

Value of the "status:" and "assignment-size:" attributes in INET6NUM objects for sub-assigned PA space

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Abstract

This document describes the new value of the "status:" attribute and the "assignment-size:" of the **inet6num** object

1.0 Motivation

For verification of efficient use of allocated space, there is a requirement for LIRs to keep records of IPv6 address assignments made to End Users. However, for calculating the efficiency (HD-ratio) there is no need to keep track of personal data associated with these assignments. The number and size of the assignments is sufficient to calculate the HD-ratio and verify efficiency.

To standardise these registrations and to provide an open and transparent method of verification, this document introduces a new value of the "status:" attribute for **inet6num** objects (AGGREGATED-BY-LIR) and a new attribute called "assignment-size:". This new value allows for the creation of **inet6num** objects indicating these are aggregated End User assignments, using the "assignment-size" attribute to indicate the size of the individual End User assignments in this aggregate

2.0 Database objects Affected

Only **inet6num** objects may contain a "status:" value of "AGGREGATED-BY-LIR" or attribute called "assignment size:". When the **inet6num** has a status of "AGGREGATED-BY-LIR", the "assignment-size" attribute is required. In all other cases the attribute is optional.

3.0 Usage

The <AGGREGATED-BY-LIR> value allows to register individual End User assignments by means of a less specific aggregate object that contains multiple assignments of the same size, which is indicated in the "assignment size:" attribute.

This allows for efficient registration of assignments in cases where there is no need or it is not possible to register the details of individual End Users. An example of this would be the use of dynamic address pools for broadband Internet access.

If, for instance, you wish to create a pool of 1000 /56 assignments, you would create an object similar to:

```
inet6num:      2000::/46
status:        AGGREGATED-BY-LIR
assignment-size: 56
<...>
```

This would indicate block of a /46 is further split into /56 End User assignments. Optionally the "remarks:" and "description:" attributes can be used to further clarify the usage or for instance give hints such as "used for dynamic assignments".

When needed, more specific **inet6num** objects are allowed to indicate a different assignment size within a certain range however, only one level of more specifics is allowed.

4.0 Functionality

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

- The **inet6num** object may contain an optional attribute called "assignment-size:".
- The value of the "assignment-size:" attribute must be a longer prefix than the prefix of the object itself.
- A value of "AGGREGATED-BY-LIR" is allowed if a one level less specific object contains a "status:" attribute with a value of "ALLOCATED-BY-RIR", "ALLOCATED-BY-LIR" or "AGGREGATED-BY-LIR".
- When an **inet6num** contains a "status:" value of "AGGREGATED-BY-LIR" the "assignment-size:" attribute becomes required.