

ZebOS®
Advanced Routing Suite

BGP-4(+) Protocol Modules

(with Optional MPLS VPN Extensions)

SKU ZOS-BGP

SKU ZOS-BGP6

Overview

IP Infusion's ZebOS® Advanced Routing Suite (ARS) BGP-4+ (Border Gateway Protocol) Protocol Module is portable software that implements the BGP version 4 and version 4+ protocols and provides optional VPN extensions for MPLS-VPN support. BGP-4+ supports both IPv4 and IPv6 extensions and provides interoperability with popular BGP routers. IETF compliant, the optional VPN extensions are designed to work in conjunction with the ZebOS Network Services Module (NSM) and the ZebOS MPLS-LDP, RSVP-TE and Forwarder Modules. The BGP-4+ Protocol Module supports an extensive set of features including Route Flap Damping, Simple Network Management Protocol (SNMP) support, optional Virtual Private Network (VPN) extensions, Graceful Restart, Autonomous System Confederations, and Route Reflection. With its optional VPN support and tight integration with the MPLS Label Distribution Protocol, ZebOS provides the industry's first portable, Layer 3 MPLS-VPN solution.

In addition, IP Infusion's BGP 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

- Compliant with RFC 1771
- Route Reflection Support
- MBGP Support (IPv4)
- Optional BGP-VPN Extensions for MPLS-VPN Support (IPv4)
- Route Server Support
- Route Flap Dampening (IPv4)
- BGP Communities Attribute
- BGP Extended Communities Attribute
- BGP Confederation
- Route Aggregation
- Soft Reconfiguration
- Update Source Configuration
- Route Refresh (IPv4)
- Route Map Support
- Graceful Restart (IPv4)
- Dynamic Capability Negotiation
- AS Path Access-list
- Community-list
- BGP-MIB (get/get_next/set/trap) for IPv4
- BGP Peer Group
- Outbound Route Filter (IPv4)
- Management: CLI api and SNMP api
- Multiple Instance Support (IPv4)
- BGP-MD5 Authentication Extension

Benefits

- Stable, robust implementation of BGP
- Support for both IPv4 and IPv6
- Support for MPLS-VPN capabilities
- Interoperability with popular routing platforms
- Can be used both in embedded equipment and on standard server platforms
- Delivers significant time-to-market advantage for customers
- Platform-independent implementation

Supported Operating Systems

- Linux
- MontaVista Professional Edition
- NetBSD
- VxWorks® *

* Requires IP Infusion TCP/IP Module.

Requirements

SKU	PRODUCT NAME
ZOS-NSM	ZebOS Network Services Module
ZOS-BGPVPNX	ZebOS MPLS-VPN Module (Optional) For MPLS-VPN support, ZOS-MFE is required
ZOS-MFE	MPLS Forwarder is required for VPN support
ZOS-VR-BGP (Optional for Virtual Routing Support)	ZebOS Virtual Routing Modules
ZOS-VR-BGP6 (Optional for Virtual Routing Support)	ZebOS Virtual Routing Modules
ZOS-VR-NSM (Optional for Virtual Routing Support)	ZebOS Virtual Routing Modules

Standards Support

STANDARD	FUNCTION
RFC 1771	Border Gateway Protocol version 4 (BGP-4)
RFC 1772	Applications of BGP-4 in the Internet
draft-ietf-ppvpn-rfc2547bis-00	BGP/MPLS VPNs (requires LDP Module and Enet Forwarder)
RFC 1657	Definitions of Managed Objects for BGP-4 using SMIv2
RFC 2439	Route Flap Dampening
RFC 3065	Autonomous System Confederations for BGP
RFC 1997	BGP Communities Attribute
RFC 2545	BGP-4 Multiprotocol Extensions for IPv6 Inter-Domain Routing
RFC 2796, 1966	BGP Route Reflection—An Alternative to Full Mesh IBGP
RFC 2842, 3392	Capabilities Advertisement with BGP-4
RFC 2858	Multiprotocol Extensions for BGP-4
draft-ietf-idr-restart-01	Graceful Restart
RFC 2918	Route Refresh Capability for BGP-4
RFC 3107	Carrying Label Information in BGP-4
draft-ietf-idr-bgp4-12	A Border Gateway Protocol 4
draft-ietf-idr-bgp4-multiprotocol-v2-05	Multiprotocol Extensions for BGP-4
draft-ietf-idr-bgp-ext-communities-01	BGP Extended Communities Attribute
draft-chen-bgp-dynamic-cap-01	Dynamic Capability for BGP-4
draft-chen-bgp-prefix-orf-02	Outbound RouteFilter (ORF)

Standard Deliverables

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



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