DRAFT: Value of the "status:" and "assignment-size:" attributes in INET6NUM objects

How to read this draft document:

This document is part of a project to improve the readability of RIPE Policy documents. If approved, it will replace ripe-513. To show you how the new document will differ from the current one, we've provided a summary of the changes made and listed both the current and the proposed text in this document.

We indicate changes to existing text in the document like this:

CURRENT TEXT	PROPOSED TEXT
The text from the current policy document that will be replaced is displayed here.	The proposed text is displayed here.

Another version of this draft document is available that contains only the proposed text.

Summary of changes:

- Wording throughout the document has been improved
- The policy title has been reworded
- All title sections have been reworded
- The old sections 2.0 and 4.0 have been merged and reworded
- Part of section 3.0 has been merged into the new section 2.0

- The real example has been moved into section 3.0

Specifics:
- Section 2.0 – the text has the structure of definitions, specifics and details on how to use the attributes defined
- Old section 4.0 – removed the first bullet point since this is covered by the last bullet point

Added in new draft document:
- Index of Contents
- Section 4.0 - Attribution

CURRENT TEXT	PROPOSED TEXT
Abstract This document describes the new value of the "status:" attribute and the "assignment-size:" of the **inet6num** object	**Abstract** This document describes the "AGGREGATED-BY-LIR" value of the "status:" attribute and the "assignment-size:" attribute in the **inet6num** object.

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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	**1.0 Introduction** In order to verify efficient use of allocation space, LIRs are required to keep a record of the IPv6 address assignments made to End Users. However, for calculating the efficiency (HD-ratio) there is no need to keep track of individual assignments. The number and size of these assignments is sufficient to calculate the HD-ratio and verify efficiency. This document introduces the "AGGREGATED-BY-LIR" value of the "status:" attribute for **inet6num** objects and the attribute "assignment-size:". Taken together, they accomplish the purpose of creating a standard registration in the database that provides an open and transparent method for verification.
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	**2.0 Database Definitions and Functionality** **2.1 Definitions** AGGREGATED-BY-LIR

attribute is optional.	Value of the "status:" attribute in an inet6num object. It indicates that individual End User assignments are represented by this **inet6num** object. Multiple End User assignments, each of the same size specified by the "assignment-size:" value, do not need to be registered in the database.
	ASSIGNMENT-SIZE
	Attribute contained in an inet6num object with the "status:" value "AGGREGATED-BY-LIR". It indicates the size of the multiple End User assignments contained within the aggregate.
	Only the **inet6num** object may use the value of "AGGREGATED-BY-LIR" for the "status:" attribute and contain the attribute "assignment-size:".
	Only when an **inet6num** contains a "status:" value of "AGGREGATED-BY-LIR" the "assignment-size:" attribute becomes required.
	2.2 Functionality
	When creating or updating an **inet6num** object, the database will check the value of the "status:" attribute according to the following rules:
	- The value of the "assignment-size:" attribute must be a longer prefix than the prefix of the object itself

	• The **inet6num** attribute "status:" may contain the value "AGGREGATED-BY-LIR" only if the one level less specific object contains a "status:" attribute with value:
	
	   - "ALLOCATED-BY-RIR", or
	   - "ALLOCATED-BY-LIR", or
	   - "AGGREGATED-BY-LIR"

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:"
	3.0 Applications
	
	  The usage of "Aggregated-BY-LIR" and "assignment-size:" 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 indicates that the block 2000::/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".

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.	When needed, more specific **inet6num** objects are allowed to contain the attribute "assignment-size:" with a larger value and have the status "AGGREGATED-BY-LIR". However, only one level of more specific objects is allowed to aggregate End Users with a different assignment size.
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.	**4.0 Attribution** This document is compiled from policies developed by the RIPE community. The following people actively contributed by making proposals through the RIPE Policy Development Process: Marco Hogewoning, Remco Van Mook