RIPE NCC Charging Scheme 2005

For 2005, the changes made for the Charging Scheme 2004 are refined, while the overall principles remain the same. Several modifications have been made to better match services rendered and to align them with membership developments. Furthermore based on feedback received from members over the last year, the Billing Score Algorithm for defining billing categories is improved.

In the Charging Scheme 2005, billing categories are based on Internet resources allocated or assigned over time. These resources consist of IPv4 (PA), IPv6 (PA), IPv4 (PI) and AS Numbers.

The changes in the Charging Scheme 2005 are the following:

- The average service fee for existing members decreases by 10%
- The sign-up fee for new members decreases by 20%
- New members will start in the 'Extra Small' billing category
- The 'Takeover fee' is renamed 'Administration fee'. The administration fee is charged when resources are transferred from one member to another or when members request the RIPE NCC to change their RegID
- A revised algorithm to determine the billing category for members
- IPv4 PI allocations are taken into account in the Billing Score Algorithm

The service fees for 2005 are fixed annual charges for the RIPE NCC membership and are based on the billing category of a member. For the 2005 service fees, and for a comparison with the service fees since 2001, see the following table:

Annual Service Fees	2001	2002	2003	2004	2005
Extra Small	-	-	-	2,000	1,750
Small	2,100	1,800	2,750	2,500	2,250
Medium	2,950	2,500	3,750	3,500	3,150
Large	3,900	3,400	5,250	5,000	4,750
Extra Large	-	-	-	6,750	6,500
Sign-up fee	2,100	2,100	2,500	2,500	2,000
Administration fee	-	-	-	1,250	1,250

Membership Growth Projections

To improve the accuracy of growth forecasts the RIPE NCC conducted a membership growth survey to gather input from the members regarding membership developments in their country. Following the membership growth survey and analysing the growth for the current year, a net growth rate of approximately 9% is expected over the year 2004. For 2005, taking into account expected member closures, a net growth rate of 11% is expected.

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

The membership figures for 2001 - 2003, the projections for the remainder of 2004 and the estimation for the budget for 2005 are as follows:

Number of LIRs	2001	2002	2003	Projection 2004	Budget 2005
Extra Small	-	-	-	729	1,156
Small	2,536	2,503	2,664	2,247	2,082
Medium	441	614	659	647	757
Large	145	152	165	130	151
Extra Large	-	-	-	33	38
Total membership	3,122	3,269	3,488	3,786	4,184
Net Growth %	22 %	5 %	7 %	9 %	11 %

Note: New members that are expected after the billing scores for 2005 have been determined are included in the Extra Small billing category.

Each member is allocated 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

Note: These percentages 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.

Percentage of Total Members per Billing Category

Billing Category	2001	2002	2003	July 2004	Cumulative % 2005
Extra Small	-	-	-	20 %	20 %
Small	81 %	77 %	78 %	58 %	75 %
Medium	14 %	19 %	18 %	17 %	95 %
Large	5 %	4 %	4 %	4 %	99 %
Extra large	-	-	-	1 %	100 %

The billing scores for members will be determined on 30 September 2004. The billing category and score range will be published and every member will be notified of their billing score and billing category by e-mail.

Change Matrix - Expected Changes of Members Between the Billing Categories

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 2005.

For example: the matrix shows that, for 2005, 53% of the members currently in the Extra Small billing category are expected to remain in that category, 41% of the members currently in the Extra Small billing category are expected to move to the Small category and 6% of the members currently in the Extra Small billing category are expected to move to the Medium category.

From: To:	Extra Small	Small	Medium	Large	Extra Large
Extra Small	53%	41%	6%	-	-
Small	29%	62%	9%	0%	-
Medium	1%	23%	68%	8%	0%
Large	-	1%	27%	64%	8%
Extra Large	-	-	-	29%	71%

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 to the member over time taking into account IPv4 (PA and PI), IPv6 and AS Numbers.

For the purpose of this scoring algorithm, an IPv4 /20 is equivalent to one IPv6 /32, to one AS Number or to one PI IPv4 /24. The following table shows how scoring units are determined based on resource usage, where the relative weights of the various resource types are established based on work load caused by the respective resource requests. To establish scoring units based on larger or smaller resource usage, the same principles apply.

Prefix IPv4		Prefix IPv6		AS Numbers 2004		Prefix PI IPv4 2004	Scoring Unit
IPv4 / 21	≜	IPv6 / 33	≜			PI IPv4 / 25 ≜	0.5
IPv4 / 20	≜	IPv6 / 32	≜	1 ASN	≜	PI IPv4 / 24 ≜	1
IPv4 / 19	≜	IPv6 / 31	≜	2 ASN	≜	PI IPv4 / 23 ≜	2
IPv4 / 18	≜	IPv6 / 30	≜	4 ASN	≜	PI IPv4 / 22 ≜	4

Note: For AS Numbers and PI IPv4 allocations, only the allocations from the past 12 months dating back from the 30 September 2004 are taken into account as these resources are allocated or assigned on behalf of third parties.

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 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.