ImageStream QOS

Version: 2840

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SNMP/ImageStream QOS

Policy-based QoS statistics are available starting with release 4.4.0-83 via SNMP through the IMAGESTREAM-QOS-MIB extension. This MIB starts at OID .1.3.6.1.4.1.15425.1.1.2 (.iso.org.dod.internet.private.enterprises.imagestream.products.router.qos).

Example snmpwalk from the router with a simple VoIP and default class setup:

```
ISis-Router:/usr/local/sand# snmpwalk -v2c -c public localhost qos
IMAGESTREAM-QOS-MIB::qosServicePolicyIndex.1 = INTEGER: 1
IMAGESTREAM-QOS-MIB::qosServicePolicyIndex.2 = INTEGER: 2
IMAGESTREAM-QOS-MIB::qosIfName.1 = STRING: brSerial0.1
IMAGESTREAM-QOS-MIB::qosIfName.2 = STRING: brSerial0.1
IMAGESTREAM-QOS-MIB::qosIfIndex.1 = INTEGER: 16
IMAGESTREAM-QOS-MIB::qosIfIndex.2 = INTEGER: 16
IMAGESTREAM-QOS-MIB::qosPolicy.1 = STRING: default
IMAGESTREAM-QOS-MIB::qosPolicy.2 = STRING: default
IMAGESTREAM-QOS-MIB::qosService.1 = STRING: voip
IMAGESTREAM-QOS-MIB::qosService.2 = STRING: default
IMAGESTREAM-QOS-MIB::qosType.1 = STRING: LLQ
IMAGESTREAM-QOS-MIB::qosType.2 = STRING: CBQ
IMAGESTREAM-QOS-MIB::qosPriority.1 = INTEGER: 0
IMAGESTREAM-QOS-MIB::qosPriority.2 = INTEGER: 5
IMAGESTREAM-QOS-MIB::qosRxMin.1 = INTEGER: 3420
IMAGESTREAM-QOS-MIB::qosRxMin.2 = INTEGER: 290
IMAGESTREAM-QOS-MIB::qosRxMax.1 = INTEGER: 3420
IMAGESTREAM-QOS-MIB::qosRxMax.2 = INTEGER: 2616
IMAGESTREAM-QOS-MIB::qosRxPackets.1 = Counter32: 884273
IMAGESTREAM-QOS-MIB::qosRxPackets.2 = Counter32: 2201804
IMAGESTREAM-QOS-MIB::qosRxBytes.1 = Counter32: 228577447
IMAGESTREAM-QOS-MIB::qosRxBytes.2 = Counter32: 2945735948
IMAGESTREAM-QOS-MIB::qosRxDropped.1 = Counter32: 0
IMAGESTREAM-QOS-MIB::qosRxDropped.2 = Counter32: 34483
IMAGESTREAM-QOS-MIB::qosRxOverlimits.1 = Counter32: 0
IMAGESTREAM-QOS-MIB::qosRxOverlimits.2 = Counter32: 0
IMAGESTREAM-QOS-MIB::qosRxBacklogPackets.1 = INTEGER: 0
IMAGESTREAM-QOS-MIB::qosRxBacklogPackets.2 = INTEGER: 17
IMAGESTREAM-QOS-MIB::qosRxBacklogBytes.1 = INTEGER: 0
IMAGESTREAM-QOS-MIB::qosRxBacklogBytes.2 = INTEGER: 25432
IMAGESTREAM-QOS-MIB::qosRxBacklogMs.1 = INTEGER: 0
IMAGESTREAM-QOS-MIB::qosRxBacklogMs.2 = INTEGER: 77
IMAGESTREAM-QOS-MIB::qosTxMin.1 = INTEGER: 728
IMAGESTREAM-QOS-MIB::qosTxMin.2 = INTEGER: 58
IMAGESTREAM-QOS-MIB::qosTxMax.1 = INTEGER: 728
IMAGESTREAM-QOS-MIB::qosTxMax.2 = INTEGER: 523
IMAGESTREAM-QOS-MIB::qosTxPackets.1 = Counter32: 886159
IMAGESTREAM-QOS-MIB::qosTxPackets.2 = Counter32: 466455
IMAGESTREAM-QOS-MIB::qosTxBytes.1 = Counter32: 242528234
IMAGESTREAM-QOS-MIB::qosTxBytes.2 = Counter32: 98499680
IMAGESTREAM-QOS-MIB::qosTxDropped.1 = Counter32: 0
IMAGESTREAM-QOS-MIB::qosTxDropped.2 = Counter32: 558
IMAGESTREAM-QOS-MIB::qosTxOverlimits.1 = Counter32: 0
IMAGESTREAM-QOS-MIB::qosTxOverlimits.2 = Counter32: 0
IMAGESTREAM-QOS-MIB::qosTxBacklogPackets.1 = INTEGER: 0
```

```
IMAGESTREAM-QOS-MIB::qosTxBacklogPackets.2 = INTEGER: 0
IMAGESTREAM-QOS-MIB::qosTxBacklogBytes.1 = INTEGER: 0
IMAGESTREAM-QOS-MIB::qosTxBacklogBytes.2 = INTEGER: 0
IMAGESTREAM-QOS-MIB::qosTxBacklogMs.1 = INTEGER: 0
IMAGESTREAM-QOS-MIB::qosTxBacklogMs.2 = INTEGER: 0
```

Example showing full OIDs

Download the full ImageStream QOS MIB IMAGESTREAM-QOS-MIB

These values can be graphed using many popular SNMP traffic graphing utilities. Here is an example QoS statistics graph.

Troubleshooting

Updating to 4.4.0-83 or later should modify the /etc/snmp/snmpd.conf file adding the following line to allow querying the QoS MIB:

```
pass_persist 1.3.6.1.4.1.15425.1.1.2.1 /bin/snmp_qos.sh
```

Policy-based QoS must be enabled for this MIB to be active. If policy-based QoS is not enabled the MIB will return an Unknown Object Identifier error.
If policy-based QoS is enabled and the router fails to query the QoS MIB ensure the correct OID is specified and that the previous configuration line is present in /etc/snmp/snmpd.conf. If not, add the configuration line and issue the **Restart snmp** command from the command line to restart the SNMP service.
For performance considerations, since the querying is done via shell script it is not recommended to use this method on more than about 50 interfaces or policies.