



RIPE NCC
RIPE NETWORK COORDINATION CENTRE

Building A Cooperative Approach

Government Engagement at the
RIPE NCC



Law Enforcement

Building Trust

RIRs and Law Enforcement



The RIRs register the organisations responsible for IP addresses



Criminals use the Internet to commit crimes



RIR databases link IP addresses to end users, ISPs and ISP customers



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



Information in the 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)

Non-Public Information



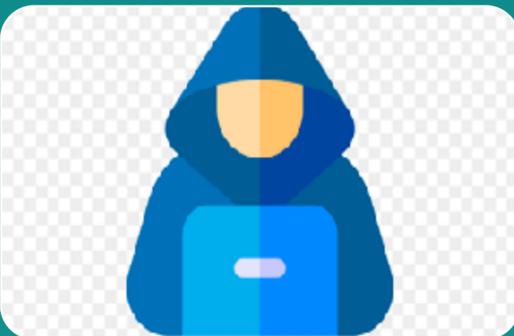
- If information is not in the public database, we will not disclose data without a court order
- Current and historical data might include:
 - Financial transaction records
 - Transaction history (ticket traffic)
 - Previous registrants of resources that have been transferred or merged
 - Corporate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

Working with Law Enforcement



Data Accuracy

- The RIPE NCC works 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, webinars, certification

Collaborative Forums

- Closed trust-groups for experiences and expertise

Law Enforcement Do Participate



- Increasing attendance at RIPE Meetings & other industry events
 - Trust community conferences
 - Various Network Operator Groups
 - IETF (Internet Engineering Task Force)
- Working with RIPE NCC on capacity building programmes
- Submit policy proposals
 - RIPE's abuse contact validation policy was actually proposed by Europol
- **Report data inaccuracies**



Regulatory Authorities

From Regulator to Facilitator

The Changing Role of Regulators



In earlier years ICT regulators were watchdogs, gatekeepers and arbiters. Their role has evolved to that of facilitator and partner in shaping ICT and digital markets.

Global ICT Regulatory Outlook 2018, ITU Publications

- Key challenge: technologies change far faster than regulatory regimes do!
- Today's world is characterised by accelerating technological development under digital transformation
- Technology has fundamentally changed many of the behaviours and processes being governed, making old regulatory models irrelevant
- Growing concerns about security, privacy, safety

Regulation as Usual?



- Disjointed policies and regulatory frameworks
- Gaps and contradictions in policy, which can neutralise the intended benefits or create confusion
- Poorly informed policy can undermine trust in government policies and the market

The Key Challenge



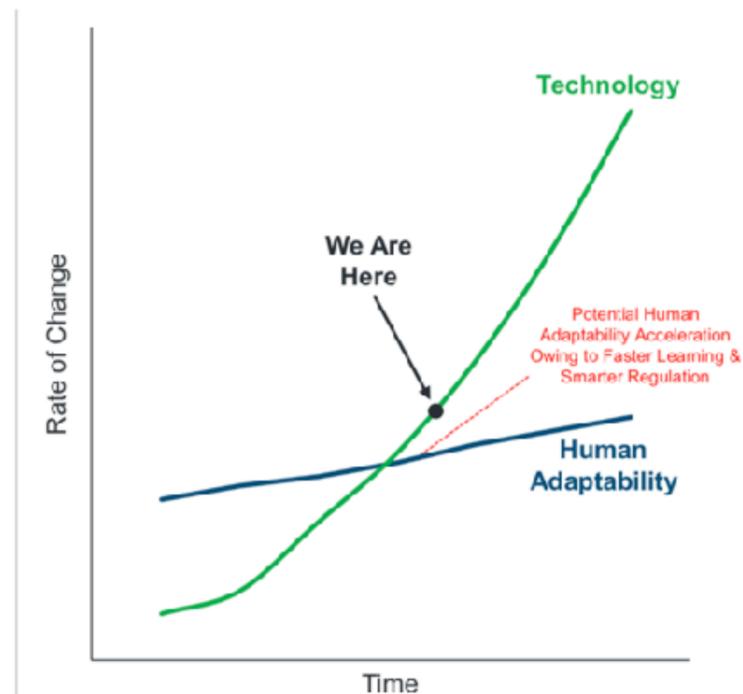
Data Volume + Utilization...
Technology Change > Human Adaptability

Humans' ability to adapt to technological change is increasing, but it is not keeping pace with the speed of scientific & technological innovation.

To overcome the resulting friction, humans can adapt by developing skills that enable faster learning & quicker iteration & experimentation.

Developing these skills is particularly important for policy makers & regulators who are looking to protect the public interest. They need to be ready to try new approaches, iterate & change with the times so tech progress goes hand in hand with public benefit.

Astro Teller – X, The Moonshot Factory
Adapted from Thomas Friedman's *Thank You For Being Late*, 2016



Mary Meeker, *Internet Trends 2019* (June 2019)

A New Generation of Regulation



- What would a new generation of regulation (and regulator) look like?
 - Coordinating policies and regulation beyond traditional boundaries or sectors
 - Sharing industry knowledge and expertise
 - Providing guidance and practical experience
 - Supporting those who may benefit least from digital transformation

Regulatory Convergence



- An emerging and intensifying trend over the past decade has been the move towards the ‘converged regulator’
 - ITU study suggests more than 60% of regulators in the space “converged”
- As technological convergence sweeps the sector, regulatory coherence must extend beyond the limits of traditional ICT to encompass a range of market players and digital services
- Regulators’ names also evolve to reflect their changing mandate and scope

In Response



- The digital era requires urgent innovations in governance and regulation - and getting it right will be crucial to its sustainability!
- Key concepts: collaborative, cross-sectoral
 - Working with other stakeholders to maximise the benefits of a common digital future, while ensuring safeguards to protect consumers
- What are stakeholder looking for?
 - Affordable access
 - Incentives for innovation and entrepreneurship

Investigate, Share & Communicate



- **The RIPE NCC is working and collaborating with regulatory authorities on IPv6, IXPs and other Internet related issues**
- Regulators bring huge value to the global Internet community by helping to investigate and understand why markets are not behaving as expected or desired
- Sharing this information with the community helps create a dialogue to analyse and find the best way forward!



Questions



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