ZebOS®
Advanced Routing Suite

LDP Module

SKU ZOS-LDP

Overview

IP Infusion's ZebOS® Advanced Routing Suite (ARS) LDP (label distribution protocol) Module is portable software that implements the LDP. The LDP Module is implemented on top of the ZebOS Network Services Module (NSM) and takes advantages of the services provided by the NSM. The MPLS–LDP Module is IETF compliant and supports a number of features, including: LDP Adjacencies, LDP Sessions, Forwarding Equivalence Classes, Label Generation, Label Distribution Modes, Label Retention Modes, Label Switch Path (LSP) Control, and Loop Detection.

The communication between ZebOS LDP and an MPLS forwarder occurs via a set of APIs that are pre-defined for the ZebOS MPLS Forwarder, but they can be customized for any hardware forwarder via the ZebOS NSM. This gives ZebOS LDP Module the flexibility to be used on a variety of platforms that customers choose. By coupling LDP with the ZebOS BGP-4 Module, IP Infusion provides one of the industry's first source code MPLS-VPN (RFC 2547) solutions.

In addition, IP Infusion's LDP solution can be used in embedded equipment and on standard server platforms. It is a control plane software module that can also be integrated into a range of network processor environments, and is pre-configured to support many popular operating systems. The ZebOS ARS modules are written in the ANSI C programming language.

Features

- IETF Compliant LDP Implementation
- Support for LDP Adjacencies
- Label Stack Encoding
- LDP Session Support
- Host Address and Prefix FEC Support
- Label Generation
- Liberal and Conservative Label Retention Modes
- Ordered and Independent LSP Control
- Auto and Discovery, Session, Advertisement, and Notification LDP Messages
- Hop Count and Path Vector Loop Detection
- Command Line Interface
- LDP MIB (get/get_next/set/trap) Support

Benefits

- Stable, robust implementation of LDP
- Fully integrated with ZebOS NSM and IPv4 routing protocol modules
- Support for scalable Layer 3 MPLS–VPN (with BGP–VPN extensions)
- Generic API to integrate with MPLS Forwarder Module (provided in ZebOS library; MPLS Forwarder is optional)
- Interoperable with popular MPLS switching platforms
- Can be used in embedded equipment and on standard server platforms
- Delivers significant time-to-market advantage for customer
- Platform-independent implementation

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Requirements

SKU	Product Name
ZOS-NSM	ZebOS Network Services Module
ZOS-LDP-CR	ZebOS Constraint-based Routing extensions - Optional for TE support
ZOS-MTNI	ZebOS MPLS Layer 2 Virtual Circuit - Optional for L2VC support
ZOS-VPLS	ZebOS VPLS Module - Optional for VPLS support

Supported Operating Systems

- Linux
- MontaVista Professional Edition
- NetBSD
- VxWorks® (Requires ZOS-TCPIP-VxW)

All environments require an MPLS Forwarder. An MPLS Forwarder for Linux is available from IP Infusion.

Standards Support

Standard	Function
RFC 3031	Multiprotocol Label Switching Architecture
RFC 3032	MPLS Label Stack Encoding
RFC 3036	LDP Specification

Standard Deliverables

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

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