

RIPE Policy Proposal 2007-01

Number: 2007-01

Policy Proposal Name: Direct Internet Resource Assignments to End Users from the RIPE NCC

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Proposal Version: 3.0 (Previous versions: [v1.0](#) and [v2.0](#))

Submission Date: 26 June 2008 (v. 3.0)

Current Phase : Review Phase – Open for Discussion

Phase ends/ended: 24 July 2008

Latest Status: Awaiting Decision from Working Group Chairs

Suggested WG for Discussion and Publication: [Address Policy](#)

Proposal Type: New and Modify

Policy Term: Renewable

Policy Documents to be Affected: IPv4 Address Allocation and Assignment Policies for the RIPE NCC Service Region ([ripe-424](#))

IPv6 Address Allocation and Assignment Policy ([ripe-421](#))

Autonomous System (AS) Number Assignment Policies and Procedures ([ripe-389](#))

IPv6 Address Space Policy for Internet Exchange Points ([ripe-256](#))

Draft RIPE Documents : [DRAFT: IPv4 Address Allocation and Assignment Policies for the RIPE NCC Service Region](#)

[DRAFT: IPv6 Address Allocation and Assignment Policy](#)

[DRAFT: Autonomous System \(AS\) Number Assignment Policies and Procedures](#)

[DRAFT: IPv6 Address Space Policy for Internet](#)

Exchange Points

DRAFT: Contractual Requirements for Provider Independent Resource Holders in the RIPE NCC Service Region (NEW DOCUMENT)

Summary of Proposal:

This proposal states that a contractual relationship between an End User and a sponsoring LIR or the RIPE NCC must be established before the End User receives Internet number resources (Autonomous System (AS) Number, Provider Independent (PI) IPv4 and IPv6 Internet Exchange Point (IXP) and anycasting assignments) directly from the RIPE NCC. It also states that the text in the policy should mention more explicitly that PI assignments cannot be sub-assigned.

Policy Text:

After receiving feedback on the first and second version of the proposal during RIPE 55 and RIPE56, in this third version of the proposal, two contractual relationship possibilities are outlined for End Users that are wishing to receive direct assignments. It is proposed that End Users can either have a contract with a sponsoring LIR or with the RIPE NCC directly.

This third version also argues that the proposal covers all non PA address space maintained in the RIPE Database, except address space marked as Early Registration (ERX) and address space marked as NON-SET.

There are four different documents that are affected by this proposal and the changes that are proposed can be seen in the drafted policy documents.

There is also a draft of a new RIPE Document. The document describes the contractual requirements necessary for End Users of provider independent resources and also speaks to the status of pre-existing assignments (see “Draft RIPE Documents” above).

Rationale:

a. Arguments supporting the proposal

Requirement for Contractual Relationship

Currently, End Users receive direct assignments from the RIPE NCC via a request sent by an existing LIR. The resources allocated or assigned can be an ASN, an IPv4 PI prefix, an IPv6 IXP prefix or a prefix for an anycasting assignment. While an End User may or may not have a contract with the LIR sending the request to the RIPE NCC on behalf of the End User, the RIPE NCC itself does not have any information about such a contract with that End User.

The absence of a contract between the End User and the LIR or the RIPE NCC is not an ideal situation for several reasons:

- The link between the RIPE NCC and the End User is broken when the End User moves from the LIR that requested the resources on behalf of the End User to another provider. This results in the RIPE NCC losing contact with the resources.
- Such a situation creates a potential environment for resource hijacking to occur.

- The process of reclaiming any resource is almost impossible without the existence of such a contract. In the near future, as IPv4 exhaustion progresses, reclamation of resources will be more important than it is currently.
- All other receivers of resources are LIRs and have a contract with the RIPE NCC. End Users receive Internet number resources like the LIRs do from the RIPE NCC. Therefore, the End User should also be obliged to enter into an equivalent contract to avoid creating an unfair alternative for receiving resources. Some ISPs prefer to receive the Internet resources as an End User rather than becoming an LIR even though they provide services to their own customers and therefore sub-assign the address space assigned by the RIPE NCC. Such End User ISPs often receive several separate PI prefixes as this can be a cheaper alternative for them. This is also not good for overall aggregation.

If an End User uses address space from an LIR allocation, which is Provider Aggregatable (PA) address space, and decides to end the relationship with this LIR, the End User will normally need to return the address space to the LIR as their contract is no longer valid. When the RIPE NCC makes direct assignments of PI, ASN, IPv6 IXP and anycasting assignments to the End User, the RIPE NCC is the provider of the address space but no contract exists, direct or indirect. However, a contract is necessary to promote responsible stewardship of Internet resources.

This proposal does not discuss any particular details of the contract that may be set up between the End User and the RIPE NCC. The RIPE NCC Executive Board will decide on the details of this contract. The details of a contract between a sponsoring LIR and an End User is not discussed either. However the proposal argues that the End Users are responsible for holding resources and in case they change their sponsoring LIR this must be communicated to the RIPE NCC and that in case the End User ceases to hold any such contracts the resources must be returned back to the RIPE NCC.

Overall, the proposal's intention is to make sure that the RIPE NCC, as the provider of PI, ASN, IPv6 IXP and anycasting assignments to the End Users, can confirm that the End User exists and continues to exist. This can be ensured by the presence of a contract between the End User and the RIPE NCC.

Any specific details of possible fees for such End Users are also out the scope of this proposal. This needs to be developed by the RIPE NCC Board in the same manner the LIR fees are proposed and developed.

Sub-assignment Clarification

Provider Independent (PI) Address space is assigned directly by the RIPE NCC for use in an End User's networks. It is not appropriate for such address space to contain any further hierarchy. Note that the current policy already mentions the following in regard to this:

“ The creation of an inetnum object with a status of “ASSIGNED PA” or “ASSIGNED PI” is only possible if there is no less specific or more specific inetnum object with an “ASSIGNED” status.”

This proposal states that this policy should be made more explicit and clearer in the policy document by adding: “PI address space cannot be re-assigned or further assigned to other parties.” This clarification will help the non-hierarchical aspect of PI address space to be understood more clearly.

b. Arguments opposing the proposal

Some LIRs may believe that this proposal might affect their own agreements with End Users.

Note that the proposal's intention is not to define such local contracts.

Additional Information:

Note: In order to provide additional information related to the proposal, details of an impact analysis carried out by the RIPE NCC are documented below. The projections presented in this analysis are based on existing data and should be viewed only as an indication of the possible impact that the policy may have if the proposal is accepted and implemented.

A. Impact of Policy on Registry and Addressing System

Address/Internet Number Resource Consumption:

After analysing the data that is currently available, the RIPE NCC does not anticipate that any significant impact will be caused if this proposal is implemented.

Fragmentation/Aggregation:

After analysing the data that is currently available, the RIPE NCC does not anticipate that any significant impact will be caused if this proposal is implemented.

B. Impact of Policy on RIPE NCC Operations/Services

B1. Regular Impact

The RIPE NCC has looked at the impact of the proposal on the actual operations from the day the policy is implemented. Assuming that all End User organisations that were assigned PI address space in 2007 would opt to hold a contract with the RIPE NCC directly, the Customer Services Department (CS) would have to process about 3000 new contracts per year, up from the current level of 800.

There are about 38,000 relevant objects currently in the RIPE Database that will be affected by 2007-01 (about 22,000 objects with status ASSIGNED PI and about 16,000 ASNs).

In the extreme case that all of these objects are held by unique organisations that then opt to have a direct relationship with the RIPE NCC, the Billing Department would have to issue about 38000 additional invoices yearly.

B2. One time Operation Impact

The retroactive nature of this proposal will result in a one-time operational impact as the RIPE NCC investigates and makes necessary updates to all existing non-PA space assignments, except address space marked as Early Registration (ERX) and address space marked as NOT-SET.

As mentioned, there are about 38,000 relevant objects currently in the RIPE Database that will be affected by 2007-01.

Customer Services (CS):

In the extreme case that all of these objects are held by unique organisations that then opt to have a direct relationship with the RIPE NCC, the retroactive nature of the policy would require the Customer Services Department (CS) to process about 38,000 new contracts.

Some of these objects are currently locked due to deprecated authentication schemes. It is anticipated that this will result in a minimum of 4000 maintainer authentication changes.

Registration Services (RS):

The Registration Services Department will have to investigate all 38,000 existing objects in the RIPE Database. The amount of reclamation and revocation that needs to be done afterwards will depend on the results of this investigation and how up-to-date the investigated blocks are.

General:

The retroactive nature of the policy means that it will create a considerable workload for the RIPE NCC. For this reason we expect that full implementation of 2007-01 will take longer than most other policy implementations.

Should the community adopt the proposal, we anticipate further planning to identify areas where we can increase efficiency by phasing out certain tasks and creating tools to automate some of the processes involved.