



# streamcore

**SNMP-GUIDE\_ENV64-R0**



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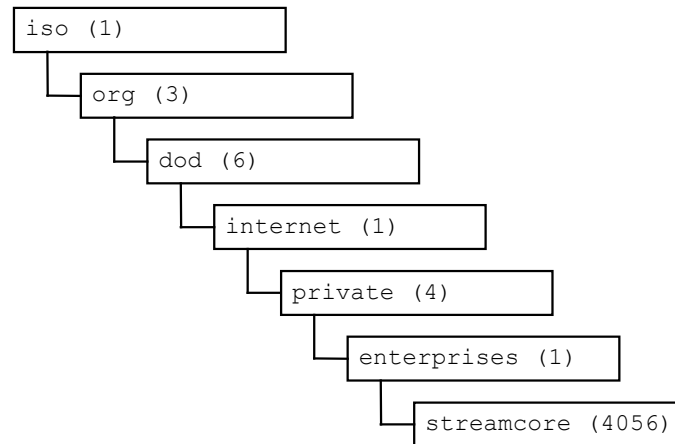
# 1 Introduction

This document describes how SNMP is implemented in Streamcore products. Part one describes how SNMP polling works for the SGM and the SG, and part two deals with traps sent by the SG or the SGM.

## 2 Streamcore MIB

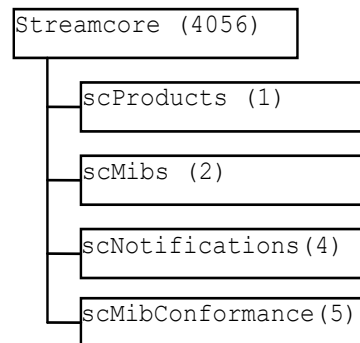
### 2.2 OVERVIEW

This part aims to give an overview of Streamcore MIB. The Streamcore MIB is provided with the documentation. It can be found in SGMConf under Documentation section. Streamcore MIB is located under the Enterprise section and can be accessed through identifier 4056, a number assigned by the IANA to Streamcore.



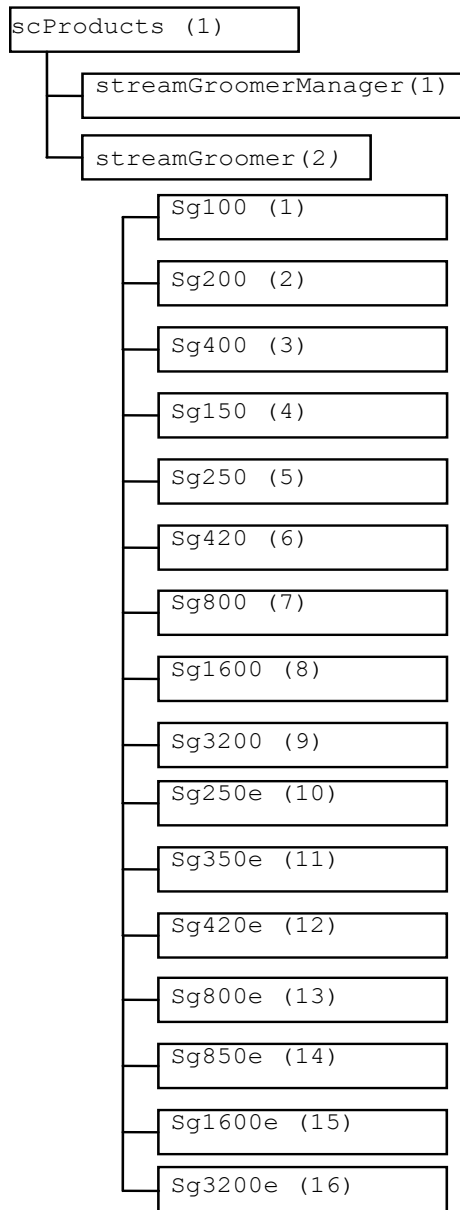
Under Streamcore, you will find four branches:

1. scProducts
2. scMibs
3. scNotifications
4. scMibConformance



### 2.3 SCPRODUCTS BRANCH

This branch defines the OID of Streamcore Products.



Below is a table describing the OID for each Streamcore product:

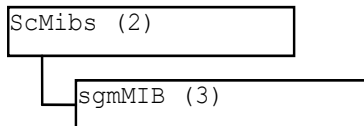
1.3.6.1.4.1.4056.11	StreamGroomer Manager
1.3.6.1.4.1.4056.1.2.1	StreamGroomer 100
1.3.6.1.4.1.4056.1.2.2	StreamGroomer 200
1.3.6.1.4.1.4056.1.2.3	StreamGroomer 400
1.3.6.1.4.1.4056.1.2.4	StreamGroomer 150
1.3.6.1.4.1.4056.1.2.5	StreamGroomer 250
1.3.6.1.4.1.4056.1.2.6	StreamGroomer 420

1.3.6.1.4.1.4056.1.2.7	StreamGroomer 800
1.3.6.1.4.1.4056.1.2.8	StreamGroomer 1600
1.3.6.1.4.1.4056.1.2.9	StreamGroomer 3200
1.3.6.1.4.1.4056.1.2.10	StreamGroomer 250e
1.3.6.1.4.1.4056.1.2.11	StreamGroomer 350e
1.3.6.1.4.1.4056.1.2.12	StreamGroomer 420e
1.3.6.1.4.1.4056.1.2.13	StreamGroomer 800e
1.3.6.1.4.1.4056.1.2.14	StreamGroomer 850e
1.3.6.1.4.1.4056.1.2.15	StreamGroomer 1600e
1.3.6.1.4.1.4056.1.2.16	StreamGroomer 3200e

## 2.4 SCMIBS BRANCH

This branch can contain all Streamcore specific MIBs. Currently, only the SGM MIB is present in this branch

OID	Name	Declination
1.3.6.1.4.1.4056.2.3	sgmMIB	STREAMCORE-SGM-MIB



More information about the sgmMIB is provided in chapter [3.3.2.2](#).

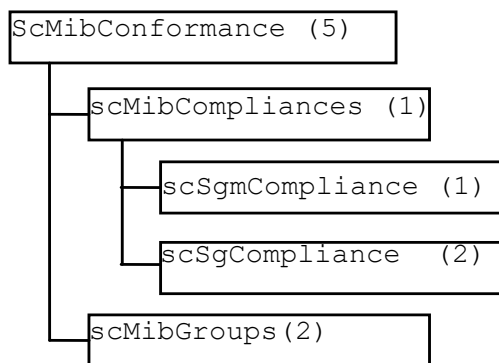
## 2.5 SCNOTIFICATIONS

This branch is dedicated to the notifications sent by the SG or the SGM.

More information about SNMP traps is provided in chapter 4.

## 2.6 SCMIBCONFORMANCE

This branch is the last part of the MIB module. It contains the conformance statement.



## SNMP Polling

This part is dedicated to the information that can be polled both on the SGM and on the SG.

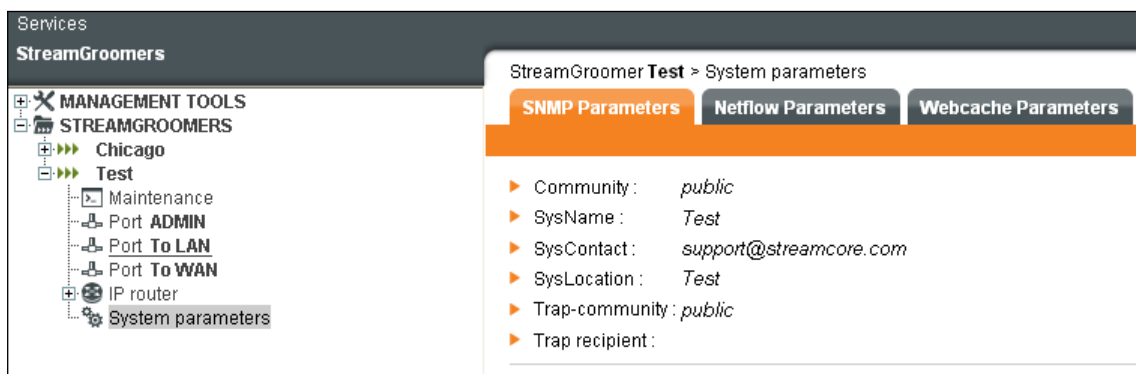
### 2.7 STREAMGROOMER POLLING

#### 2.7.1 Configuration

In StreamView, on *StreamGroomers>sg xxx>System parameters page>SNMP parameters* tab, these parameters are available and need to be filled:

- Community : (default = public)
- sysName : (default = SG name)
- sysContact : (default = support@streamcore.com)
- sysLocation : (default = site name associated with the creation)

**Note:** If sysName is empty, then the SG name defined in StreamView is used.



#### 2.7.2 Supported MIBs

##### 2.7.2.1 OVERVIEW

The MIB used by a SG are:

Group	MIB
UCD MIB	UCD-SNMP UCD-DLMOD
MIB II	RFC1213 IF-MIB SNMPV2-MIB SNMP-VIEW-BASED-ACM
Host resources MIB	HOST-RESOURCES
Bridge MIB	BRIDGE-MIB

**The SNMP agent on the SG is only available in OPE mode.**

**Note:** In order to improve the performance of the SG, SNMP information is kept on memory for 1 min.

##### 2.7.2.2 MIB II (RFC1213)



MIB II groups supported are:

- System RFC 3418: SNMPv2-MIB
- Interfaces RFC 2863: IF-MIB
- SNMP RFC 3418: SNMPv2-MIB
- RFC 3415: SNMP-VIEW-BASED-ACM

The following MIB II groups are not supported: Address Translation, TCP, UDP, EGP, Transmission.

Some explanations about the values polled in the MIB II:

- "sysName" the name defined in StreamView
- "sysContact" is the contact defined in StreamView
- "sysLocation" is the location defined in StreamView
- "sysDescr" gives a unique identification of the SG. This parameter has four parts separated by spaces :
  - StreamGroomer
  - SG type : "SG420", "SG1600" ...
  - SG mode : "Boot", "OPE-bypass", "OPE-monitoring", "OPE-optimisation"
  - SG active version
- SysObjectID shows "enterprises.streamcore.scProducts.SGM"
- SysUptime shows the time the SG has been "up" and running.

---

### 2.7.2.3 MIB HOST RESOURCES (RFC 2790)

This MIB allows you to get the followings stats:

- CPU load
- Static Memory
- Dynamic Memory

---

### 2.7.2.4 MIB BRIDGE (RFC 4188)

MIB bridge supported are:

- dot1dBase
- dot1dTp (Transparent Bridging objects)

MIB bridge not supported are:

- dot1dStp (Spanning Tree Protocol objects)
- dot1dSr (Source Routing objects)
- dot1dStatic (Destination Address Filtering)

**Note:** with this MIB, a SNMP network monitor will be able to see StreamGroomers as bridges between the LAN and the WAN.

## 2.8 SGM POLLING - SYSTEM

### 2.8.1 Configuration

The SGM configuration is set in SGMConf, in **System>Parameters:**

**SNMP Parameters section:**

- Community string : (default = public)
- SysName : (default = SGM)
- SysContact : (default = [support@streamcore.com](mailto:support@streamcore.com))
- SysLocation : (default = )

### 2.8.2 Supported MIBs

#### 2.8.2.1 OVERVIEW

The standards MIB used by a SGM are:

Group	MIB
UCD MIB	UCD-SNMP UCD-DLMOD
MIB II	RFC1213 IF-MIB SNMPV2-MIB SNMPV2-SMI SNMP-VIEW-BASED-ACM
Host resources MIB	HOST-RESOURCES

#### 2.8.2.2 MIB II (RFC 1213)

MIB II groups that are supported:

- System           SNMPv2-MIB (RFC 3418)
- Interfaces       IF-MIB (RFC 2863)
- SNMP            SNMPv2-MIB (RFC 3418)
- SNMPv2-SMI (RFC 2578)
- SNMP-VIEW-BASED-ACM (RFC 3415)

The following MIB II groups are not supported: Address Translation, TCP, UDP, EGP, Transmission.

Some explanations about the values polled in the MIB II:

- "sysName" is defined in SGMconf
- "sysContact" is defined in SGMconf
- "sysLocation" is defined in SGMconf
- "sysDescr" gives a unique identification of the SGM. This parameter has tree parts separated by spaces :
  - SGM type : "A", "B" ...
  - Serial number
  - System version

- "SysObjectID" shows "enterprises.streamcore.scProducts.SGM"
- "SysUptime" shows the time the SGM has been "up" and running.

---

### 2.8.2.3 MIB HOST RESOURCES (RFC 2790)

This MIB allows you to get the followings information:

- CPU load
- Static Memory
- Dynamic Memory
- Disk usage
- Processes

## 2.9 SGM POLLING - DATABASES

### 2.9.1 Configuration

The SGM configuration is set in SGMConf, in **System>Parameters**: Community string: (default = public)

### 2.9.2 Supported MIBs

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#### 2.9.2.1 OVERVIEW

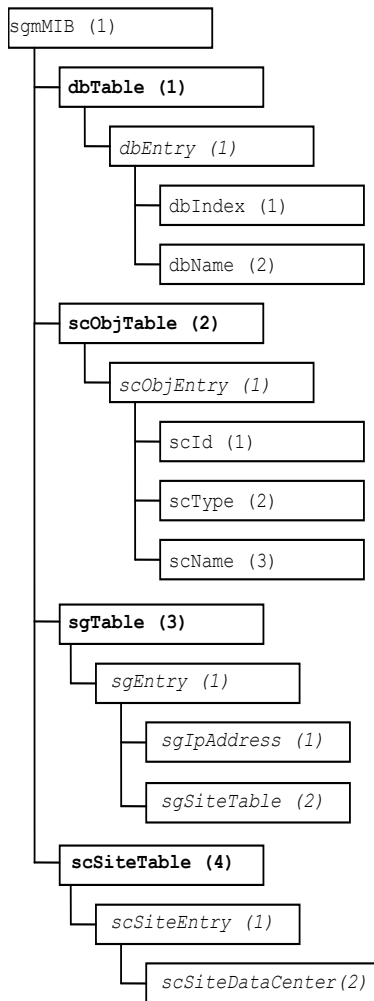
The only specific MIB used by a SGM is:

Group	MIB
Streamcore MIB	STREAMCORE-SGM-MIB

---

#### 2.9.2.2 STREAMCORE SGM MIB

The SGM MIB lists all the databases, the SGs and the sites managed by a SGM.



**dbTable table:**

This table contains all the databases managed by the SGM:

- dbIndex shows the identifier of the database
- dbName shows database's name

To poll this table, you may use in your SNMP network monitor commands such as:

Snmpwalk -c public host dbtable

**scObjTable table:**

scObjTable contains all the Streamcore objects managed by the SGM:

- scId shows the Streamcore object's identifier
- scType shows the type of the Streamcore object (SG or site)
- scName shows Streamcore Object's name

Using this table, you can have a list of Streamcore objects by database.

To poll this table, you may use in your SNMP network monitor commands such as:

Snmpwalk -c public@dbname host scObjtable

If only one database is defined, you may use snmpwalk -c public scObjtable

**sgTable table:**

sgTable contains all the SG managed by the SGM:

- sgIpAddress shows its admin IP address
- sgSiteId shows the associated site of the SG in the scSiteTable.

Using this table, you can have a list of SG by database.

To poll this table, you may use in your SNMP network monitor commands such as:

```
Snmpwalk -c public@dbname host sgtable
```

If only one database is defined, you may use `snmpwalk -c public sgtable`

**scSiteTable table:**

scSiteTable contains information on all configured sites:

- scSiteDataCenter shows if the site is a data center.

Using this table, you can have a list of Sites by database.

To poll this table, you may use in your SNMP network monitor commands such as:

```
Snmpwalk -c public@dbname host scSiteTable
```

### **3 If only one database is defined, you may use `snmpwalk -c public scsitetable`.**

# SNMP Trap

Streamcore products can send traps when they are handling some specific events. This section deals with these events and lists all the traps that can be sent.

## 3.1 STREAMGROOMER TRAPS

### 3.1.1 Configuration

In Streamview, on *Streamgroomers>sg xxx>System parameters page>SNMP parameters* tab, these parameters are available and need to be filled:

- Trap-community : (default = public)
- Trap recipient

### 3.1.2 Supported traps

#### OVERVIEW

The StreamGroomer can send the following traps:

- Standard traps:
  - Coldstart
  - Interface up/down
- Specific traps:
  - StreamGroomer status change
  - Webcache status change

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#### 3.1.2.2 STANDARD TRAPS

snmpMIBObject.snmpTraps

1.3.6.1.6.3.1.1.5

Name	OID	Details
coldStart	snmpTraps 1	Sent when the SG reboots
linkdown	snmpTraps 3	Sent when an interface goes down
linkup	snmpTraps 4	Sent when an interface goes up

### 3.1.2.3 SPECIFIC TRAPS

scSgNotifications

1.3.6.1.4.1.4056.4.3.0

Name	OID	Details
scQosStatusChange	scSgNotifications 1	Sent when the Streamgroomer's status changes. The new status is defined by the scQosOperStatus variable (1.3.6.1.4.1.4056.4.1.1).
scWebcacheStatusChange	scSgNotifications 2	Sent whenever the StreamGroomer's webcache status changes. The new status is defined by the scWebcacheStatus variable.

## 3.2 SGM TRAPS - SYSTEM

### 3.2.1 Configuration

The configuration to export trap related to the SGM system is set in SGMConf, in **System>Alarms**:

SNMP trap configuration:

- Trap community string:
- Traps receivers:
- Reliable trap: yes/no

## 3.2.2 Supported traps

### OVERVIEW

The SGM system can send the following traps:

- Standard traps:
  - Coldstart
  - Interface up/down
- Specific traps:
  - Threshold alarm (number of rules exceed, load too high...)
  - Event alarm (polling issue...)
  - Hard drive failure

#### 3.2.2.2 STANDARD TRAPS

snmpMIBObject.snmpTraps

1.3.6.1.6.3.1.1.5

Name	OID	Details
coldStart	snmpTraps 1	Sent when the SGM reboots
linkdown	snmpTraps 3	Sent when an interface goes down
linkup	snmpTraps 4	Sent when an interface goes up

#### 3.2.2.3 SPECIFIC TRAPS

scSgmNotifications

1.3.6.1.4.1.4056.4.2.0

Name	OID	Details
scSgmEvent	scSgmNotifications 2	<p>Notification sent when an event occurs on the SGM:</p> <ul style="list-style-type: none"><li>Number of rules exceed</li><li>Hard drive partition nearly full</li><li>Load too high</li><li>Free memory too low</li><li>Flush issue (nbLinesCache)</li><li>Flush process issue</li><li>Polling issue</li><li>Fsck error</li></ul> <p>These alarms include several variables described in scNotificationObjects (1.3.6.1.4.1.4056.4.1):</p> <ul style="list-style-type: none"><li>scAlarmEvent (OID 3): alarm triggered or rearmed</li><li>scAlarmLevel (OID 4): alarm criticality</li><li>scAlarmDescr (OID 5): description</li><li>scAlarmValue (OID 6): value</li></ul>
scHardDriveFailure	scSgmNotifications 3	Notification sent when a hard drive failure occurs



### 3.3 SGM TRAPS - DATABASES

#### 3.3.1 Configuration

Alarms related to databases, and defined in StreamView can be exported as SNMP traps. The configuration is set in StreamView, in **Management Tools>General parameters**, "Alarm export" tab:

SNMP trap configuration:

- Traps receivers:
- Trap community string:
- Reliable trap: yes/no
- Administrative status: up/down
- Minimum level of the alarms to be sent

#### 3.3.2 Supported Traps

##### 3.3.2.1 OVERVIEW

The following alarms related to databases can be exported as SNMP traps:

- StreamGroomer threshold alarm (performance) and status (mode, webcache...)
- Services threshold alarm (network, application, VoIP/video)

#### 3.3.3 Specific Traps

scSgmNotifications 1.3.6.1.4.1.4056.4.2.0

Name	OID	Details
scThresholdAlarm	scSgmNotifications 1	<p>Notification sent when a threshold alarm is reached for StreamGroomers or Services.</p> <p>These alarms include several variables described in sgmMIB (1.3.6.1.4.1.4056.2.3): scType (OID 1): SG or site scName (OID 2): name of SG or site</p> <p>And variables described in scNotificationObjects (1.3.6.1.4.1.4056.4.1): scAlarmEvent (OID 3): alarm triggered or rearmed scAlarmLevel (OID 4): alarm criticality scAlarmDescr (OID 5): description scAlarmValue (OID 6): value</p>