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.

• Finding Feature Information, page 1
• Information About PfR SNMP MIB v1.0 (Read Only), page 1
• Additional References, page 4
• Feature Information for PfR SNMP MIB v1.0 (Read Only), page 5

Finding Feature Information

Your software release may not support all the features documented in this module. For the latest caveats and feature information, see Bug Search Tool and the release notes for your platform and software release. To find information about the features documented in this module, and to see a list of the releases in which each feature is supported, see the feature information table at the end of this module.

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.

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

- cpfMCAdminStatus
- cpfMCConnStatus
- cpfMCEntry
- cpfMCIndex
- cpfMCKeepAliveTime
- cpfMCLearnStateTimeRemain
- cpfMCMapIndex
- cpfMCMaxPrefixLearn
- cpfMCMaxPrefixTotal
- cpfMCMaxRangeReceivePercent
- cpfMCMaxRangeUtilPercentMax
- cpfMCNumofBorderRouters
- cpfMCNumofExits
- cpfMCOperStatus
- cpfMCPortNumber
- cpfMCPrefixConfigured
- cpfMCPrefixCount
- cpfMCPrefixLearned
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
- cpfrBRCnnFailureReason
- cpfrBRCnnStatus
- cpfrBREntry
- cpfrBRIndex
- cpfrBRKeyName
- cpfrBROperStatus
- cpfrBRRowStatus
- cpfrBRSStorageType
- 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:
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

<table>
<thead>
<tr>
<th>Related Topic</th>
<th>Document Title</th>
</tr>
</thead>
<tbody>
<tr>
<td>Cisco IOS commands</td>
<td>Cisco IOS Master Command List, All Releases</td>
</tr>
<tr>
<td>Cisco IOS PfR commands: complete command syntax, command mode, command history, usage guidelines, and examples</td>
<td>Cisco IOS Performance Routing Command Reference</td>
</tr>
<tr>
<td>Basic PfR configuration for Cisco IOS XE releases</td>
<td>&quot;Configuring Basic Performance Routing&quot; module</td>
</tr>
<tr>
<td>Information about configuration for the border router only functionality for Cisco IOS XE Releases 3.1 and 3.2</td>
<td>&quot;Performance Routing Border Router Only Functionality&quot; module</td>
</tr>
<tr>
<td>Concepts required to understand the Performance Routing operational phases for Cisco IOS XE releases</td>
<td>&quot;Understanding Performance Routing&quot; module</td>
</tr>
<tr>
<td>Advanced PfR configuration for Cisco IOS XE releases</td>
<td>&quot;Configuring Advanced Performance Routing&quot; module</td>
</tr>
</tbody>
</table>
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.

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

<table>
<thead>
<tr>
<th>Feature Name</th>
<th>Releases</th>
<th>Feature Information</th>
</tr>
</thead>
</table>
| 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`. |