

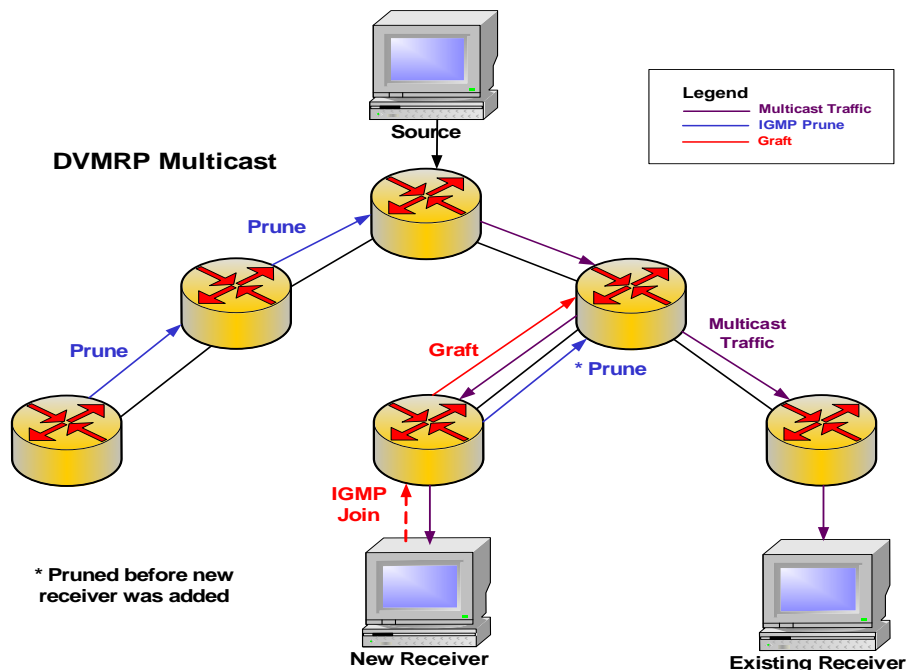
ZebOS®
Network Platform

Distance Vector Multicast Routing Protocol

Overview

The ZebOS® Network Platform Distance Vector Multicast Routing Protocol (DVMRP) is a multicast routing protocol that provides an efficient mechanism for connection-less datagram delivery to a group of hosts across an internetwork. It is a distributed protocol that dynamically generates IP multicast delivery trees using a technique called Reverse Path Multicasting (RPM). The basic architecture of the ZebOS DVMRP module conforms to the latest DVMRPv3 draft, and interoperates with legacy RFC 1075 and other older DVMRP implementations. It also supports the IETF draft for the Multicast MIB.

The ZebOS DVMRP Module uses a separate daemon serviced by the Network Services Manager (NSM). The DVMRP Routing Information Base (RIB) is a system-wide structure encompassing all multicast routes for a DVMRP-enabled router. The DVMRP RIB is a Patricia tree that contains the table of routes for multicast sources learned through DVMRP route exchanges. Both the upstream and the downstream parts of a route state reside physically in a single, combined DVMRP RIB node.



DVMRP Multicast Routing Network Topology

Features

- Probe Message and Neighbor Adjacency
- DVMRP Multicast Route Table and Reporting
- Upstream and Downstream Prune State Machines
- Grafting
- IGMPv1/v2/v3 support via ZebOS NSM
- Source Specific Multicast (SSM) support
- Tunnel Interfaces
- Multicast Forwarding Information Base (MFIB) Calculation
- Backward-compatibility with DVMRP versions 1 and 2 (non-pruning), and earlier drafts of version 3
- Tracing and Troubleshooting support (Neighbor Message Types)
- DVMRP Management Information Base (MIB) support

Benefits

- Stable, robust and platform-independent implementation of DVMRP
- Significant time-to-market advantage for customers
- Used in both in embedded equipment and on standard server platforms
- Fully-independent module that can be installed, configured and upgraded separately

Requirements

- ZebOS Network Services Module

Note: Router that route both multicast and unicast datagrams must run two separate routing processes, since ZebOS DVMRP is not developed for use in routing non-multicast datagrams.

Standards Support

- draft-ietf-idmr-dvmrp-v3-11 — Distance Vector Multicast Routing Protocol
- draft-ietf-idmr-dvmrp-mib-11 — Distance Vector Multicast Routing Protocol MIB

Standard Deliverables

- Source Code (written in ANSI-compliant C)
- Installation Guide
- Command Reference Guide
- Configuration Guide
- Developer Guide