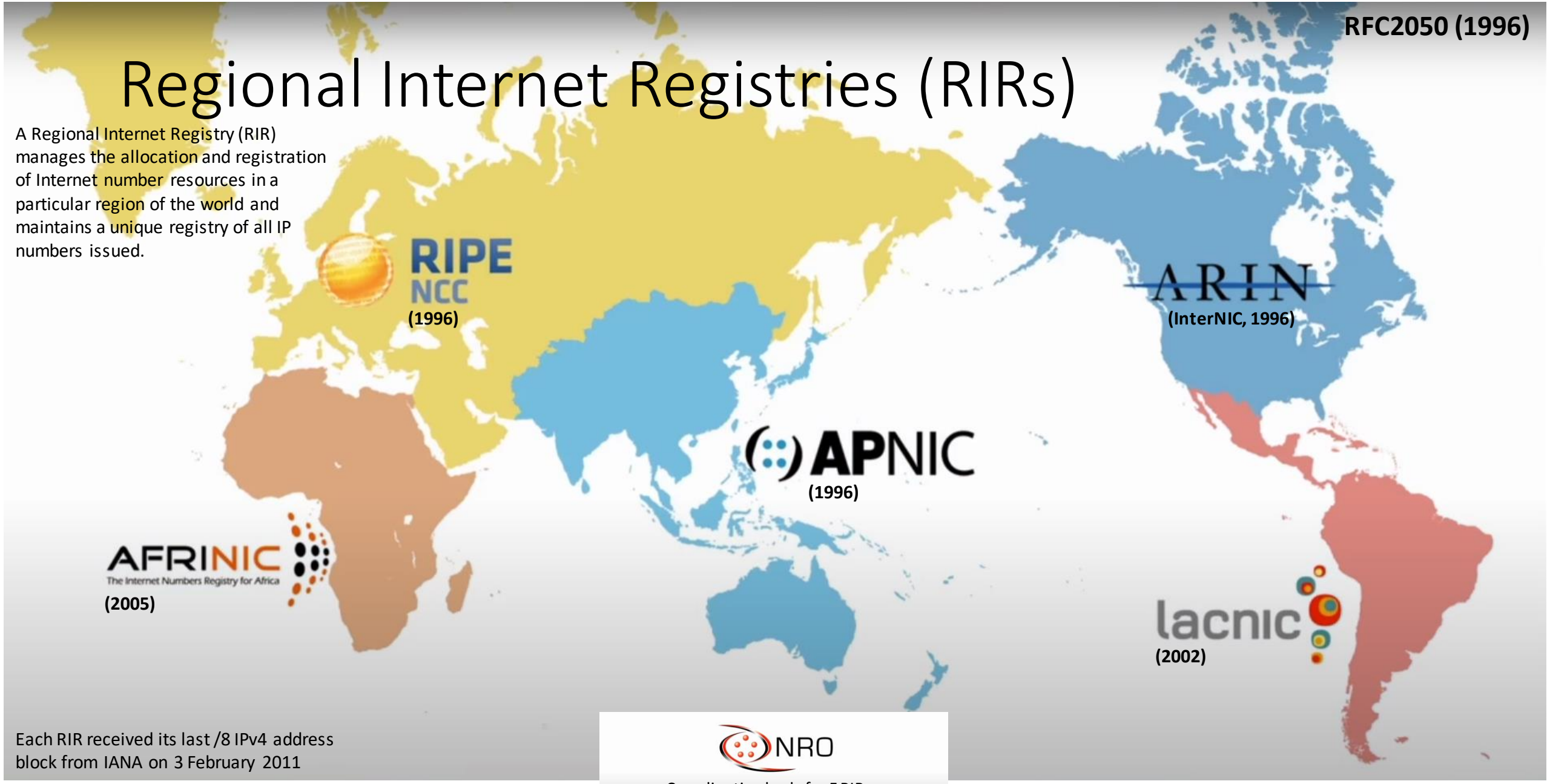
Regional Internet Registries (RIRs)

RFC2050 (1996)

A Regional Internet Registry (RIR) manages the allocation and registration of Internet number resources in a particular region of the world and maintains a unique registry of all IP numbers issued.



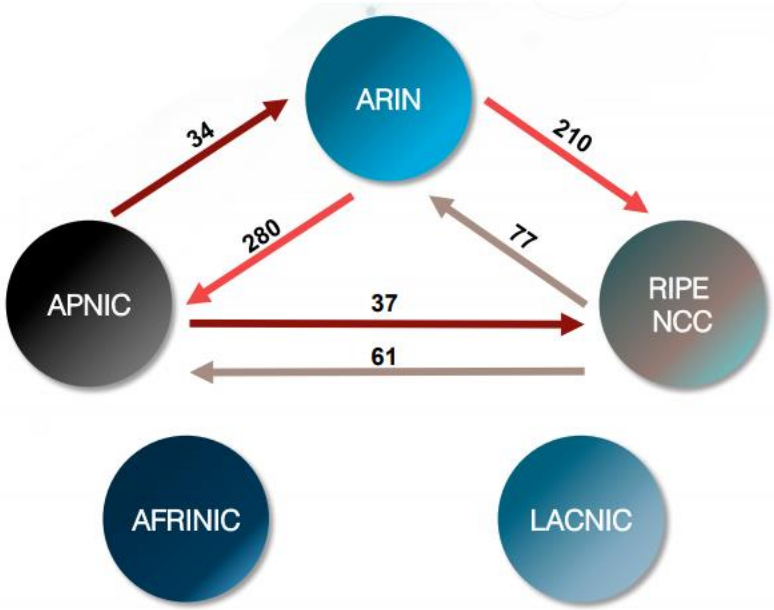
Each RIR received its last /8 IPv4 address block from IANA on 3 February 2011

NRO

Coordinating body for 5 RIRs

Number Resource Organization

National Internet Registries (RIRs)



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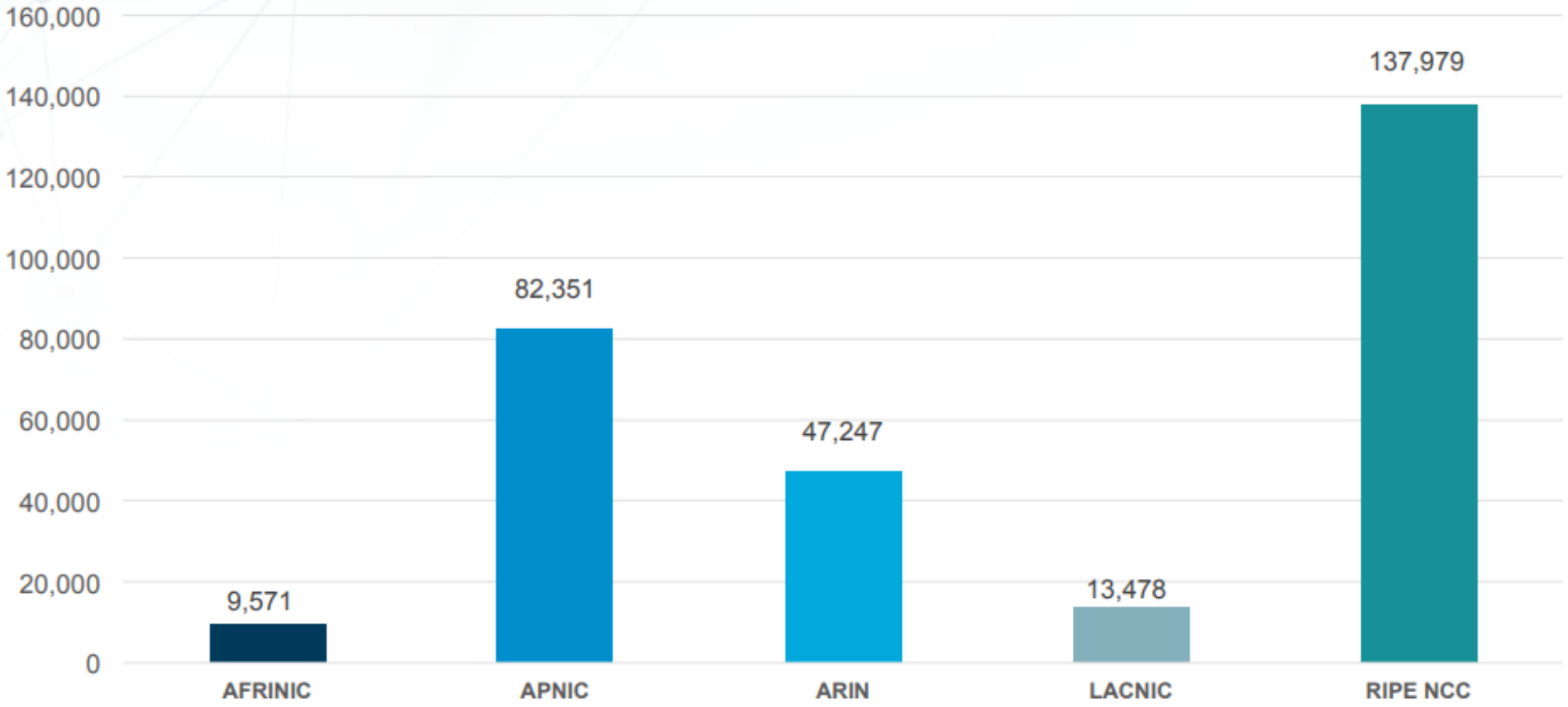
Total IPv6 Space Currently Allocated

- **Total IPv6 space (in /32s) each RIR has allocated**



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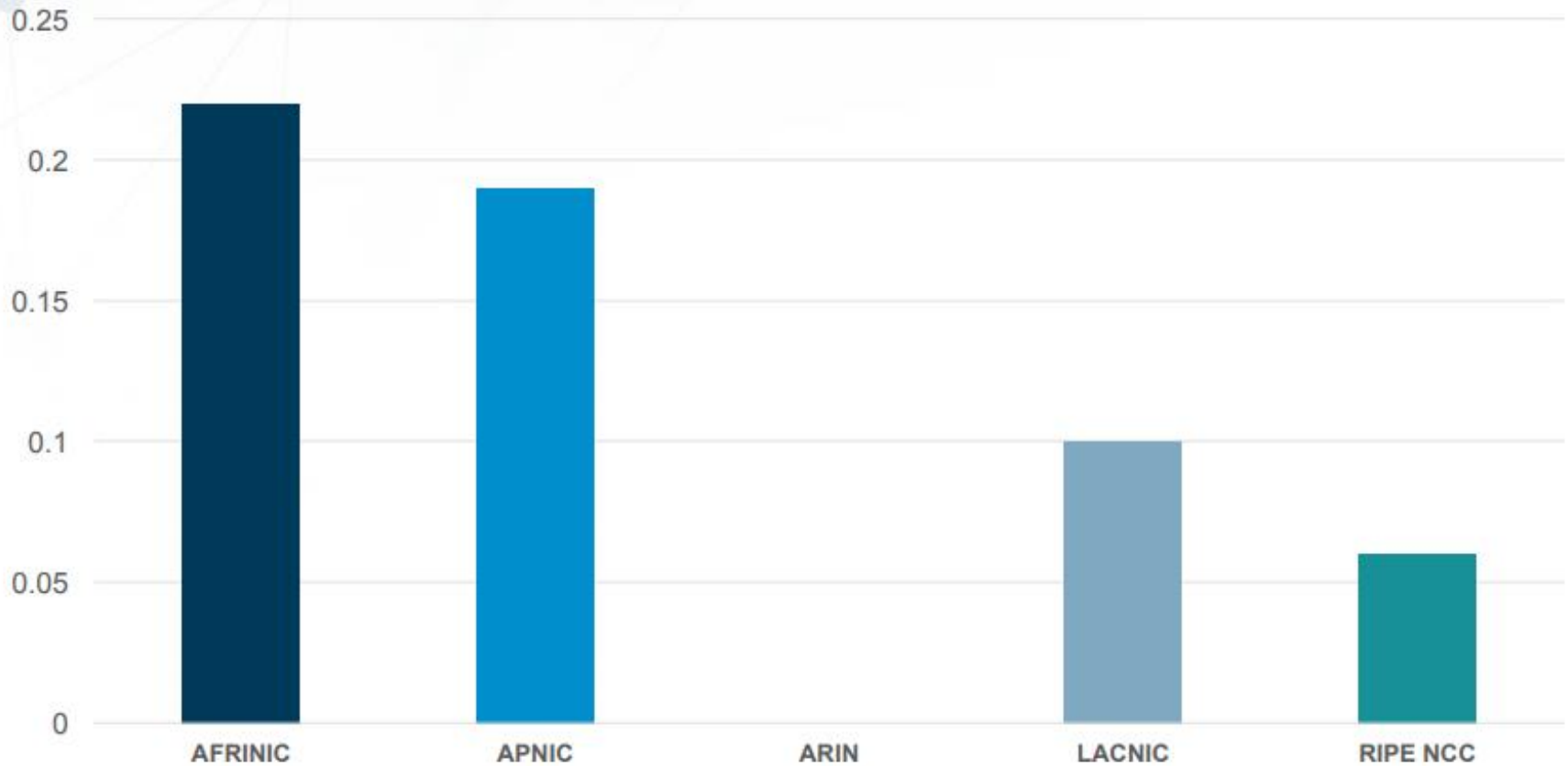
IPv4 Space Currently Available in Each RIR

- **Measured in /8s**



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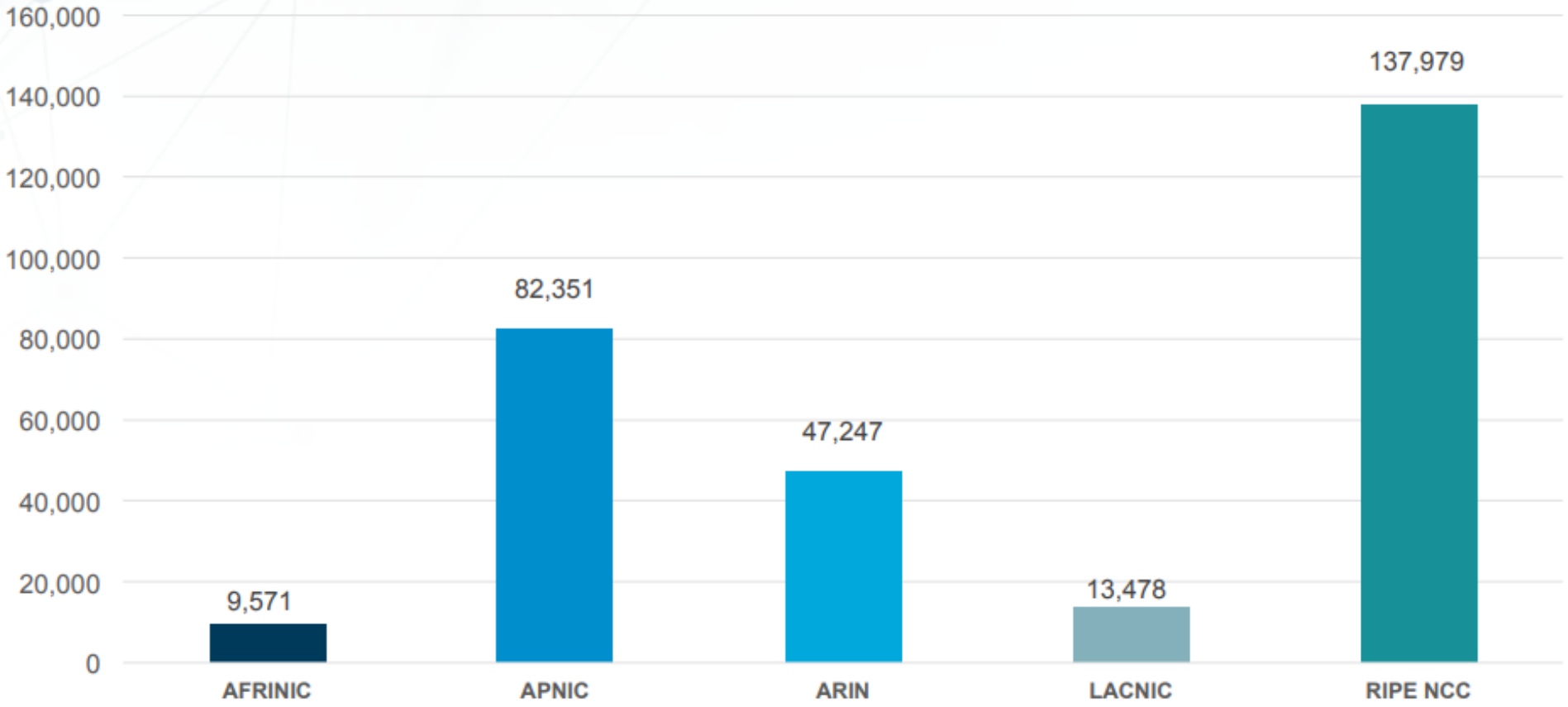

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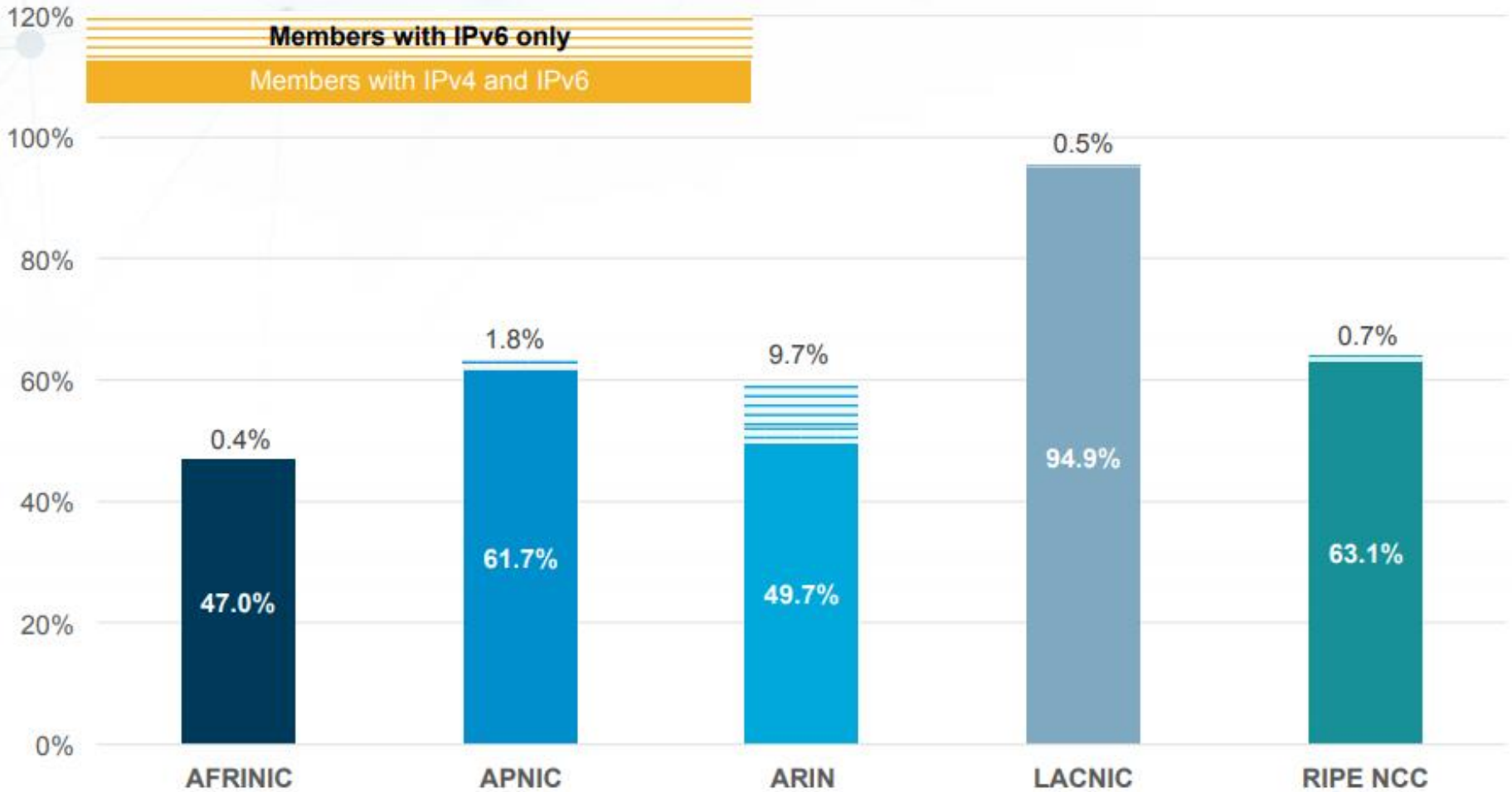
Percentage of Members with IPv6



1993

M: 0 ASN: 0 IPv4: 405 IPv6: 0 S: 1

The distribution of the registration function is desirable, and in keeping with that goal, it is necessary to develop a plan which manages the distribution of the network number space. The demand for network numbers has grown significantly within the last two years and as a result the allocation of network numbers must be approached in a more systematic fashion. - *RFC1466*

The pentium processor is invented

The World Wide Web is born at CERN

Development of CIDR support in routing protocols underway

Japan has the fastest bandwidth speed in the world, at 2.17 Mbps

1994

M: 27 ASN: 1 IPv4: 513 IPv6: 0 S: 2

NETSCAPE

Netscape releases the Navigator browser in October under the code name Mozilla

In late 1994 SSL encryption is introduced to make transactions secure

CIDR and BGP4 deployment by major network operators across the Internet

APCCIRN becomes the Asia Pacific Networking Group (APNG)

eCommerce arrives on the Internet:

- Pizza Hut offers online ordering
- The first online bank opens
- There are attempts to offer flower delivery and magazine subscriptions online

1995

M: 55 ASN: 47 IPv4: 993 IPv6: 0 S: 3

JAVA

Java computer language invented

DVD

DVD (Digital Versatile Disc or Digital Video Disc) invented

The US Space Shuttle (STS-71) docks to the Mir space station for the first time

Internet users number 16 million, 4% of the population

1996

M: 114 ASN: 63 IPv4: 1050 IPv6: 0 S: 5

Internet address space is distributed according to the following three goals:
1) Conservation
2) Routability
3) Registration

Regional Internet Registries (RIRs) operate in large geopolitical regions such as continents. Currently there are three RIRs established; InterNIC serving North America, RIPE NCC serving Europe, and APNIC serving the Asia Pacific region. - RFC2050

Web TV invented

ebaY

Ebay started the online auction and shopping website

1997

M: 200 ASN: 98 IPv4:274 IPv6:0 S: 5

APRICOT becomes the Asia Pacific Regional Internet Conference on Operational Technologies and adopts logo designed by Bob Coggeshall.

Singapore became the second country in Asia after Japan to be linked to the global Internet2 infrastructure via the launch of the Singapore Advanced Research and Education Network (SingAREN).

Hong Kong returned to Chinese rule

1998

M: 249 ASN: 108 IPv4:166 IPv6:0 S: 6

The BGP table passes 50,000 prefixes for the first time

Google!

Google files for incorporation in California on September 4

Apple Computer unveils the iMac

1999

M: 396 ASN: 128 IPv4:232 IPv6:5 S: 12

You can create a live journal on LiveJournal.com

6,000,000,000

The human population of the world surpasses six billion

2000

M: 602 ASN: 230 IPv4:353 IPv6:14 S: 23

2000 Summer Olympics in Sydney, Australia

The billionth living person in India is born

In December, the BGP table passes 100,000 prefixes for the first time

304 million Internet users, 5.0% of the population

2001

M: 699 ASN: 220 IPv4:360 IPv6:25 S: 31

Apple's iPod released - would eventually become the most popular portable media player on the market

Wikipedia goes online

The Dotcom Crash wipes billions off the tech stock market

3G network technology becomes available for commercial use first in Japan.

2002

M: 767 ASN: 203 IPv4:301 IPv6:86 S: 33

The Euro enters circulation

The world's first cyborg is created

The dwarf planet Quaoar is discovered

2003

M: 879 ASN: 198 IPv4:422 IPv6:50 S: 40

Concorde makes its last commercial flight, bringing the era of airliner supersonic travel to a close, at least for the time being

The human genome sequenced

2004

M: 978 ASN: 186 IPv4:568 IPv6:57 S: 44

Facebook is launched

Motorola RAZR V3 is released

"Web 2.0" emerges

Measuring 509m (1,671 ft) to the tip of its spire, Taipei 101 becomes the tallest building in the world. It is the first skyscraper to break the half-kilometer mark.

2005

M: 1157 ASN: 245 IPv4:705 IPv6:51 S: 46

YouTube - the online video sharing and viewing community - is invented by Steve Chen, Chad Hurley and Jawed Karim. The first YouTube video posted was posted by co-founder Jawed Karim at the San Diego Zoo. It was uploaded on April 23, 2005.

1,018 million internet users, 15.7% of the population

France has the fastest bandwidth at 200,000 Mbs, with China at 136,106 Mbs

2006

M: 1362 ASN: 298 IPv4:864 IPv6:42 S: 46

The first tweet was written by co-founder Jack Dorsey on March 21, 2006

The one billionth song is purchased from Apple iTunes

Pluto is demoted to "dwarf planet" status

Google purchases YouTube for US$1.65 billion in stock

2007

M: 1584 ASN: 308 IPv4:917 IPv6:63 S: 57

Apple Introduces the iPhone on June 29th

Amazon releases the kindle

Singapore Airlines is the first airline to fly the new Airbus passenger jet A380 on scheduled service between Singapore and Sydney, Australia

By the end of 2007, ecommerce sales accounted for 3.4 percent of total retail sales.

2008

M: 1855 ASN: 418 IPv4:984 IPv6:160 S: 62

The Large Hadron Collider (LHC), the world's largest and highest-energy particle accelerator, is considered "one of the great engineering milestones of mankind". Built by the European Organization for Nuclear Research (CERN)

In March, the BGP table passes 250,000 prefixes for the first time

Internet access is disrupted in the Middle East and India due to breaks in submarine cable systems in the Mediterranean

By 2008 Google had processed over 1,000,000,000,000 (one trillion) unique URLs, while the number of individual web pages was growing by several billion per day and the number of individual users had reached nearly 1.5 billion

2009

M: 2170 ASN: 436 IPv4: 1065 IPv6: 185 S: 63

Scientists engineer new plastics without the use of fossil fuels

The mouse genome is sequenced

3D scanning enters the consumer market

The first exoplanet that could contain liquid water is discovered

Sina Weibo is established

2010

M: 2521 ASN: 505 IPv4: 1358 IPv6: 643 S: 65

Apple debuts the iPad

Scientists create synthetic life

Scientists trap antimatter

Speech-to-speech translation is common in mobile phones

1,966 million Internet users, 28.7% of the population

2011

M: 2947 ASN: 495 IPv4: 1475 IPv6: 620 S: 70

Each RIR received its last /8 IPv4 address block from IANA on 3 February 2011

The world's first synthetic transplant occurs

7,000,000,000

Global population reaches 7 billion

Multi-touch surface computing enters the consumer market

Estimated total online retail sales of merchandise during 2011 at $188.1 billion

2012

M: 3534 ASN: 581 IPv4: 1075 IPv6: 562 S: 71

Twitter reaches the half billion accounts mark in June 2012. Jakarta is the top city by number of Tweets followed by Tokyo and London

2,405 million Internet users, 34.3% of the population

2013

M: 3779 ASN: 306 IPv4: 744 IPv6: 255 S: 68

Sina Weibo passes
500 Million users

2014

M: 4051 ASN: 646 IPv4: 3914 IPv6: 484 S: 70

40% of world's population with Internet access

3B Internet users; two-thirds of world's Internet users are from developing economies

3,000,000,000

Mobile cellular subscriptions reach almost 7B (3.6B in AP region)

2015

M: 5268 ASN: 881 IPv4: 4498 IPv6: 785 S: 76

42.4% of world's population with Internet

3.2B Internet users

3,200,000,000

7B+ mobile cellular subscriptions

2016

M: 5994 ASN: 881 IPv4: 4498 IPv6: 785 S: 75

47% of world's population with Internet

3.4B Internet users

3,400,000,000

2017

M: 6557 ASN: 1226 IPv4: 2235 IPv6: 1377 S: 77

50% of world's population with Internet

3.8B Internet users worldwide

3,800,000,000

4.9B unique mobile users worldwide; 3.9B mobile subscriptions in the Asia Pacific

2018

M: 7162 ASN: 912 IPv4: 2199 IPv6: 1430 S: 80

IPv6 adoption increased, with the proportion of Members holding IPv6 resources reaching 61% and total IPv6 capability reaching 22%

Blockchain technology is invented to protect cryptocurrency transactions

5G

5G, the fifth generation of wireless technology is developed. It promises speeds in excess of 1Gbps

2019

M: 7776 ASN: 1560 IPv4: 2027 IPv6: 1472 S: 77

IBM announces the first commercial quantum computer, the IBM Q System One