

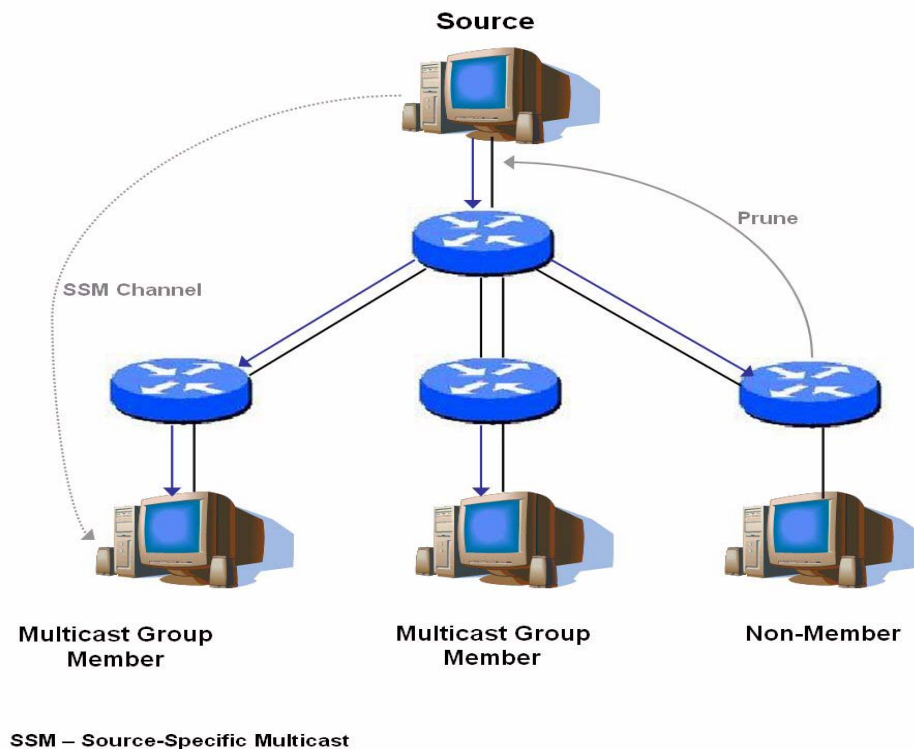
ZebOS®
Network Platform

PIM-DM Module

Overview

The ZebOS® Network Platform Protocol Independent Multicast - Dense Mode module is a data-driven multicast routing protocol, which builds source-based multicast distribution trees that operate on the flood-and-prune principle. It requires unicast-routing information, but does not depend on a specific unicast routing protocol. PIM-DM is a multicast routing protocol designed to distribute data effectively to target recipients in a concentrated area. Ideally suited for routers and switches, PIM-DM greatly optimizes the delivery of video conferencing, streaming music and movies, Voice over IP (VoIP), distributed downloads, and internet TV, into Local Area Networks (LANs).

The ZebOS PIM-DM Module is fully integrated into the ZebOS Network Services Module (NSM) and other ZebOS protocol modules.



PIM-DM Network Topology

Features

- ZebOS PIM-DM is Virtual Router (VR) and Virtual Routing and Forwarding (VRF) aware*
- Reverse Path Forwarding (RPF) algorithm
- Rooted-shared trees and source-specific trees (multicast delivery trees) using periodic and triggered Join/Prune messages
- IGMPv1/v2/v3 and MLDv1/v2 support via ZebOS NSM
- Neighbor Discovery
- Each interface can enable or disable PIM-DM independently or concurrently
- Random delivery of triggered HELLO messages to avoid synchronization
- Delayed prune override to avoid prune storm
- Source-Specific Multicast (SSM) support
- Bootstrap Router (BSR) Support
- Support for more than 32 Interfaces

* Requires multiple Multicast Forwarding Information Base (FIB) support

Benefits

- Stable, robust implementation of PIM-DM
- Interoperable with major router vendors
- Can be used in embedded equipment and on standard server platforms
- Delivers significant time-to-market advantages for customers
- Platform-independent implementation
- PIM-DM is independent of the routing protocol used.

Requirements

- ZebOS Network Services Module
- An IGP

Standards Support

- RFC 3973 — Protocol Independent Multicast–Dense Mode (PIM-DM) Protocol (Revised)

Standard Deliverables

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