

IDNIC

NIR Operations Update



2021

IDNIC Activities

Manage &
Distribute IP
from APNIC



Serving
IDNIC
Member



Supporting
National
Internet
Development



Training &
Workshops



Cooperating
with APNIC

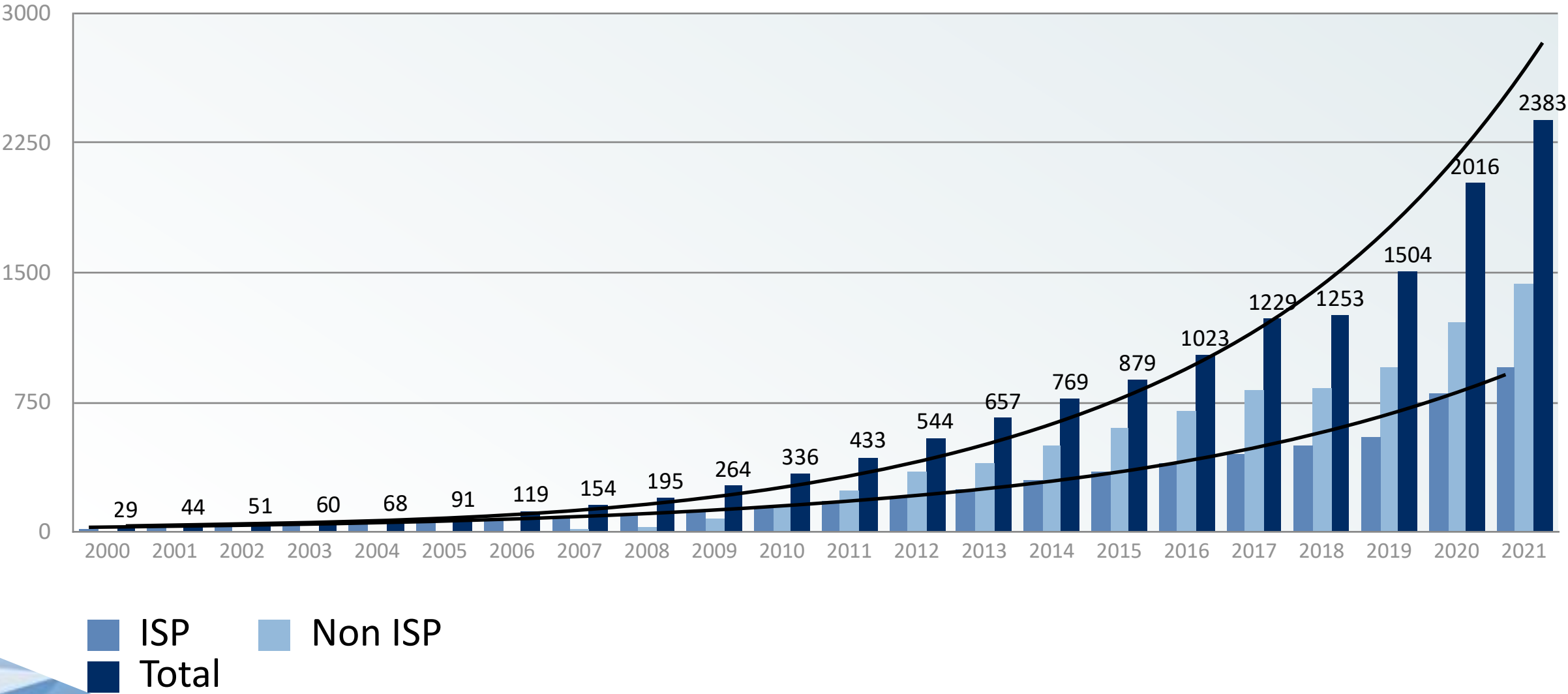


IP & ASN Delegation

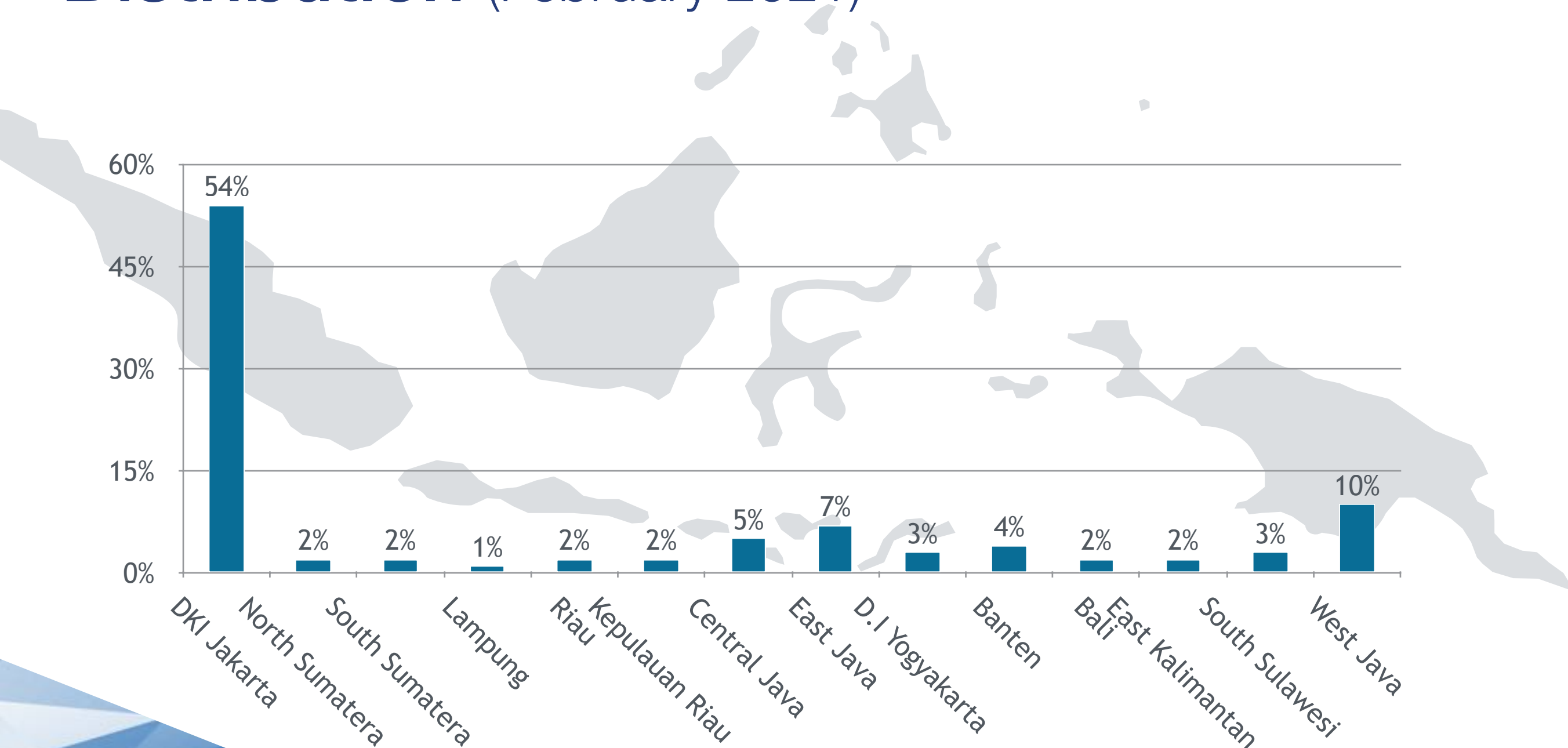
IDNIC
Activities

IDNIC Member Statistics

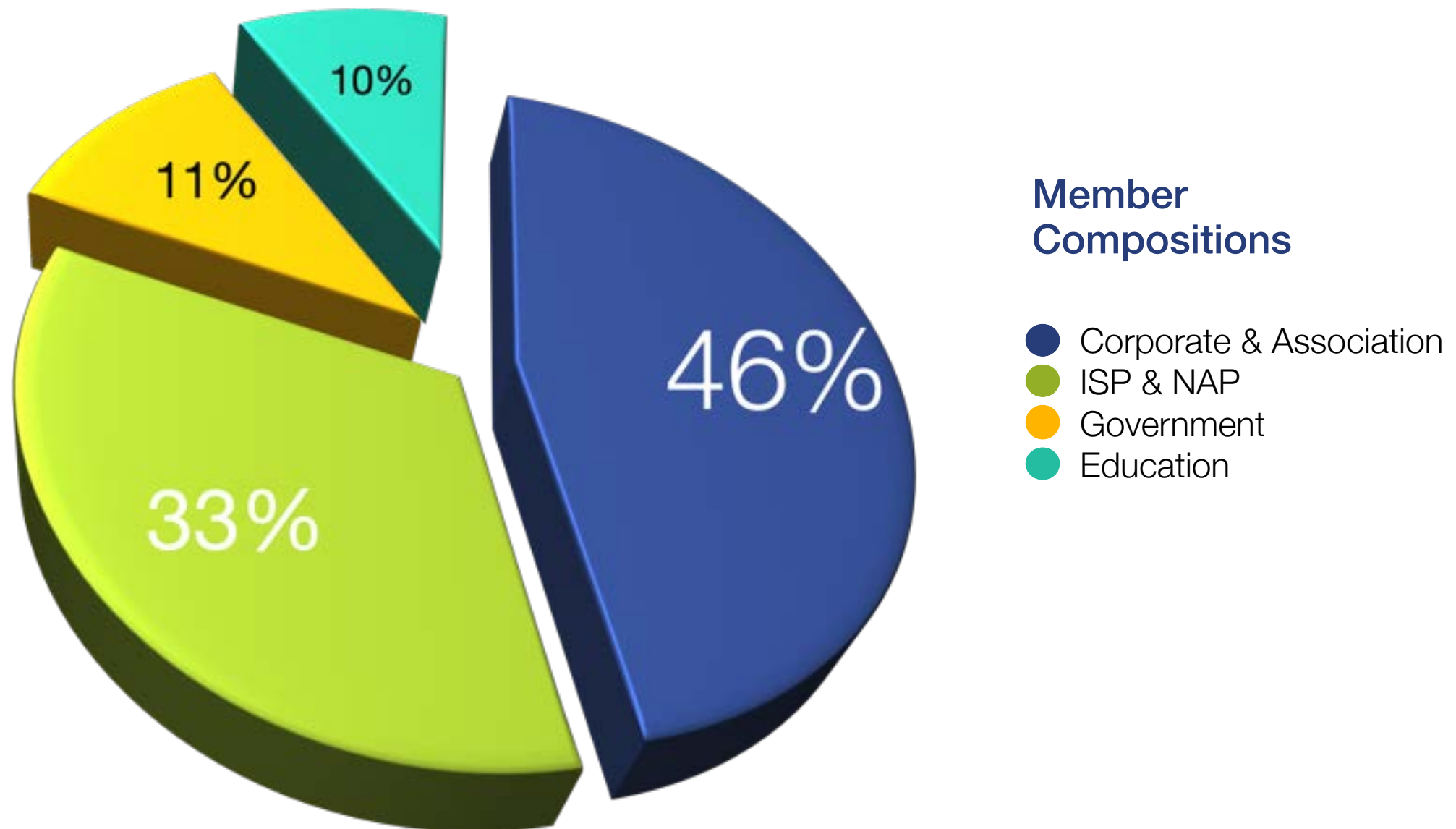
(February 2021)



IDNIC Member Distribution (February 2021)

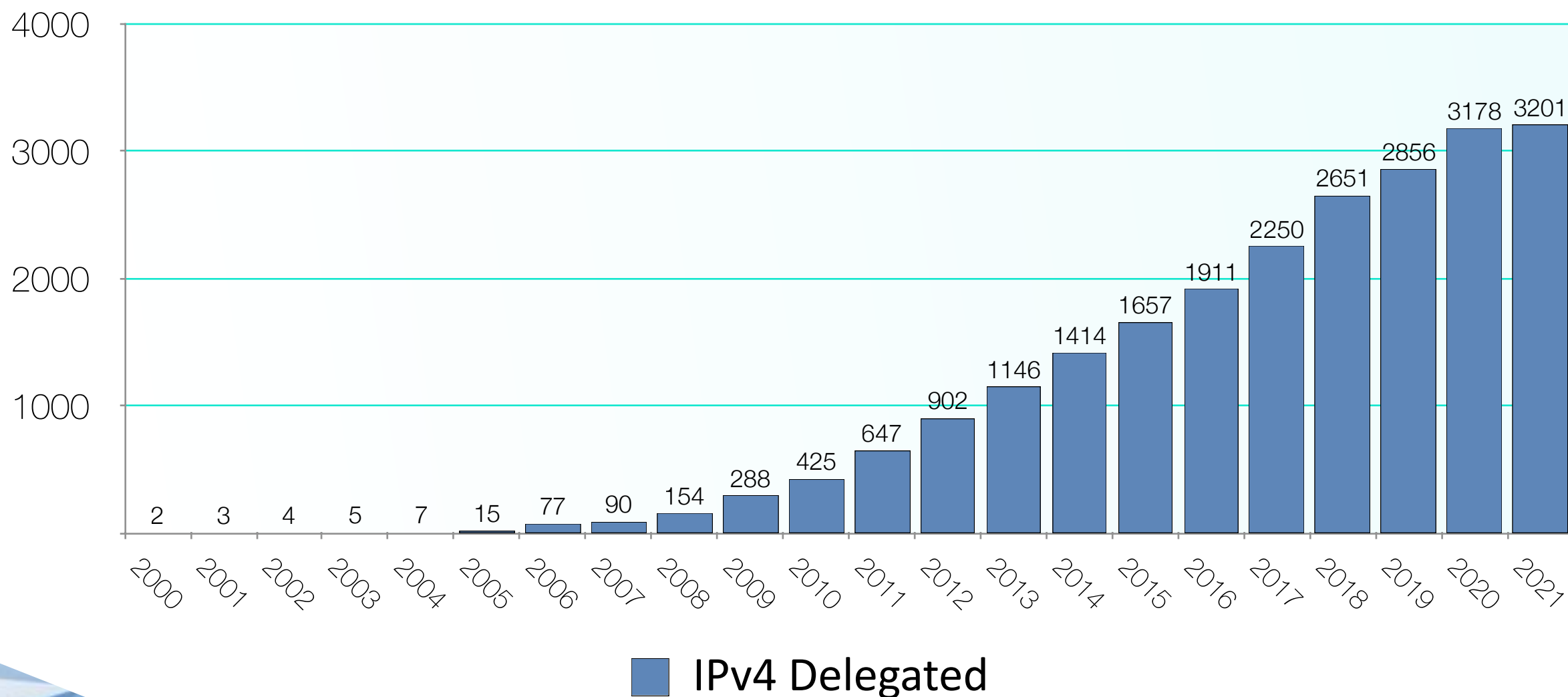


Member Compositions (February 2021)



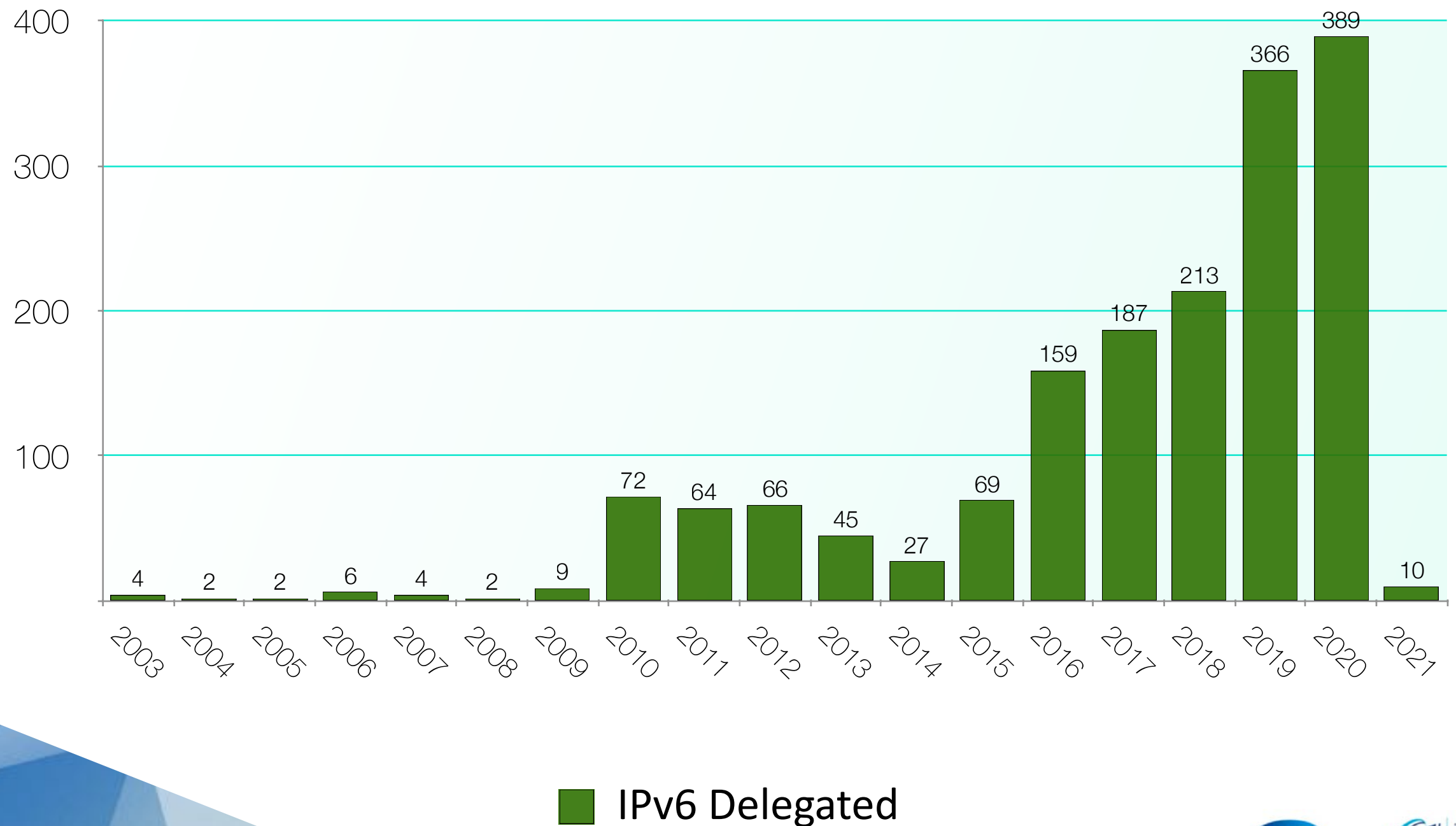
IPv4 Delegated

>18 million IPv4 Address



IPv6 Delegated

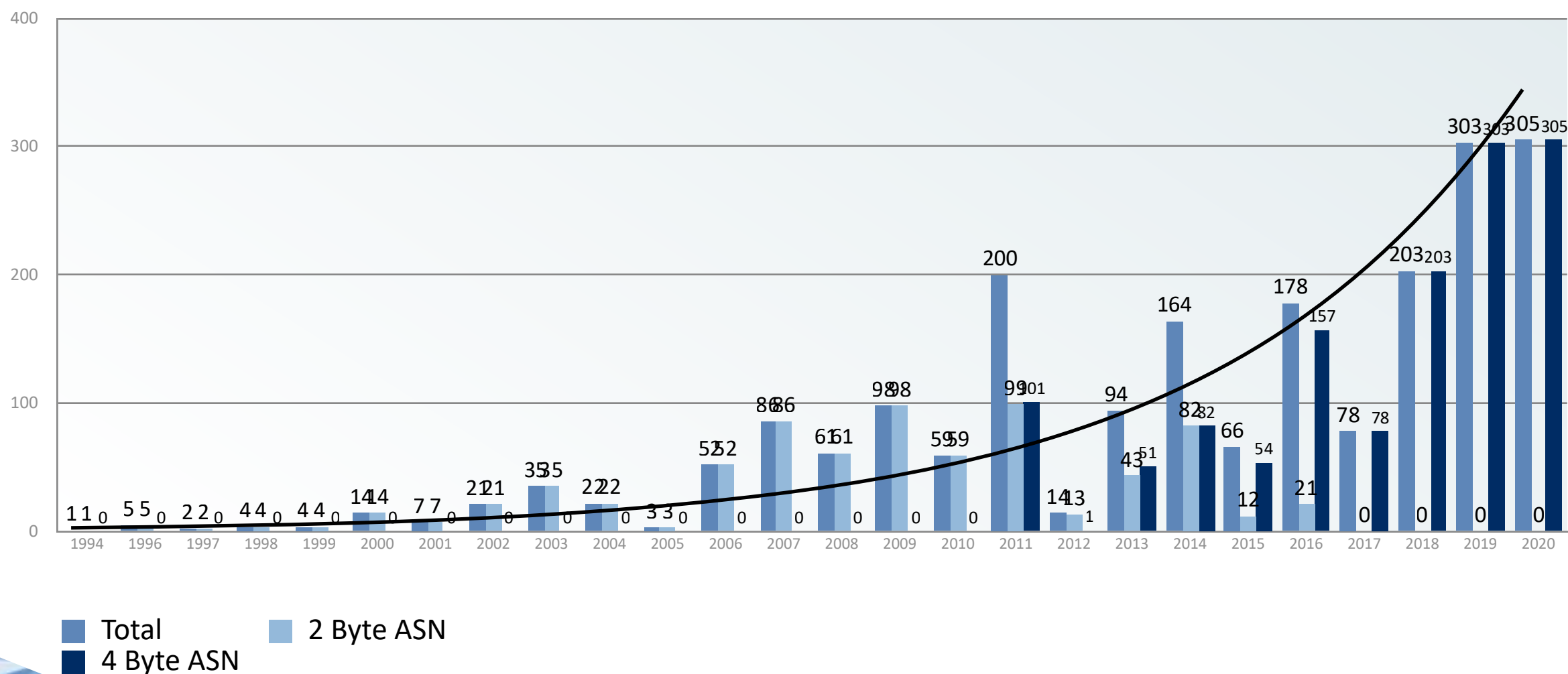
>43 million /48 IPv6 Address



ASN Delegation

(December 2021)

>2100 ASN Delegation



Serving IDNIC Members

IDNIC
Activities



IDNIC IRR

IDNIC New Service 2021



IDNIC IRR



irr.idnic.net



<ftp://irr-mirror.idnic.net>



infra@idnic.net

Mirrored by
RADb

Filters
Route Object
With
ROA

```
→ whois -h irr.idnic.net -- "203.119.13.0/24AS4622"
route:                203.119.13.0/24
descr:                ID-NIC
descr:                Indonesia Network Information Center
descr:                Jakarta Selatan
country:              ID
origin:               AS4622
mnt-by:               MNT-APJII-ID
last-modified:        2008-09-04T07:54:29Z
source:               IDNIC
rpki-ov-state:        valid
```

RPKI IRR Validation▶



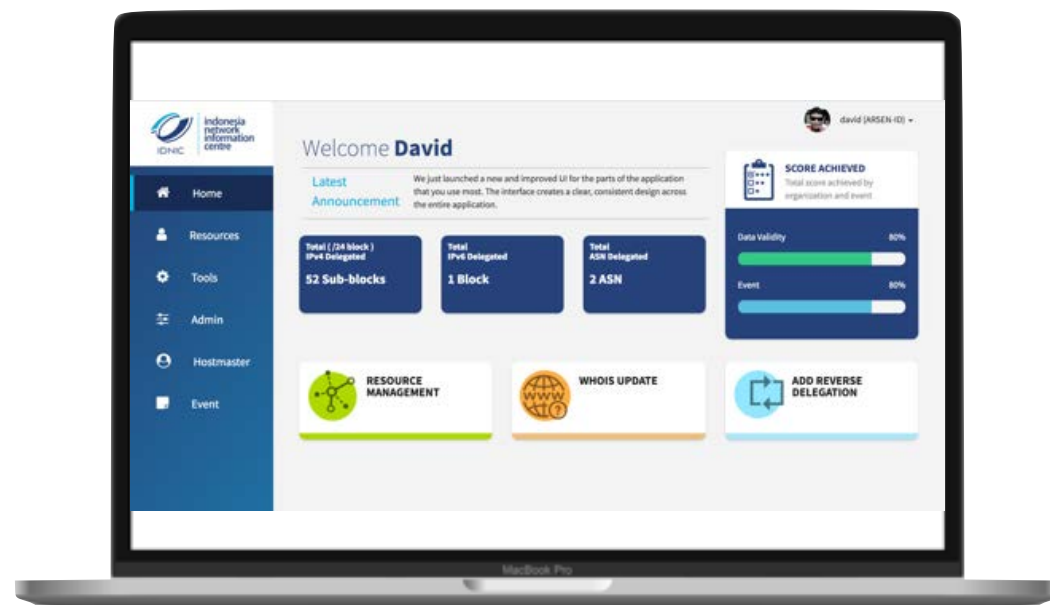
MyIDNIC Portal

Update

myIDNIC

A web portal we
dreamed for more
than 10 years ago

Online portal for
IDNIC Member for:



Manage IPv4,
IPv6, and ASN
resources

Whois
Update &
Tools

Trouble
Ticket

ROA & RPKI
Requests

New

IRR
Management

Supporting National Internet Development

IDNIC
Activities



IDNIC RPKI Progress

RPKI Roadmap Indonesia

**Done
2019**

Phase 1

Deployed production ready
CA & RPKI System



**Done
2020**

Phase 2

Allow IDNIC Member to create ROA from
myIDNIC



**Done
2020**

Phase 3

IDNIC ROA dashboard & monitoring
kadabra.id





- Home
- BGPPlay
- Dataset
- Apa itu KADABRA?
- Bergabung dengan KADABRA

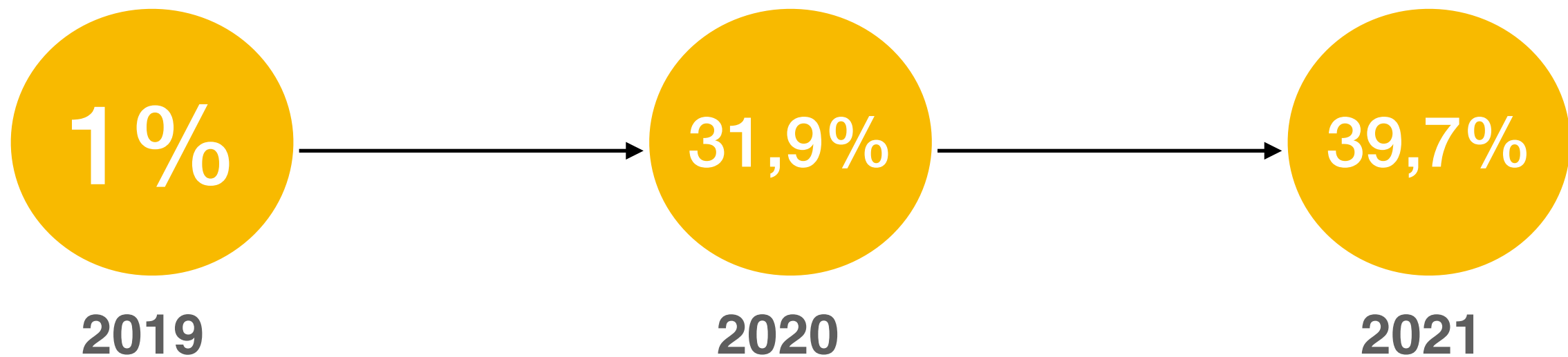
Routing Information Service Live (RIS Live)

RIS Live is a feed that offers BGP messages in real-time. It collects information from the RIS Route Collectors (RRCs) and uses a WebSocket JSON API to monitor and detect routing events around the world. A non-interactive full stream ("firehose") is also available.



State of RPKI in Indonesia

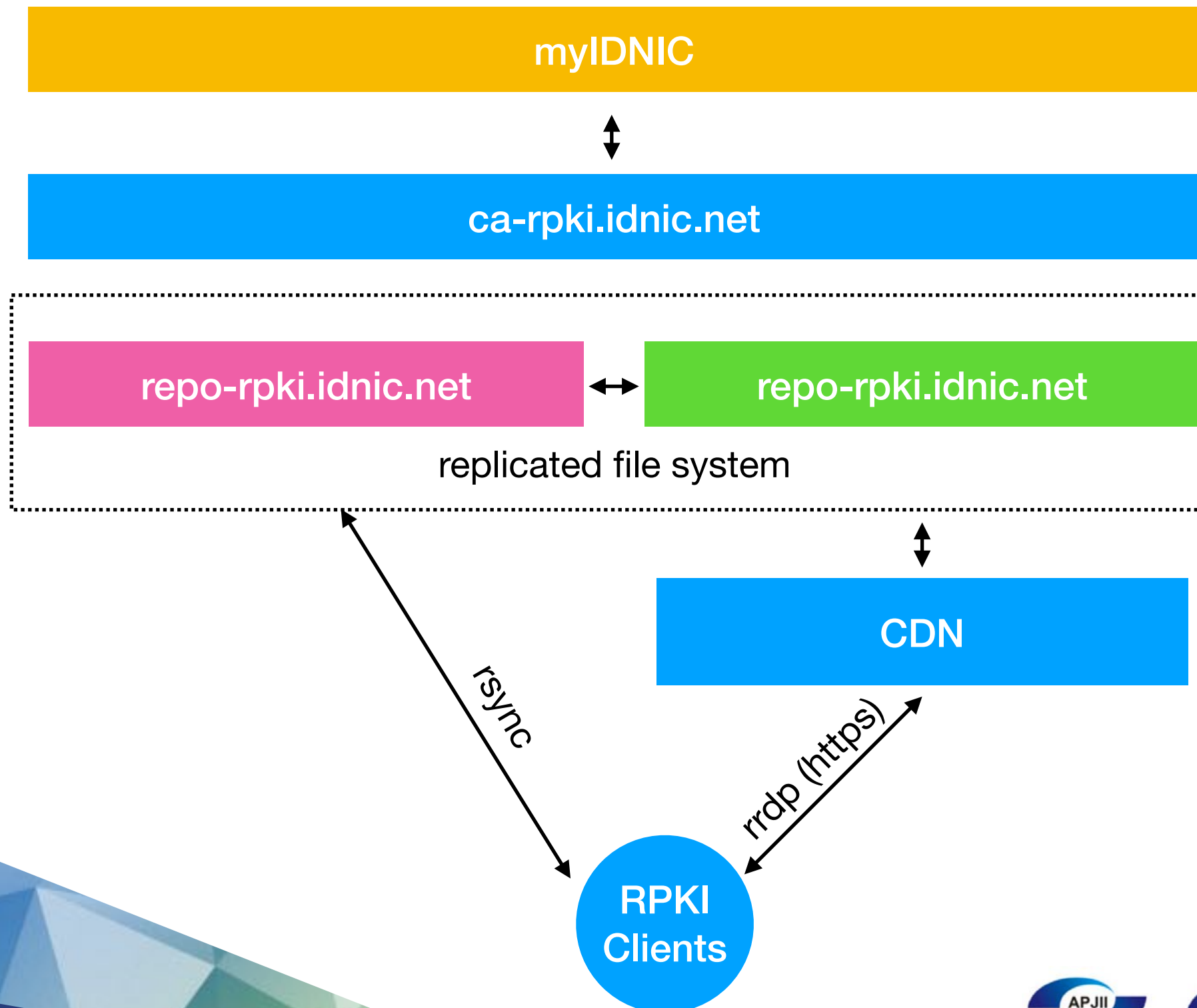
BGP Advertisement Covered by RPKI



<https://www.nlnetlabs.nl/projects/rpki/rpki-analytics/>

RPKI Resiliency Program

On progress partnering with NL NetLabs

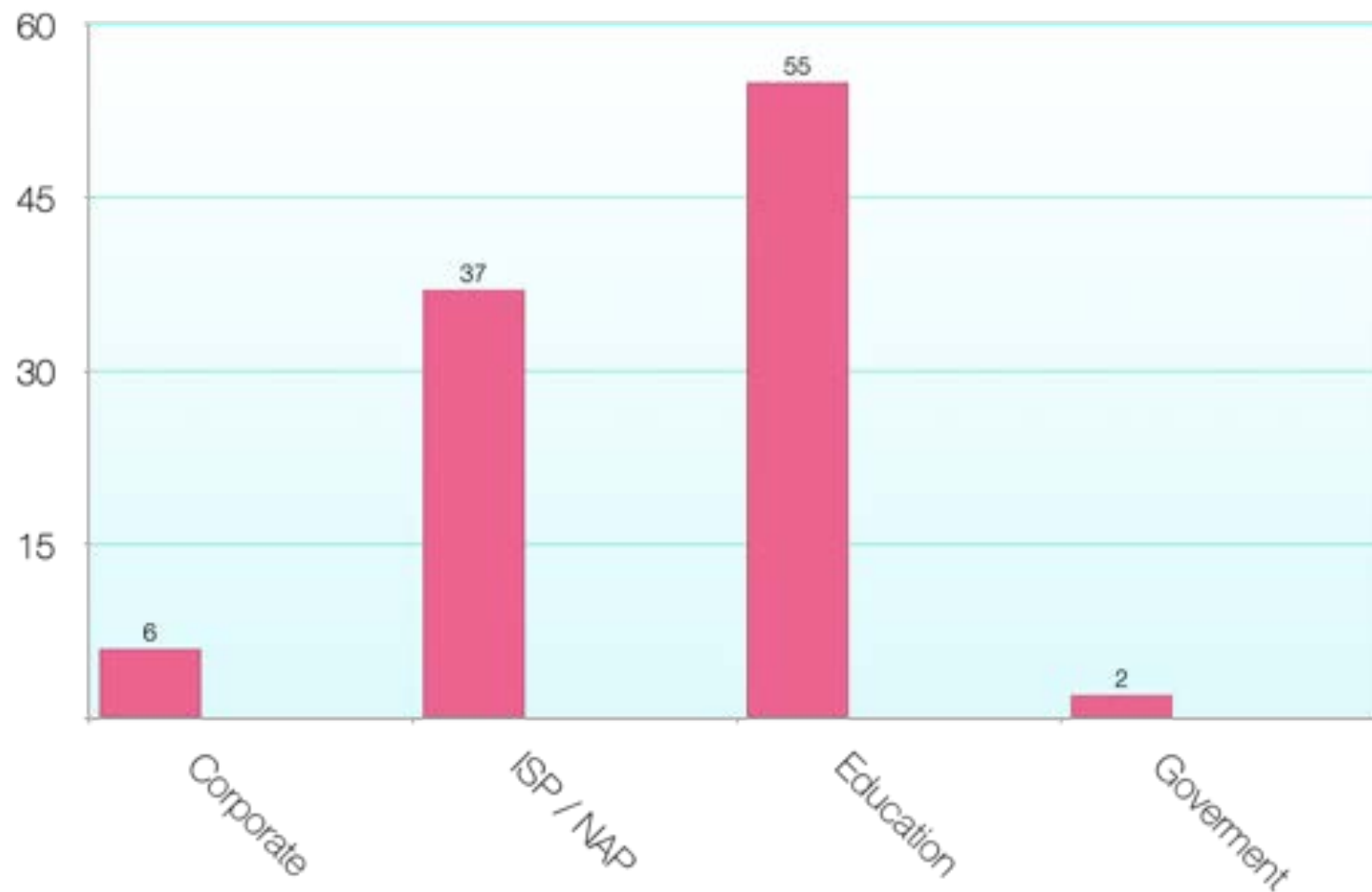




IPv6 Development



Indonesia IPv6 Readiness (Januari 2021)



Percentage Of Advertised IPv6

From > 2200 IDNIC
Members
(Januari 2021)

Indonesian “Big” Operators Testing IPv6

- 1 PT Telekomunikasi Indonesia
AS Rank 1st
- 2 PT. Telekomunikasi Selular
AS Rank 2nd
- 3 PT XL Axiata
AS Rank 4th
- 4 Hutchison CP Telecommunications, PT
AS Rank 5th

AS Rank From **528** AS In Indonesia Based On
<https://stats.labs.apnic.net/cgi-bin/aspop?c=ID>

Problems

- 1 Reachability from end user / CPE side using IPv6 to access IPv4 content
- 2 IPv4 Content unreachable via native IPv6

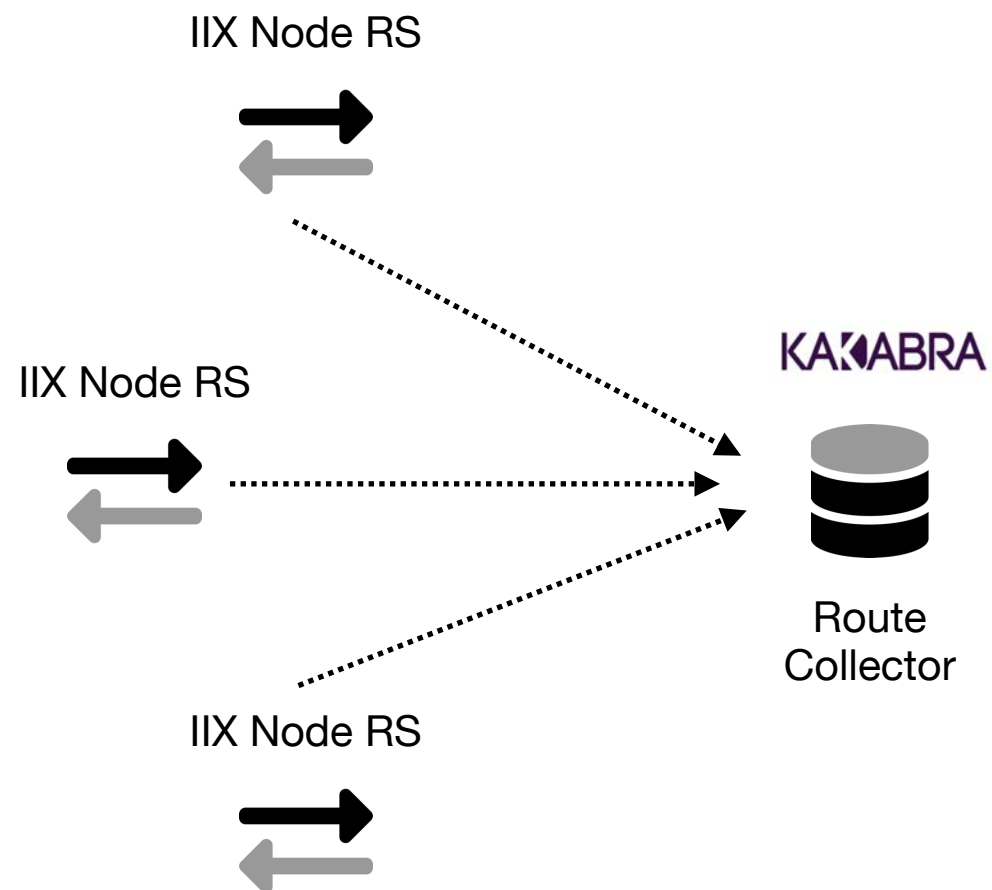


IDNIC

Route Collector & Route Server Project

IDNIC RC & RS Project

Deploying **RPKI Compliant** route server to all Indonesia Internet Exchange (IIX) nodes



Total 11
IIX Nodes

Route
Collected to
KADABRA

Standardised
BGP
Community

IDNIC RC & RS Project

What we achieve



Able to track national RPKI deployment progress



Troubleshoot & track routing incident with BGPlay platform



Routing incident alerting to members

Product Development

IDNIC
Activities

KAKABRA

Overview

03

Statistics

Our resources growth statistics tracker, track growth of ASN, Prefix(es) and RPKI/ROA Growth

01

Routing Information Service

All data collected through our RIS services
Each prefix(es) and ASN(s) scanned and recorded to our databases for analytics purposes

04

Public RTR server to accelerate RPKI deployment in ID. Available at rpki.kadabra.id
tcp/3323 or tcp/8292

Incidents Records

We have successfully integrated BGPLAY to analyze our national internet exchange.

BGPlay is a framework from RIPE NCC

02

KADABRA



IN PROGRESS



Enhancement

We still in progress to enhance our statistics dashboard, it will able to detect detailed statistics

Integration

We will implementation alerting to our members to receive notification if their resource was hijacked or there's route leaks in related exchange

Data Exchange

As source of truth for Indonesia, we need to provide exchange mechanism to external parties.

KAKABRA



Training & Events

IDNIC
Activities

1

IDNIC

Online 360 Experience 3rd AMM

IDNIC History & Beyond



IDNIC History & Beyond



360 Virtual Online Experience



Opening Speech by APNIC & NIRs



4 Online Workshop



Featuring IDNIC Hostmaster
from 1996 - 2020

>400 Workshop Participants

>500 Conference Participants



Thanks to:

- Mr. Paul Wilson
- Mr. George Kuo
- Mr. Sanjaya

IDNIC History & Beyond

History Of IP In Indonesia

Cyber Security

Internet for Online Education



2

IDNIC Webinars

IDNIC

Webinar

IDNIC Workshop During COVID-19 Pandemic

During COVID-19 pandemic, IDNIC replacing
Worskhop program with webinar. We run webinar on
zoom platform, with virtual hands on lab.

Total Series

3

Total Event

12

Total Participant

424

Livestream Viewers

2,284

IDNIC Webinar 2020



Virtual Lab



200 Participants Capacity

Courses

IPv6

Information Security

RPKI

BGP

Total Series

4

Total Event

16

Total Participant

1214

Livestream View

8765

3

IDNIC Academy



Virtual Lab



Available free for IDNIC
Members (login via SSO)



750+ Users



E-Certificate

Courses

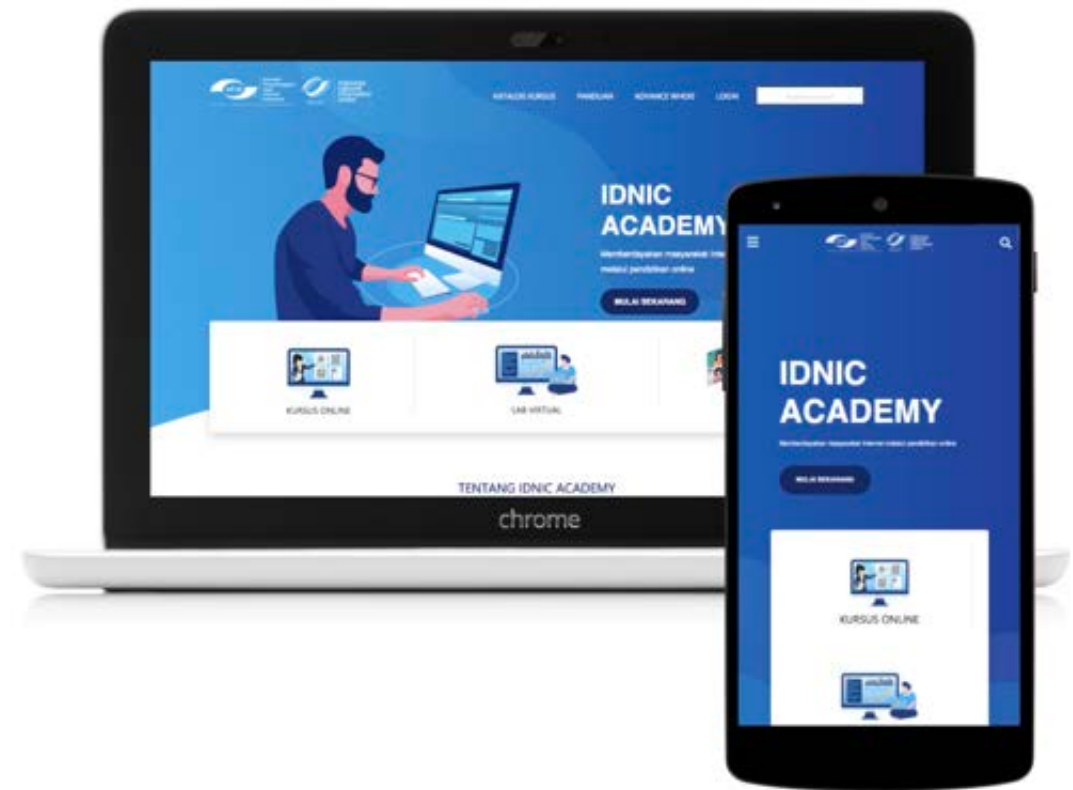
IPv6 Fundamental

Information Security Fundamental

Internet Resource Management (Upcoming)

BGP Basic (Upcoming)

Cybersecurity Awareness (Upcoming)



Cooperating With APNIC

IDNIC
Activities

1

Deploying IDNIC IRR & Mirrored
to RADb
(Done)

2

IDNIC NIC-HDL Update to
-IDNIC (On Progress)

3

Whois RDAP Development
(On Progress)