

## RIPE NCC Charging Scheme 2013 - Option C

### Introduction

The purpose of the RIPE NCC Charging Scheme is to generate sufficient income for the operations of the RIPE NCC in a stable and predictable manner. The Charging Scheme defines the annual fee per LIR charged to members and sets the sign-up fee for new members.

Based on existing RIPE Policy, the separate charge of EUR 50 per Provider Independent number resource assignment will be continued. Independent Internet number resources are IPv4 and IPv6 PI assignments, Anycasting and IPv6 IXP assignments. Contrary to previous years, AS Numbers are excluded from this separate charge.

The billing score algorithm is adjusted; IPv6 is included for 2013 in the billing score algorithm.

Non-members that are currently charged fees for using specific services such as DNSMON and NRTM, as well as Direct Assignment Users, must become members. Organisations that wish to support the RIPE NCC or particular activities should become members.

The sign-up fee for new LIRs will be continued and will remain at EUR 2,000.

### RIPE NCC Annual Fees 2013

The fee for 2013 will consist of an annual fee for the members' LIR billing category plus a set fee of EUR 50 for each Provider Independent assignment registered to the member on 30 September 2012. For the 2013 fees, and for a comparison with the fees since 2007, see the following table:

Annual fee (in EUR)	2007	2008	2009	2010, 2011 and 2012	2013
Extra Small	1,300	1,300	1,300	1,300 + 50 per PI assignment	1,200 + 50 per PI assignment
Small	1,800	1,800	1,800	1,800 + 50 per PI assignment	1,650 + 50 per PI assignment
Medium	2,550	2,550	2,550	2,550 + 50 per PI assignment	2,450 + 50 per PI assignment
Large	4,100	4,100	4,100	4,100 + 50 per PI assignment	4,000 + 50 per PI assignment
Extra Large	5,500	5,500	5,500	5,500 + 50 per PI assignment	5,400 + 50 per PI assignment
Sign-up fee	2,000	2,000	2,000	2,000	2,000

Each LIR receives a score according to the Billing Score Algorithm (see below). All LIRs are ranked in ascending order. LIRs with the same score get identical rankings. The billing categories are defined using the following cumulative boundaries:

- Up to 20% of LIRs will make up the Extra Small billing category
- Up to 75% of LIRs will make up the Extra Small and Small billing categories
- Up to 95% of LIRs will make up the Medium billing category and all smaller billing categories
- Up to 99% of LIRs will make up the Large billing category and all smaller billing categories
- The remaining LIRs will make up the Extra Large billing category

#### Percentage of Total LIRs per Billing Category

Billing Category	2009	2010	2011	August 2012	Target 2013
Extra Small	27%	31%	31%	28%	20 %
Small	50%	48%	48%	50%	55 %
Medium	18%	17%	17%	18%	20 %
Large	4%	3%	3%	3%	4 %
Extra large	1%	1%	1%	1%	1 %

*Note: The percentages for 2013 may deviate slightly. If a set of LIRs with the same score falls across the boundary between two billing categories, they will be part of the higher billing category.*

The billing score algorithm will be run after the members at the General Meeting have approved the Charging Scheme 2013. The billing scores and the number of Provider Independent assignments for LIRs will be determined based on data from 30 September 2012. Every LIR will be notified of their billing score, their billing category and their annual fee by email.

The billing category for each LIR can be seen by selecting the relevant LIR from the full list of LIRs by country, which is available at:

<http://www.ripe.net/membership/indices/>

#### Change Matrix - Expected Changes of LIRs Between the Billing Categories for 2013

The Change Matrix indicates the percentage of LIRs currently in a certain billing category that is expected to move to a different billing category for 2013. Since all new registries start as Extra Small, the migration from Extra Small to other categories is higher than the migration between other categories.

**For example:** The matrix shows that for 2013:

- 39% of the LIRs currently in the Extra Small billing category are expected move to the Small category
- 1% of the LIRs currently in the Extra Small billing category are expected move to the Medium category
- 0.1% of the LIRs currently in the Extra Small billing category are expected move to the Large category
- None of the LIRs currently in the Extra Small billing category are expected move to the Extra Large category
- The other 60% of the LIRs are expected remain in the Extra Small billing category

<b>BILLING CATEGORY</b>	Change to Extra Small	Change to Small	Change to Medium	Change to Large	Change to Extra Large	<b>2013 TOTAL CHANGE</b>
Extra Small		39%	1%	0%	-	<b>40%</b>
Small	0%		6%	-	-	<b>6%</b>
Medium	0%	0%		4%	-	<b>4%</b>
Large	0%	-	-		4%	<b>4%</b>
Extra Large	-	-	-	-		-

*Note: In the table above, "-" indicates that no registries are expected to move to a particular category.*

### **Billing Score Algorithm**

An LIR's billing category is set based on the LIR's billing algorithm score. This score is based on Internet resource allocations made over time at the LIR's request. The scoring system takes into account all IPv4 allocations and IPv6 allocations.

For the purpose of this scoring algorithm, an allocation of IPv4 /21 is equivalent ( $\triangleq$ ) to one IPv6 /32 allocation. The following table shows how scoring units are determined based on resource usage. To establish scoring units based on larger or smaller resource usage, the same ratio applies.

IPv4 Allocation	IPv6 Allocation	Scoring Unit
/ 22 $\triangleq$	/ 33 $\triangleq$	0.5
/ 21 $\triangleq$	/ 32 $\triangleq$	1
/ 20 $\triangleq$	/ 31 $\triangleq$	2
/ 19 $\triangleq$	/ 30 $\triangleq$	4

The total score per LIR is the sum of all allocation scores for that LIR. Using this matching system, the following algorithm is run to determine the total score per LIR:

$$S(\text{reg}) = \sum_{i=1}^N a_i * t_i$$

$a_i$  = Scoring unit  
 $t_i$  = Time function of allocation i ( year of allocation – 1992 )  
N = Number of allocations

In simplified terms:

- Score = Scoring unit that an allocation is worth
- Time Score = Time function of an allocation (year of allocation – 1992)
- Score X Time Score = Allocation Score

The total score per member is the sum of all allocation scores for that member with a time factor applied to give more weight to recent allocations. Thus, the relative weight of a given allocation decreases over time.