

# Chapter 4

## SNMP Monitoring and Troubleshooting

Table 7 summarizes the command-line interface (CLI) commands that allow you to monitor SNMP. In the table, the commands are grouped by functionality. In the remainder of this chapter, they are explained alphabetically.

**Table 7: Commands for Monitoring and Managing SNMP**

Task or Information to Monitor	Command
SNMP statistics	show snmp statistics on page 105
	clear snmp statistics on page 104

## clear snmp statistics

**Syntax** clear snmp statistics

**Description** Clear SNMP statistics.

**Required Privilege Level** clear

**Sample Output**

```

user@host> show snmp statistics
SNMP statistics:
  Input:
    Packets: 8, Bad versions: 0, Bad community names: 0,
    Bad community uses: 0, ASN parse errors: 0,
    Too big: 0, No such names: 0, Bad values: 0,
    Read only: 0, General errors: 0,
    Total request varbinds: 8, Total set varbinds: 0,
    Get requests: 0, Get nexts: 8, Set requests: 0,
    Get responses: 0, Traps: 0,
    Silent drops: 0, Proxy drops 0
  Output:
    Packets: 2298, Too big: 0, No such names: 0,
    Bad values: 0, General errors: 0,
    Get requests: 0, Get nexts: 0, Set requests: 0,
    Get responses: 8, Traps: 2290

user@host> clear snmp statistics

user@host> show snmp statistics
SNMP statistics:
  Input:
    Packets: 0, Bad versions: 0, Bad community names: 0,
    Bad community uses: 0, ASN parse errors: 0,
    Too big: 0, No such names: 0, Bad values: 0,
    Read only: 0, General errors: 0,
    Total request varbinds: 0, Total set varbinds: 0,
    Get requests: 0, Get nexts: 0, Set requests: 0,
    Get responses: 0, Traps: 0,
    Silent drops: 0, Proxy drops 0
  Output:
    Packets: 0, Too big: 0, No such names: 0,
    Bad values: 0, General errors: 0,
    Get requests: 0, Get nexts: 0, Set requests: 0,
    Get responses: 0, Traps: 0

```

## show snmp statistics

<b>Syntax</b>	show snmp statistics
<b>Description</b>	Display statistics about SNMP packets sent and received by the router.
<b>Sample Output</b>	<pre> user@host&gt; show snmp statistics SNMP statistics:   Input:     Packets: 8, Bad versions: 0, Bad community names: 0,     Bad community uses: 0, ASN parse errors: 0,     Too big: 0, No such names: 0, Bad values: 0,     Read only: 0, General errors: 0,     Total request varbinds: 8, Total set varbinds: 0,     Get requests: 0, Get nexts: 8, Set requests: 0,     Get responses: 0, Traps: 0,     Silent drops: 0, Proxy drops 0   Output:     Packets: 2298, Too big: 0, No such names: 0,     Bad values: 0, General errors: 0,     Get requests: 0, Get nexts: 0, Set requests: 0,     Get responses: 8, Traps: 2290 </pre>
<b>Output Fields</b>	<p>Input—Information about received packets:</p> <p>Packets—(snmplnPkts) Total number of messages delivered to the SNMP entity from the transport service.</p> <p>Bad versions—(snmplnBadVersions) Total number of messages delivered to the SNMP entity that were for an unsupported SNMP version.</p> <p>Bad community names—(snmplnBadCommunityNames) Total number of messages delivered to the SNMP entity that used an SNMP community name not known to the entity.</p> <p>Bad community uses—(snmplnBadCommunityUses) Total number of messages delivered to the SNMP entity that represented an SNMP operation that was not allowed by the SNMP community named in the message.</p> <p>ASN parse errors—(snmplnASNParseErrs) Total number of ASN.1 or BER errors encountered by the SNMP entity when decoding received SNMP messages.</p> <p>Too big—(snmplnTooBig) Total number of SNMP PDUs delivered to the SNMP entity with an error status field of tooBig.</p> <p>No such names—(snmplnNoSuchNames) Total number of SNMP PDUs delivered to the SNMP entity with an error status field of noSuchName.</p> <p>Bad values—(snmplnBadValues) Total number of SNMP PDUs delivered to the SNMP entity with an error status field of badValue.</p> <p>Read only—(snmplnReadOnly) Total number of valid SNMP PDUs delivered to the SNMP entity with an error status field of readOnly. Only incorrect implementations of SNMP generate this error.</p> <p>General errors—(snmplnGenErrs) Total number of SNMP PDUs delivered to the SNMP entity with an error status field of genErr.</p>

- Total requests varbinds—(snmpInTotalReqVars) Total number of MIB objects retrieved successfully by the SNMP entity as a result of receiving valid SNMP Get-Request and Get-Next PDUs.
- Total set varbinds—(snmpInSetVars) Total number of MIB objects modified successfully by the SNMP entity as a result of receiving valid SNMP Set-Request PDUs.
- Get requests—(snmpInGetRequests) Total number of SNMP Get-Request PDUs that have been accepted and processed by the SNMP entity.
- Get nexts—(snmpInGetNexts) Total number of SNMP Get-Next PDUs that have been accepted and processed by the SNMP entity.
- Set requests—(snmpInSetRequests) Total number of SNMP Set-Request PDUs that have been accepted and processed by the SNMP entity.
- Get responses—(snmpInGetResponses) Total number of SNMP Get-Response PDUs that have been accepted and processed by the SNMP entity.
- Silent drops—(snmpSilentDrops) Total number of GetRequest, GetNextRequest, GetBulkRequest, SetRequests, and InformRequest PDUs delivered to the SNMP entity that were silently dropped because the size of a reply containing an alternate response PDU with an empty variable-bindings field was greater than either a local constraint or the maximum message size associated with the originator of the requests.
- Proxy drops—(snmpProxyDrops) Total number of GetRequest, GetNextRequest, GetBulkRequest, SetRequests, and InformRequest PDUs delivered to the SNMP entity that were silently dropped because the transmission of the (possibly translated) message to a proxy target failed in such a way (other than a timeout) such that no response PDU could be returned.
- Output—Information about transmitted packets:
  - Packets—(snmpOutPkts) Total number of messages passed from the SNMP entity to the transport service.
  - Too bigs—(snmpOutTooBigs) Total number of SNMP PDUs generated by the SNMP entity with an error status field of tooBig.
  - No such names—(snmpOutNoSuchNames) Total number of SNMP PDUs delivered to the SNMP entity with an error status field of noSuchName.
  - Bad values—(snmpOutBadValues) Total number of SNMP PDUs generated by the SNMP entity with an error status field of badValue.
  - General errors—(snmpOutGenErrs) Total number of SNMP PDUs generated the SNMP entity with an error status field of genErr.
  - Get requests—(snmpOutGetRequests) Total number of SNMP Get-Request PDUs that have been generated by the SNMP entity.
  - Get nexts—(snmpOutGetNexts) Total number of SNMP Get-Next PDUs that have been generated by the SNMP entity.
  - Set requests—(snmpOutSetRequests) Total number of SNMP Set-Request PDUs that have been generated by the SNMP entity.

Get responses—(snmpOutGetResponses) Total number of SNMP Get-Response PDUs that have been generated by the SNMP entity.

Traps—(snmpOutTraps) Total number of SNMP traps generated by the SNMP entity.



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