New Values of the "status:" Attribute for inet6num Objects

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Abstract

This document describes the new values of the "status:" attribute for **inet6num** objects and their impact on database operation.

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1.0 Motivation

The new IPv6 policy, published in the "IPv6 Address Allocation and Assignment Policy" document and accepted by consensus at RIPE 42, replaces the addressing hierarchy described in the "Provisional IPv6 Assignment and Allocation Policy Document". The new policy requires new values for the "status:" attribute of **inet6num** objects in the RIPE Database.

2.0 Database Objects Affected

Only **inet6num** objects may have the new values of the "status:" attribute.

3.0 Usage

There are three new values for the "status:" attribute:

- "ALLOCATED-BY-RIR" - For allocations made by an RIR to an LIR.
- "ALLOCATED-BY-LIR" - For allocations made by an LIR or an LIR's downstream

customer to another downstream organisation.

- "ASSIGNED" - For assignments made to End User sites.

ALLOCATED-BY-RIR
Only an RIR may place this status on **inet6num** objects. In the RIPE Database it is only possible to place this status on an **inet6num** object if the "mnt-by:" attribute is set to RIPE-NCC-HM-MNT.

ALLOCATED-BY-LIR
An LIR or a downstream network operator of the LIR is able to make an allocation from which assignments and/or smaller allocations will be made.

The ALLOCATED-BY-LIR status allows an LIR to document distribution and delegate management of the address space they were allocated by the RIR.

The ALLOCATED-BY-LIR status objects may reference different contact information and have different values of "mnt-lower:" attributes from the less specific **inet6num**s above them in the hierarchy.

The "mnt-lower:" attribute delegates authorisation for the creation of more specific **inet6num** objects in the RIPE Database to different entities in different address blocks within the organisation's allocated space. For example, if we consider the following hierarchy:

```
inet6num: 2001:07D8::/32
mnt-by: RIPE-NCC-HM-MNT
mnt-lower: LIR-MNT
status: ALLOCATED-BY-RIR

inet6num: 2001:07D8::/40
mnt-by: LIR-MNT
mnt-lower: OTHER1-MNT
status: ALLOCATED-BY-LIR

inet6num: 2001:07D8::/42
mnt-by: OTHER1-MNT
mnt-lower: OTHER2-MNT
status: ALLOCATED-BY-LIR

inet6num: 2001:07D8::/48
mnt-by: OTHER2-MNT
mnt-lower: OTHER2-MNT
status: ASSIGNED
```

The LIR-MNT has the authority to create more specific **inet6num** objects within the 2001:07D8::/32 range.
OTHER-MNT has the authority to create more specific **inet6num** objects within 2001:07D8::/40 with a status of ALLOCATED-BY-LIR or ASSIGNED.
Please note that LIR-MNT cannot modify 2001:07D8::/42 because LIR-MNT is not referenced in a "mnt-by:" attribute for that object.

ASSIGNED
This status indicates that the network is in use by an End User. No more specific assignments may be registered in the database.

4.0 Functionality

When creating or modifying an **inet6num** object, the database will check the value of the "status:" attribute according to the following rules:

The value of "ALLOCATED-BY-RIR" is allowed if the object is maintained by the RIPE-NCC-HM-MNT **mntner**.

The value of "ALLOCATED-BY-LIR" is allowed if one level less specific **inet6num** object contains a "status:" attribute with the value of "ALLOCATED-BY-RIR" or "ALLOCATED-BY-LIR".

The value of "ASSIGNED" is allowed if one level less specific inetnum object contains a "status:" attribute with the value of "ALLOCATED-BY-RIR" or "ALLOCATED-BY-LIR". **inet6num** objects cannot be created if there is a less specific object with a status of "ASSIGNED".

5.0 IP Address Policy Implications

The new values of the "status:" attribute reflect the changes to the policy agreed at RIPE 42 and implemented by the RIPE NCC on 1 July 2002. There are no additional implications to the IPv6 policy.