



RIPE NCC

RIPE NETWORK COORDINATION CENTRE

The Regional Internet Registries & the Law Enforcement Community

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What is a Regional Internet Registry?



- 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
 - Number resources include:
 - IP addresses (IPv6 and IPv4)
 - Autonomous System Numbers
- Support the infrastructure of the Internet through technical coordination
- Independent, not-for-profit, membership organisation

RIR Core Functions



*Manage the distribution and registration of IPv4 and IPv6 addresses and Autonomous System Numbers

*Provide and maintain directory services: database, and routing information
*Manage reverse DNS

*Support Internet infrastructure through technical coordination
*Facilitate development and implement community driven policies



RIRs and Law Enforcement



The RIRs register the organisations responsible for IP addresses



Criminals use the Internet to commit crimes



Database links IP addresses to end users, ISPs and ISP customers



Law enforcement uses the database to determine who these IP addresses are registered to



Information in an RIR Database



- Referred to in the tech community as the Whois
- In the RIPE NCC service region: RIPE Database
- Registration information about
 - IP addresses and AS Numbers registered by an RIR
 - IP addresses and AS Numbers registered prior to the establishment of the RIRs (**legacy space**)
 - Original registration date
 - Organisations that hold these resources
 - Points of Contact for resources or organisations
 - Customer reassignment information (from ISPs to their customers)

What Non-Public Information Might an RIR Have?



- If information is not in the public database, we will not disclose data without a court order
- Current and historical data might include:
 - Financial transaction records
 - Transaction history (ticket traffic)
 - Previous registrants of resources that have been transferred or merged
 - Corporate papers and list of officers (if available)
 - Customer reassignment information (if available)

Current Challenges



More fraudulent requests to transfer IPv4 addresses

- *IPv4 addresses have increasing market value as supply depletes*



Manipulating registry entries either via unauthorised access or by means of identity theft



Manipulating the routing system by making false claims to alter or enable traffic flows

Current Challenges



Leasing/buying/selling of IPv4 address space (outside of registry system)



People not validating their contact information in the database



Carrier Grade NAT
Difficult to identify individual subscribers

How the RIRs Work With Law Enforcement



Data Accuracy

- RIRs work with all stakeholders to improve the integrity and accuracy of the data

Case Support

- Respond to court orders

Capacity Building

- Provide training and information sharing sessions

Collaborative Forums

- Closed trust-groups for experiences and expertise

Law Enforcement Do Participate



- Attend RIR and other industry meetings
 - Trust community conferences
 - Various Network Operator Groups
 - IETF (Internet Engineering Task Force)
- Schedule training sessions with RIRs
- Submit policy proposals
 - Registration policies, verification and due diligence practices
 - Abuse contact validation policy was actually proposed by Europol
- **Report data inaccuracies**



Questions



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