RIPE NCC Charging Scheme 2006

Introduction

The purpose of the RIPE NCC Charging Scheme is to define the annual service fee charged to members. As Internet number resources do not have a value in themselves, the RIPE NCC charges members an annual service fee based on the services that the member receives from the RIPE NCC. These services are related to the distribution of Internet number resources to the member. The annual service fee charged to each member is proportionally related to the workload involved in providing the services requested by that member. The annual service fee charged to a member is based on the billing category of that member as defined by the Charging Scheme. The billing categories are based on Internet number resources allocated or assigned over time at the request of the member.

RIPE NCC Charging Scheme 2006

For 2006, several modifications have been made to better match services rendered and to align the Charging Scheme with membership developments. Furthermore the Billing Score Algorithm for defining billing categories has been adjusted to reflect an improved alignment between the different resources.

The changes in the Charging Scheme 2006 are the following:

- The average service fee for existing members decreases by 12%
- The 'Administration fee' decreases by 20%. The 'Administration fee' is charged when members want to transfer Internet number resources to another member or when members request the RIPE NCC to change their Reg ID
- The Billing Score of IPv4 allocations is adjusted to better align IPv4, IPv6 and AS Number resources in accordance with the allocation policy decided by the RIPE community
- Special purpose IPv6 assignments are taken into account in the Billing Score Algorithm

The service fees for 2006 are fixed annual charges for the RIPE NCC membership and are based on the billing category of a member. For the 2006 service fees, and for a comparison with the service fees since 2002, see the following table:

Annual service fee (in EUR)	2002	2003	2004	2005	2006
Extra Small	-	-	2,000	1,750	1,500
Small	1,800	2,750	2,500	2,250	2,000
Medium	2,500	3,750	3,500	3,150	2,750
Large	3,400	5,250	5,000	4,750	4,250
Extra Large	-	-	6,750	6,500	5,750

Sign-up fee	2,100	2,500	2,500	2,000	2,000
Administration fee	-	-	1,250	1,250	1,000

Membership Growth Projections

In line with the membership growth survey conducted in 2004, a membership growth model has been developed to improve the accuracy of forecasting in relation to membership developments. Following this model a net growth rate of approximately 10% is expected over 2005. For 2006, taking into account expected member closures, a net growth rate of 8% is expected.

The membership figures for 2002 - 2004, the projections for the remainder of 2005 and the estimation for the budget for 2006 are as follows:

Number of LIRs	2002	2003	2004	Projection 2005	Budget 2006
Extra Small	-	-	766	1,303	1,162
Small	2,503	2,664	2,126	2,005	2,320
Medium	614	659	749	720	844
Large	152	165	144	139	169
Extra Large	-	-	39	39	42
Total membership	3,269	3,488	3,824	4,206	4,537
Net Growth %	5 %	7 %	10 %	10 %	8 %

Note: Since the formal recognition in April 2005 of AfriNIC, the Regional Internet Registry for Africa, RIPE NCC members from that region have been transferred to AfriNIC. These are excluded from the figures for 2005 and 2006.

New members that are expected in 2006 are included in the Extra Small billing category.

Each member receives a score according to the Billing Score Algorithm (see Appendix I). Starting from the lowest score, all members are ranked in order depending on their score. Members with the same score get identical rankings. The billing categories are defined using the following cumulative boundaries:

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

Percentage of Total Members per Billing Category

Billing Category	2002	2003	2004	July 2005	Target 2006
Extra Small	-	-	19 %	28 %	20 %
Small	77 %	78 %	61 %	50 %	55 %
Medium	19 %	18 %	16 %	18 %	20 %
Large	4 %	4 %	3 %	3 %	4 %
Extra large	-	-	1 %	1 %	1 %

Note: These percentages for 2006 may deviate slightly. If a set of members with the same score fall across the boundary between billing categories, these members will be part of the next higher billing category.

The Billing Score Algorithm will be run after the General Meeting has approved the Charging Scheme 2006. The billing scores for members will be determined based on 30 September 2005 statistics. Every member will be notified of their billing score and billing category by e-mail.

The billing category for each member will also be available by selecting the relevant member from the full list of members by country available at:

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

Change Matrix - Expected Changes of Members Between the Billing Categories for 2006

The Change Matrix indicates the percentage of members currently in a certain billing category that are expected to move to a different billing category for 2006. Due to the fact that all new registries start as Extra Small, the migration from Extra Small to other categories is higher than the migration from other categories.

For example: The matrix shows that, for 2006:

- 57% of the members currently in the Extra Small billing category will remain in that category
- 35% of the members currently in the Extra Small billing category will move to the Small category
- 7% of the members currently in the Extra Small billing category will move to the Medium category
- 1% of the members currently in the Extra Small billing category will move to the Large category
- 0.2 % of the members currently in the Extra Small billing category will move to the Extra Large category

From:	To: Extra Small	Small	Medium	Large	Extra Large
Extra Small	57%	35%	7%	1%	0%

Small	4%	89%	7%	-	-
Medium	1%	15%	78%	6%	-
Large	1%	-	18%	74%	7%
Extra Large	-	-	-	23%	77%

Note: In the table above, "-" indicates that no registries are expected to move to a particular category." 0%" indicates that there may be some registries that will move to a particular category but that this percentage is expected to be lower than 1%.

Appendix I: Billing Score Algorithm

To determine the billing category for a member, a score is calculated on the basis of the resources allocated or assigned at the request of the member. The scoring system is based on Internet resource allocations or assignments made over time at the request of the member. The scoring system takes into account:
- IPv4 allocations
- IPv4 PI assignments
- IPv6 PA allocations
- IPv6 special purpose assignments
- AS Number assignments

Note: PI stands for Provider Independent and PA stands for Provider Aggregatable

For the purpose of this scoring algorithm, an allocation of IPv4 /21 is equivalent ($\triangleq$) to one IPv6 /32 allocation or to one AS Number. 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.

Prefix IPv4 Allocation		Prefix IPv6 Allocation		AS Numbers Assignment 2005		Prefix PI IPv4 Assignment 2005	IPv6 Special Purpose Assignment 2005	Scoring Unit
IPv4 / 22	$\triangleq$	IPv6 / 33	$\triangleq$			PI IPv4 / 25 $\triangleq$		0.5
IPv4 / 21	$\triangleq$	IPv6 / 32	$\triangleq$	1 ASN	$\triangleq$	PI IPv4 / 24 $\triangleq$	1	1
IPv4 / 20	$\triangleq$	IPv6 / 31	$\triangleq$	2 ASN	$\triangleq$	PI IPv4 / 23 $\triangleq$	2	2
IPv4 / 19	$\triangleq$	IPv6 / 30	$\triangleq$	4 ASN	$\triangleq$	PI IPv4 / 22 $\triangleq$	4	4

Note: AS Numbers, PI IPv4 and IPv6 special purpose assignments issued before 1 October 2004 will NOT count toward the 2006 billing score.

Using this matching system, the following algorithm is run to determine the total score per member:

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

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

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