



RIPE NCC
RIPE NETWORK COORDINATION CENTRE

LIRs and the Internet Ecosystem

Webinar (2 hours)

RIPE NCC Learning & Development

A close-up photograph of a professional condenser microphone mounted on a boom arm. The microphone has a silver mesh grille and a black body. The boom arm is black and extends from the left side of the frame. The background is blurred, showing a computer monitor and other studio equipment. A white banner with orange text is overlaid at the bottom of the image.

This session is being recorded

Agenda



LIRs and the Internet Ecosystem

1. The Internet Registry System
2. RIPE and the RIPE NCC
3. How to improve the Internet
4. The LIR Portal
5. The RIPE Database

LIRs: Manage your IP Addresses and AS Numbers

1. Which Internet Numbers does the RIPE NCC distribute?
2. How to get Internet Numbers from the RIPE NCC
3. How to transfer them to/from another LIR
4. Using the Internet Numbers
5. Tips and tricks

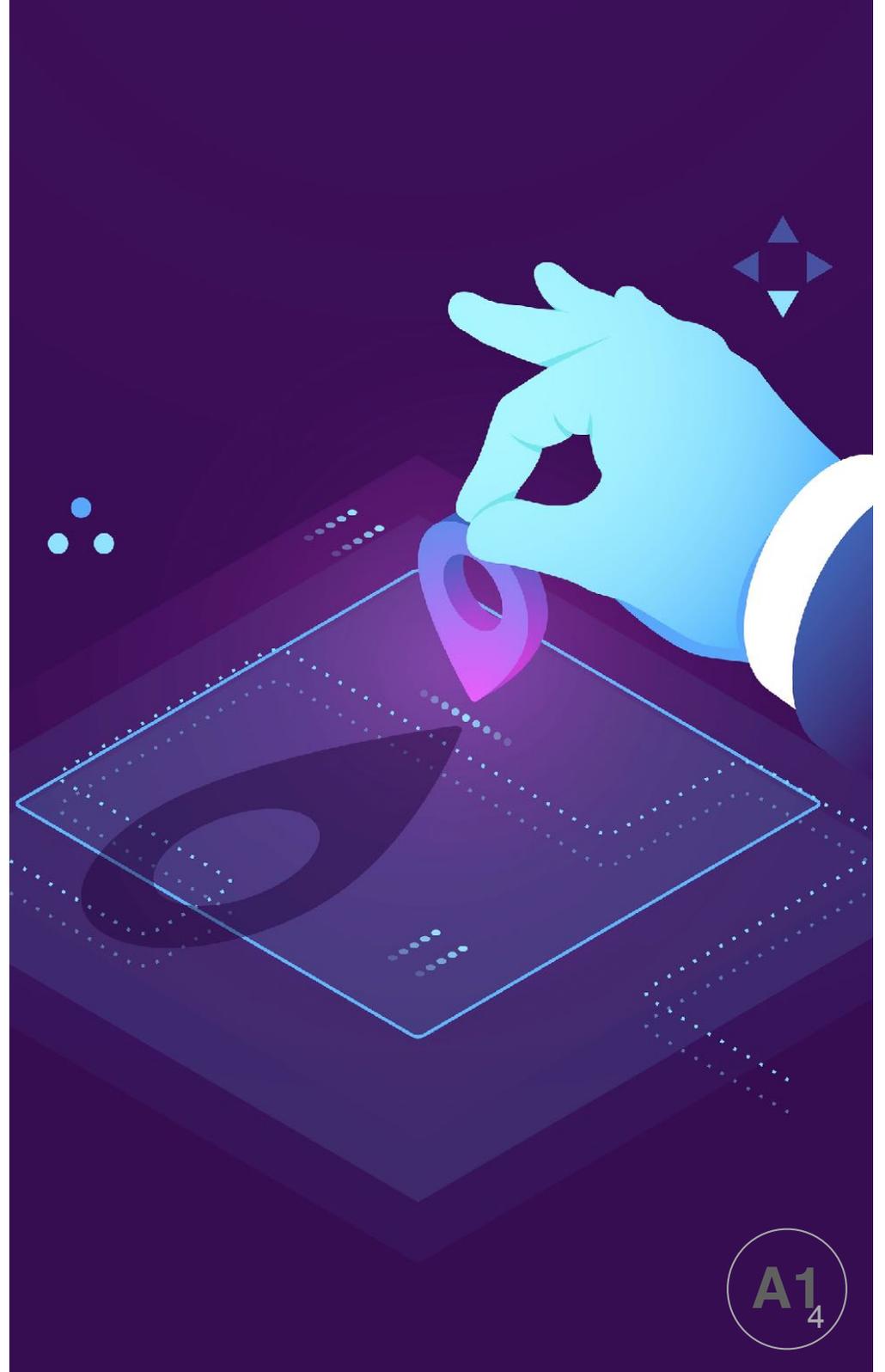
Take the poll!

What does an **LIR** do?

Please type in your answer

 2 min.

A1
4





The Internet Registry System

Section 1 of 5



Internet Assigned Numbers Authority



All five RIRs are:

- Not-for-profit organisation
- Funded by membership fees
- Policies developed by regional communities
- Neutral, impartial, open, and transparent

RIR = Regional Internet Registry



RIRs are responsible for:

- Keeping the registry up to date, correct, and secure
- Using hierarchical allocations
- Maintaining neutrality towards all members





The RIPE NCC Service Region

Europe, the Middle East, and parts of Central Asia



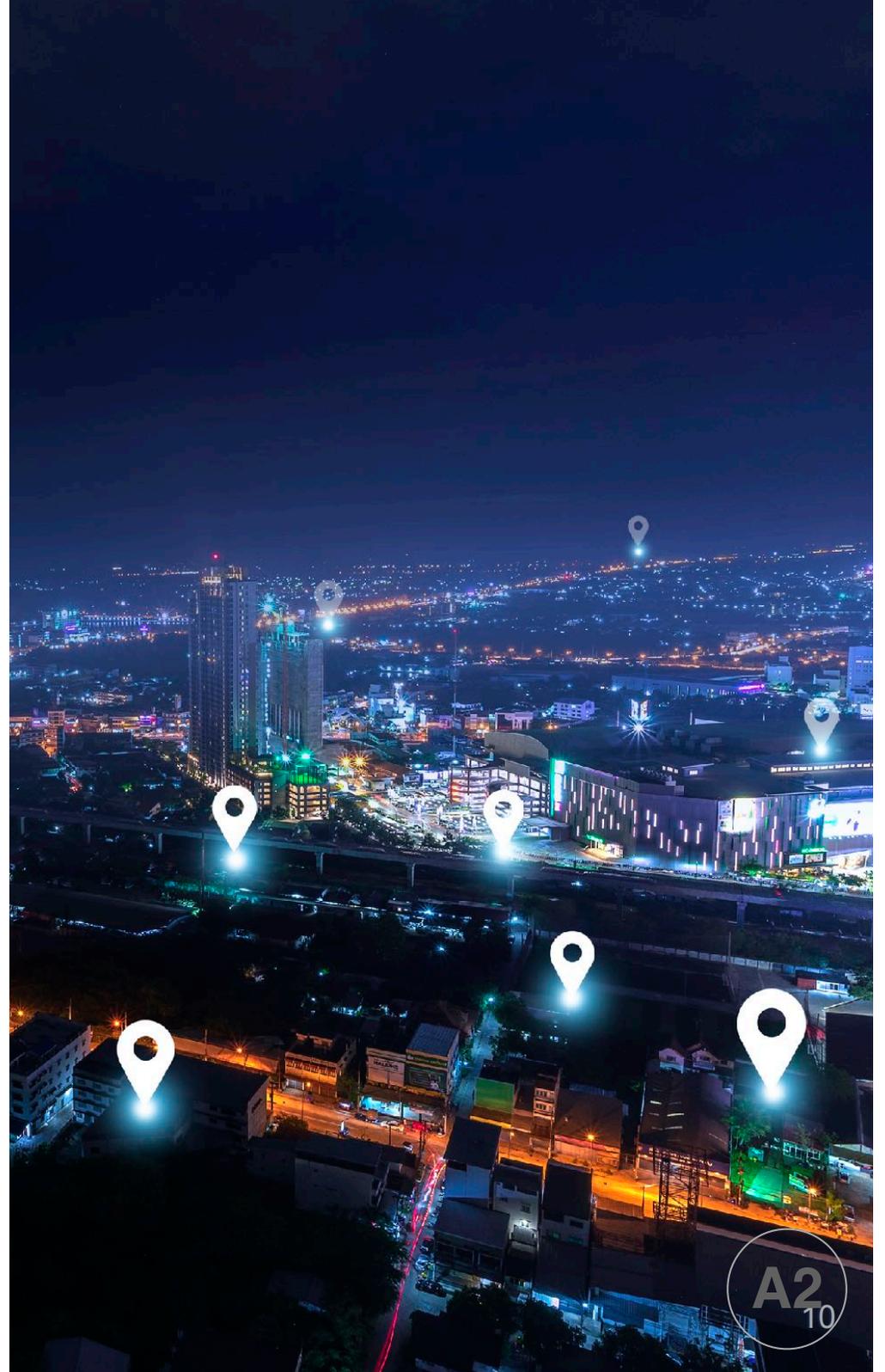
LIRs: Local Internet Registries

Take the poll!

Can **anybody** become an LIR?

Please choose the correct answer.

 2 min.



A2
10



Who can become an LIR?

- Organisations:
 - Internet Service Provider (ISP)
 - University
 - Bank
 - ...
- A private person

Any **legal entity** or **natural person** can become a member of the RIPE NCC → become a Local Internet Registry (**LIR**)

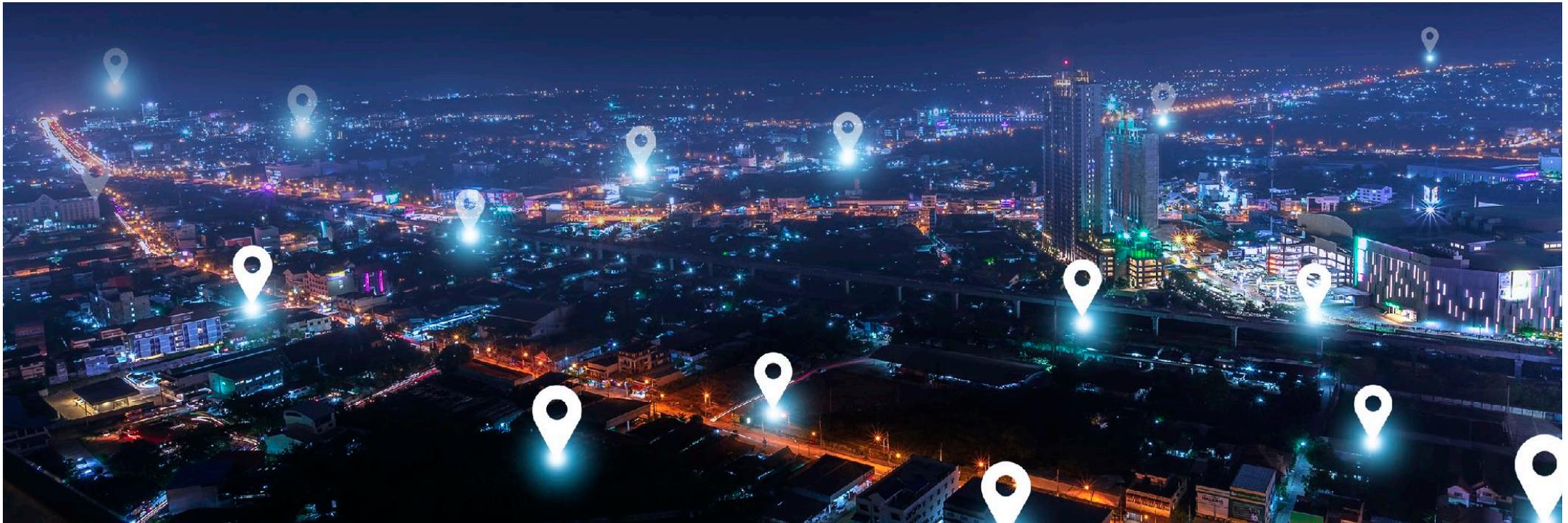
The RIPE NCC membership landing page:

<https://www.ripe.net/participate/member-support>



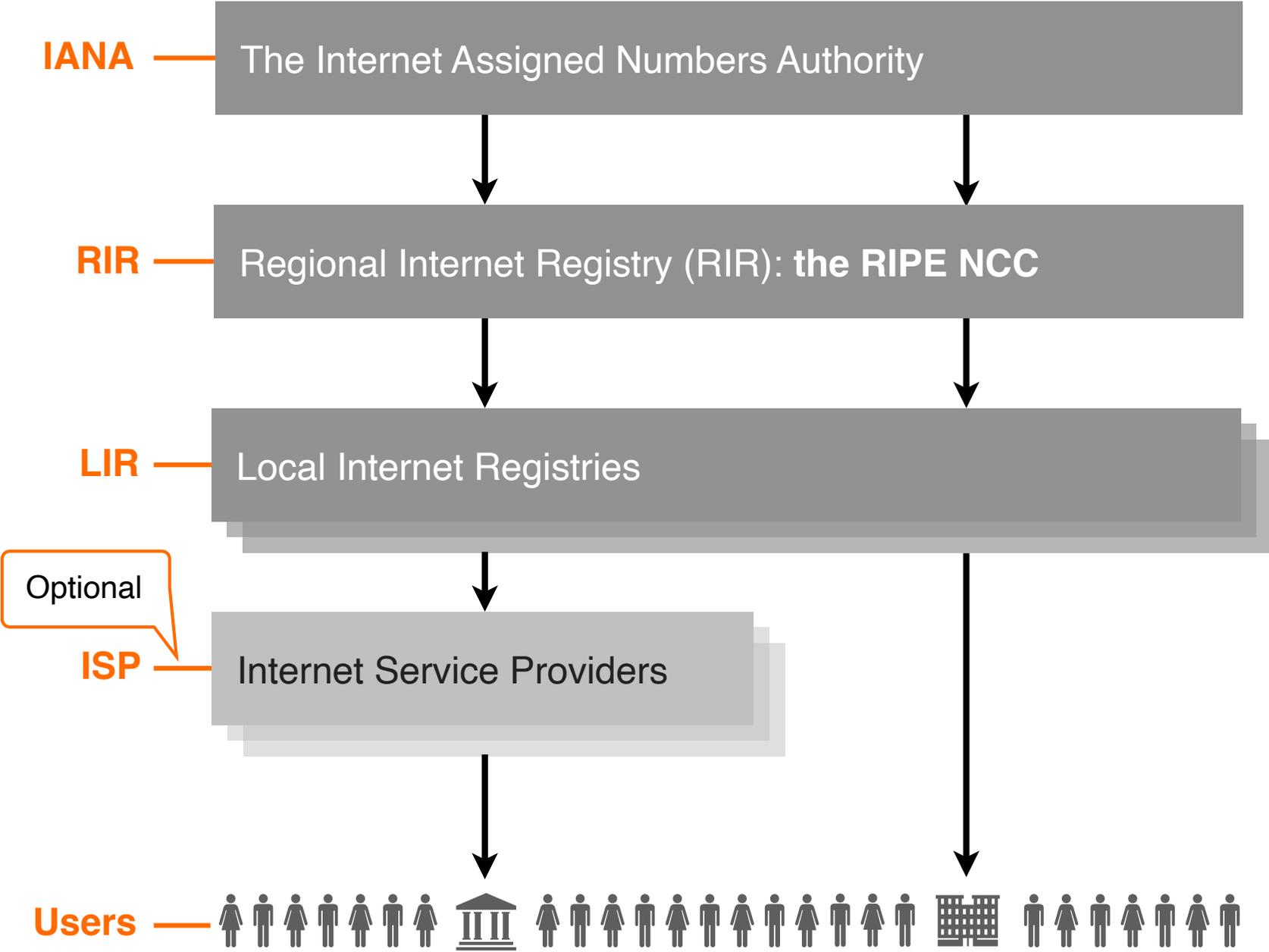
What are LIRs responsible for?

- Distributing Internet Number resources to End Users
- Registering them in the RIPE Database
- Keeping the registry up-to-date
- Can participate in discussions on the future of the RIPE NCC





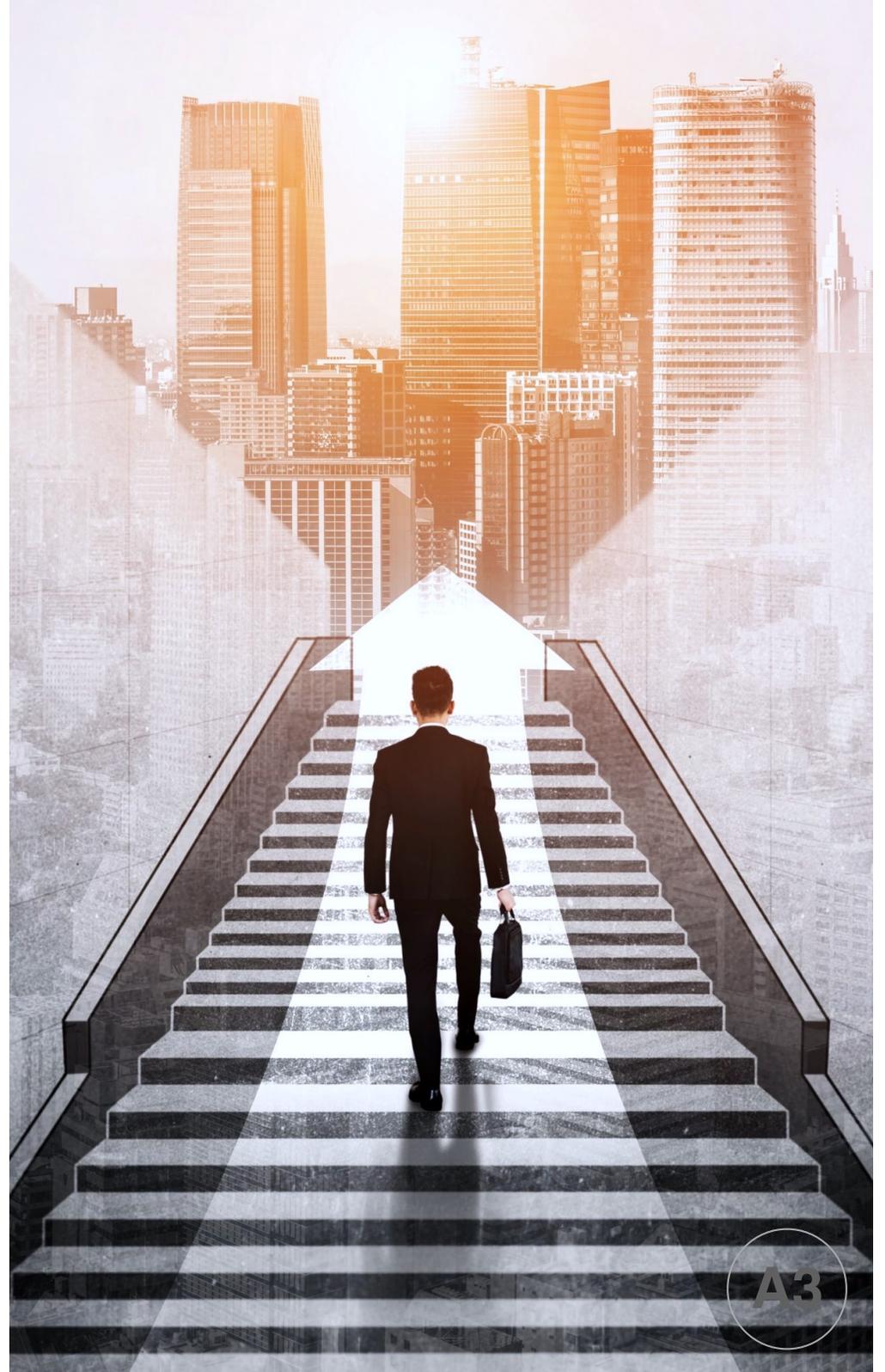
There is a Distribution Hierarchy



Take the poll!

Can an End User get Internet Number resources **directly** from the RIPE NCC?

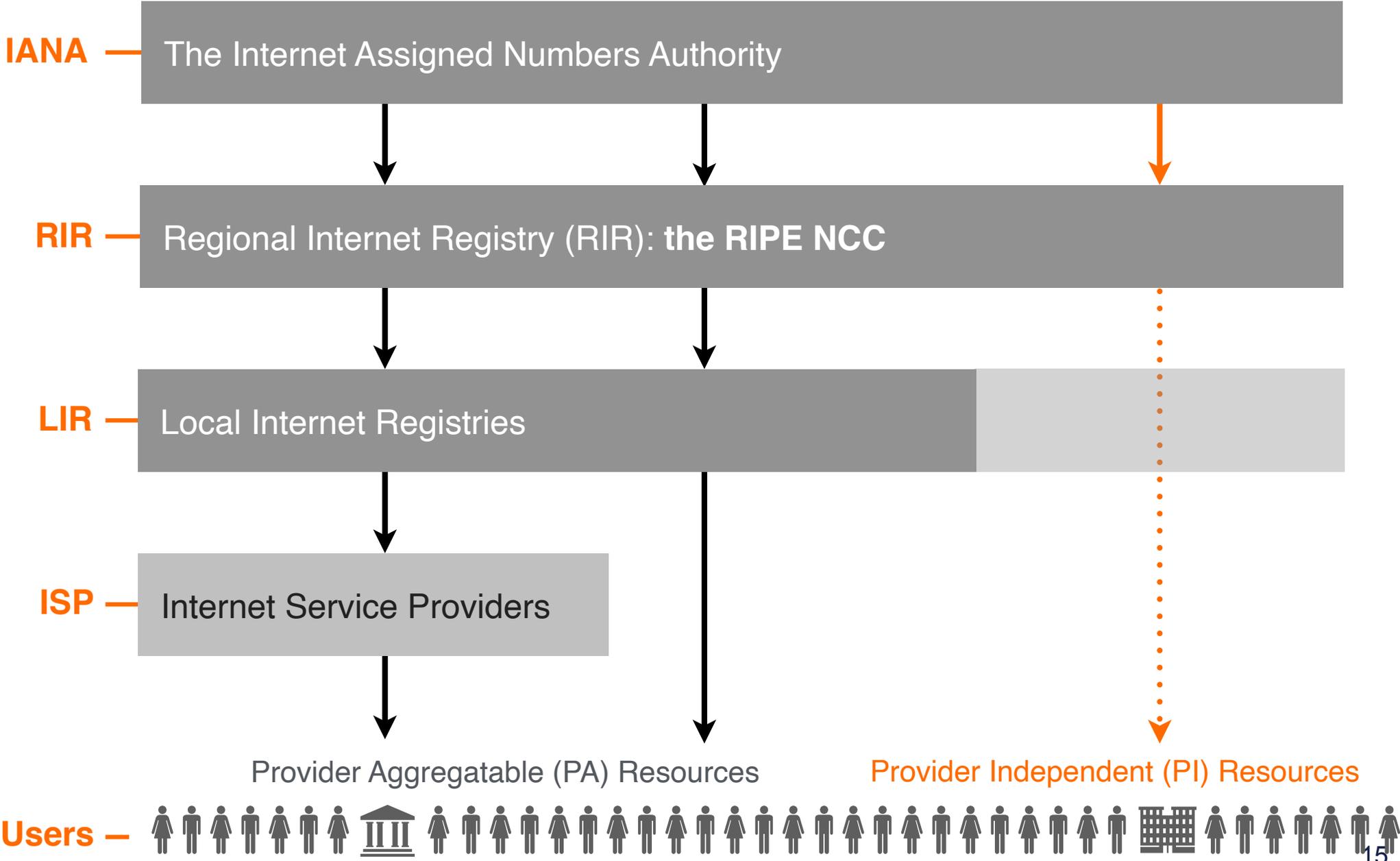
 2 min.



A3



PA and PI Resources



Take the poll!

Which **Internet Number resources** does **each RIR** distribute?

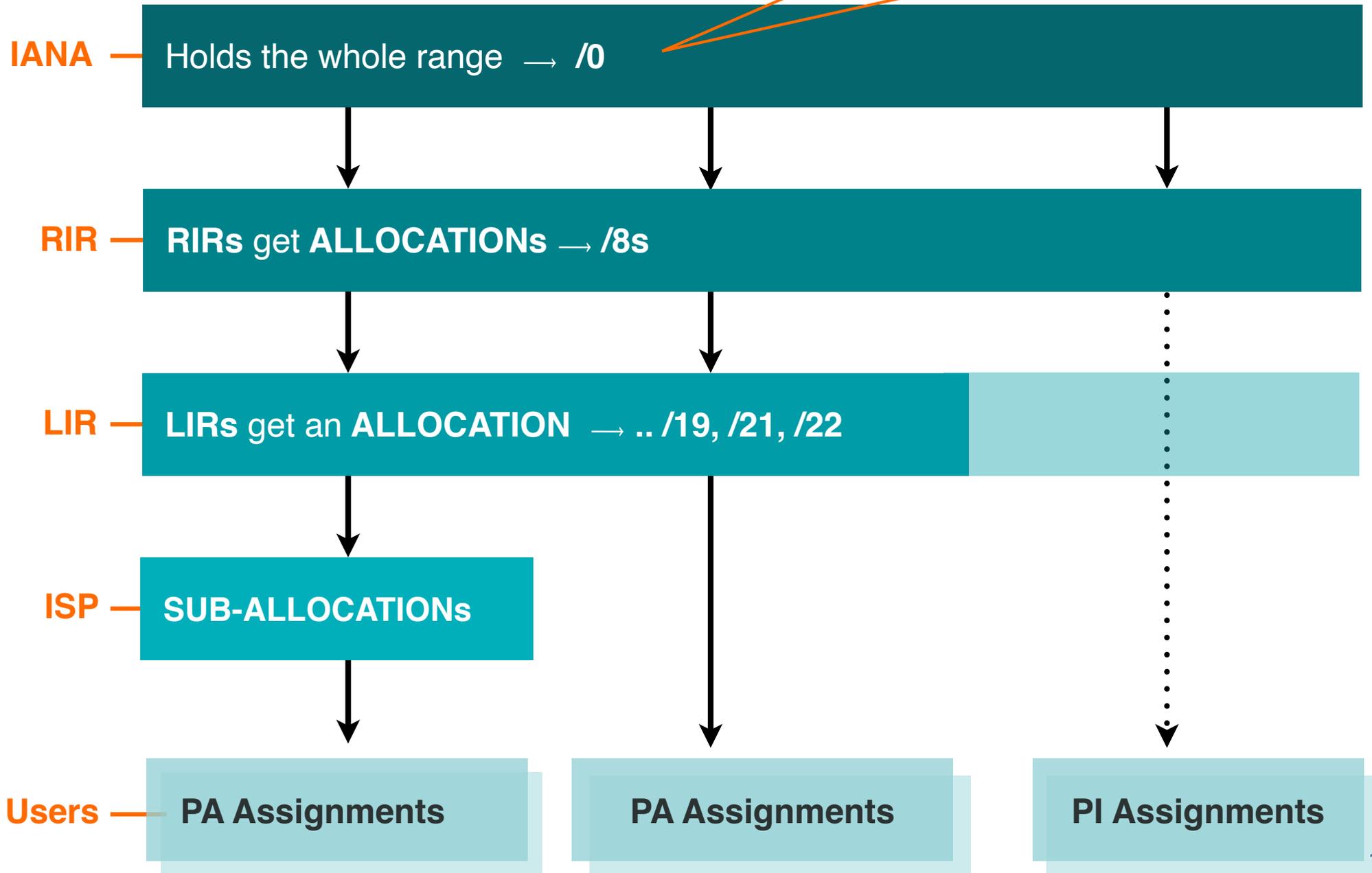
Please type in your answer.

 2 min.



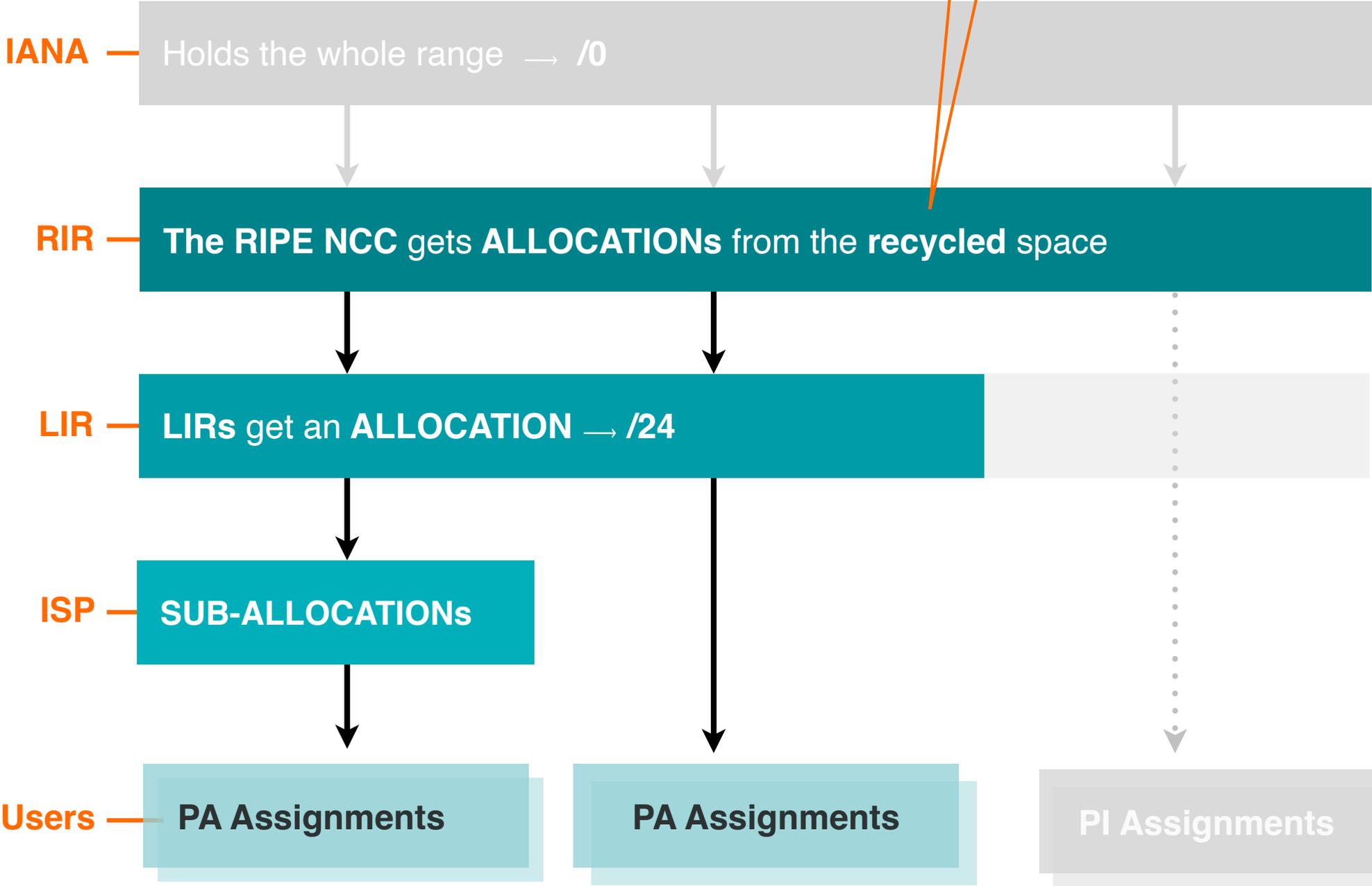
IPv4: How it used to be

/8 = 16,77 million IPv4 addresses
/16 = 65536 IPv4 addresses
/24 = 256 IPv4 addresses





How it is for IPv4 now



Take the poll!

How many IPv4 addresses are there in one **/24 prefix**?

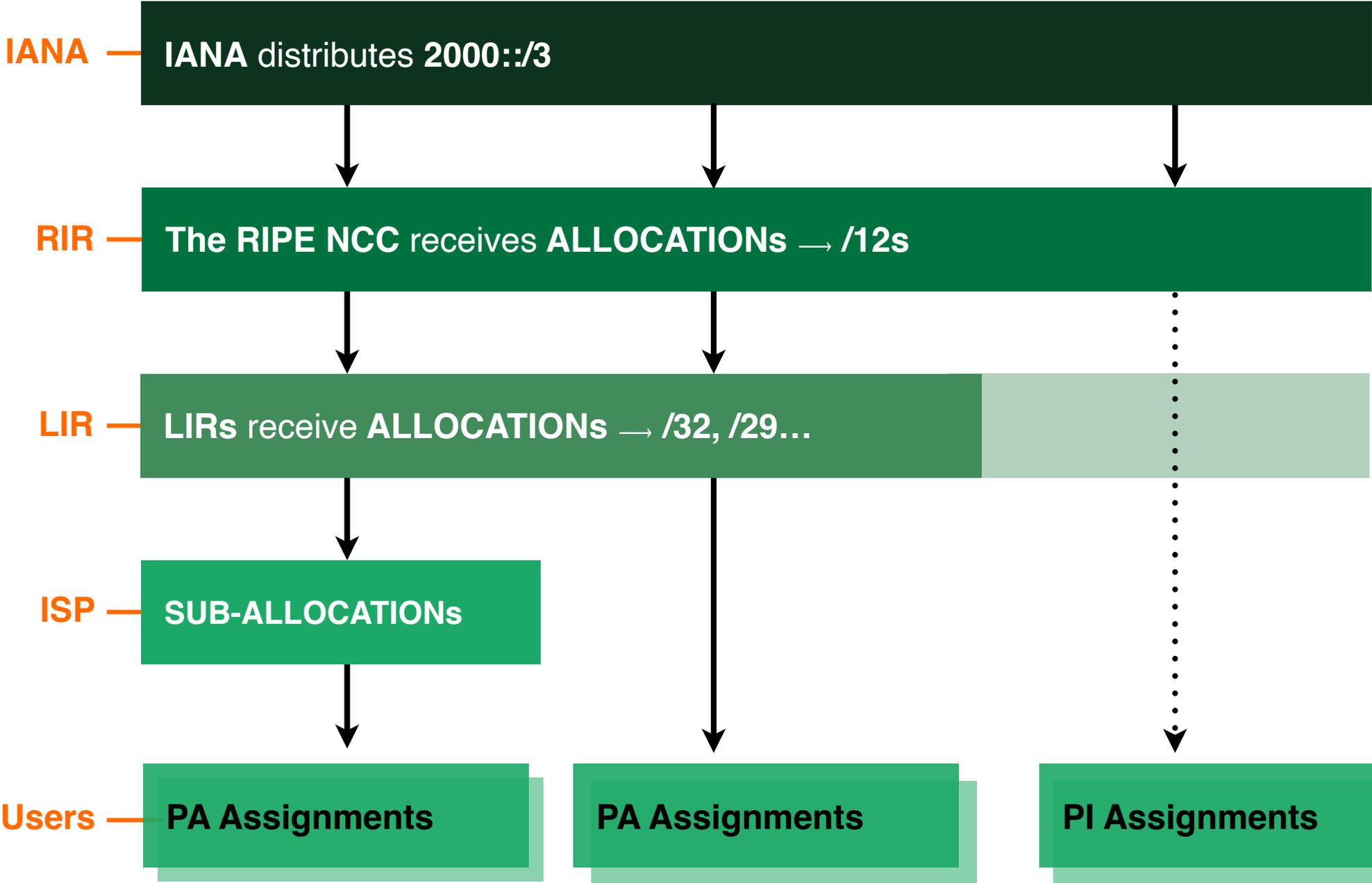
Please choose the correct answer in the poll.

 2 min.

A5



How it works for IPv6



Take the poll!

How many of the following are there in one **/32** of an IPv6 prefix?

/48s

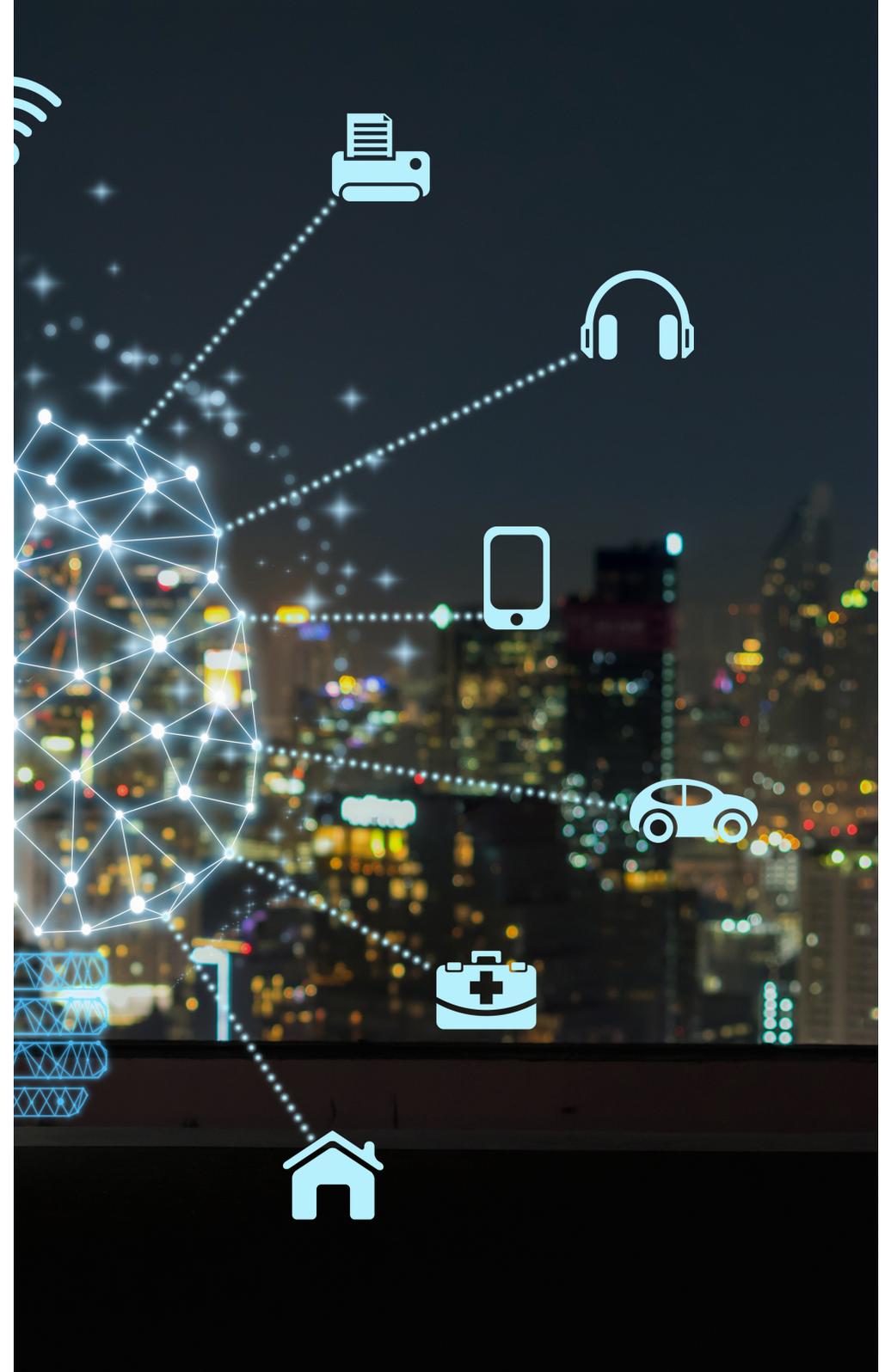
/56s

/64s

Please put your answers in the **chat window**

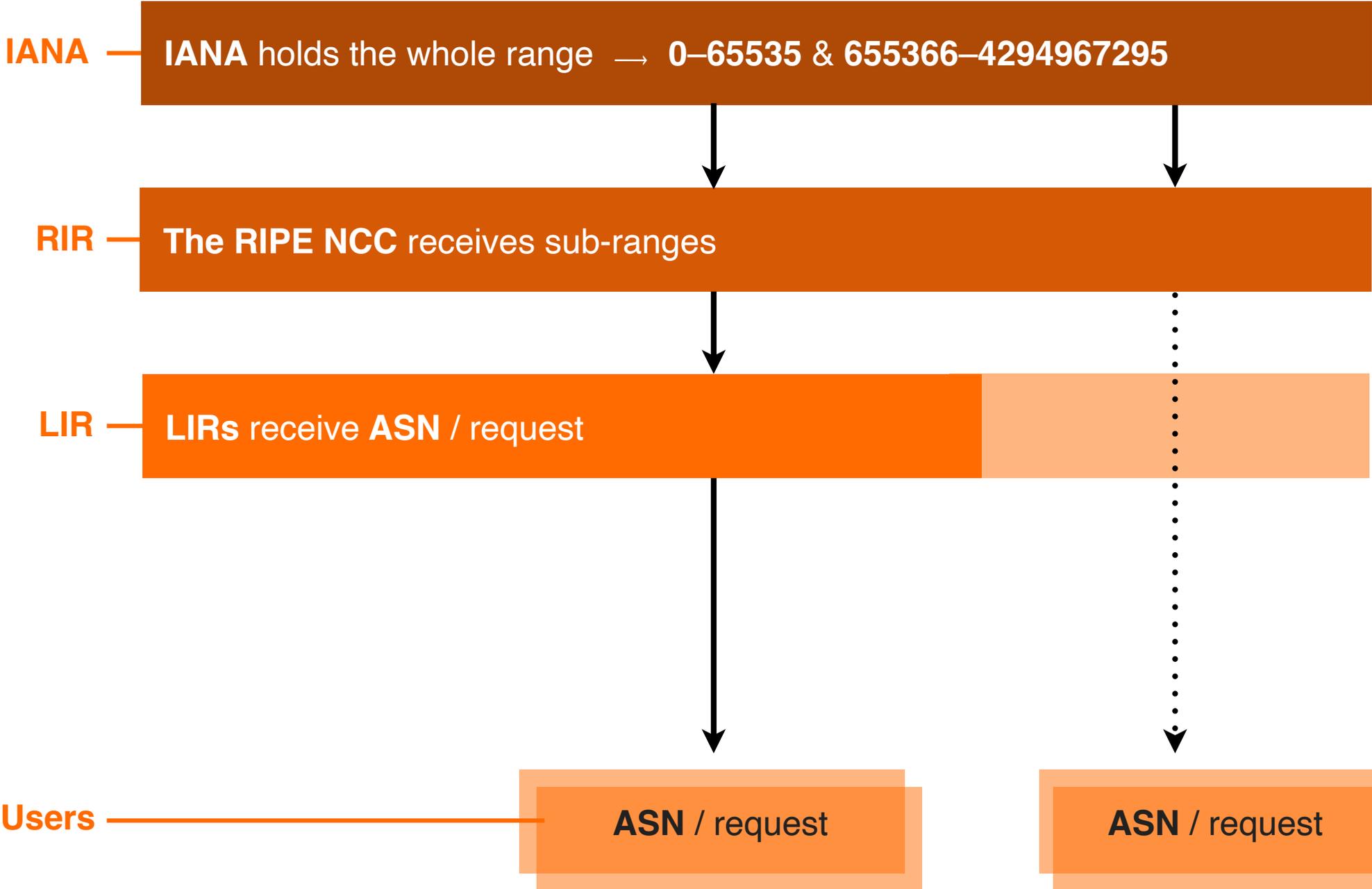
 2 min.

There is no poll pod for this poll





How it works for **ASNs**





Questions





RIPE and the RIPE NCC

Section 2 of 5



Take the poll!

What does **RIPE** mean?

Please choose the correct answer in the poll.



 5 min.

A6

Réseaux IP Européens (RIPE)



Discussion forum open to everybody interested

The RIPE community

The RIPE Network Coordination Centre



RIPE NCC

RIPE NETWORK COORDINATION CENTRE

- ~160 employees
- Offices in Amsterdam, Dubai and Moscow*

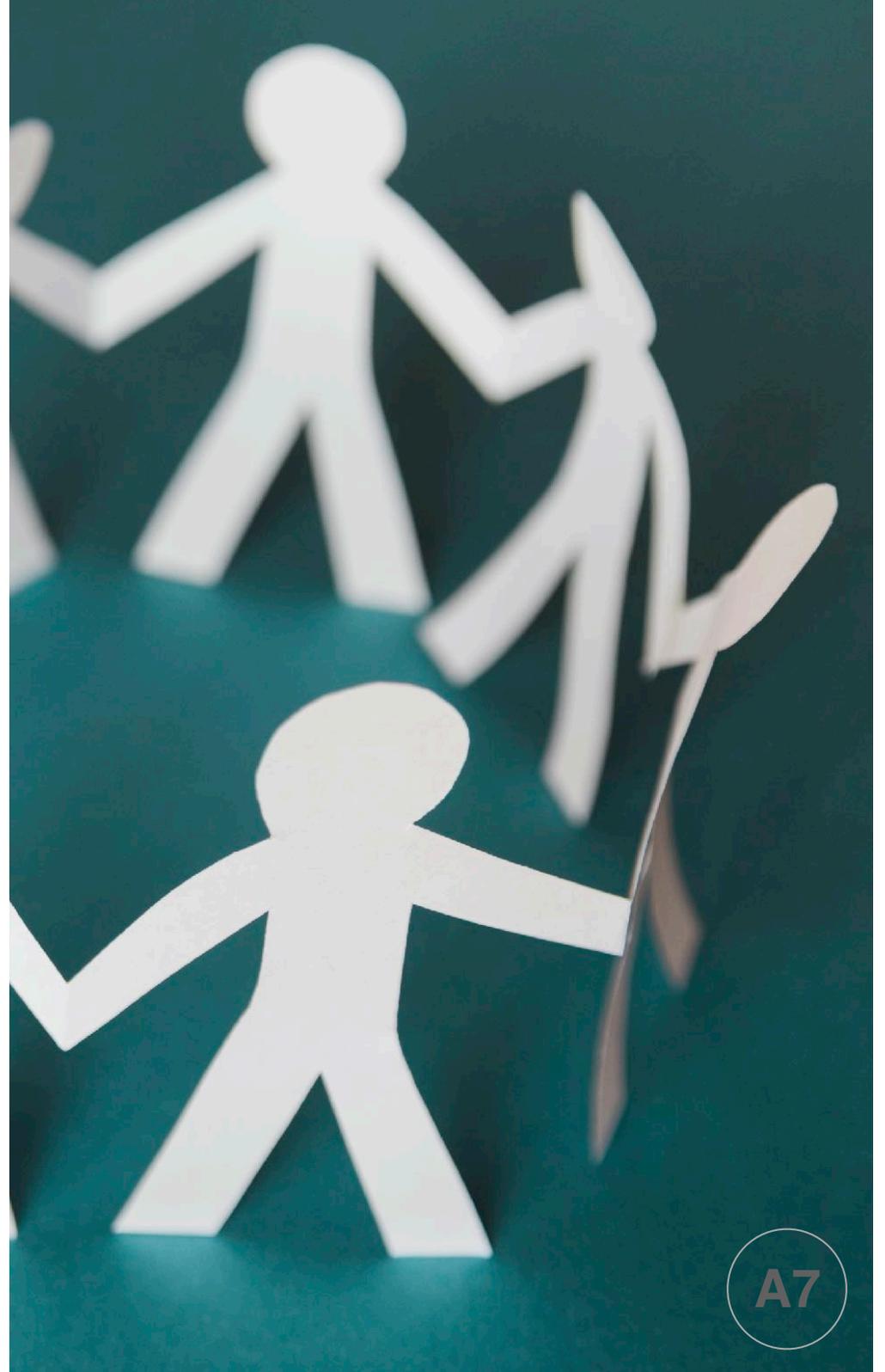
Take the poll!

What defines the **RIPE** community?

Please choose the correct answers.

 2 min.

A7





The RIPE community

- Started in 1989
- Discussion forum **open** to all parties interested
- Not a legal entity and **no formal membership**
- Develops **policies**
- Work done in Working Groups
- Activities are performed on a voluntary basis
- Decisions formed by **consensus**

The RIPE NCC



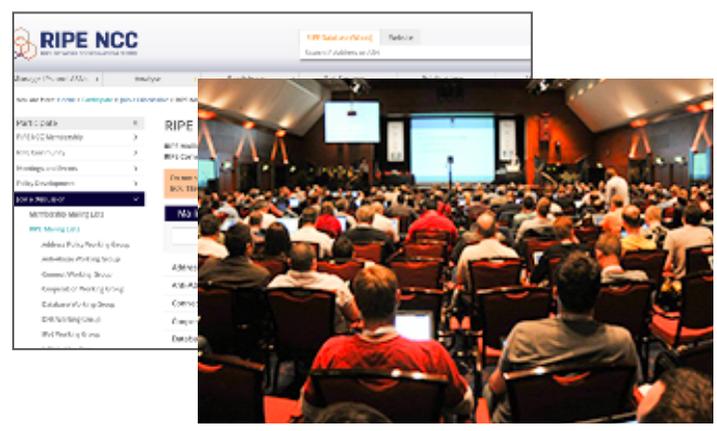
- Distributes IP addresses and ASNs
- Maintains the registry
- Outreach activities with governments and LEAs
- Internet measurements
- Operates the K-root name servers

LEA = Law Enforcement Agency

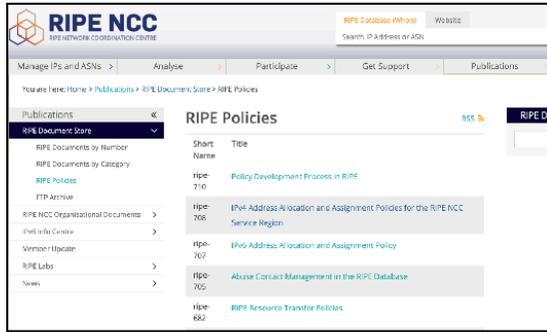
RIPE



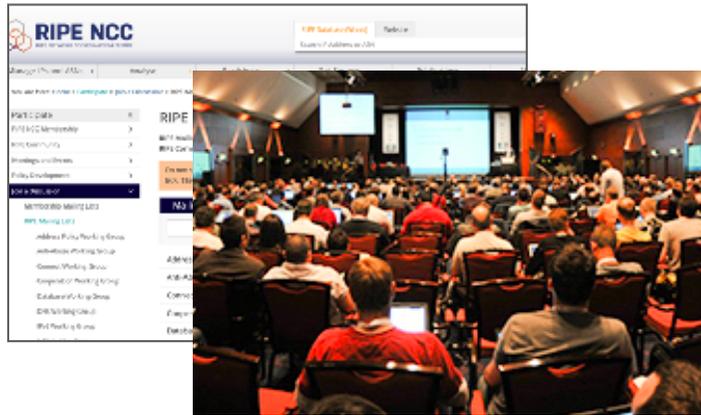
RIPE Working Groups RIPE Meetings



RIPE Policies



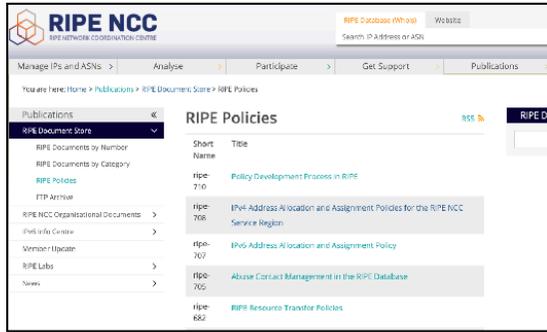
RIPE Working Groups
RIPE Meetings



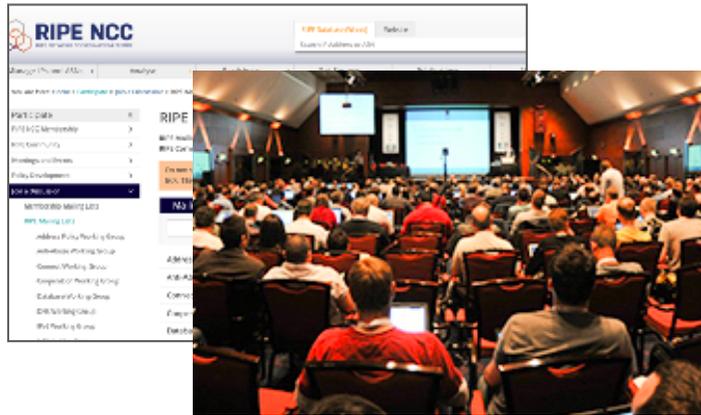
RIPE



RIPE Policies



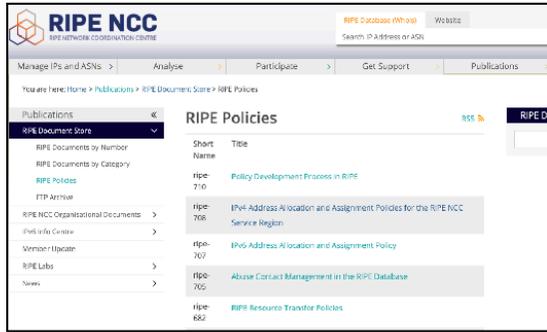
RIPE Working Groups RIPE Meetings



LIRs



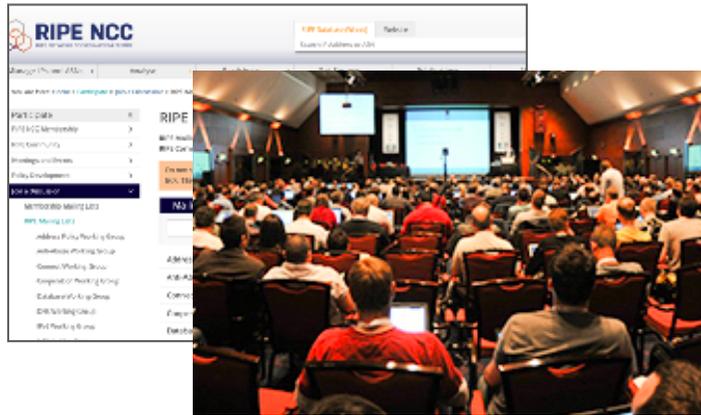
RIPE Policies



**RIPE
NCC**

RIPE NETWORK
COORDINATION
CENTRE

RIPE Working Groups
RIPE Meetings



RIPE NCC
General Meetings
Mailing Lists

LIRs



Take the poll!

How can an LIR influence the RIPE NCC **membership fee**?

Please type in your answer.

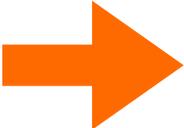
 2 min.



A8



Demo: Registering for the GM



RIPE NCC
RIPE NETWORK COORDINATION CENTRE

RIPE Database (Whois) Website

Search the content of this website

Manage IPs and ASNs > Analyse > **Participate >** Get Support > Publications > About Us >

You are here: Home > Participate > Meetings and Events > General Meetings

Participate <<
RIPE NCC Membership >
RIPE Community >
Meetings and Events v

- RIPE Meetings
- Regional Meetings
- General Meetings**
- Executive Board Election TF
- Voting
- Roundtable Meetings
- LEA Meetings
- Open House
- Upcoming Events
- Upcoming Hackathons

RIPE NCC General Meetings (GM)

The RIPE NCC General Meeting (GM) is open to members and candidate members of the RIPE NCC. The GM is the forum where RIPE NCC Members may discuss the operations and activities of the RIPE NCC. Members can exercise their voting rights on the RIPE NCC:

- Charging Scheme, Resolutions (Spring GM)
- Executive Board membership (Spring GM)
- Financial Report (Spring GM)

The autumn GM also allows members to provide input to, and feedback on, the RIPE NCC's [Activity Plan and Budget](#).

Previous GM

The RIPE NCC General Meeting October 2020 took place over 28-30 October 2020. It was held adjacent to the [RIPE 81 Meeting](#) which took place from 26-30 October 2020.

Why should you attend the GM?

Upcoming GMs

- [RIPE NCC General Meeting](#)
19 May 2021 - 21 May 2021 Virtual
- More GMs >

Previous GMs

- [RIPE NCC General Meeting, 28 - 30 October 2020](#)
28 Oct 2020 - 30 Oct 2020
- [RIPE NCC General Meeting, 13 - 15 May 2020](#)
13 May 2020 - 15 May 2020
- [RIPE NCC General Meeting, Rotterdam, 16 - 18 October 2019](#)
16 Oct 2019 - 18 Oct 2019
Rotterdam, the Netherlands
- More GMs >

Demo

The General Meeting information page:

<https://www.ripe.net/participate/meetings/gm>



Questions





How to Improve the Internet

Section 3 of 5

Take the poll!

Who defines in the RIPE region what is **the minimum** IPv6 allocation size?

Please choose the correct answer.

 2 min.

STANDARDS



REQUIREMENTS



REGULATIONS

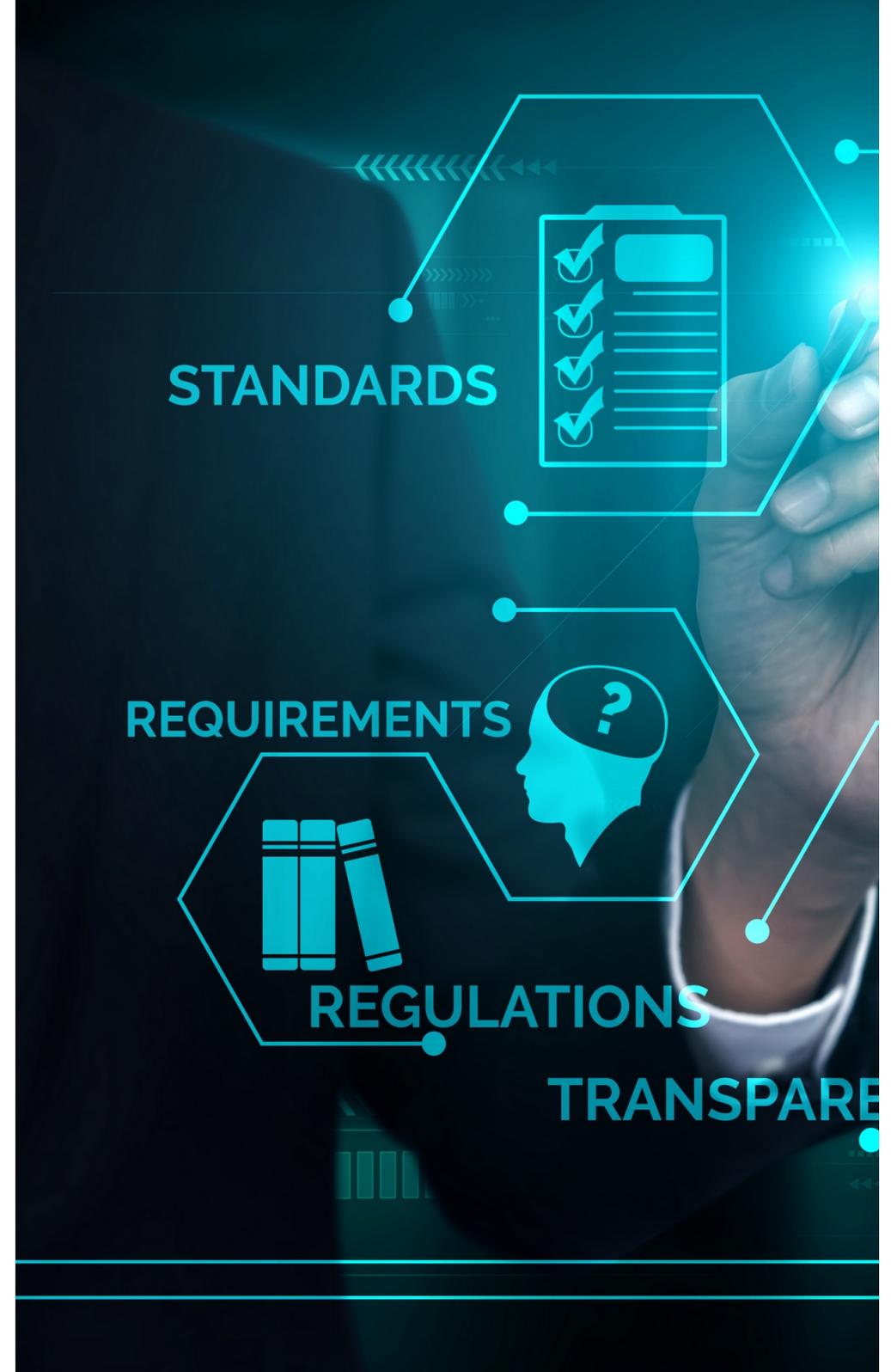
TRANSPARE

A9

RIPE Policies:

- How IPv4 addresses are allocated and assigned
- How IPv6 addresses are allocated and assigned
- How abuse contacts are managed

...



How can you improve the Internet?

1. Check the current policies
2. Suggest an improvement to the Working Group
3. Try to reach consensus
4. Make a RIPE policy 👍

Too difficult? Takes too long?



Need help from the RIPE NCC?



Angela Dall'Ara
pdo@ripe.net

YES! The **Policy Officer** will assist you.



How can you start?

1. Stay up-to-date with new policies
2. Join in the policy discussions
3. Propose a new policy

Join WG Mailing Lists:

<https://www.ripe.net/participate/ripe/wg/active-wg>

Join RIPE NCC Membership Announce Mailing List:

<https://www.ripe.net/participate/mail/ripe-ncc-mailing-lists/ncc-announce>

Current Policy Proposals:

<https://www.ripe.net/participate/policies/current-proposals/current-policy-proposals>



The RIPE Community:

- Creates and discusses proposals
- Seeks consensus

Working Group Chairs:

- Accept proposals
- Chair discussions
- Decide whether consensus has been reached



- Supports these activities
- Publishes accepted policies
- Implements and enforces them





Questions



**Let's take a
5 minute
break!**



WELCOME

WE ARE

OPEN

PLEASE COME IN





Questions





The LIR Portal

Section 4 of 5

A RIPE NCC Access Account



- For all RIPE NCC services
- Free to create
- Can be associated with one or more LIRs → gets access to the LIR Portal

A screenshot of the RIPE NCC website. The browser address bar shows 'ripe.net'. The user is logged in as 'John Smith'. The navigation menu includes 'Manage IPs and ASNs', 'Analyse', 'Participate', 'Get Support', and 'Publications'. A search bar is visible with the text 'Your IP address is: 2001:67c:2e8:9::c100:14e6'. Below the navigation menu, there is a banner for 'How trustworthy is your network?' with a 'Try It Now' button. Below the banner, there are four icons representing 'My Resources', 'Become a Member', 'Report Hacking and Spamming', and 'What is an IP Address?'. At the bottom, there is a footer with links for 'Get To Know Us', 'Our Services', 'A to Z', 'RIPE Community', and 'My Dashboard'.





Demo: LIR Portal Overview

- Account details
- Resources details
- Communicating with the RIPE NCC:
 - Request resources
 - Create tickets
 - Sign up for a training or webinar

Demo

 10 min.

LIR Portal: <https://my.ripe.net>

A10
52



Questions





The RIPE Database

Section 5 of 5

Take the poll!

You work for an ISP. One of your clients cannot reach a specific network.

What can help you solve the problem?

Please choose all correct answers in the poll.

 2 min.



The purpose of the RIPE Database



- Registry of **who** holds IP addresses and ASNs
- Keeps **contact** information
 - For troubleshooting, notifying outages, etc.
- Publishing **routing** policies
- Provisioning **reverse DNS**



The RIPE Database

Production



<https://apps.db.ripe.net/>

The Test Database

For testing purposes



<https://apps-test.db.ripe.net/>

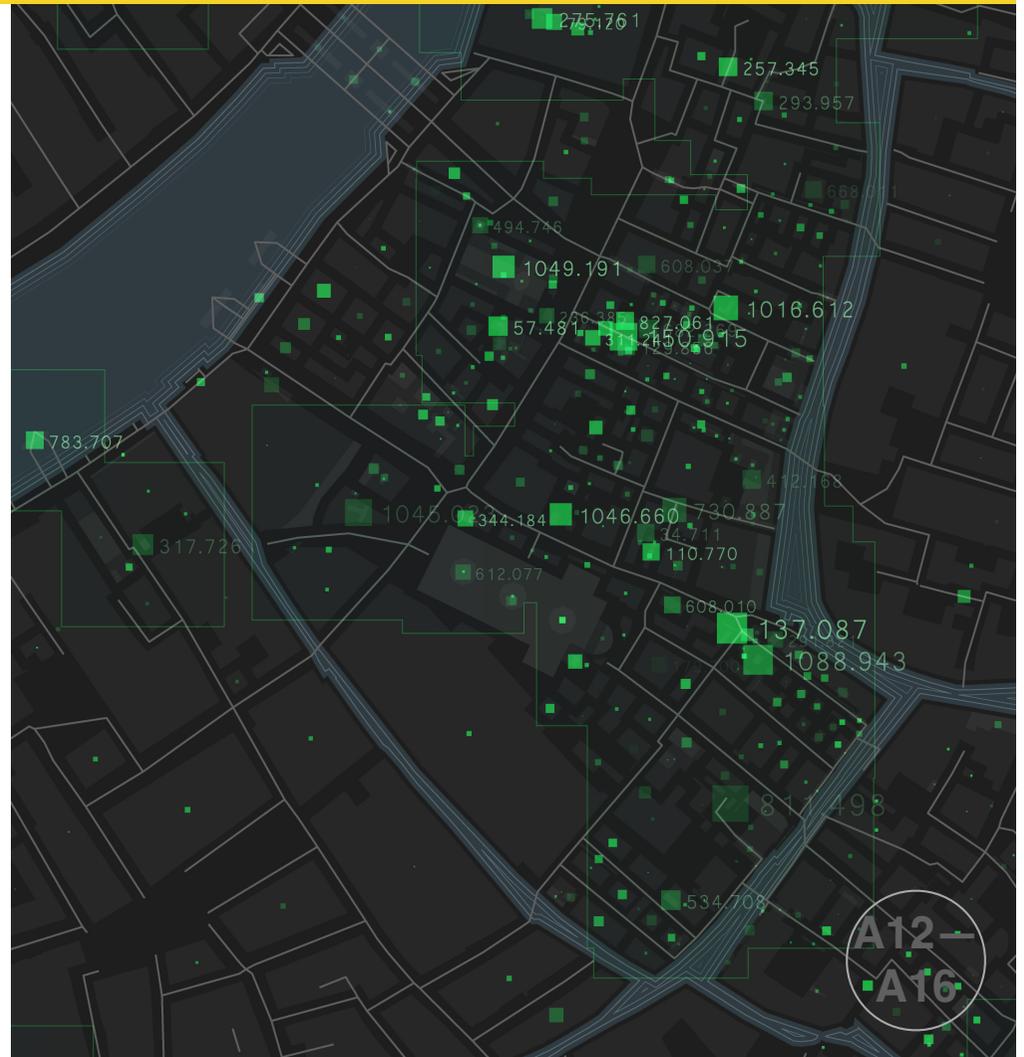
Lab: Look up a network

We are using the TEST Database: <https://apps-test.db.ripe.net/>

You want to buy a company which is using **193.0.29.71** for their services.

Before signing the contract you want to investigate this a bit further.

Please use the polls, and choose the correct answers there.



Demo

🕒 15 min.



Questions



What's Next



LIRs and the Internet Ecosystem

1. The Internet Registry System
2. RIPE & RIPE NCC
3. How to improve the Internet
4. LIR Portal
5. The RIPE Database

LIRs: Manage your IP Addresses and AS Numbers

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5. Tips and tricks



We want your feedback!

What did you think about this session?

Take our survey at:

<https://www.ripe.net/support/training/feedback/lir1/>





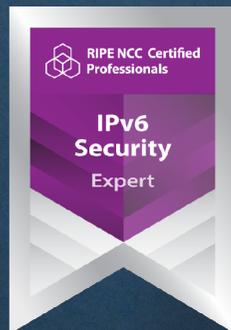
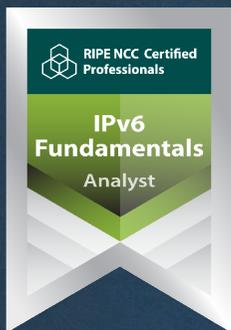
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<https://getcertified.ripe.net/>

