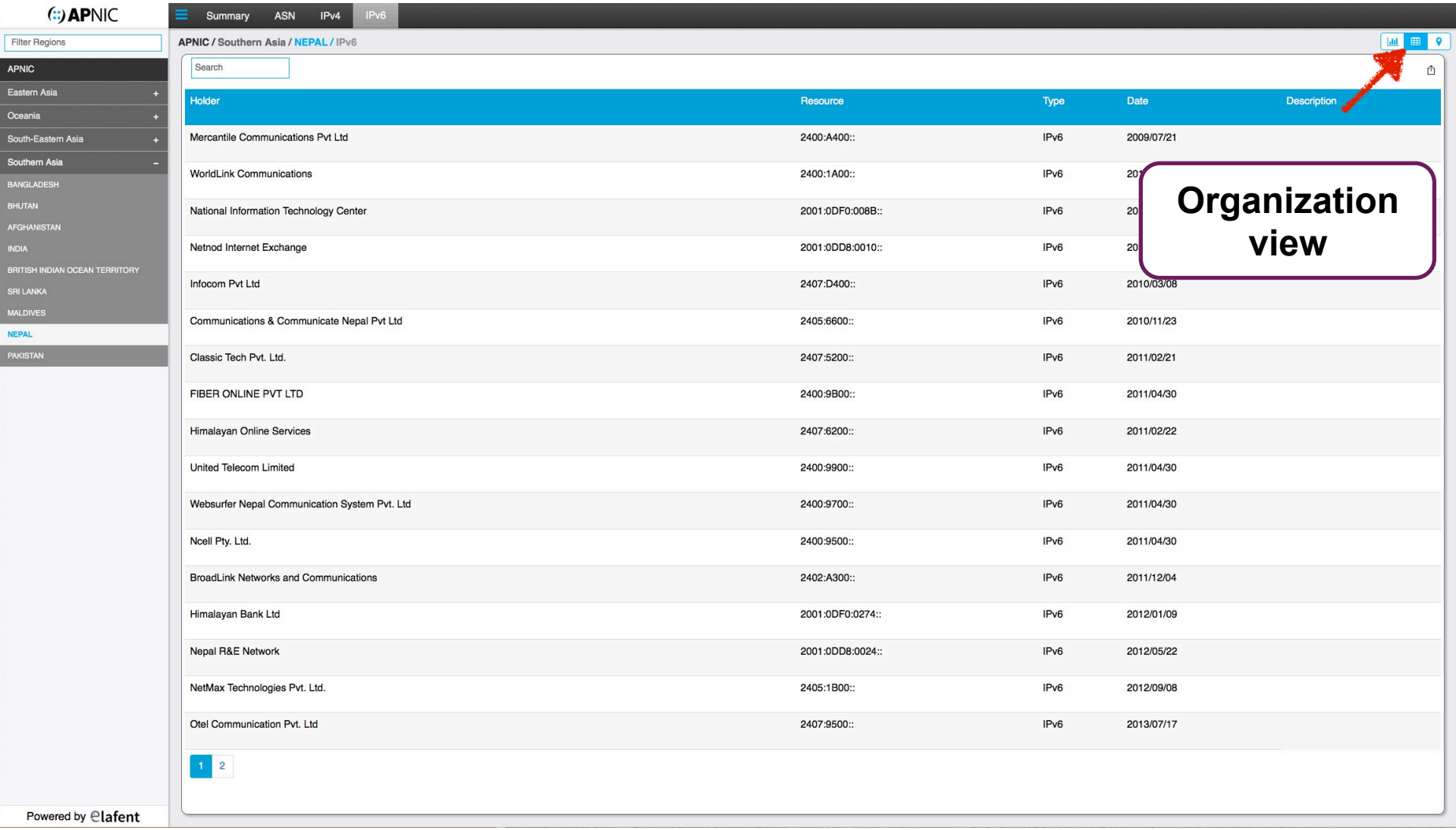

APNIC
Summary
ASN
IPv4
IPv6
Filter Regions
APNIC / ASN
APNIC
Eastern Asia
Oceania
South-Eastern Asia
Southern Asia
ASN
ASN 2 Byte by Year
Total
2 Byte
4 Byte
Cumulative
Count (Unique Numbers)
Year
ASN by Subregion
Powered by elafent

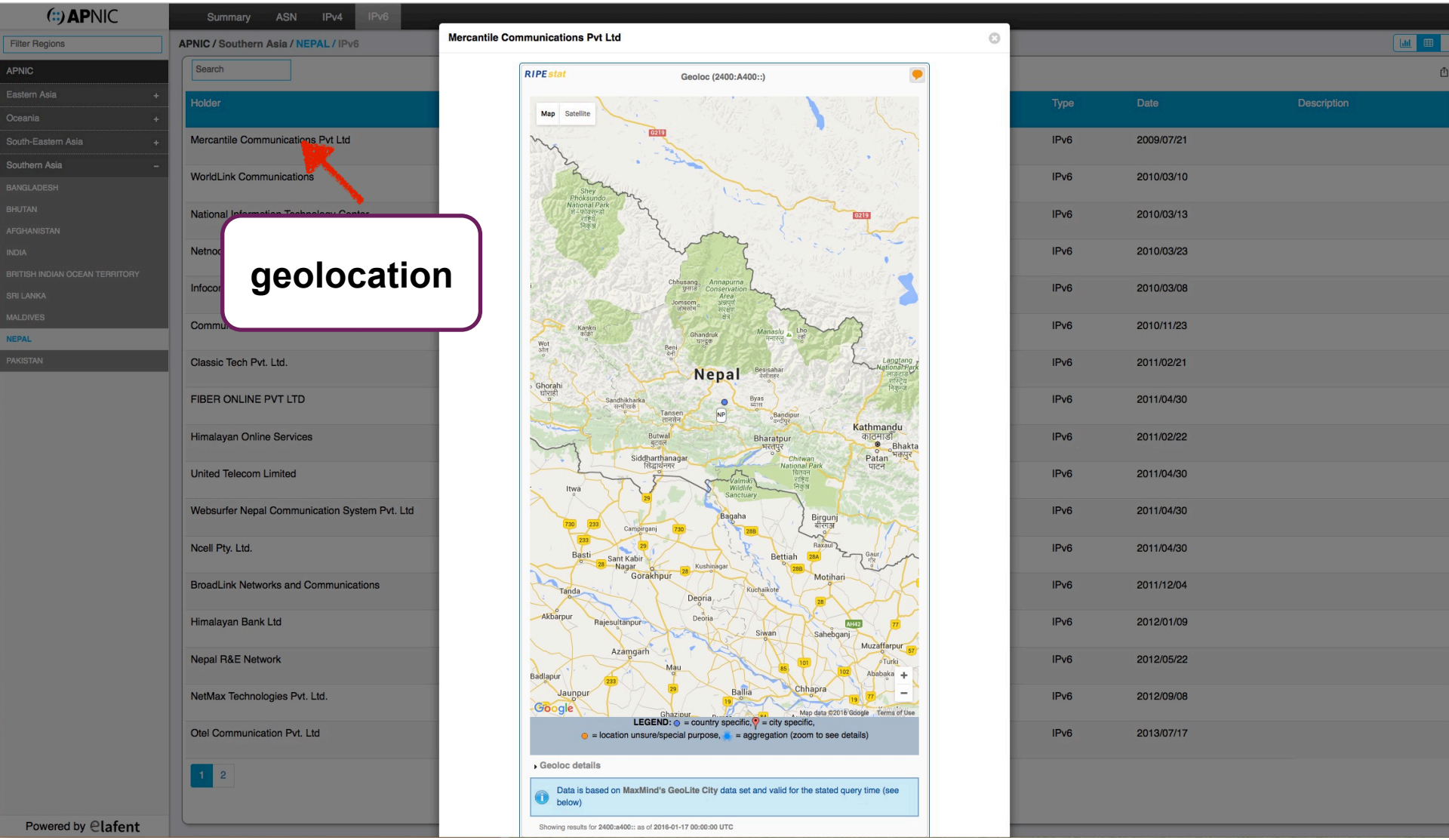

APNIC
Summary
ASN
IPv4
IPv6
Filter Regions
APNIC / IPv4
APNIC
Eastern Asia
Oceania
South-Eastern Asia
Southern Asia
IPv4
IPv4/24 by Year
Total
/24
Delegations
Cumulative
Count (Thousands of Unique Addresses)
Year
IPv4 by Subregion
Powered by elafent

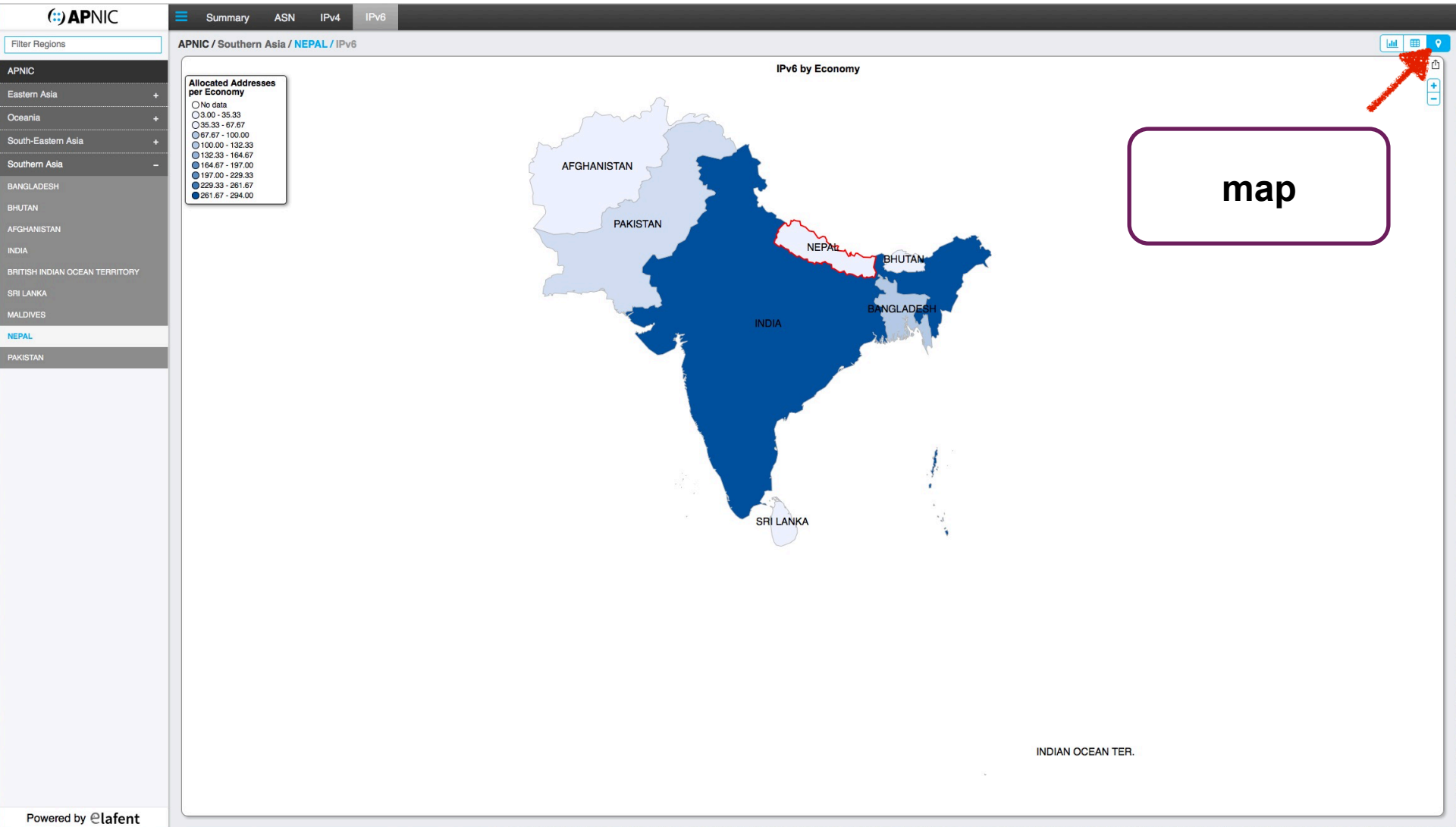

APNIC
Summary
ASN
IPv4
IPv6
Filter Regions
APNIC / IPv6
APNIC
Eastern Asia
Oceania
South-Eastern Asia
Southern Asia
IPv6/32 by Year
/32 /48 Delegations
Cumulative
9.51
Count (Thousands of Unique Addresses)
Year
2004
2006
2008
2010
2012
2014
IPv6
IPv6 by Subregion
Powered by elafent

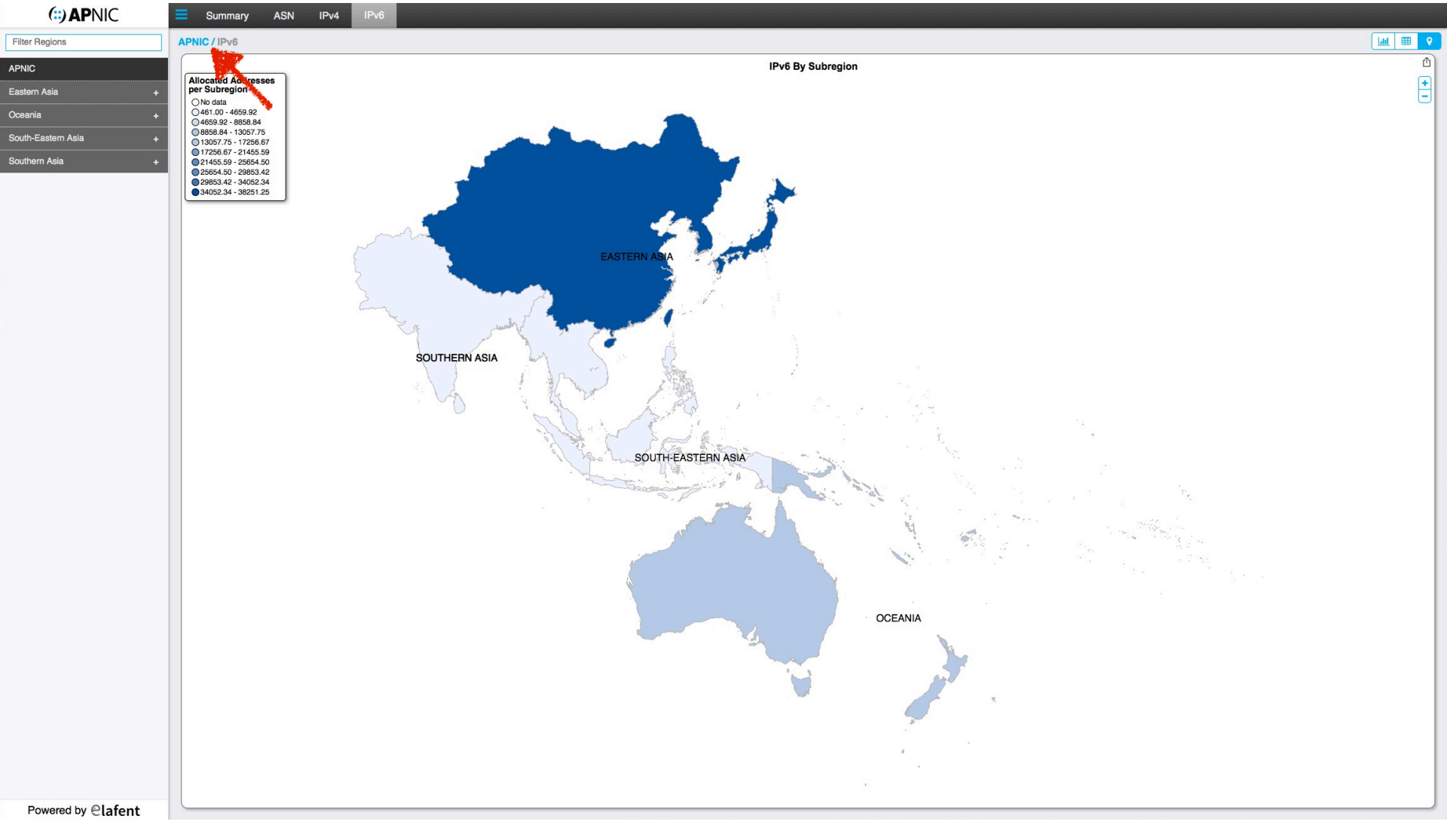

APNIC
Summary
ASN
IPv4
IPv6
Filter Regions
APNIC / Southern Asia / IPv6
APNIC
Eastern Asia
Oceania
South-Eastern Asia
Southern Asia
BANGLADESH
BHUTAN
AFGHANISTAN
INDIA
BRITISH INDIAN OCEAN TERRITORY
SRI LANKA
MALDIVES
NEPAL
PAKISTAN
subregion
IPv6/32 by Year
/32
/48
Delegations
Cumulative
Count (Unique Addresses)
Year
2004
2006
2008
2010
2012
2014
IPv6 by Economy
Powered by elafent


APNIC
Summary
ASN
IPv4
IPv6
Filter Regions
APNIC / Southern Asia / NEPAL / IPv6
APNIC
Eastern Asia
Oceania
South-Eastern Asia
Southern Asia
BANGLADESH
BHUTAN
AFGHANISTAN
INDIA
BRITISH INDIAN OCEAN TERRITORY
SRI LANKA
MALDIVES
NEPAL
PAKISTAN
IPv6/32 by Year
/32
/48
Delegations
Cumulative
Count (Unique Addresses)
Year
2003
2004
2005
2006
2007
2008
2009
2010
2011
2012
2013
2014
2015
economy
Powered by elafent


APNIC
Summary
ASN
IPv4
IPv6
Filter Regions
APNIC / Southern Asia / NEPAL / IPv6
APNIC
Eastern Asia
Oceania
South-Eastern Asia
Southern Asia
BANGLADESH
BHUTAN
AFGHANISTAN
INDIA
BRITISH INDIAN OCEAN TERRITORY
SRI LANKA
MALDIVES
NEPAL
PAKISTAN
Search
Holder
Resource
Type
Date
Description
Mercantile Communications Pvt Ltd
2400:A400::
IPv6
2009/07/21
WorldLink Communications
2400:1A00::
IPv6
National Information Technology Center
2001:0DF0:008B::
IPv6
Netnod Internet Exchange
2001:0DD8:0010::
IPv6
Infocom Pvt Ltd
2407:D400::
IPv6
2010/03/08
Communications & Communicate Nepal Pvt Ltd
2405:6600::
IPv6
2010/11/23
Classic Tech Pvt. Ltd.
2407:5200::
IPv6
2011/02/21
FIBER ONLINE PVT LTD
2400:9B00::
IPv6
2011/04/30
Himalayan Online Services
2407:6200::
IPv6
2011/02/22
United Telecom Limited
2400:9900::
IPv6
2011/04/30
Websurfer Nepal Communication System Pvt. Ltd
2400:9700::
IPv6
2011/04/30
Ncell Pty. Ltd.
2400:9500::
IPv6
2011/04/30
BroadLink Networks and Communications
2402:A300::
IPv6
2011/12/04
Himalayan Bank Ltd
2001:0DF0:0274::
IPv6
2012/01/09
Nepal R&E Network
2001:0DD8:0024::
IPv6
2012/05/22
NetMax Technologies Pvt. Ltd.
2405:1B00::
IPv6
2012/09/08
Otel Communication Pvt. Ltd
2407:9500::
IPv6
2013/07/17
1
2
Powered by elafent
Organization view


APNIC
Summary
ASN
IPv4
IPv6
Filter Regions
APNIC / Southern Asia / NEPAL / IPv6
APNIC
Eastern Asia
Oceania
South-Eastern Asia
Southern Asia
BANGLADESH
BHUTAN
AFGHANISTAN
INDIA
BRITISH INDIAN OCEAN TERRITORY
SRI LANKA
MALDIVES
NEPAL
PAKISTAN
Search
Holder
Type
Date
Description
Mercantile Communications Pvt Ltd
IPv6
2009/07/21
WorldLink Communications
IPv6
2010/03/10
IPv6
2010/03/13
IPv6
2010/03/23
IPv6
2010/03/08
IPv6
2010/11/23
Classic Tech Pvt. Ltd.
IPv6
2011/02/21
FIBER ONLINE PVT LTD
IPv6
2011/04/30
Himalayan Online Services
IPv6
2011/02/22
United Telecom Limited
IPv6
2011/04/30
Websurfer Nepal Communication System Pvt. Ltd
IPv6
2011/04/30
Ncell Pty. Ltd.
IPv6
2011/04/30
BroadLink Networks and Communications
IPv6
2011/12/04
Himalayan Bank Ltd
IPv6
2012/01/09
Nepal R&E Network
IPv6
2012/05/22
NetMax Technologies Pvt. Ltd.
IPv6
2012/09/08
Otel Communication Pvt. Ltd
IPv6
2013/07/17
1
2
Powered by elafent
geolocation
Mercantile Communications Pvt Ltd
RIPEstat
Geoloc (2400:A400::)
Map
Satellite
Nepal
Kathmandu
Bhaktapur
Patan
Bharatpur
Siddharthanagar
Bagaha
Birgunj
Bettiah
Motihari
Gorakhpur
Deoria
Siwan
Sahebganj
Muzaffarpur
Azamgarh
Mau
Ballia
Chhapra
Jaunpur
Basti
Tanda
Akbarpur
Rajesultanpur
Badlapur
Itwa
Campirganj
Kushinagar
Kuchaikote
Google
Map data ©2016 Google
Terms of Use
LEGEND: = country specific, = city specific,
= location unsure/special purpose, = aggregation (zoom to see details)
Geoloc details
Data is based on MaxMind's GeoLite City data set and valid for the stated query time (see below)
Showing results for 2400:a400:: as of 2016-01-17 00:00:00 UTC


APNIC
Summary
ASN
IPv4
IPv6
Filter Regions
APNIC / Southern Asia / NEPAL / IPv6
APNIC
Eastern Asia
Oceania
South-Eastern Asia
Southern Asia
BANGLADESH
BHUTAN
AFGHANISTAN
INDIA
BRITISH INDIAN OCEAN TERRITORY
SRI LANKA
MALDIVES
NEPAL
PAKISTAN
Powered by elafent
IPv6 by Economy
Allocated Addresses per Economy
No data
3.00 - 35.33
35.33 - 67.67
67.67 - 100.00
100.00 - 132.33
132.33 - 164.67
164.67 - 197.00
197.00 - 229.33
229.33 - 261.67
261.67 - 294.00
AFGHANISTAN
PAKISTAN
NEPAL
BHUTAN
BANGLADESH
INDIA
SRI LANKA
INDIAN OCEAN TER.
map


APNIC
Summary
ASN
IPv4
IPv6
Filter Regions
APNIC / IPv6
APNIC
Eastern Asia
Oceania
South-Eastern Asia
Southern Asia
IPv6 By Subregion
Allocated Addresses per Subregion
No data
461.00 - 4659.92
4659.92 - 8858.84
8858.84 - 13057.75
13057.75 - 17256.67
17256.67 - 21455.59
21455.59 - 25654.50
25654.50 - 29853.42
29853.42 - 34052.34
34052.34 - 38251.25
EASTERN ASIA
SOUTHERN ASIA
SOUTH-EASTERN ASIA
OCEANIA
Powered by elafent

You're invited!

APRICOT 2016
APNIC 41

APNIC 42

Issue Date: 25/01/2016

Revision: 1

APNIC