

Regional Internet Registries Overview

Introduction

Internet identifiers are coordinated globally, so that each identifier is uniquely assigned to only one party - thus enabling successful and reliable communication among parties on the Internet. For Internet numbers (which include, most notably, Internet Protocol or IP addresses), a global registration system is facilitated by the coordinated activities of five Regional Internet Registries (**RIRs**).

The evolution of the RIR system was a result of the Internet community's desire for the administration of Internet number resources in accordance with practices and policies established cooperatively by those using the resources.

Each RIR operates as a not-for-profit, member-based association in its respective region in accordance with the laws of the country in which it is located. The five RIRs are as follows: AFRINIC (established 2005, serving Africa and based in Mauritius), APNIC (established 1993, serving Asia Pacific region and based in Australia), ARIN (established 1997, serving the United States, Canada, many Caribbean and North Atlantic islands and based in the United States), LACNIC (established 2002, serving Latin America and the Caribbean and based in Uruguay) and the RIPE NCC (established 1992, serving Europe, Central Asia and the Middle East and based in The Netherlands).

The RIRs are governed by Boards elected by their members and are funded by fees paid by the participating organizations. They operate according to policies developed by the community via open, inclusive, bottom-up Policy Development Processes.

The Role of Regional Internet Registries

Within their respective regions, RIRs provide services for the administration, management, distribution and registration of Internet number resources; specifically IPv4 addresses, IPv6 addresses, and Autonomous System numbers. Services are based, in part, upon policies that the communities of each RIR develop in a multi-stakeholder, bottom up approach that is open to all interested parties.

The Policy Development Process within each RIR region defines the way these policies are developed and adopted.

The key services the RIRs provide are administration of the Internet number resources to help ensure uniqueness, responsible distribution, ensuring that resources go to those with a demonstrated need for them, and global publication of all allocations and assignments.

RIR Communities

The communities that develop the policies under which the RIRs operate are comprised of a variety of organizations: Internet service providers of various types, governments at all levels, universities, civil society, for-profit and not-for-profit enterprises of all sizes and across all business sectors. These communities and their processes are open to anyone who wants to participate in policy-making and related discussions. The communities make policy via open, transparent and community-based processes. Governments and their representatives are able to participate in this process, but do not have a privileged role as such. However, given the important role that governments play in shaping public policy relating to the Internet, their contribution to the RIR policy process is quite important, and the five RIRs individually engage in a range of outreach activities to encourage government participation in their respective regions.

Discussions on public mailings lists are an important part of the policy-making process, and these lists are available by subscription to all interested individuals. These discussions also take place at RIR meetings, which are open for everyone to participate both on-site or via remote participation online. The RIRs also facilitate sub-regional events and forums to better engage with all stakeholders.

While policy discussions occur at a regional level, the Internet itself has no geographic limits. Interconnection with networks in other geographic areas is an important precondition for the proper functioning of the Internet. Therefore, participation by people from other regions in each RIR's discussions is encouraged. Anyone with an interest in the development of RIR policies is welcome and encouraged to participate in the policy-making processes in any region.

RIR communities are comprised of both members and non-members. Membership criteria are established by each RIR and vary by region. In some instances, membership is required to access RIR services. In other cases, membership is established as part of the subscription of services the organization is requesting. Lastly, in some cases, membership can be attained through a membership fee independent of RIR services. Non-members may be organizations that have contracted for RIR services or are simply interested parties. The global RIR community consists of more than thirty thousand entities around the world, and allows for the administration of Internet number resources in a manner responsive to the affected community.

Regional Policy-making Process

RIR policy-making processes are designed so anyone who is interested can participate. There are no requirements about who can propose a policy or an amendment to a current policy. Once a policy proposal is submitted, anyone can submit comments, or provide support or objection to the proposal. These processes adhere to established timeframes, but if the community of an RIR needs more time to consider a particular proposal due to the scope or complexity involved, these timeframes can be expanded.

Community consensus is required for a policy proposal to become an RIR policy or to amend an existing policy. Any arguments or objections raised in the discussion phase of the policy process must have been carefully considered or addressed before the proposal is adopted. It is the task of the community leadership (e.g. working group chairs, advisory council members) to determine if all arguments have been considered and if there is wide enough community support to declare consensus on a proposal. In some RIR communities, the RIR governance board plays a role in validating that the community policy development process has been adhered to and consensus reached.

In turn, each RIR is bound by their operational rules to execute the policies that have been developed by their communities. This obligation is detailed in each RIRs' governance documents.

Global Policy-making Process

Global policy development exists to develop and maintain the policies that direct the manner in which the Internet Assigned Numbers

Authority (IANA) issues Internet number resources to the RIRs. The IANA function is carried out by ICANN.

A global policy proposal can be submitted by anyone and must be considered in all five RIR communities and accepted according to each community's policy development process. Once global consensus and similar policy language exist within the five RIRs, those regional policies are merged together as a single policy statement. This is done through the Number Resource Organization Number Council (NRO NC) a 15-person, community-elected representative body (with three representatives from each RIR region).

In the ICANN context, the NRO NC fills the role of the Address Supporting Organization Address Council (ASO AC). Consistent with its memorandum of understanding (MoU) with ICANN, the ASO AC advances global policy proposals to the ICANN Board for ratification. The IANA issues Internet number resources to the RIRs consistent with these ratified global policies.

RIR Oversight and Stability

Member-elected boards govern the RIRs. Boards provide fiduciary oversight, strategic guidance, and verification of the policy development process. RIRs have implemented mechanisms to avoid capture through their election, bylaws, incorporation articles, and membership provisions.

The mechanisms by which the RIRs coordinate policy and governance matters require consensus and support from the communities in every region. This process encourages stability, but allows for change when policy and governance matters have been explored in regional discussions across the globe. This same structure provides very strong protections against capture, as action contrary to the global multi-stakeholder community would have to succeed in structural capture of the policy-making or governance apparatus of each region to achieve an outcome contrary to the global community's actual intent.

Conclusion

For more than twenty years, the RIR system has served as a successful model for the coordination and administration of Internet

number resources. It has proven that community-based policy-development and governance can be coordinated globally in a transparent, open manner and be responsive to the requirements of the entire Internet multi-stakeholder community.