PfR SNMP MIB v1.0 (Read Only)

The PfR SNMP MIB v1.0 (Read Only) feature introduces a Management Information Base (MIB) to support Performance Routing (PfR). The PfR MIB, named CISCO-PFR-MIB, allows the management and limited control of PfR using SNMPv2 in a read-only mode.

Information About PfR SNMP MIB v1.0 (Read Only)

PfR MIB Support

The Management Information Base (MIB) to support Performance Routing (PfR) is the CISCO-PFR-MIB, and support was introduced in the PfR SNMP MIB v1.0 (Read Only) feature. The PfR MIB allows the management and limited control of PfR using SNMPv2.

The Performance Routing Manager (PRM) is a new subsystem that acts as a common control point between management clients and the PfR component code. PRM exposes five interfaces:

- Client Services Interface—An interface for MIB subsystems supporting the retrieval and modification of managed data associated with PfR entities, such as Border Routers (BRs), Exits, PfR Maps, and other managed entities.
- Config Services Interface—An interface through which the PRM makes changes to configuration data related to PfR managed entities that are requested by the MIB via the Client Services Interface.
- Status Services Interface—An interface through which the PRM can retrieve the status of PfR managed entities. The PRM also uses this interface to register and deregister objects in the PfR system.
- Metrics Services Interface—An interface through which the PRM retrieves performance metrics that have been collected for the PfR Traffic Classes (TCs) by the passive (NetFlow) and/or active (IP SLA) performance monitoring components.
- Notification Services Interface—An interface through which the PRM is notified of events that warrant generation of PfR SNMP TRAPs.

PfR MIB Tables

Master Controller Table

The cpfrMCTable supports the management of PfR master controllers (MCs). The table may contain the following MIB variables depending on the actual PfR master controller configuration:

- cpfrMCAdminStatus
- cpfrMCConnStatus
- cpfrMCEntry
- cpfrMCIndex
- cpfrMCKeepAliveTime
- cpfrMCLearnStateTimeRemain
- cpfrMCMapIndex
- cpfrMCMaxPrefixLearn
- cpfrMCMaxPrefixTotal
- cpfrMCMaxRangeReceivePercent
- cpfrMCMaxRangeUtilPercentMax
- cpfrMCNumofBorderRouters
- cpfrMCNumofExits
- cpfrMCOperStatus
- cpfrMCPortNumber
- cpfrMCPrefixConfigured
- cpfrMCPrefixCount
- cpfrMCPrefixLearned
- cpfrMCRowStatus
- cpfrMCTraceroute ProbeDelay

Border Router Table

The cpfrBRTable supports the management of PfR border routers (BRs). The table may contain the following MIB variables depending on the actual PfR border router configuration:

- cpfrBRAddress
- cpfrBRAddressType
- cpfrBRAuthFailCount
- cpfrBRConnFailureReason

- cpfrBRConnStatus
- cpfrBREntry
- cpfrBRIndex
- cpfrBRKeyName
- cpfrBROperStatus
- cpfrBRRowStatus
- cpfrBRStorageType
- cpfrBRUpTime

Active Probe Table

The cpfrActiveProbeTable table contains objects representing active probes. Each entry in the table is assigned an index value as follows:

- cpfrActiveProbeIndex

Exit Table

The cpfrExitTable table contains objects representing PfR exits. Each entry in the table is assigned an index value as follows:

- cpfrExitIndex

Exit Cost Table

The cpfrExitCostTable table contains objects representing PfR exit cost data. Each entry in the table is assigned an index value as follows:

- cpfrExitCostIndex

Learn Table

The cpfrLearnTable table contains objects representing PfR learn parameters for the master controller. Each entry in the table is assigned an index value as follows:

- cpfrLearnIndex

Learn List Table

The cpfrLearnListTable table contains objects representing PfR learn list parameters for the master controller. Each entry in the table is assigned an index value as follows:

- cpfrLearnListIndex

Map Table

The cpfrMapTable supports the management of PfR maps. The table contains objects representing PfR maps. Values for the PfR map table should match values in the output of the **show oer master traffic-class** command.

- cpfrMapIndex

Match Table

The cpfrMatchTable table contains objects representing match clauses. The table entries for match objects are assigned using the appropriate map objects.

Resolve Table

The cpfrResolveTable table contains objects representing PfR resolver priorities. The table entries for match objects are assigned using the appropriate map objects.

Additional References

Related Documents

Related Topic	Document Title
Cisco IOS commands	Cisco IOS Master Command List, All Releases
Cisco IOS PfR commands: complete command syntax, command mode, command history, defaults, usage guidelines, and examples	Cisco IOS Performance Routing Command Reference
Basic PfR configuration for Cisco IOS XE releases	“Configuring Basic Performance Routing” module
Information about configuration for the border router only functionality for Cisco IOS XE Releases 3.1 and 3.2	“Performance Routing Border Router Only Functionality” module
Concepts required to understand the Performance Routing operational phases for Cisco IOS XE releases	“Understanding Performance Routing” module
Advanced PfR configuration for Cisco IOS XE releases	“Configuring Advanced Performance Routing” module
IP SLAs overview	“Cisco IOS IP SLAs Overview” module
PfR home page with links to PfR-related content on our DocWiki collaborative environment	PfR:Home

MIBs

MIB	MIBs Link
• CISCO-PFR-MIB • CISCO-PFR-TRAPS-MIB	To locate and download MIBs for selected platforms, Cisco software releases, and feature sets, use Cisco MIB Locator found at the following URL: http://www.cisco.com/go/mibs

Technical Assistance

Description	Link
The Cisco Support and Documentation website provides online resources to download documentation, software, and tools. Use these resources to install and configure the software and to troubleshoot and resolve technical issues with Cisco products and technologies. Access to most tools on the Cisco Support and Documentation website requires a Cisco.com user ID and password.	http://www.cisco.com/cisco/web/support/index.html

Feature Information for PfR SNMP MIB v1.0 (Read Only)

The following table provides release information about the feature or features described in this module. This table lists only the software release that introduced support for a given feature in a given software release train. Unless noted otherwise, subsequent releases of that software release train also support that feature.

Use Cisco Feature Navigator to find information about platform support and Cisco software image support. To access Cisco Feature Navigator, go to www.cisco.com/go/cfn. An account on Cisco.com is not required.

Table 1: Feature Information for PfR SNMP MIB v1.0 (Read Only)

Feature Name	Releases	Feature Information
PfR SNMP MIB v1.0 (Read Only)	15.2(2)T Cisco IOS XE Release 3.5S	The PfR SNMP MIB v1.0 (Read Only) feature introduced the CISCO-PfR-MIB in read-only mode. The following commands were introduced or modified: **debug pfr mib error**, **debug pfr mib info**.