Network Working Group
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IAB Recommendation for an Intermediate Strategy to Address the Issue of Scaling

Status of this Memo

This memo provides information for the Internet community. It does not specify an Internet standard. Distribution of this memo is unlimited.

Recommendation

Classless Inter-Domain Routing (CIDR) proposes strategies for address assignment of the existing IP address space with a view to conserve the address space and stem the explosive growth of routing tables in default-route-free routers run by transit routing domain providers [1]. CIDR is proposed as an immediate term strategy to extend the life of the current 32 bit IP address space. This strategy presumes that a suitable long term solution is being addressed within the Internet technical community.

The basic components of the CIDR plan are: management of the allocation of Internet address space and provision of a mechanism for aggregation of routing information. The IP community has published several RFCs and Internet-Drafts which describe the architecture for IP address assignment and routing protocols which will promote the deployment of CIDR. These documents have led to changes in the way network address are allocated and have prompted enhancements to the inter-domain and intra-domain routing protocols.

With the CIDR prompted changes in the management of the allocation of the Internet address space, allocation of blocks of Class C numbers leads to an explosion of the routing tables. So, it is important that the techniques for aggregating information in the routing protocols keep pace with the change in the allocation of IP numbers.

The IAB endorses the CIDR architecture and its implementation. In addition, the IAB supports the actions taken by the IANA and InterNIC, the router vendors, and the network operators to implement CIDR to address the scaling problem that we are facing with the growth of the Internet.

References

[1] Fuller, V., Li, T., Yu, J., and K. Varadhan, "Supernetting: an Address Assignment and Aggregation Strategy", RFC 1338, BARRNet, cisco, Merit, OARnet, June 1992.

[2] Gerich, E., "Guidelines for management of IP Address Space", RFC 1466, Merit, May 1993.

[3] Topolcic, C., "Schedule for IP Address Space Management Guidelines", RFC 1367, CNRI, October 1992.

[4] Rekhter, Y., and T. Li, "An Architecture for IP Address Allocation with CIDR", Work in Progress, January 1993.

[5] Rekhter, Y., and C. Topolcic, "Exchanging Routing Information across Provider/Subscriber Boundaries in CIDR environment", Work in Progress, February 1993.

Security Considerations

Security issues are not discussed in this memo.

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