The RIPE Registry

ripe-508
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January 2011

Abstract

This document describes the RIPE registry and its history.

Purpose of the RIPE Registry

The RIPE NCC keeps a comprehensive record of all Internet Number Resources registered within the RIPE NCC service region to ensure that each Resource Holder holds unique and legitimate Internet Protocol (IP) address space and Autonomous System Numbers (ASNs). The collective of this data is generally referred to as the 'RIPE Registry'.

Historical background

Throughout the history of the Internet, the Internet Assigned Numbers Authority (IANA) has been the primary authority to allocate and assign numeric identifiers required for operation of the Internet. In 1990, the term "Internet Registry (IR)" was defined by the Internet Engineering Task Force (IETF) in [RFC 1174] as "the organisation which has the responsibility for gathering and registering information about networks to which identifiers (network numbers, autonomous system numbers) have been assigned by the IR".

At the time [RFC 1174] was written, SRI International served as the sole IR for the IANA.

> **It was recommended in [RFC 1174] that:**
>
> Under this proposal, the IR would be charged with the registration and administration of the Internet number space but not with the enforcement of policy. The IR should collect enough information to permit network administrators to make intelligent decisions as to the acceptability of traffic destined to or from each and every legitimate Internet number [...] At a later step,

we anticipate that it will be desirable to distribute the IR function among multiple centres on different continents.

Shortly after the IETF identified the need to distribute the IR function, the RIPE community published [ripe-19] (16 September 1990), a document that proposed that a network coordination centre be formally established to, among other things, take on the role as Regional Internet Registry (RIR) in Europe. The RIPE Network Coordination Centre's (NCC) first activity plan was published the following year on 5 May 1991 [ripe-35].

The following year, the IETF published [RFC 1366], dated October 1992, proposing a plan for a systematic approach to allocate Internet Number Resources globally. It was in this document that the criteria for a regional registry were established:

> a) Networking authorities within the geographic area legitimise the organisation;
> b) The organisation is well established and has legitimacy outside of the registry function;
> c) The organisation will commit appropriate resources to provide stable, timely, and reliable service to the geographic region;
> d) The commitment to allocate IP numbers according to the guidelines established by the IANA and the IR;
> e) The commitment to coordinate with the IR to establish qualifications and strategies for sub-allocations of the regional allocation.

Having met the criteria to become an RIR, and with the endorsement of the RIPE community, the RIPE NCC was authorised by the IANA to take on this role in the service region of Europe, the Middle East, parts of Central Asia and North Africa. The RIPE NCC service region was redefined to exclude North Africa when AfriNIC, the fifth RIR, was formed in 2004.

The responsibility for record keeping covers Internet Number Resources allocated to the RIPE NCC by the IANA, as well as Internet Number Resources that were distributed in the RIPE NCC region by the IANA prior to the RIPE NCC's existence. These resources are known as Early Registration Transfers (ERX), or legacy space.

The base set of operational guidelines that Regional Internet Registries are required to follow is documented in [RFC 2050], dated November 1996. These guidelines include:

Registration: Provision of a public registry documenting address space allocation and assignment. This is necessary to ensure uniqueness and to provide information for Internet trouble shooting at all levels.

Data in the RIPE Registry

The RIPE Registry contains a set of registration data for all Internet Number Resources administered by the RIPE NCC. Information must include:

- The number resource or range of number resources
- Status of Internet Number Resource. This is one of:
    - Allocated
    - Legacy
    - Unallocated
    - Reserved

- Date of last status change

In case the Status is either 'Allocated' or 'Legacy', the following information is also mandatory:

- Full legal name of Resource Holder
- Full address of Resource Holder
- Contact information for matters of an administrative nature, and for matters of a technical nature. This information consists of an email address and a telephone number

If the status is 'Reserved', the reason for the reservation must be noted in the Registration (e.g. a reference to a RIPE policy document).

As registration data may change over time, the RIPE NCC also keeps a history of changes in the Registry.

The RIPE Database provides access to the public data of the Registry. Note that this database contains additional data that is not part of the Registry, and is defined by separate RIPE policies.

Responsibilities

The RIPE NCC has the responsibility for keeping the Registry comprehensive, correct and up-to-date. To do this, the RIPE NCC relies on Resource Holders to supply data that pertains specifically to the Resource Holder, as documented in the RIPE NCC Standard Services Agreement [ripe-435] and/or the Independent Assignment Request and Maintenance Agreement [ripe-462]. For holders of legacy resources this responsibility is derived from the original allocation by the IANA Internet Registry.

Terminology in this Document

Internet number resources: IPv4 addresses, IPv6 Addresses and Autonomous System Numbers.

Registration: The documentation of Internet Number Resources within the RIPE NCC service region.

Resource Holder: An organisation or individual that has been allocated Internet Number Resources in the RIPE NCC service region.

Further Reading

[ripe-495] Blokzijl, R., Karrenberg, D., "Principles for Number Resource Registration Policies", July 2010.

References

[RFC 1174] Cerf, V., "IAB Recommended Policy on Distributing Internet Identifier Assignment and IAB Recommended Policy Change to Internet 'Connected' Status", August 1990.

[ripe-19] Blokzijl, R., Devillers, Y., Karrenberg, D., Volk, R., "RIPE Network Coordination Centre", 16 September 1990.

[ripe-35] Blokzijl, R., "RIPE NCC Activity Plan", 5 May 1991.

[RFC 1366] Gerich, E., "Guidelines for Management of IP Address Space", October 1992.

[RFC 2050] Hubbard, K., Kosters, M., Conrad, D., Karrenberg, D., Postel, J., "Internet Registry IP Allocation Guidelines", November 1996.

[ripe-435] RIPE NCC, "RIPE NCC Standard Service Agreement", August 2008.

[ripe-462] RIPE NCC, "End User Assignment Agreement", February 2009.