

## Chapter 9

# Juniper Networks Enterprise-Specific MIBs

The JUNOS software supports the following enterprise-specific Management Information Bases (MIBs):

**Alarm MIB**—Provides support for alarms from the router. For a downloadable version of this MIB, see [www.juniper.net/techpubs/software/junos/junos71/swconfig71-net-mgmt/html/mib-jnx-chassis-alarm.txt](http://www.juniper.net/techpubs/software/junos/junos71/swconfig71-net-mgmt/html/mib-jnx-chassis-alarm.txt).

**ATM CoS MIB**—Provides support for monitoring Asynchronous Transfer Mode, version 2 (ATM2) virtual circuit (VC) class of service (CoS) configurations. It also provides CoS queue statistics for all VCs that have CoS configured. For a downloadable version of this MIB, see [www.juniper.net/techpubs/software/junos/junos71/swconfig71-net-mgmt/html/mib-jnx-atm-cos.txt](http://www.juniper.net/techpubs/software/junos/junos71/swconfig71-net-mgmt/html/mib-jnx-atm-cos.txt).

**ATM MIB**—Provides support for ATM interfaces and virtual connections. For a downloadable version of this MIB, see [www.juniper.net/techpubs/software/junos/junos71/swconfig71-net-mgmt/html/mib-jnx-atm.txt](http://www.juniper.net/techpubs/software/junos/junos71/swconfig71-net-mgmt/html/mib-jnx-atm.txt).

**BGP4 V2 MIB**—Contains objects used to monitor Border Gateway Protocol (BGP) peer-received prefix counters. It is based upon similar objects in the MIB documented in Internet draft [draft-ietf-idr-bgp4-mibv2-03.txt](http://draft-ietf-idr-bgp4-mibv2-03.txt), *Definitions of Managed Objects for the Fourth Version of Border Gateway Protocol (BGP-4), Second Version*. For more information about the BGP4 V2 MIB, see “Interpreting the Enterprise-Specific BGP4 V2 MIB” on page 351. For a downloadable version of this MIB, see [www.juniper.net/techpubs/software/junos/junos71/swconfig71-net-mgmt/html/mib-jnx-bgpmib2.txt](http://www.juniper.net/techpubs/software/junos/junos71/swconfig71-net-mgmt/html/mib-jnx-bgpmib2.txt).

**Chassis MIB**—Provides support for environmental monitoring (power supply state, board voltages, fans, temperatures, and air flow) and inventory support for the chassis, System Control Board (SCB), System and Switching Board (SSB), Switching and Forwarding Model (SFM), Flexible PIC Concentrators (FPCs), and Physical Interface Cards (PICs). For more information about the chassis MIB, see “Interpreting the Enterprise-Specific Chassis MIBs” on page 211. For a downloadable version, see [www.juniper.net/techpubs/software/junos/junos71/swconfig71-net-mgmt/html/mib-jnx-chassis.txt](http://www.juniper.net/techpubs/software/junos/junos71/swconfig71-net-mgmt/html/mib-jnx-chassis.txt).

**Chassis Definitions for Router Model MIB**—Contains the object identifiers (OIDs) that are used by the chassis MIB to identify platform and chassis components. The chassis MIB provides information that changes often, while the chassis definitions for router model MIB provide information that changes less often. For more information about the chassis definitions for the router model MIB, see “Chassis Definitions for the Router Model MIB” on page 293. For a downloadable version of the chassis definitions for router mode MIB, see [www.juniper.net/techpubs/software/junos/junos71/swconfig71-net-mgmt/html/mib-jnx-chas-defines.txt](http://www.juniper.net/techpubs/software/junos/junos71/swconfig71-net-mgmt/html/mib-jnx-chas-defines.txt).

**Class of Service MIB**—Provides support for monitoring interface output queue statistics per interface and per forwarding class. For a downloadable version of this MIB, see [www.juniper.net/techpubs/software/junos/junos71/swconfig71-net-mgmt/html/mib-jnx-cos.txt](http://www.juniper.net/techpubs/software/junos/junos71/swconfig71-net-mgmt/html/mib-jnx-cos.txt).

**Configuration Management MIB**—Provides notification for configuration changes as SNMP traps. Each trap contains the time at which the configuration change was committed, the name of the user who made the change, and the method by which the change was made. A history of the last 32 configuration changes is kept in `jnxCmChgEventTable`. For a downloadable version of this MIB, see [www.juniper.net/techpubs/software/junos/junos71/swconfig71-net-mgmt/html/mib-jnx-cfgmgmt.txt](http://www.juniper.net/techpubs/software/junos/junos71/swconfig71-net-mgmt/html/mib-jnx-cfgmgmt.txt).

**Destination Class Usage MIB**—Provides support for monitoring packet counts based on the ingress and egress points for traffic transiting your networks. Ingress points are identified by input interface. Egress points are identified by destination prefixes grouped into one or more sets, known as destination classes. One counter is managed per interface per destination class, up to a maximum of 16 counters per interface. For information about the destination class usage MIB, see “Interpreting the Enterprise-Specific Destination Class Usage MIB” on page 295. For a downloadable version of this MIB, see [www.juniper.net/techpubs/software/junos/junos71/swconfig71-net-mgmt/html/mib-jnx-dcu.txt](http://www.juniper.net/techpubs/software/junos/junos71/swconfig71-net-mgmt/html/mib-jnx-dcu.txt).

**Ethernet MAC MIB**—Monitors media access control (MAC) statistics on Gigabit Ethernet intelligent queuing (IQ) interfaces. It collects MAC statistics; for example, inoctets, inframes, outoctets, and outframes on each source MAC address and virtual LAN (VLAN) ID for each Ethernet port. For more information about the Ethernet MAC MIB, see the “Interpreting the Enterprise-Specific Ethernet MAC MIB” on page 331. To view this MIB, see [www.juniper.net/techpubs/software/junos/junos71/swconfig71-net-mgmt/html/mib-jnx-mac.txt](http://www.juniper.net/techpubs/software/junos/junos71/swconfig71-net-mgmt/html/mib-jnx-mac.txt).

**Experimental MIB**—Contains object identifiers for experimental MIBs. To view this MIB, see [www.juniper.net/techpubs/software/junos/junos71/swconfig71-net-mgmt/html/mib-jnx-exp.txt](http://www.juniper.net/techpubs/software/junos/junos71/swconfig71-net-mgmt/html/mib-jnx-exp.txt).

**Firewall MIB**—Provides support for monitoring firewall filter counters. Routers must have the Internet Processor II ASIC to perform firewall monitoring. For a downloadable version of this MIB, see [www.juniper.net/techpubs/software/junos/junos71/swconfig71-net-mgmt/html/mib-jnx-firewall.txt](http://www.juniper.net/techpubs/software/junos/junos71/swconfig71-net-mgmt/html/mib-jnx-firewall.txt).

**Host Resources MIB**—Extends the `hrStorageTable` object, providing a measure of the usage of each file system on the router in percentage. Previously, the objects in the `hrStorageTable` measured the usage in allocation units—`hrStorageUsed` and `hrStorageAllocationUnits`—only. Using the percentage measurement, you can more easily monitor and apply thresholds on usage. For a downloadable version of this MIB, see [www.juniper.net/techpubs/software/junos/junos71/swconfig71-net-mgmt/html/mib-jnx-hostresources.txt](http://www.juniper.net/techpubs/software/junos/junos71/swconfig71-net-mgmt/html/mib-jnx-hostresources.txt).

**Interface MIB**—Extends the standard `ifTable` (RFC 2863) with additional statistics and Juniper Networks enterprise-specific chassis information. For more information about this MIB, see “Interpreting the Enterprise-Specific Interface MIB” on page 333. For a downloadable version of this MIB, see [www.juniper.net/techpubs/software/junos/junos71/swconfig71-net-mgmt/html/mib-jnx-if-extensions.txt](http://www.juniper.net/techpubs/software/junos/junos71/swconfig71-net-mgmt/html/mib-jnx-if-extensions.txt).

**IPv4 MIB**—Provides additional Internet Protocol version 4 (IPv4) address information, supporting the assignment of identical IPv4 addresses to separate interfaces. For a downloadable version of this MIB, see [www.juniper.net/techpubs/software/junos/junos71/swconfig71-net-mgmt/html/mib-jnx-ipv4.txt](http://www.juniper.net/techpubs/software/junos/junos71/swconfig71-net-mgmt/html/mib-jnx-ipv4.txt).

**IPv6 and ICMPv6 MIB**—Provides IPv6 and Internet Control Message Protocol version 6 (ICMPv6) statistics. For a downloadable version of this MIB, see [www.juniper.net/techpubs/software/junos/junos71/swconfig71-net-mgmt/html/mib-jnx-ipv6.txt](http://www.juniper.net/techpubs/software/junos/junos71/swconfig71-net-mgmt/html/mib-jnx-ipv6.txt).

**LDP MIB**—Provides Label-distribution Protocol (LDP) statistics and defines LDP label-switch path (LSP) notifications. LDP traps support only IPv4 standards. For a downloadable version of this MIB, see [www.juniper.net/techpubs/software/junos/junos71/swconfig71-net-mgmt/html/mib-jnx-ldp.txt](http://www.juniper.net/techpubs/software/junos/junos71/swconfig71-net-mgmt/html/mib-jnx-ldp.txt).

**Flow Collection Services MIB**—Provides statistics on files, records, memory, FTP, and error states of a monitoring services interface. It also provides SNMP traps for unavailable destinations, unsuccessful file transfers, flow overloading, and memory overloading. For a downloadable version of this MIB, see [www.juniper.net/techpubs/software/junos/junos71/swconfig71-net-mgmt/html/mib-jnx-coll.txt](http://www.juniper.net/techpubs/software/junos/junos71/swconfig71-net-mgmt/html/mib-jnx-coll.txt).

**MPLS MIB**—Provides Multiprotocol Label Switching (MPLS) information and defines MPLS notifications. For a downloadable version of this MIB, see [www.juniper.net/techpubs/software/junos/junos71/swconfig71-net-mgmt/html/mib-jnx-mpls.txt](http://www.juniper.net/techpubs/software/junos/junos71/swconfig71-net-mgmt/html/mib-jnx-mpls.txt).

**Passive Monitoring MIB**—Performs traffic flow monitoring and lawful interception of packets transiting between two routers. For more information about the passive monitoring MIB, see the *JUNOS Feature Guide* and “Interpreting the Enterprise-Specific Passive Monitoring MIB” on page 317. For a downloadable version of this MIB, see [www.juniper.net/techpubs/software/junos/junos71/swconfig71-net-mgmt/html/mib-jnx-pmon.txt](http://www.juniper.net/techpubs/software/junos/junos71/swconfig71-net-mgmt/html/mib-jnx-pmon.txt).

**Ping MIB**—Extends the standard ping MIB control table (RFC 2925). Items in this MIB are created when entries are created in `pingCtlTable` of the ping MIB. Each item is indexed exactly as it is in the ping MIB. For more information about the ping MIB, see “Interpreting the Enterprise-Specific Ping MIB” on page 297. For a downloadable version of this MIB, see [www.juniper.net/techpubs/software/junos/junos71/swconfig71-net-mgmt/html/mib-jnx-ping.txt](http://www.juniper.net/techpubs/software/junos/junos71/swconfig71-net-mgmt/html/mib-jnx-ping.txt).

Resource Reservation Protocol (RSVP) traffic engineering (TE) MIB—Provides information about RSVP-TE sessions that correspond to MPLS LSPs on transit routing platforms in the service provider core network. For a downloadable version of this MIB, see [www.juniper.net/techpubs/software/junos/junos71/swconfig71-net-mgmt/html/mib-jnx-rsvp.txt](http://www.juniper.net/techpubs/software/junos/junos71/swconfig71-net-mgmt/html/mib-jnx-rsvp.txt).

Reverse-Path-Forwarding MIB—Monitors statistics for traffic that is rejected because of reverse-path-forwarding (RPF) processing. For more information about the reverse-path-forwarding MIB, see “Interpreting the Enterprise-Specific Reverse-Path-Forwarding MIB” on page 313. For a downloadable version of this MIB, see [www.juniper.net/techpubs/software/junos/junos71/swconfig71-net-mgmt/html/mib-jnx-rpf.txt](http://www.juniper.net/techpubs/software/junos/junos71/swconfig71-net-mgmt/html/mib-jnx-rpf.txt).

RMON Events and Alarms MIB—Supports the JUNOS extensions to the standard remote monitoring (RMON) events and alarms MIB (RFC 2819). The extension augments alarmTable with additional information about each alarm. Two new traps are also defined to indicate when problems are encountered with an alarm. For more information about the RMON events and alarms MIB, see “Interpreting the Enterprise-Specific RMON Events and Alarms MIB” on page 309. For a downloadable version of this MIB, see [www.juniper.net/techpubs/software/junos/junos71/swconfig71-net-mgmt/html/mib-jnx-rmon.txt](http://www.juniper.net/techpubs/software/junos/junos71/swconfig71-net-mgmt/html/mib-jnx-rmon.txt).

SONET/SDH Interface Management MIB—Monitors the current alarm for each SONET/SDH interface. For more information about the SONET interface management MIB, see “Interpreting the Enterprise-Specific SONET/SDH Interface Management MIB” on page 319. For a downloadable version of this MIB, see [www.juniper.net/techpubs/software/junos/junos71/swconfig71-net-mgmt/html/mib-jnx-sonet.txt](http://www.juniper.net/techpubs/software/junos/junos71/swconfig71-net-mgmt/html/mib-jnx-sonet.txt).

SONET Automatic Protection Switching MIB—Monitors any SONET interface that participates in Automatic Protection Switching (APS). For more information about the SONET APS MIB, see “Interpreting the Enterprise-Specific SONET APS MIB” on page 321. For a downloadable version of this MIB, see [www.juniper.net/techpubs/software/junos/junos71/swconfig71-net-mgmt/html/mib-jnx-sonetaps.txt](http://www.juniper.net/techpubs/software/junos/junos71/swconfig71-net-mgmt/html/mib-jnx-sonetaps.txt).

Source Class Usage MIB—Counts packets sent to customers by performing a lookup on the IP source address and the IP destination address. The source class usage (SCU) MIB makes it possible to track traffic originating from specific prefixes on the provider core and destined for specific prefixes on the customer edge. For more information about the source class usage MIB, see “Interpreting the Enterprise-Specific Source Class Usage MIB” on page 315. For a downloadable version of this MIB, see [www.juniper.net/techpubs/software/junos/junos71/swconfig71-net-mgmt/html/mib-jnx-scu.txt](http://www.juniper.net/techpubs/software/junos/junos71/swconfig71-net-mgmt/html/mib-jnx-scu.txt).

Structure of Management Information MIB—Explains how the Juniper Networks enterprise-specific MIBs are structured. For more information on the structure of management information (SMI) MIB, see “Interpreting the Structure of the Management Information MIB” on page 207. For a downloadable version of this MIB, see [www.juniper.net/techpubs/software/junos/junos71/swconfig71-net-mgmt/html/mib-jnx-smi.txt](http://www.juniper.net/techpubs/software/junos/junos71/swconfig71-net-mgmt/html/mib-jnx-smi.txt).

Traceroute MIB—Supports the JUNOS extensions of traceroutes and remote operations. Items in this MIB are created when entries are created in the traceRouteCtlTable of the traceroute MIB. Each item is indexed exactly the same way as it is in the traceroute MIB. For more information about the traceroute MIB, see “Interpreting the Enterprise-Specific Traceroute MIB” on page 307. For a downloadable version, see [www.juniper.net/techpubs/software/junos/junos71/swconfig71-net-mgmt/html/mib-jnx-traceroute.txt](http://www.juniper.net/techpubs/software/junos/junos71/swconfig71-net-mgmt/html/mib-jnx-traceroute.txt).

VPN MIB—Provides monitoring for Layer 3 VPNs, Layer 2 VPNs, and virtual private LAN service (VPLS) (read access only). For more information about the VPN MIB, see “Interpreting the Enterprise-Specific VPN MIB” on page 339. For a downloadable version of this MIB, see [www.juniper.net/techpubs/software/junos/junos71/swconfig71-net-mgmt/html/mib-jnx-vpn.txt](http://www.juniper.net/techpubs/software/junos/junos71/swconfig71-net-mgmt/html/mib-jnx-vpn.txt).

