

Research on Overcoming Obstacles in Network and IP Address Management



Scope of the research

100+ ISPs and infrastructure providers

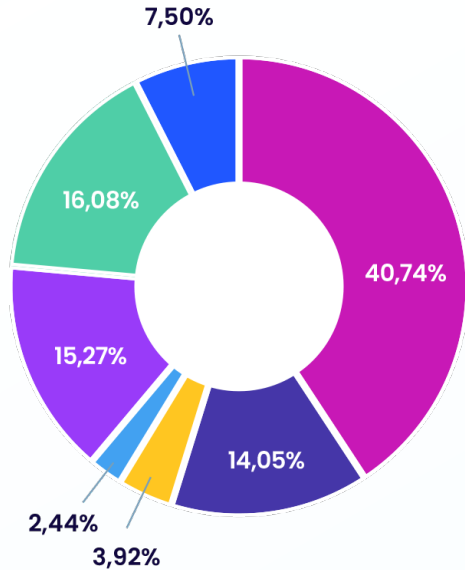
US & EU based

Topics discussed:

- Resource Public Key Infrastructure (RPKI) and Route Origin (ROA) handling
- Abuse management
- Geolocation management
- WHOIS management
- IPv6 adoption

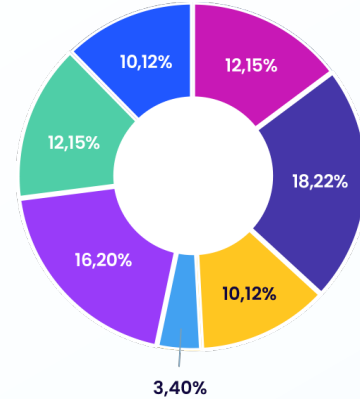


Landscape overview

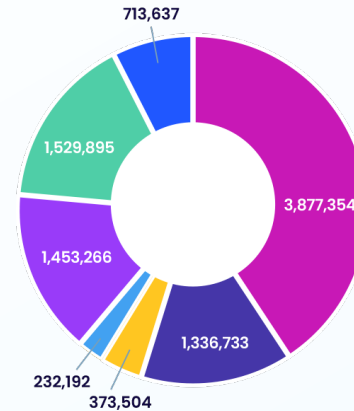


Industry Distribution by IP Count %

- Cloud provider
- Hosting
- Proxy
- Data Mining
- Telco/ISP
- LIR
- Other



Industry Distribution



Industry Distribution by IP Count



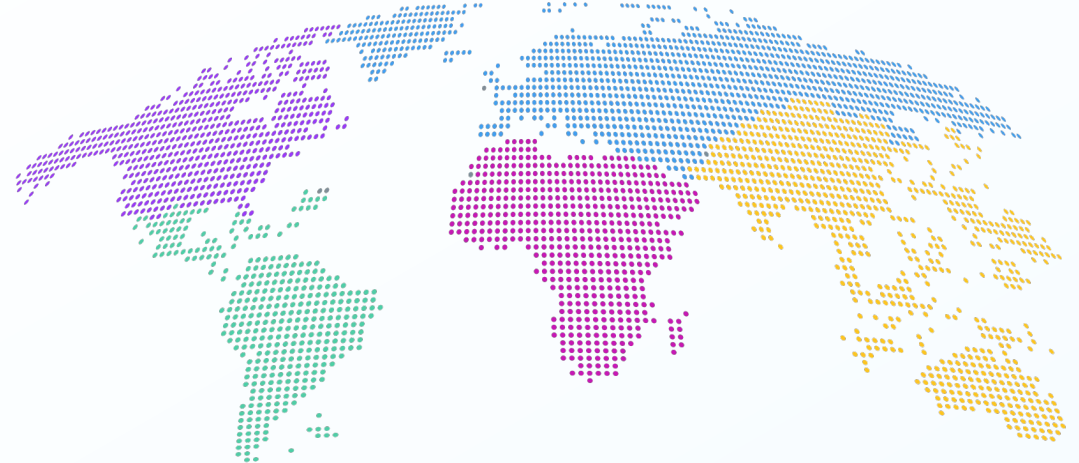
Obstacles across the Internet's core building and governing elements

Resources in various RIRs

- Multiple portals needed
- Same stuff – different language

In-house old complex tools

- Microsoft Excel keeps the world running
- Legacy in-house apps as IPAM
 - No API
 - Limited or no automation
 - Limited knowledge
 - Just runs



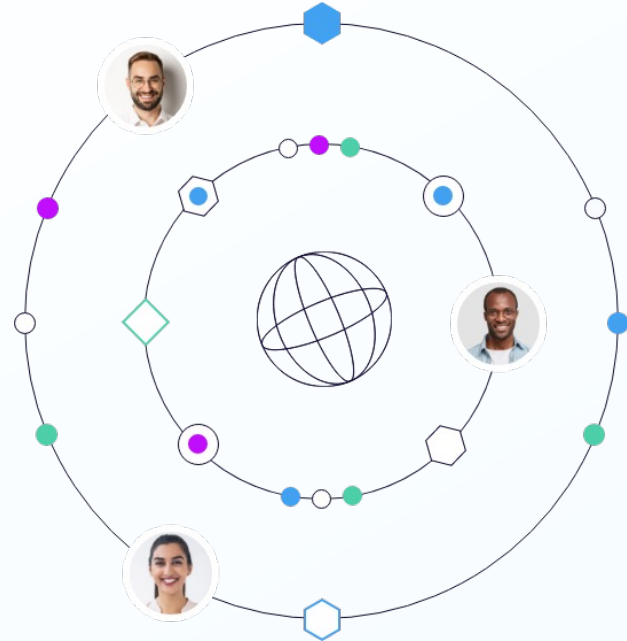
Obstacles across the Internet's core building and governing elements

Key people dependency

- Different employees - different aspects of networking
 - Whois records with Person A
 - Global/Edge routing with Person B
 - Data center networking with Person C

Effective utilization

- Without proper tools at hand, it's hard to effectively utilize the whole IPv4 inventory



Obstacles across the Internet's core building and governing elements

IP reputation management

- Multiple sources
- Different procedures for each blocklist are labor intensive task
- You never know where you are hit

IP geolocation management

- Numerous databases
- Mismatches between them
- Inconsistent mechanisms under the hood
- RFC9092 is great – yet another data point to manage



Gaps in consistency poses risks

Stability

Security



Planning

**Transition to
IPv6 speed**





Peace of mind

**The market is looking for
a solution that could**



Spot data inconsistencies between the different planes.



Provide recommendations on what data points need to be synchronized



Have an option to define states, have them watched, and act upon change.



Generate resource optimization offerings to allow IPv4 owners and operators to get the most of their resources.



Be API Enabled to enable seamless integration to the current tech stack.



The future

Once IPv4 management is sorted and Automated it's time **to move to IPv6**

Same challenges:

- IPAM
- IP reputation management
- Geolocation management
- Record accuracy and relevancy



Thank You

Q&A

