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Category: Best Current Practice

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Multicast pruning a necessity

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Abstract

This document mandates that the MBone will be free of non-pruning multicast implementations by 31 October 1996.

It is a product of the Multicast Deployment Working Group in the Operational Requirements area of the Internet Engineering Task Force. Submit comments to <mboned@ns.uoregon.edu> or the author.

Discussion

The MBone (Multicast Backbone) of the Internet is composed of a DVMRP backbone connected to regions that may be running other multicast routing protocols.

DVMRP versions prior to 3 do not support pruning. Every multicast packet transmitted is delivered to every non-pruning router (subject to scoping rules), regardless of the presence of members of that

group. Network paths between each source and each non-pruning router are thus forced to carry all multicast traffic from those sources. This behavior is fundamentally incompatible with a scalable multicast backbone.

Effective 31 October 1996, the MBone community will no longer accept such non-pruning implementations as a part of the MBone. Such implementations should be upgraded or disconnected from the MBone prior to that date. Service providers should assist their customers in these processes.

DVMRP implementations that do not support pruning include mrouted versions prior to 3, and Cisco Systems IOS prior to version 11.0(3). 3Com's NETBuilder routers and LANplex switches have supported pruning as long as DVMRP has been available for them (releases 8.3 and 7.0, respectively). Bay Networks' implementation supports pruning in version 9.00 and up.

Within non-DVMRP regions, software that does not support DVMRP pruning but does support a similar mechanism of a different protocol (such as CBT, MOSPF, or PIM) is acceptable, as long as the border routers of such a region can translate that mechansism into DVMRP pruning.

Security Considerations

Security considerations are not addressed in this memo.

References

[IPMULTI] S.E. Deering, "Host extensions for IP multicasting", RFC1112, 1 August 1989.

[MREQ] R. Braudes, S. Zabele, "Requirements for Multicast Protocols", RFC1458, 26 May 1993.

[DVMRP] T. Pusateri, "Distance Vector Multicast Routing Protocol", Work in progress (internet-draft).

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