

RFC1112 - Host Extensions for IP Multicasting

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Table 1: Data sheet for Host Extensions for IP Multicasting

Title	Host Extensions for IP Multicasting
Acronym	
Version	1989
Document Number	RFC1112
Release Date	August 1989
Reference	https://tools.ietf.org/html/rfc1112

Note: The following is an excerpt from the official IETF [Request For Comment \(RFC\)](#). It is provided here as a convenience and is not authoritative. Refer to the original document as the authoritative reference.

Introduction

Internet Protocol (IP) multicasting is the transmission of an IP datagram to a “host group”, a set of zero or more hosts identified by a single IP destination address. A [multicast](#) datagram is delivered to all members of its destination host group with the same “best-efforts” reliability as regular unicast IP datagrams, i.e., the datagram is not guaranteed to arrive intact at all members of the destination group or in the same order relative to other datagrams.

The membership of a host group is dynamic; that is, hosts may join and leave groups at any time. There is no restriction on the location or number of members in a host group. A host may be a member of more than one group at a time. A host need not be a member of a group to send datagrams to it.

A host group may be permanent or transient. A permanent group has a well-known, administratively assigned [IP address](#). It is the address, not the membership of the group, that is permanent; at any time a permanent group may have any number of members, even zero. Those IP multicast addresses that are not reserved for permanent groups are available for dynamic assignment to transient groups which exist only as long as they have members.

Internetwork forwarding of IP multicast datagrams is handled by “multicast routers” which may be co-resident with, or separate from, internet gateways. A host transmits an IP multicast datagram as a local network multicast which reaches all immediately-neighboring members of the destination host group. If the datagram has an IP time-to-live greater than 1, the multicast router(s) attached to the local network take responsibility for forwarding it towards all other networks that have members of the destination group. On those other member networks that are reachable within the IP time-to-live, an attached multicast router completes delivery by transmitting the datagram as a local multicast.

This memo specifies the extensions required of a host IP implementation to support IP multicasting, where a “host” is any internet host or [gateway](#) other than those acting as

multicast routers. The algorithms and protocols used within and between multicast routers are transparent to hosts and will be specified in separate documents. This memo also does not specify how local network multicasting is accomplished for all types of network, although it does specify the required service interface to an arbitrary local network and gives an [Ethernet](#) specification as an example. Specifications for other types of network will be the subject of future memos.

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