

PIM-SMv4 Module

SKU ZOS-PIMSM

The ZebOS® Advanced Routing Suite (ARS) Protocol Independent Multicast–Sparse Mode (PIM-SM) IPv4 Module is a multicast routing protocol module that uses the underlying unicast Routing Information Base (RIB) to find out the best next-hop neighbor to reach the root of the multicast data distribution tree or the Rendezvous Point (RP) or the source. It builds unidirectional-shared trees per group and optionally creates shortest-path trees per source. PIM-SM Module routes multicast packets to multicast groups, and is designed to efficiently establish distribution trees across wide area networks (WANs). PIM-SM is called “protocol independent” because it can use the route information that any ZebOS routing protocol enters into the multicast Touting Information Base (RIB).

The ZebOS PIM-SM Module is written in the ANSI C programming language and fully integrated into the ZebOS Network Services Module (NSM) and the ZebOS IPv4 protocol modules.

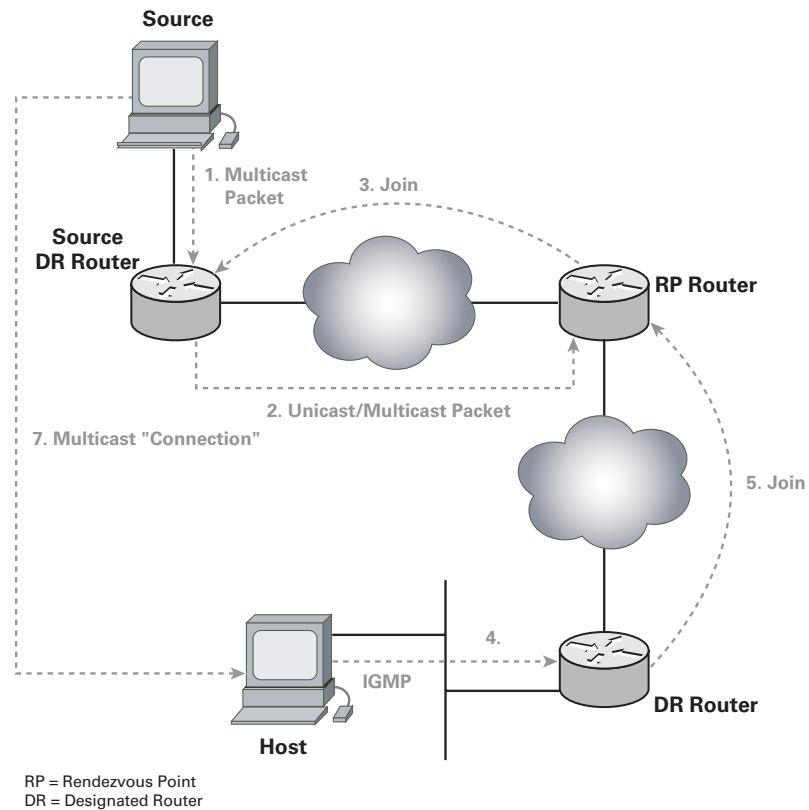


Figure 1 PIM-SM Network Topology

Features

- Reverse Path Forwarding (RPF) algorithm Support
- Static Rendezvous Point (RP) Configuration Support
- Static RP for multiple group range
- Bootstrap Mechanism (BSM) Support
- Rooted shared trees and source specific trees (Multicast delivery trees) using periodic and triggered Join/Prune messages Support
- IGMPv2 Support via ZebOS NSM or protocol daemon
- Neighbor Discovery Support
- PIM-SM (get/get_next/trap)
- Industry Standard Command Line Interface
- Last hop binary switch over to Shortest Path Tree (SPT)

Benefits

- Stable, robust implementation of PIM-SM
- Interoperable with major router vendors
- Can be used in embedded equipment and on standard server platforms
- Delivers significant time-to-market advantages for customer
- Platform-independent implementation

Requirements

| SKU | PRODUCT NAME |
|---------|-------------------------------|
| ZOS-NSM | ZebOS Network Services Module |

Standards Support

| STANDARD | FUNCTION |
|---|---|
| RFC2362 | Protocol Independent Multicast-Sparse Mode (PIM-SM) |
| Draft-ietf-pim-sm-bsr-02 | Bootstrap Router (BSR) Mechanism for PIM Sparse Mode |
| Draft-ietf-pim-sm-v2-new-08 (This draft is backward compatible with RFC2362) | Protocol Independent Multicast - Sparse Mode (PIM-SM): Protocol Specification (Revised) |
| Draft-ietf-pim-mib-v2.00 | Protocol Independent Multicast MIB |

Supported Operating Systems

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

Standard Deliverables

- Source Code (written in ANSI compliant C)
- PIM-SM Command References
- Developer Guides
- Installation and Configuration Guide



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