

# Distance Vector Multicast Routing Protocol (DVMRP)

DVMRP (Distance Vector Multicast Routing Protocol) is a multicast routing protocol that provides an efficient mechanism for connectionless 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. The basic architecture of the ZebOS DVMRP Module conforms to the latest DVMRP v3 draft and interoperates with legacy RFC1075 and other older DVMRP implementations. It also supports the IETF draft MIB.

ZebOS DVMRP is a separate daemon serviced by the NSM daemon. The DVMRP Routing Information Block (RIB) is a system-wide structure encompassing all multicast routes in a DVMRP-enabled router. The DVMRP RIB is a Patricia tree which 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 combined, single DVMRP RIB node.

The ZebOS DVMRP module is written in ANSI C programming language and is platform independent.

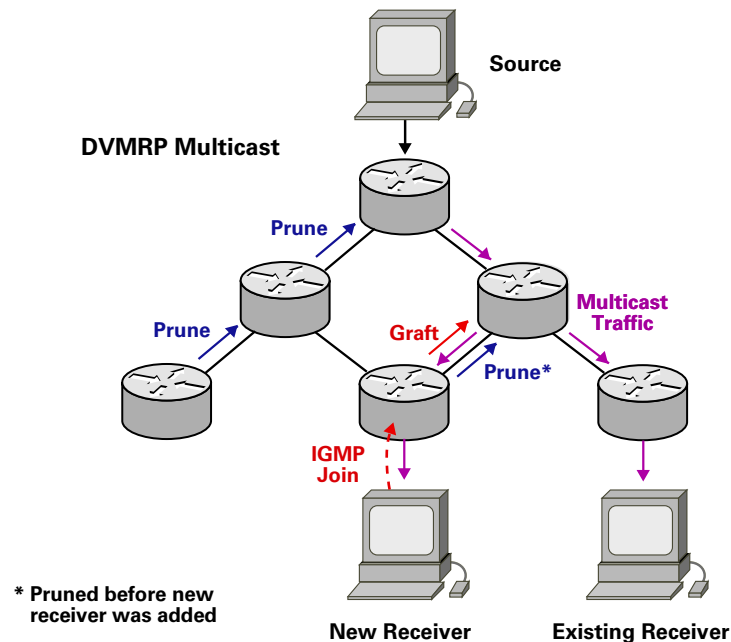


Figure 1 DVMRP Multicast Routing Network Topology

## Features

- Up-to-date with the latest IETF draft, draft-ietf-idmr-dvmrp-v3-10
- Probe Message and Neighbor Adjacency
- DVMRP Multicast Route Table and Reporting
- Upstream and Downstream Prune State Machines
- Grafting
- Tunnel Interfaces
- Multicast forwarding Information Base Calculation (MFIB)
- Command Line Interface
- Backward interoperability with DVMRP major versions 1 and 2 (non- pruning) and earlier drafts of version 3
- Tracing & Troubleshooting support (Neighbors 2 message Types)

## Benefits

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

## Supported Operating Systems

- Linux
  - MontaVista Professional Edition
  - NetBSD\*
  - VxWorks®\*\*
- \* Requires third party multicast forwarder patch  
\*\* Requires IP Infusion TCP/IP Module

## Requirements

SKU	PRODUCT NAME
ZOS-NSM	ZebOS Network Services Module

Note: DVMRP is not currently developed for use in routing non-multicast datagrams, so a router that routes both multicast and unicast datagrams must run two separate routing processes. DVMRP is designed to be easily extensible and could be extended to route unicast datagrams.

## Standards Support

STANDARD	FUNCTION
draft-ietf-idmr-dvmrp-v3-10 (Note: This Draft obsoletes: RFC 1075)	Distance Vector Multicast Routing Protocol
draft-ietf-idmr-dvmrp-mib-11	Distance Vector Multicast Routing Protocol MIB



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