Principles for Number Resource Registration Policies

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1. Scope of This Document

This document sets out the principles for IPv4 address registration after the unallocated pool of addresses has run out. The purpose of this document is to expose the thinking of the authors, and encourage a discussion in the community.

This is not a policy proposal. Once there is community consensus about these principles, the authors intend to instigate the development of appropriate policies.

2. History

From the very first RIPE Meeting in 1989 the need for a registry has been identified. In the early years of RIPE this consisted of documenting the use of IPv4 address space in the RIPE region on a voluntary basis. The actual address space was not distributed by RIPE.

From August 1992 the new RIPE NCC started distributing address space in the RIPE region. These allocations were done following rules agreed upon by the RIPE community. Over the years these rules - or policies as we now call them - have evolved based on the principle of distributing unallocated resources. While the vast majority of the policies deal with distribution of address space, some of them deal with registration.

Allocations made by the RIPE NCC have always been documented in the registry by the RIPE NCC and the Local Internet Registries (LIRs).

In the foreseeable future there will be no more unallocated address space. However, the authors believe that the need for an accurate registry will remain.

3. The Need for New Registration Policies

Current registration policies are part of much wider distribution policies. In the near future the unallocated pool will have run out. Therefore the whole set of distribution policies will become historic. However, the registry will still remain and the authors expect that the community will still find it useful.

There will be a continued need for registration policies. Rather than changing the current policy documents by removing the parts relating to address space distribution, the authors suggest to produce a registration policy document that reflects the new situation.

4. Purpose of the Registry

At the root of any policy about the resource registry lies the purpose of the registry. Therefore we briefly enumerate the diverse purposes of the RIPE registry below.

The RIPE NCC address registry serves two purposes:

1. A comprehensive public recording of the address space for which the RIPE NCC has administrative responsibility. This concerns both address space allocated by the RIPE NCC and address space allocated by others and transferred to the administrative responsibility of the RIPE NCC.

2. A comprehensive public recording of the current holders of the address space.

Transparency and accountability about the administration of Internet number resources has always been very important. Publication of the registry is an essential element of this transparency and accountability.

The registry plays an important part in the operational coordination between Internet operators.

Other applications of the registry are numerous and are not defined by the RIPE NCC.

5. Properties of the Registry

In order to serve its purpose, the registry must have the following properties:

- Comprehensive: The registry has to cover all address space the RIPE NCC is responsible for without exceptions.
- Current: The registry must be kept up to date.
- Correct: The registry must correctly document the holder of the address space.

Note that we describe the properties of the registry and not possible services based upon the registry. One example of this would be a global look-up service across all RIRs.

6. Incentives and Disincentives

The registry can only serve its purpose with active participation of the holders of Internet number resources - the registrants. Any policy must consider incentives and disincentives for registrants to participate.

Here are a few examples:

Incentives:

1. Publicly document that the registrant is the rightful user. This is one of the safeguards against hijacking.
2. All address space will be registered, irrespective of current or past allocation policies.
3. The registry benefits the whole Internet community.

- Privacy concerns. Concerns about revealing too much personal data in a publicly available registry need to be addressed.
- Commercial confidentiality. Registrants may be concerned about the registry revealing too much about their commercial activities. These concerns need to be addressed.
- Cost. The cost should not be unreasonable in relation to the benefits for the Internet community.

7. What the Registry is Not

The registry is an address registry. It does not constitute a directory of Internet Service Providers (ISPs), neither does it license ISPs.

The registry is not the instrument to implement policies concerning access to, and routing over, the Internet.

8. Conclusion

The authors believe that the RIPE community needs to develop registration policies for the IPv4 address space. This document presents some initial thoughts on the registry. We encourage RIPE to discuss the principles for a registry.

Once the principles are clear and accepted, RIPE should develop policies that define registration services.

Though this document has been developed with IPv4 addresses in mind, the authors are of the opinion that in general a separation between distribution and registration policies should be made for all Internet number resources. Ideally, one registration policy should be applicable to all resources.