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PRODUCT
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Interface Manual
Volume 3
SNMP Interface and MIB

Interface Manual: Volume 3, SNMP Interface and MIB

Description

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Contents

1 Introduction

This chapter lists the SNMP Traps generated by the OpenScape Voice system and received by the OpenScape Voice Assistant. The system generates traps to alert management stations that failure events have been detected or cleared. The OpenScape Voice supports the SNMP v2 trap format.

Note: For alarm descriptions and repair notes, refer to the *OpenScape Voice Service Handbook (SHB)*.

A fault is a condition in the system, detected by the system, where the system does not behave as specified. All the faults are predefined by the system and can not be changed.

When a fault is recognized by the system, it is raised to the system fault management in order to be processed adequately:

- System internal service or component recognizes a fault
- System fault management is informed about the fault.
- Fault event is logged in the persistent system log file.
- Fault is assigned a fault severity.
- Faults with severity minor, major, critical are stored in the alarm database
- Faults with severity warning, minor, major, critical and fault clearance events are reported with SNMP traps
- Alarm is set to the active (ON) state.
- If the alarm is switched on in the OpenScape Voice Assistant and there is already the same alarm active, the new alarm data is taken over, e.g. the timestamp of the active alarm is set to the new occurrence. In addition, the alarm hit count[1] is incremented.
- A corresponding alarm history entry is created in the alarm history log.

If, for any reason, forwarding of faults from OpenScape Voice to a surveillance system (like Assistant) is not possible, the faults can be read from the OSV database via SNMP, CLI or reading a file with a list of active alarms.

1. Shows how many times an alarm has been triggered since the last acknowledge action.

2 Supported and Unsupported MIBS

The Managed Information Base (MIB) describes the objects that a third party system may manage via SNMP. The MIB exists as a number of files, specified in Table 1 and Table 2.

To facilitate upgrades, the SNMP interface and MIBs must be backward compatible. The NOC should be upgraded first to support the latest OpenScape Voice system version, and therefore also be able to support previous OpenScape Voice versions.

2.1 Supported MIBS

There are several ways available to obtain / retrieve the OSV MIBs:

1. Collect all the *.mib and *.my files found in the following directory on the OpenScape Voice system.

   `/opt/SMAW/SMAWrtp/snmpMib/`

2. From SWS.
   - Enter in the extended search mask the following items:
     - Main Category: Communication Systems
     - Product Family: OpenScape Voice
     - Product: OpenScape Voice Server
     - Product Version: OpenScape Voice Server V6
     - Prod.Item Nr (PIN) / Vers.: P30152-P1538-A3-3 (V6 R0.12.3 Patchsets)
     - Production-Version: (leave emtpy)
   - Click on the **Search** Button.
   - Go to the very first line, V6 R0.12.3 Patchsets
   - Select **Details**. The MIBs are last the line in File List (right before RN).
3. Retrieve the **HiPath8000_Mibs.zip** package from the DVD.
   - Contact technical support for a CD/DVD containing the package.
   - Insert the CD/DVD into the DVD drive. After the auto-mount completes, the CD/DVD should be readable.

- If the system does not auto-mount, then manually mount as follows:

  ```
  # mount /dev/dvd
  ```

2.1.1 OpenScape Voice MIBs

Table 1 outlines the OpenScape Voice supported MIBs. For additional information and specific OIDs for each group, refer to Section 6.1, “OpenScape Voice MIBs”, on page 69.

hiq8000Admin.mib	us_srxUce.mib	RtpAdmAlarmMgmt.mib
hiqTrap.mib	us_srxMgcp.mib	RtpAdmEventMgmt.mib
hiqFeatLic.mib	RtpAdm.mib	surpassRtpAdmin.mib
us_srxService.mib	surpassRtp.mib	surpassRtpProducts.mib
us_srxSip.mib		

Table 1 OpenScape Voice Supported MIBs

2.1.2 SNMPv2 MIBs

Table 2 outlines the SNMPv2 supported MIBs. For additional information and specific OIDs, refer to Section 6.2, “SNMPv2 MIBs”, on page 149.

SNMPV2-SMI (RFC 2578)	TCP-MIB (RFC 4022)
SNMPV2-TC (RFC 2579)	UDP-MIB (RFC 4113)
SNMPv2-CONF (RFC 2580)	IANAifType-MIB
SNMPv2-MIB (RFC 3418)	IP-MIB (RFC 4293)
INET-ADDRESS-MIB (RFC 2851)	IF-MIB (RFC 2863)
UCD-SNMP MIB	

Table 2 SNMPv2 Supported MIBs

2.2 Unsupported MIBs

SNMP MIBs are required to support third party Network Operations Centers, operated by either customer or via EN Managed Service Offerings. However, many legacy MIBs also support provisioning that has since been migrated to SOAP instead of SNMP, and also Carrier-specific MIBs. Such MIBs are no longer supported and have been removed from OpenScape Voice deliverables. Refer to Table 3 for a list of these unsupported MIBs.

h323com.mib	hiqSmdi.mib	us_srxIcp.mib
hiqCaleaAdmin.mib	hiqSubAdmin.mib	us_srxIsdn.mib
hiqCGCTraffic.mib	hiqTgTraffic.mib	us_srxIsup.mib
hiqCmtsAdmin.mib	hiqTrafficMeas.mib	us_srxLnp.mib
hiqCSTA.mib	hiqTTUD.mib	us_srxMaintMgr.mib
hiqDfAdmin.mib	us_srxSs7.mib	us_srx.mib
hiqEvtMsg.mib	us_srxTnsans.mib	us_srxNfas.mib
hiqIN.mib	usvoicemibs.mib	us_srxPri.mib
hiqIrm.mib	v2-tc.my	us_srxPrm.mib
hiqHttpDigest.mib	ussmi.mib	us_srxPstnRteDest.mib
hiqPsa.mib	us_srxAuc.mib	us_srxPstnTrunk.mib
hiqRetailer.mib	us_srxBase.mib	us_srxTrap.mib
hiqRksAdmin.mib	us_srxBch.mib	us_srxXlaZone.mib
hiqRouting.mib	us_srxCasSm.mib	us_srxMegaco.mib

Table 3 Unsupported MIBs(Seite 1 von 2)

hiqSBrk.mib	us_srxDnm.mib	us_srxH323.mib
hiqSecurity.mib	us_srxMain.mib	us_srxOvl.mib
RtpAdmProcessMgmt.my	RtpAdmSS7Mgmt.my	RtpAdmStatCountMgmt.my

Table 3 Unsupported MIBs(Seite 2 von 2)

2.3 Gathering MIBs Using Supported Compilers

The OpenScape Voice MIBs have been tested and collected successfully with the following compilers. Instructions how to gather the MIBs with each compiler are supplied in the ‘readme’ file located in the **/opt/SMAW/SMAWrtp/snmpMib** directory.

- Net-SNMP - an open source product.
- MG-Soft - a supplier of SNMP, and general network management applications, toolkits and solutions.
- Emanate - an SNMP toolkit, and,
- Zenoss Core - an enterprise-grade open source monitoring platform.

2.3.1 Standard RFC MIBs

In order to compile the OpenScape Voice MIBs, the following standard RFC MIBs are needed:

- SNMPv2-SMI
- SNMPv2-TC
- SNMPv2-CONF
- SNMPv2-MIB
- INET-ADDRESS-MIB
- TCP-MIB
- UDP-MIB
- IANAifType-MIB
- IF-MIB
- IP-MIB

These MIBs are acquired from the compiler. In case they are not provided, download them from the following directory in the OpenScape Voice system or any Linux Machine with Net-SNMP installed:

```
/usr/share/snmp/mibs/
```

2.3.2 Compilation Order

The recommended compile order is as follows:

1. SNMPv2-SMI
2. SNMPv2-TC
3. SNMPv2-CONF
4. SNMPv2-MIB
5. INET-ADDRESS-MIB
6. TCP-MIB
7. UDP-MIB
8. IANAifType-MIB
9. IF-MIB
10. IP-MIB
11. RtpAdm.mib
12. RtpAdmEventMgmt.mib
13. RtpAdmAlarmMgmt.mib
14. surpassRtp.mib
15. surpassRtpAdmin.mib
16. surpassRtpProducts.mib
17. hiq8000Admin.mib
18. hiqTrap.mib
19. hiqFeatLic.mib
20. us_srxSip.mib
21. us_srxUce.mib
22. us_srxService.mib
23. us_srxMgcp.mib

2.3.3 SNMP Operations

The following SNMP functions (based on Net-SNMP) can be executed against OpenScape Voice MIBs and MIB-II.

- SNMPTRANSLATE - displays MIB contents in meaningful text.
- SNMPGET - retrieves data.
- SNMPGETNEXT - retrieves unknown indexed data.
- SNMPWALK - performs a sequence of chained GETNEXT requests.
- SNMPTABLE - retrieves the contents of an SNMP table, and displays it one row at a time.
- SNMPSET - performs write operations.
- SNMPBULKGET - retrieves data using SNMP GETBULK request.
- SNMPBULKWALK - retrieves a sub-tree of management values using SNMP GETBULK requests.
- SNMPTRAP - notifications used to signal alarms.

A SNMP Request received by Net-SNMP triggers a DNS Reverse Lookup query for the source IP of the request which can cause SNMP responses being delayed if the DNS Server replies delayed or not at all.

A DNS Server responding in a timely manner to the DNS Reverse Lookup query, or as an alternative entries for potential source IPs of SNMP requests in the OSV's "/etc/hosts" file, are needed to avoid unnecessary delays of SNMP responses.

2.3.4 Procedures for Compilation

Instructions for collecting the mibs using the qualified compilers (Zenoss, NetSnmp, Emanate, MG-Soft) can be obtained from the README file also delivered in **/opt/SMAW/SMAWrtp/snmpMib**.

Unify does not guarantee that the MIBs provided will collect, or gather, with other compilers without errors and/or warnings.

3 Event and Alarm Management MIBS

There are two Managed Information Base (MIB) files for OpenScape Voice alarming that specify all alarms reported by OpenScape Voice applications as well as the new RTP alarm Object Identifiers (OIDs). These two MIBs are:

- Event Management
- Alarm Management

Sometimes referred to as a variable binding, the pairing of the name of a variable and its associated value creates the OID. The variable bindings (see the first column of Table 4) in a particular alarm grouping are combined to form the category. Refer to Section 5.1, “Object Identifier”, on page 43 for additional information.

3.1 Event Management MIB

The Event Management MIB contains information relating to details of the alarms and event configuration and includes the following elements:

- Event Table (rtpEvtTable)
- Traps (rtpEvtTraps)
- Event Escalation Filter[1] (rtpEvtEscalationFilterTable)
- Event Descriptors (rtpEvtDescriptorTable)
- Filtered Event Table (rtpEvtFilteredEventTable)
- Event Filter Table (rtpEvtFilterTable)

3.1.1 Event Table

The rtpEvtTable is a table that contains the details of each reported event. Table 4 defines the variable binding object list that comprises the Event Table. All are read only. Refer to Table 4 for specific information.

```
rtpEvtTable             1.3.6.1.4.1.4329.2.1.2.1.1.1
Aggregate         not-accessible
rtpEvtTableEntry        1.3.6.1.4.1.4329.2.1.2.1.1.1.1
Aggregate         not-accessible
```

1. Presently, this table is not used.

Table 4 defines the variable binding object list of every reported event. All are read only.

Variable Binding	Syntax/Values	Description
rtpEvtSequenceNumberIndex	Unsigned32	This variable binding records an event sequence number that is unique within the entire OpenScape Voice system. This value is incremented by one for each new event. Variable OID: 1.3.6.1.4.1.4329.2.1.2.1.1.1.1.1
rtpEvtCurrId	Unsigned32	This variable binding records the current log record ID of the event in the database. This object's value is always identical to the value of rtpEvtSequenceNumberIndex. Variable OID: 1.3.6.1.4.1.4329.2.1.2.1.1.1.1.2
rtpEvtSet	Integer32 (1 - 32767)	This variable binding records the National Language Support (NLS) set number of the event. Variable OID: 1.3.6.1.4.1.4329.2.1.2.1.1.1.1.3
rtpEvtNum	Integer32 (1 - 32767)	This variable binding records the NLS ID number of the event. Variable OID: 1.3.6.1.4.1.4329.2.1.2.1.1.1.1.4
rtpEvtSeverity	INTEGER • critical (1) • major (2) • minor (3) • warning (4) • informational (5) • clear (6) • unknown (7)	This variable binding records the event's severity level. Variable OID: 1.3.6.1.4.1.4329.2.1.2.1.1.1.1.5
rtpEvtEventTime	INTEGER (0..2147483647)	This variable binding records the time at which the event occurred, in seconds since 1.Jan.1970 00:00:00h. Variable OID: 1.3.6.1.4.1.4329.2.1.2.1.1.1.1.6
rtpEvtReportingObject	OCTET STRING (Size = 0 - 63)	This variable binding records the logical name of the process that reported the event. Please note that the logical name of a process is unique within the entire OpenScape Voice system. Variable OID: 1.3.6.1.4.1.4329.2.1.2.1.1.1.1.7
rtpEvtFaultyObject	OCTET STRING (Size = 0 - 63)	This variable binding describes what failed and records the OpenScape Voice node that reported the event (i.e., generated the trap). Variable OID: 1.3.6.1.4.1.4329.2.1.2.1.1.1.1.8

Table 4 Variable Bindings (Seite 1 von 2)

Variable Binding	Syntax/Values	Description
rtpEvtEndkey	INTEGER • noRecoveryDefined (0) • recoveryManagerInformed (1)	This variable binding records the end key as an integer and indicates whether an automatic recovery action has been initiated at the RTP or not. If this action succeeds, an appropriate clear message is sent by the RTP. Otherwise, no clear message is sent. Variable OID: 1.3.6.1.4.1.4329.2.1.2.1.1.1.1.9 **NOTE:** Currently, the end key is not supported and is always set to noRecoveryDefined.
rtpEvtFormatText	OCTET STRING (Size = 0 - 512)	This variable binding records the format string of the default short text with place holders, such as “printf” for variable parameters. Variable OID: 1.3.6.1.4.1.4329.2.1.2.1.1.1.1.10
rtpEvtParameters	OCTET STRING (Size = 0 - 4096)	This variable binding records the variable parts of the event, encoded in the following manner: rtpEvtParameters = <empty> or rtpEvtParameters parameter parameter = type = value <null-byte> type = “c” (character), “s” (string), “d” (integer/long integer), “u” (unsigned integer/unsigned long integer), or “g” (float/double) value = <empty> or value <non-null-character> Variable OID: 1.3.6.1.4.1.4329.2.1.2.1.1.1.1.11
rtpEvtAlarmType	Integer • Communication (1) • Service (2) • Processing (3) • Equipment (4) • Database (6) • Security (32) • Indication (34) **NOTE:** Values in the range 32 - 2147483647 are application specific.	This variable binding reports the type of alarm object to which the event belongs (i.e., the alarm type). Variable OID: 1.3.6.1.4.1.4329.2.1.2.1.1.1.1.12
rtpEvtShortText	OCTET STRING (Size = 0 - 512)	This variable binding describes the alarm and records the short text, including all variable parameters. Variable OID: 1.3.6.1.4.1.4329.2.1.2.1.1.1.1.13
rtpEvtFilterLastTransId		This variable binding records the end of the variable list for each trap. Variable OID: 1.3.6.1.4.1.4329.2.1.2.1.1.9.1.5
rtpClusterName	OCTET STRING	The cluster name is an identifier of the cluster publishing the event. Variable OID: 1.3.6.1.4.1.4329.2.1.2.1.1.1.1.14

Table 4 Variable Bindings (Seite 2 von 2)

3.1.1.1 Last Event Sequence Number

The following OID can be used to retrieve the sequence number of the last trap that was reported to all "generic" destinations configured in the SNMP master agent. If event filters are being used to route traps to specific management systems, then the sequence number may be different for each system. Refer to Section 3.1.1.5, “Event Filter Table”, on page 22 for more information.

```
rtpEvtLastEventSequenceNumber 1.3.6.1.4.1.4329.2.1.2.1.1.2
Unsigned32        read-only
```

3.1.1.2 Generic Trap OIDs

Used only by RTP, the following OIDs represent the generic trap IDs for alarm traps generated by RTP that do not have a specific OID configured for a given Event Set-Event ID.

Attention: In general, generic trap IDs should be avoided to allow correlating a clearing event with a specific alarm trap.

```
rtpEvtTrapCritical      1.3.6.1.4.1.4329.2.1.2.1.1.3.1
nonLeaf
rtpEvtTrapMajor         1.3.6.1.4.1.4329.2.1.2.1.1.3.2
nonLeaf
rtpEvtTrapMinor         1.3.6.1.4.1.4329.2.1.2.1.1.3.3
nonLeaf
rtpEvtTrapWarning       1.3.6.1.4.1.4329.2.1.2.1.1.3.4
nonLeaf
rtpEvtTrapInformation   1.3.6.1.4.1.4329.2.1.2.1.1.3.5
nonLeaf
rtpEvtTrapClear         1.3.6.1.4.1.4329.2.1.2.1.1.3.6
nonLeaf
rtpEvtTrapUnknown       1.3.6.1.4.1.4329.2.1.2.1.1.3.7
nonLeaf
```

Each trap, generic or specific, provides the following object list. Refer to Table 4 for details.

```
rtpEvtSequenceNumberIndex=1.3.6.1.4.1.4329.2.1.2.1.1.1.1.1
=1.3.6.1.4.1.4329.2.1.2.1.1.1.1.2
rtpEvtSet=1.3.6.1.4.1.4329.2.1.2.1.1.1.1.3
rtpEvtNum=1.3.6.1.4.1.4329.2.1.2.1.1.1.1.4
rtpEvtSeverity=1.3.6.1.4.1.4329.2.1.2.1.1.1.1.5
rtpEvtEventTime=1.3.6.1.4.1.4329.2.1.2.1.1.1.1.6
rtpEvtReportingObject=1.3.6.1.4.1.4329.2.1.2.1.1.1.1.7
rtpEvtFaultyObject=1.3.6.1.4.1.4329.2.1.2.1.1.1.1.8
rtpEvtEndkey=1.3.6.1.4.1.4329.2.1.2.1.1.1.1.9
rtpEvtFormatText=1.3.6.1.4.1.4329.2.1.2.1.1.1.1.10
rtpEvtParameters=1.3.6.1.4.1.4329.2.1.2.1.1.1.1.11
rtpEvtAlarmType=1.3.6.1.4.1.4329.2.1.2.1.1.1.1.12
rtpEvtShortText=1.3.6.1.4.1.4329.2.1.2.1.1.1.1.13
```

```
rtpEvtFilterLastTransId=1.3.6.1.4.1.4329.2.1.2.1.1.9.1.5
```

Note: rtpEvtFaultyObject contains a duplicate of the "FaultyObject" character string, which is the concatenation of the first three variables of the rtpEvtShortText.

3.1.1.3 Event Descriptor Table

The rtpEvtDescriptorTable is a table that contains the severity and alarm type (summary category) for each Event Set-Event ID. These are configured in the *.eds files. Refer to Table 5 for details.

```
rtpEvtDescriptorTable  1.3.6.1.4.1.4329.2.1.2.1.1.5
Aggregate        not-accessible
rtpEvtDescriptorTableEntry 1.3.6.1.4.1.4329.2.1.2.1.1.5.1
Aggregate        not-accessible
```

Table 5 defines the variable binding object list of the Event Descriptor Table. All objects are read only.

Object	Syntax/Values	Description/Variable OID
rtpEvtDescriptorSet	Integer32 (1..32767)	This object records the descriptor set number of the event. 1.3.6.1.4.1.4329.2.1.2.1.1.5.1.1
rtpEvtDescriptorNum	Integer32 (1..32767)	This object records the descriptor ID number of the event. 1.3.6.1.4.1.4329.2.1.2.1.1.5.1.2
rtpEvtDescriptorSeverity	INTEGER • critical (1) • major (2) • minor (3) • warning (4) • informational (5) • clear (6) • unknown (7)	This object records the event's severity level. 1.3.6.1.4.1.4329.2.1.2.1.1.5.1.3
rtpEvtDescriptorAlarmType	INTEGER • Communication (1) • Processing (3) • Equipment (4) • Database (6) • Security (32) • Indication (34) **NOTE:** Values in the range 32 - 2147483647 are application specific.	This object reports the type of alarm object to which the event belongs (i.e., the alarm type). 1.3.6.1.4.1.4329.2.1.2.1.1.5.1.4

Table 5 Event Descriptor Table Variable Bindings

3.1.1.4 Filtered Event Table

The rtpEvtFilteredEventTable is a table that contains details of the alarms that are sent to management systems configured in the Event Filter Table and is indexed by the IP address of the management system. Refer to Table 6 for details.

```
rtpEvtFilteredEventTable 1.3.6.1.4.1.4329.2.1.2.1.1.8
Aggregate        not-accessible
rtpEvtFilteredEventEntry 1.3.6.1.4.1.4329.2.1.2.1.1.8.1
Aggregate        not-accessible
```

Table 6 defines the variable binding object list of the Filtered Event Table (Fet). All objects are read only.

Object	Syntax/Values	Description/Variable OID
rtpEvtFetIpAddress	OctetString (4..8)	This object is the address of the management station. 1.3.6.1.4.1.4329.2.1.2.1.1.8.1.1
rtpEvtFetCurrId	Unsigned32	This object records the current log record ID of the event in the database. This object's value is always identical to the value of rtpEvtSequenceNumberIndex. 1.3.6.1.4.1.4329.2.1.2.1.1.8.1.2
rtpEvtFetSet	Integer32 (1..32767)	This object records the Filtered Event Table set number of the event. 1.3.6.1.4.1.4329.2.1.2.1.1.8.1.3
rtpEvtFetNum	Integer32 (1..32767)	This object records the Filtered Event Table ID number of the event. 1.3.6.1.4.1.4329.2.1.2.1.1.8.1.4
rtpEvtFetSeverity	INTEGER • critical (1) • major (2) • minor (3) • warning (4) • informational (5) • clear (6) • unknown (7)	This object records the event's severity level. 1.3.6.1.4.1.4329.2.1.2.1.1.8.1.5
rtpEvtFetEventTime	INTEGER (0..2147483647)	This object records the time at which the event occurred, in seconds since 1.Jan.1970 00:00:00h. 1.3.6.1.4.1.4329.2.1.2.1.1.8.1.6
rtpEvtFetReportingObject	OctetString (0..63)	This object records the logical name of the process that reported the event. Note that the logical name of a process is unique within the entire OpenScape Voice system. 1.3.6.1.4.1.4329.2.1.2.1.1.8.1.7

Table 6 Filtered Event Table Variable Bindings (Seite 1 von 2)

Object	Syntax/Values	Description/Variable OID
rtpEvtFetFaultyObject	OctetString (0..63)	This object describes what failed and records the OpenScape Voice node that reported the event (i.e., generated the trap). 1.3.6.1.4.1.4329.2.1.2.1.1.8.1.8
rtpEvtFetEndkey	INTEGER • noRecoveryDefined (0) • recoveryManagerInformed (1)	This object records the end key as an integer and indicates whether an automatic recovery action has been initiated at the RTP or not. If this action succeeds, an appropriate clear message is sent by the RTP. Otherwise, no clear message is sent. 1.3.6.1.4.1.4329.2.1.2.1.1.8.1.9 **NOTE:** Currently, the end key is not supported and is always set to 0 - noRecoveryDefined.
rtpEvtFetFormatText	OctetString (0..512)	This object records the format string of the default short text with place holders, such as “printf” for variable parameters. 1.3.6.1.4.1.4329.2.1.2.1.1.8.1.10
rtpEvtFetParameters	OctetString (0..4096)	This object records the variable parts of the event, encoded in the following manner: • rtpEvtParameters = <empty> or rtpEvtParameters parameter • parameter = type = value <null-byte> • type = “c” (character), “s” (string), “d” (integer/long integer), “u” (unsigned integer/unsigned long integer), or “g” (float/double) • value = <empty> or value <non-null-character> 1.3.6.1.4.1.4329.2.1.2.1.1.8.1.11
rtpEvtFetAlarmType	INTEGER • Communication (1) • Processing (3) • Equipment (4) • Database (6) • Security (32) • Indication (34) **NOTE:** Values in the range 32 - 2147483647 are application specific.	This object reports the type of alarm object to which the event belongs (i.e., the alarm type). 1.3.6.1.4.1.4329.2.1.2.1.1.8.1.12
rtpEvtFetShortText	OctetString (0..512)	This object describes the alarm and records the short text, including all variable parameters. 1.3.6.1.4.1.4329.2.1.2.1.1.8.1.13

Table 6 Filtered Event Table Variable Bindings (Seite 2 von 2)

3.1.1.5 Event Filter Table

The rtpEvtFilterTable (the destination of the alarm trap) contains a list of management stations to which alarms for specific event sets should be sent.

```
rtpEvtFilterTable      1.3.6.1.4.1.4329.2.1.2.1.1.9
Aggregate        not-accessible
rtpEvtFilterEntry      1.3.6.1.4.1.4329.2.1.2.1.1.9.1
Aggregate        not-accessible
```

Table 7 defines the variable binding object list of the Event Filter Table. All objects are read only, unless noted.

Object	Syntax/Values	Description/Variable OID
rtpEvtFilterIpAddress	OctetString(4..8)	The object is the address of the management station. 1.3.6.1.4.1.4329.2.1.2.1.1.9.1.1
rtpEvtFilterEventSets	OctetString(0..512) Read-Create	The object is the colon-separated list of event sets that should be sent. It can be specified as an empty string, which indicates that all event sets and severity levels should be sent. 1.3.6.1.4.1.4329.2.1.2.1.1.9.1.2
rtpEvtFilterSeverityLevels	OctetString(0..13) Read-Create	The object is the colon-separated list of severity levels that should be sent. It can be specified as an empty string, which indicates that all event sets and severity levels should be sent. 1.3.6.1.4.1.4329.2.1.2.1.1.9.1.3
rtpEvtFilterSnmpVersion	INTEGER • v1 (1) • v2c (2) • v3 (3) Read-Create **NOTE**: Currently, v3 is not supported.	1.3.6.1.4.1.4329.2.1.2.1.1.9.1.4
rtpEvtFilterLastTransId	Unsigned32	This object records the end of the variable list for each trap. 1.3.6.1.4.1.4329.2.1.2.1.1.9.1.5
rtpEvtFilterLastCurrId	Unsigned32	This object records the last current log record ID of the event in the database. This object's value is always identical to the value of rtpEvtSequenceNumberIndex. 1.3.6.1.4.1.4329.2.1.2.1.1.9.1.6

Table 7 Event Filter Table Variable Bindings (Seite 1 von 2)

Object	Syntax/Values	Description/Variable OID
rtpEvtFilterRowStatus	INTEGER • active (1) • notInService (2) • notReady (3) • createAndGo (4) • createAndWait (5) • destroy (6) Read-Create	1.3.6.1.4.1.4329.2.1.2.1.1.9.1.7

Table 7 Event Filter Table Variable Bindings (Seite 2 von 2)

3.2 Alarm Management MIB

The Alarm Management MIB contains information pertaining to Alarm Summary Objects as well as a list of the currently active alarms and includes the following elements:

- Alarm Status Object Table (rtpArmAlarmObjectTable)
- Active AlarmTable (rtpArmAlarmTable)
- Correlation Trap (rtpArmCorrIdTrap)

3.2.1 Alarm Object Table

The rtpArmAlarmObjectTable holds the current status of each of the alarm types or categories.

```
rtpArmAlarmObjectTable 1.3.6.1.4.1.4329.2.1.2.2.1.1
Aggregate        not-accessible
rtpArmAlarmObjectEntry 1.3.6.1.4.1.4329.2.1.2.2.1.1.1
Aggregate        not-accessible
```

Table 8 defines the variable binding object list of the Alarm Object Table. All objects are read only, unless noted.

Object	Syntax/Values	Description/Variable OID
rtpArmAlarmObjectType	INTEGER	1.3.6.1.4.1.4329.2.1.2.2.1.1.1.1
rtpArmAlarmObjectStatus	INTEGER • rtpArmOk (0) • rtpArmNOk (1)	1.3.6.1.4.1.4329.2.1.2.2.1.1.1.2

Table 8 Alarm Object Table Variable Bindings (Seite 1 von 2)

Object	Syntax/Values	Description/Variable OID
rtpArmAlarmObjectAction	INTEGER • nothing (0) • clear (1) Read-Write	Setting rtpArmAlarmObjectAction to 1 (clear) will clear the alarms related to the given rtpArmAlarmObjectType, clearing the alarm object for this type of alarm. 1.3.6.1.4.1.4329.2.1.2.2.1.1.1.3

Table 8 Alarm Object Table Variable Bindings (Seite 2 von 2)

3.2.2 Active Alarm Table

The rtpArmAlarmTable is a table of currently active alarms.

```
rtpArmAlarmTable       1.3.6.1.4.1.4329.2.1.2.2.1.2
Aggregate         not-accessible
rtpArmAlarmEntry       1.3.6.1.4.1.4329.2.1.2.2.1.2.1
Aggregate         not-accessible
```

Table 9 defines the variable binding object list of the Active Alarm Table. All objects are read only, unless noted.

Object	Syntax/Values	Description/Variable OID
rtpArmAlarmType	INTEGER	1.3.6.1.4.1.4329.2.1.2.2.1.2.1.1
rtpArmAlarmTime	INTEGER(0..2147483647)	1.3.6.1.4.1.4329.2.1.2.2.1.2.1.2
rtpArmAlarmId	Unsigned32	The rtpArmAlarmId field that is returned is an index into the RtpEvtTable, where details for the alarm can be retrieved. 1.3.6.1.4.1.4329.2.1.2.2.1.2.1.3
rtpArmAlarmAction	INTEGER • nothing (0) • deleteSingle (1) • deleteBeforeId (2) • deleteBeforeTime (3) Read-Write	Setting the rtpArmAlarmAction will cause alarms to be cleared as described below. 1.3.6.1.4.1.4329.2.1.2.2.1.2.1.4 Setting this object to one of the specified actions has the following effects: **deleteSingle** - Deletes a single entry selected by its current Id (rtpArmAlarmId) from the alarm table. rtpArmAlarmType and rtpArmAlarmTime should be set to zero or to valid values (i.e. an existing OID). **deleteBeforeId** - Deletes all entries within the specified alarm type from the top of the alarm table to the set current Id (rtpArmAlarmId) from the alarm table. rtpArmAlarmTime should be set to zero or to a valid value (i.e. an existing OID). **deleteBeforeTime** - Deletes all entries within the specified alarm type from the top of the alarm table to the set alarm time (rtpArmAlarmTime) from the alarm table. rtpArmAlarmId must be set to a valid value (i.e. an existing OID). **nothing** - has no effect

Table 9 Active Alarm Table Variable Bindings

3.2.2.1 Correlation Trap

The rtpArmCorrIdTrap mainly contains the Current ID of a Clear event ('rtpEvtCurrId') and the list of Correlated IDs, i.e., those alarm IDs which have been cleared by the Clear event ('rtpArmCiCorrIDs'). The list of Correlated IDs may be empty. Or, it may also be too long to fit into a single SNMP Protocol Data Unit (PDU). For the latter reason, it may be necessary to send more than one trap for the same Clear event in order to provide all Correlated IDs. There are objects in the trap controlling the sending of multiple parts of the Correlated ID list ('rtpArmCiMultipartNum', 'rtpArmCiAmountOfParts').

Note: Since there is no filtering for 'rtpArmCorrIdTrap' traps, all recipients (configured either in 'rtpEvtFilterTable' - see the event management mib file: RtpAdmEventMgmt.my - or at the EMANATE Master Agent) will receive the same(!) value in 'rtpArmCiLastTransId', respectively!"

```
rtpArmCorrIdTrap        1.3.6.1.4.1.4329.2.1.2.2.1.3
nonLeaf
```

Table 10 defines the variable binding object list of the Correlation Trap Table. All objects are read only.

Object	Syntax/Values	Description/Variable OID
rtpEvtCurrId	Unsigned32	This object records the current log record ID of the event in the database. This object's value is always identical to the value of rtpEvtSequenceNumberIndex. Variable OID: 1.3.6.1.4.1.4329.2.1.2.1.1.1.1.2
rtpArmCiLastTransId	Unsigned32	This object records the end of the variable list for each trap. 1.3.6.1.4.1.4329.2.1.2.2.1.4
rtpArmCiMultipartNum	Integer32	This object is the sequence number of the message (trap). 1.3.6.1.4.1.4329.2.1.2.2.1.5
rtpArmCiAmountOfParts	Integer32	This object is the total number of traps to be sent. 1.3.6.1.4.1.4329.2.1.2.2.1.6
rtpArmCiAmountOfCorrIDs	Integer32	This object is the number of correlation IDs contained in all of the messages. 1.3.6.1.4.1.4329.2.1.2.2.1.7
rtpArmCiCorrIDs	OctetString (0..4096)	This object is the list of IDs, separated by colons. If this list cannot be contained within one trap, multiple traps will be sent. 1.3.6.1.4.1.4329.2.1.2.2.1.8

Table 10 Correlation Trap Table Variable Bindings

4 External Message Flows

When an alarm is generated in the OpenScape Voice Server, the first `snmpwalk` command issued from an external system to read the OSV alarm table (rtpArmAlarmTable) may miss alarms. A second call however shows all alarms.

4.1 Message Flows Between the NOC and OpenScape Voice

This section includes external message flow examples between the Network Operations Center (NOC) and the OpenScape Voice system.

- Figure 1 - NOC Initial Alarm Synchronization
- Figure 2 - NOC Periodic Alarm Audit and Resynchronization
- Figure 3 - Alarm Correlation and Clearing
- Figure 4 - Manually Clearing an Alarm in the OpenScape Voice system via the NOC

There are, however, other methods to achieve the same end result, so possible flows for other surveillance systems are shown in Section 4.2, “Additional Message Flow Diagrams”, on page 32.

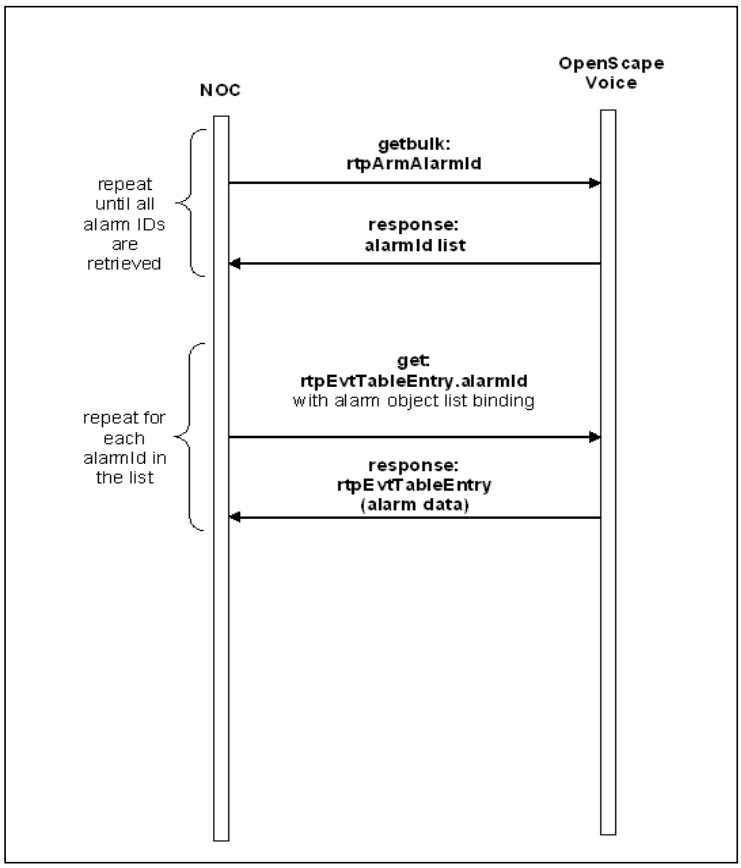

Figure 1 NOC Initial Alarm Synchronization

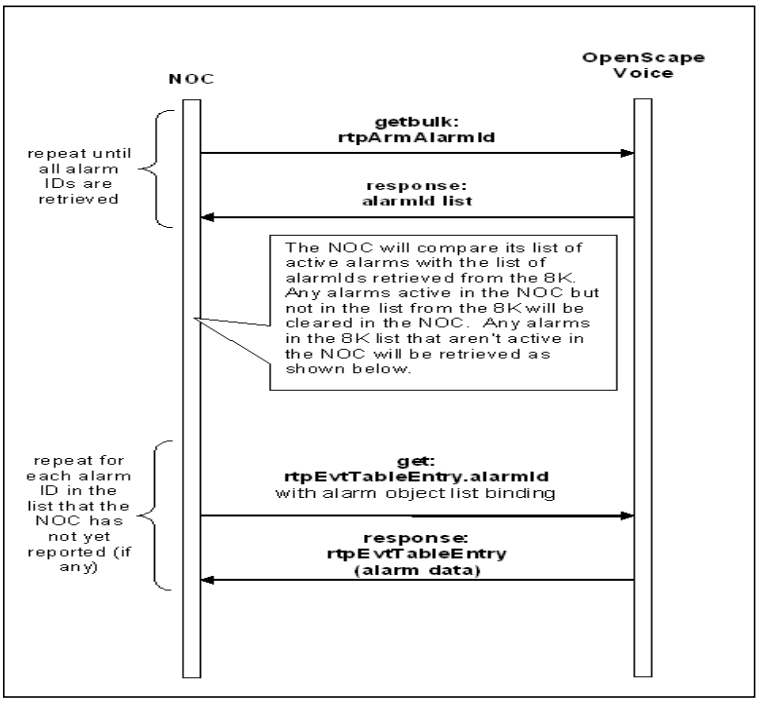

Figure 2 NOC Periodic Alarm Audit and Resynchronization

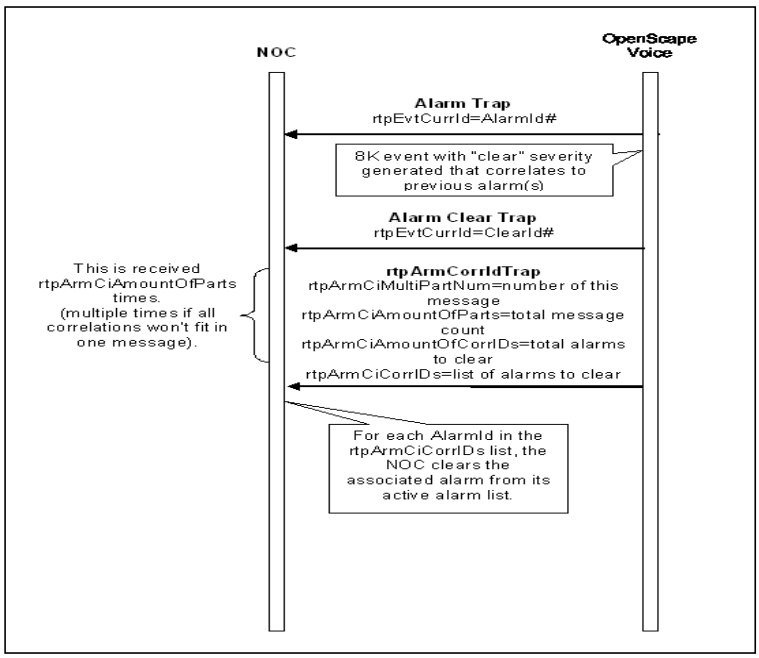

Figure 3 Alarm Correlation and Clearing

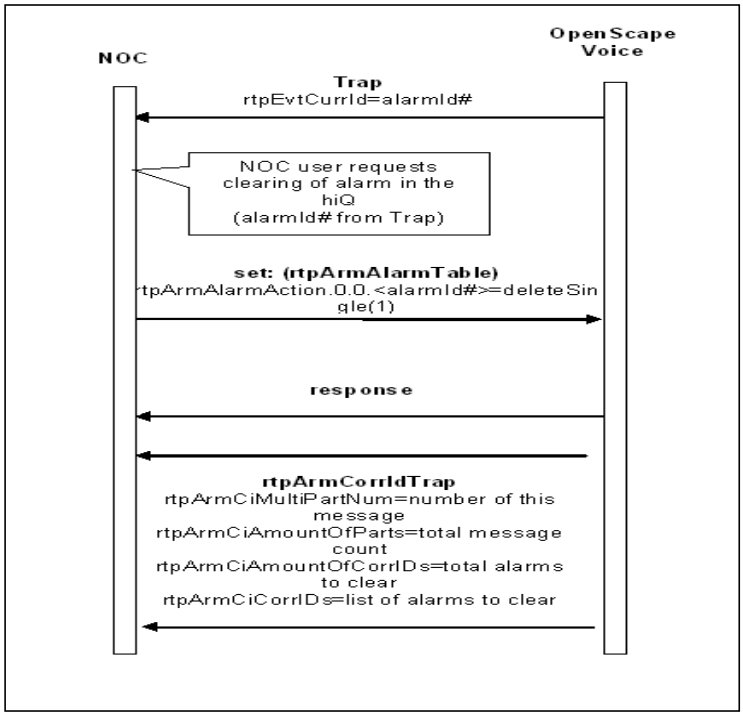

Figure 4 Manually Clearing a System Alarm via the NOC

4.2 Additional Message Flow Diagrams

If a surveillance system does not restrict which event sets cause traps to be sent, and if all critical, major, minor, and clear severity traps are sent to the surveillance system, then it is suggested (not required) to follow the "Filtered Alarm" flows that are shown below:

- Figure 5 - Filtered Alarm Initial Synchronization
- Figure 6 - Filtered Alarm Audit and Resynchronization
- Figure 7 - Lost Trap Detection
- Figure 8 - Alarm Summary Retrieval

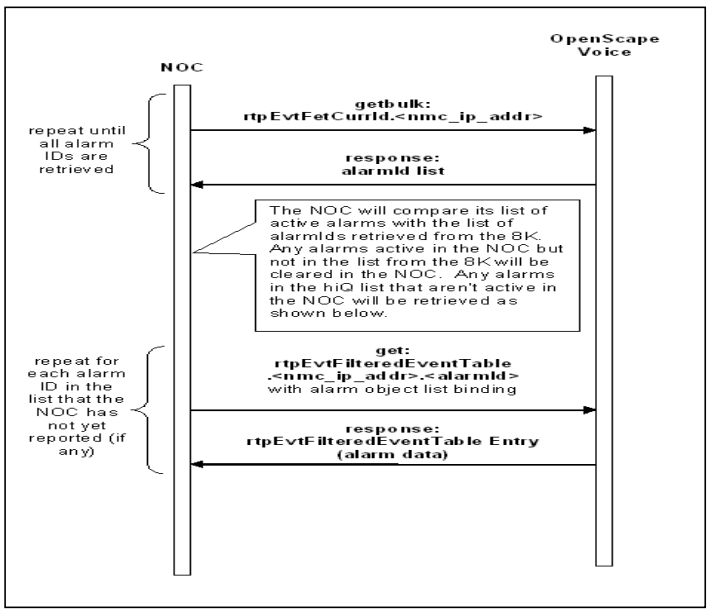

Figure 5 Filtered Alarm Initial Synchronization

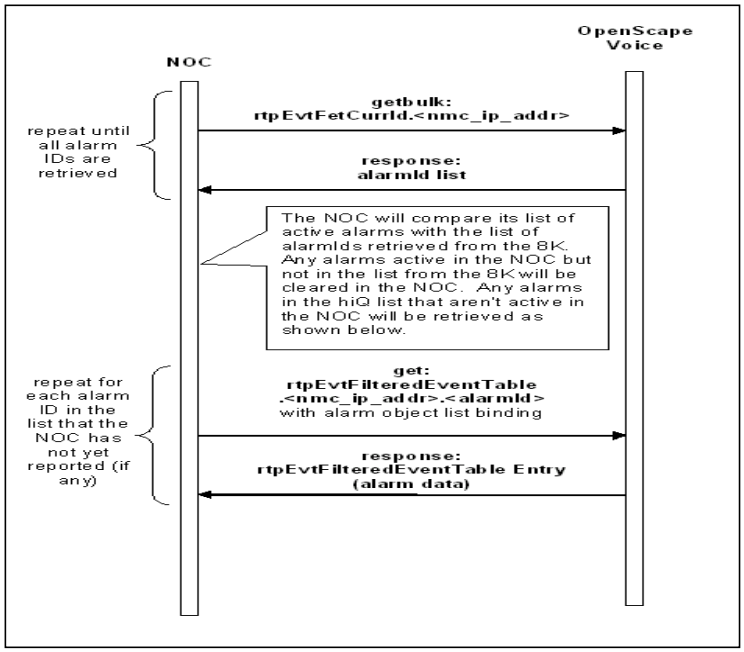

Figure 6 Filtered Alarm Audit and Resychronization

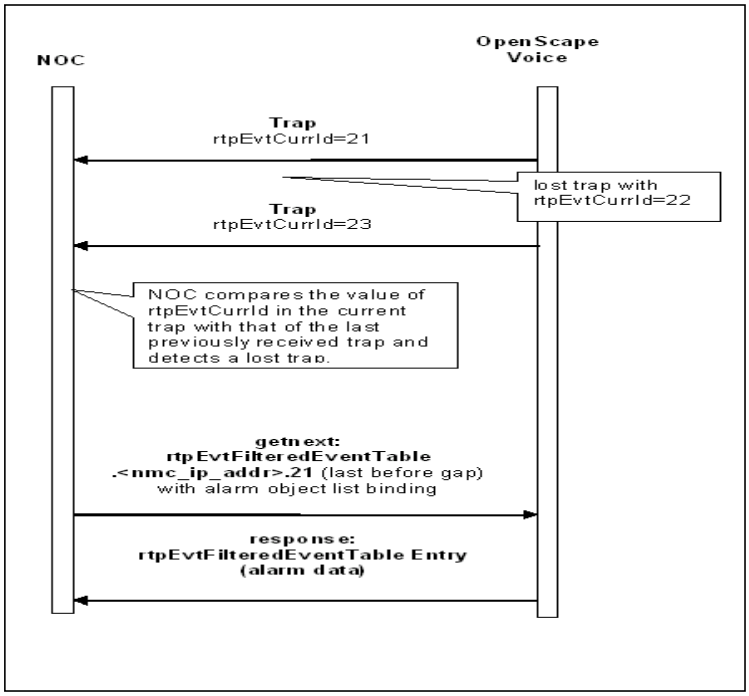

Figure 7 Lost Trap Detection

Note: The lost trap detection mechanism described above **cannot be used for the OSV** because the OSV does not send SNMP traps for all events (some event sets,and alarm severites are internally suppressed, e.g. warnings). Consequently there will always be gaps in the RtpEvtCurrId sequence. See Section 4.3.2.1, “Lost Trap Detection” which describes the process that must be followed for lost trap detection with the OSV.

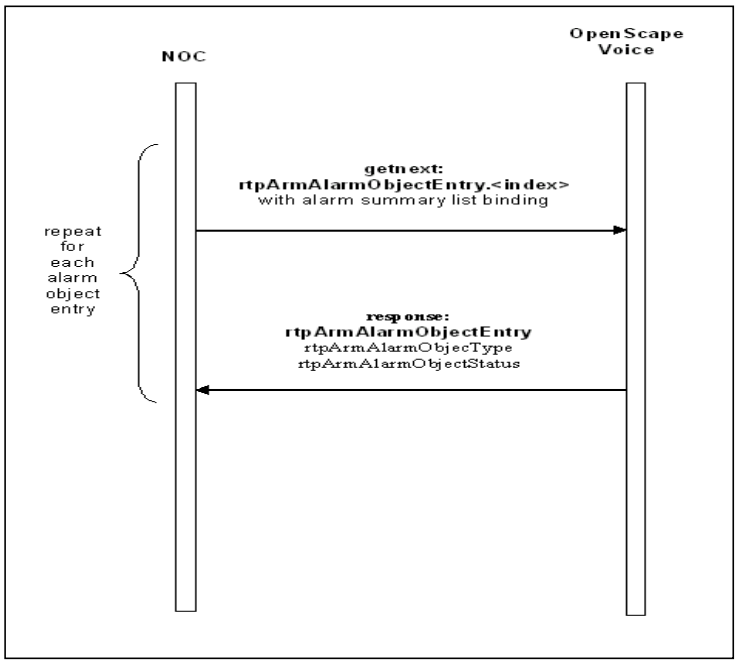

Figure 8 Alarm Summary Retrieval

4.3 Managing Alarms

Alarm clearance, (re)synchronization, and obtaining alarm summary information are a few of the tasks associated with managing alarms. The following sections offer possible solutions that a NOC might use to interface with the OpenScape Voice alarm subsystem.

4.3.1 Alarm Clearance

The ability to automatically clear most alarms is provided. The OpenScape Voice system has its own alarm-to-clearance event correlation that can be used. A surveillance system can make its own correlation, based on receiving traps with a Clear severity. And, in rare instances, it may be required to manually clear an alarm in the OpenScape Voice system. All of these methods are described in the following sections.

4.3.1.1 Alarm Clearance via Correlation Trap

OpenScape Voice contains a database and associated logic to correlate most events of Clear severity to any active alarms that should be cleared when the specific clear event is generated. The logic involved does a comparison not only on the event, but may match string and numeric arguments that are part of the event or trap. A surveillance system can take advantage of this by using the correlation trap, which is sent as a result of a clear event. If the logic in OpenScape Voice has determined that any alarms should be cleared, a variable in this trap contains a list of alarm IDs to be cleared. Refer to Figure 3 on page 30.

4.3.1.2 Alarm Clearance via Trap with Clear Severity

A surveillance system can perform its own alarm correlation by associating clear traps with related alarm traps. Typically, but not always, the faultyObject trap variable contains a string that is useful in identifying a specific object or collection of objects.

4.3.1.3 Manual Alarm Clearance

In order to clear alarms in the OpenScape Voice system, the sequence depicted in Figure 3 on page 30 is required.

4.3.2 Alarm Synchronization

Because SNMP traps are sent via UDP and UDP by nature has no guaranteed reliability, it is inevitable that some alarm traps will eventually be lost during transport over the network. Therefore, a mechanism is provided to resynchronize the OpenScape Voice traps with those present on the surveillance system. In addition to recovering from lost packets, the mechanism can also be used to synchronize alarms with the surveillance system upon startup of that system.

Possible methods to detect a mismatch of alarms between the surveillance system and OpenScape Voice are:

- Lost trap detection
- Periodic audit

It may be desirable to use a combination of the two methods.

4.3.2.1 Lost Trap Detection

While there is a trap sequence number mechanism provided for lost trap detection, it cannot be totally relied upon. If the last trap that was sent by the OpenScape Voice system was lost, the surveillance system does not detect the lost trap until some point in time that OpenScape Voice sends yet another alarm trap. To avoid this issue, the surveillance system periodically retrieves the value of rtpEvtFilterLastTransId for a specified IP address.

Another consideration with this method is that if alarms are manually cleared in OpenScape Voice via one surveillance system, other surveillance systems monitoring the same OpenScape Voice will not detect the clearing of that alarm since no trap is sent as a result.

Event Filtering

The RTP event SNMP traps include the **rtpEvtFilterLastTransId** object. This transmission ID is handled separately for each filter entry in **rtpEvtFil- terTable**. For each trap, which is sent to a particular IP address, the **rtpEvt- FilterLastTransId** value is increased by one. Thus, an SNMP manager can use this object to *detect* the loss of traps. However, to *recover* event data of lost traps, **rtpEvtFilterLastTransId** cannot be used since there is no persistent relationship between it and the event's logRecordID.

The SNMP manager rather has to use the logRecordID of the last received trap (**rtp**EvtSequenceNumber**Index** or **rtp**EvtCurr**I**d) as an index for **rtpEvtFil- teredEventTable** (see also the

description above). If an SNMP manager re- ceives no traps at all, it should regularly poll the **rtpEvtFilterLastTransId** object of the filter entry corresponding to its IP address (in **rtpEvtFilterT- able**). As long as this object's value is identical to the last received **rtpEvtFil– terLastTransId** (as part of a trap), the SNMP manager knows that its event list is up-to-date.

Lost trap Detection

Background:

The transmission ID is not stored persistently to avoid an additional database write access for each trap being sent (which can be more than one write access per received event!). Another effect of this implementation is, the transmission ID will be reset to 0 each time the subagent starts (and increments after having sent a trap, respectively). Therefore the transmission ID values can only be used to detect the loss of traps but not to recover the related event data.

Restart of the subagent:

If the RTP subagent restarts (e.g. after a process crash), the transmission ID will start at 1 again for the first sent trap. If the SNMP manager detects that **rtpE- vtFilterLastTransId** (either as part of a trap or read from **rtpEvtFilterT- able**) is less than the last received one, it should recover possibly lost traps using **rtpEvtFilteredEventTable**.

Example:

These are the transmission IDs and logRecordIDs in the event traps sent to 11.21.31.41:

rtpEvtFilterLastTransId:	rtpEvtrtpEvtCurrId:
1	101
2	103
3	110
4	111 <--- trap gets lost
5	120 <--- trap gets lost

The SNMP manager detects the loss of traps, since it receives the transmission IDs 1, 2 and 5. Now it recovers the logRecordIDs of the lost traps using the last received logRecordID

(rtpEvtSequenceNumberIndex or rtpEvtCurrId) as index for rtpEvtFetCurrId in rtpEvtFilteredEventTable (for simplicity reasons the event attributes are omitted in the example):

```
Manager / GET_NEXT(rtpEvtFetCurrId.4.11.21.31.41.103)
Agent / response:
rtpEvtFetCurrId.4.11.21.31.41.110: 110

Manager / GET_NEXT(rtpEvtFetCurrId.4.11.21.31.41.110)
Agent / response:
rtpEvtFetCurrId.4.11.21.31.41.111: 111

Manager / GET_NEXT(rtpEvtFetCurrId.4.11.21.31.41.111)
Agent / response:
rtpEvtFetCurrId.4.11.21.31.41.120: 120
```

The SNMP manager should not assume that it knows from the gap in the trans- mission ID values how many traps it has to recover (2 in the above example). It is safer to read the logRecordIDs until it gets one, which has already been re- ceived as trap. The SNMP manager then knows for sure that all logRecordIDs belonging to lost traps have been recovered.

Alternatively, the SNMP manager can determine the logRecordID of the most recent event trap from rtpEvtFilterLastCurrId. When a response to one of the manager's GET NEXT requests to rtpEvtFilteredEventTable returns that logRecordID, the manager is up-to-date again. Using rtpEvtFilterLast- CurrId could be easier to handle for the SNMP manager especially if during event recovery - simultaneously - new event traps are received. Note that like rtpEvtFilterLastTransId, rtpEvtFilterLastCurrId is non-persistent; after a restart of the subagent, its value is first reset to 0 and is updated to the logRecordID after having sent a trap, respectively.

Again, for each retrieved rtpEvtFetCurrId, the related full event data can also be read from the same table specifying the corresponding OIDs in the same GET NEXT request.

4.3.2.2 Periodic Audit

A simple solution that the NOC uses is to poll for active alarms at startup and periodically audit the active alarms in OpenScape Voice against the active alarm list maintained by the NOC. This method is

simple and reliable, however, if there are a large number of alarms present, excessive resources might be used during the audit, when compared with the lost trap detection, that simply detects a break in trap sequence numbers. Refer to Figure 7 on page 34.

4.3.3 Alarm Summary

A surveillance system can retrieve the current state of all alarm summaries on the OpenScape Voice system. For instance, one of the given alarm summaries is for communication alarms. If any communication alarm type is currently active, the alarm summary for communication alarms would indicate so. The process of retrieving alarm summary information is shown in Figure 8 on page 35.

5 SNMP Trap Categories

SNMP Traps are categorized into several categories, called Event Sets (rtpEvtSet). These categories or event sets help organize the faults that are generated by the OpenScape Voice system into logical areas. These areas are outlined in the internal hiqTrap.mib file (mib = managed information base) and provided to users in this section. Table 11 outlines the OpenScape Voice Fault Management event sets.

For additional information on Event and Alarm Management MIBs, refer to Chapter 2, “Supported and Unsupported MIBS”.

Section 5.1.1, “hiQAccountMgmtFaultMgt (221)”
Section 5.1.2, “hiQAucUscFaultMgmt (182)”
Section 5.1.3, “hiQAudFaultMgmt (102)”
Section 5.1.4, “hiQCacFaultMgt (231)”
Section 5.1.5, “hiQGlobalFaultMgt (217)”
Section 5.1.6, “hiQHardwareFaultMgt (219)”
Section 5.1.7, “hiQLicensingFaultMgt (220)”
Section 5.1.8, “hiQNmFaultMgt (107)”
Section 5.1.9, “hiQOvlFaultMgmt (190)”
Section 5.1.10, “hiQSecurityFaultMgt (218)”
Section 5.1.10, “hiQSecurityFaultMgt (218)”
Section 5.1.11, “hiQSipFaultMgmt (230)”
Section 5.1.12, “hiQSnmFaultMgt (119)”
Section 5.1.13, “hiQSoapServerFaultMgmt (207)”
Section 5.1.14, “hiQSolidFaultMgt (141)”
Section 5.1.15, “hiQTicFaultMgmt (111)”
Section 5.1.16, “hiQTcaFaultMgt (216)”
Section 5.1.17, “hiQUCEServicesFaultMgmt (193)”
Section 5.1.18, “hiQTcgFaultMgmt (233)”
Section 5.1.19, “hiQPlatformFaultMgmt (234)”
Section 5.1.20, “hiQRapidStatFaultMgmt (235)”
Section 5.1.21, “hiQSmdiFaultMgmt (208)”
Section 5.1.22, “hiQNotificationMgmt (250)”
Section 5.1.23, “hiQDatabaseSizeMgmt (215)”
Section 5.1.24, “hiQSurvivalAuthorityObjects (222)”
Section 5.1.25, “hiQInterfaceSecurityFaultMgmt (236)”
Section 5.1.26, “hiQNotificationMgmt (250)”

Table 11 Fault Management Event Sets

5.1 Object Identifier

Object Identifier (OID) is part of the SNMP definition of the trap. For the OpenScape Voice alarms, the OID is expressed numerically and identifies the specific alarm. All of the numbers are the same for all OpenScape Voice alarms with the exception of the last two numbers. The last two numbers represent the rtpEvtSet and the rtpEvtNum, respectively. Refer to SNMP Trap OID Example:. The rtpEvtSet is the event (alarm) set or group and the rtpEvtNum is the event (alarm) number. Refer to Table 11 for a list of OpenScape Voice event sets.

For more information on the RTP event records, refer to Section 3.1.1, “Event Table”, on page 15.

SNMP Trap OID Example:

Trap OID for **hiQAccountInactiveTrap** is **1.3.6.1.4.1.4329.2.18.2.2.1.47.221.1**

– The last two numbers of the trap OID are **221.1**, where the **221** represents the rtpEvtSet and the **1** represents the rtpEvtNum.

Note: The largest event set is 255 and the largest event number is 32767. For the event set, 1 through 175 are reserved for use by RTP; 176 and above are for applications.

The sections below outline the SNMP trap name, its object identifier (OID), corresponding alarm name, severity of the trap, as well as the trap name that can clear the alarm.

5.1.1 hiQAccountMgmtFaultMgt (221)

Table 12 outlines the SNMP traps that are associated with the Account Management Faults.

Trap Name OID Number	Severity	Clearing Trap Name
hiQAccountInactiveTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.221.1	Minor	Must be cleared manually
hiQAccountDisabledTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.221.2	Minor	Must be cleared manually
hiQAccountDeletedTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.221.3	Minor	Must be cleared manually
hiQSSHDisabled 1.3.6.1.4.1.4329.2.18.2.2.1.47.221.4	Minor	Must be cleared manually
hiQAccountDisabled2 1.3.6.1.4.1.4329.2.18.2.2.1.47.221.5	Minor	Must be cleared manually
hiQLogonAttempts 1.3.6.1.4.1.4329.2.18.2.2.1.47.221.6	Major	Must be cleared manually
hiQCertificateNearExpiration 1.3.6.1.4.1.4329.2.18.2.2.1.47.221.7	Minor	Must be cleared manually
hiQSessionDenied 1.3.6.1.4.1.4329.2.18.2.2.1.47.221.8	Minor	Must be cleared manually
hiQSessionTerminated 1.3.6.1.4.1.4329.2.18.2.2.1.47.221.9	Minor	Must be cleared manually
hiQOCSPNotResponding 1.3.6.1.4.1.4329.2.18.2.2.1.47.221.10	Minor	

Table 12 Account Managment Fault Traps (Seite 1 von 2)

Trap Name OID Number	Severity	Clearing Trap Name
hiQCRLDownloadFailure 1.3.6.1.4.1.4329.2.18.2.2.1.47.221.11	Minor	Must be cleared manually
hiQClientAuthenticationFailure 1.3.6.1.4.1.4329.2.18.2.2.1.47.221.12	Minor	

Table 12 Account Managment Fault Traps (Seite 2 von 2)

5.1.2 hiQAucUscFaultMgmt (182)

Table 12 outlines the SNMP traps that are associated with the AUC, User Collection (USC) Faults.

Trap Name OID Number	Severity	Clearing Trap Name
hiQAucUscServerTxCdrTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.182.15	Major	hiQAucUscServerInitTrap
hiQAucUscPriStorNotPossibleTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.182.35	Warning	hiQAucUscPriStorOKTrap
hiQAucUscPriStorOKTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.182.36	Clear	N/A
hiQAucUscSecStorNotPossibleTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.182.37	Minor	hiQAucUscLocalSecStorageOkTrap
hiQAucUscFileSeqNumberErrorTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.182.38	Minor	Must be cleared manually
hiQAucUscLocalSecStorageOk 1.3.6.1.4.1.4329.2.18.2.2.1.47.182.39	Clear	N/A

Table 13 Auc, User Collection Fault Traps

5.1.3 hiQAudFaultMgmt (102)

Table 14 outlines the SNMP traps that are associated with the Audit Manager Faults.

Trap Name OID Name	Severity	Clearing Trap Name
hiQAuditStartingTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.102.1	Clear	N/A

Table 14 Audit Fault Manager Traps (Seite 1 von 7)

Trap Name OID Name	Severity	Clearing Trap Name
hiQAudAvailDiskSpBelowCritThld 1.3.6.1.4.1.4329.2.18.2.2.1.47.102.201	Critical	hiQAuditStartingTrap hiQAudFileSystemBelowMin1Trap hiQAudFileSystemBelowMin2Trap hiQAudFileSystemBelowMin3Trap hiQAudFileSystemBelowMin4Trap hiQAudFileSystemAboveMinTrap
hiQAudAvailDiskSpBelowMajorThld 1.3.6.1.4.1.4329.2.18.2.2.1.47.102.202	Major	hiQAuditStartingTrap hiQAudFileSystemBelowMin1Trap hiQAudFileSystemBelowMin2Trap hiQAudFileSystemBelowMin3Trap hiQAudFileSystemBelowMin4Trap hiQAudFileSystemAboveMinTrap
hiQAudAvailDiskSpBelowMinorThld 1.3.6.1.4.1.4329.2.18.2.2.1.47.102.203	Minor	hiQAuditStartingTrap hiQAudFileSystemBelowMin1Trap hiQAudFileSystemBelowMin2Trap hiQAudFileSystemBelowMin3Trap hiQAudFileSystemBelowMin4Trap hiQAudFileSystemAboveMinTrap
hiQAudFileSystemBelowMin1Trap 1.3.6.1.4.1.4329.2.18.2.2.1.47.102.211	Clear	N/A
hiQAudFileSystemBelowMin2Trap 1.3.6.1.4.1.4329.2.18.2.2.1.47.102.212	Clear	N/A
hiQAudFileSystemBelowMin3Trap 1.3.6.1.4.1.4329.2.18.2.2.1.47.102.213	Clear	N/A
hiQAudFileSystemBelowMin4Trap 1.3.6.1.4.1.4329.2.18.2.2.1.47.102.214	Clear	N/A
hiQAudFileSystemAboveMinTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.102.215	Clear	N/A
hiQAudFileGrpAboveCritThld 1.3.6.1.4.1.4329.2.18.2.2.1.47.102.301	Critical	hiQAuditStartingTrap hiQAudFileGroupSizeChange1Trap hiQAudFileGroupSizeChange2Trap hiQAudFileGroupSizeChange3Trap hiQAudFileGroupSizeChange4Trap hiQAudFileGrpBelowThreshTrap
hiQAudFileGrpAboveMajorThld 1.3.6.1.4.1.4329.2.18.2.2.1.47.102.302	Major	hiQAuditStartingTrap hiQAudFileGroupSizeChange1Trap hiQAudFileGroupSizeChange2Trap hiQAudFileGroupSizeChange3Trap hiQAudFileGroupSizeChange4Trap hiQAudFileGrpBelowThreshTrap
hiQAudFileGrpAboveMinorThld 1.3.6.1.4.1.4329.2.18.2.2.1.47.102.303	Minor	hiQAuditStartingTrap hiQAudFileGroupSizeChange1Trap hiQAudFileGroupSizeChange2Trap hiQAudFileGroupSizeChange3Trap hiQAudFileGroupSizeChange4Trap hiQAudFileGrpBelowThreshTrap

Table 14 Audit Fault Manager Traps (Seite 2 von 7)

Trap Name OID Name	Severity	Clearing Trap Name
hiQAudFileGroupSizeChanged1Trap 1.3.6.1.4.1.4329.2.18.2.2.1.47.102.311	Clear	N/A
hiQAudFileGroupSizeChanged2Trap 1.3.6.1.4.1.4329.2.18.2.2.1.47.102.312	Clear	N/A
hiQAudFileGroupSizeChanged3Trap 1.3.6.1.4.1.4329.2.18.2.2.1.47.102.313	Clear	N/A
hiQAudFileGroupSizeChanged4Trap 1.3.6.1.4.1.4329.2.18.2.2.1.47.102.314	Clear	N/A
hiQAudFileGrpBelowThreshTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.102.315	Clear	N/A
hiQAudProcHeapAboveCritThld 1.3.6.1.4.1.4329.2.18.2.2.1.47.102.401	Critical	hiQAuditStartingTrap hiQAudProcStackSizeOkTrap hiQAudProcStackSizeChanged1Trap hiQAudProcStackSizeChanged2Trap hiQAudProcStackSizeChanged3Trap hiQAudProcStackSizeChanged4Trap hiQAudProcRunningTrap
hiQAudProcHeapAboveMajorThld 1.3.6.1.4.1.4329.2.18.2.2.1.47.102.402	Major	hiQAuditStartingTrap hiQAudProcHeapSizeOkTrap hiQAudProcHeapSizeChanged1Trap hiQAudProcHeapSizeChanged2Trap hiQAudProcHeapSizeChanged3Trap hiQAudProcHeapSizeChanged4Trap hiQAudProcRunningTrap
hiQAudProcHeapAboveMinorThld 1.3.6.1.4.1.4329.2.18.2.2.1.47.102.403	Minor	hiQAuditStartingTrap hiQAudProcHeapSizeOkTrap hiQAudProcHeapSizeChanged1Trap hiQAudProcHeapSizeChanged2Trap hiQAudProcHeapSizeChanged3Trap hiQAudProcHeapSizeChanged4Trap hiQAudProcRunningTrap
hiQAudProcHeapSizeChanged1Trap 1.3.6.1.4.1.4329.2.18.2.2.1.47.102.411	Clear	N/A
hiQAudProcHeapSizeChanged2Trap 1.3.6.1.4.1.4329.2.18.2.2.1.47.102.412	Clear	N/A
hiQAudProcHeapSizeChanged3Trap 1.3.6.1.4.1.4329.2.18.2.2.1.47.102.413	Clear	N/A
hiQAudProcHeapSizeChanged4Trap 1.3.6.1.4.1.4329.2.18.2.2.1.47.102.414	Clear	N/A
hiQAudProcHeapSizeOkTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.102.415	Clear	N/A

Table 14 Audit Fault Manager Traps (Seite 3 von 7)

Trap Name OID Name	Severity	Clearing Trap Name
hiQAudProcStackAboveCritThld 1.3.6.1.4.1.4329.2.18.2.2.1.47.102.421	Critical	hiQAuditStartingTrap hiQAudProcStackSizeChanged1Trap hiQAudProcStackSizeChanged2Trap hiQAudProcStackSizeChanged3Trap hiQAudProcStackSizeChanged4Trap hiQAudProcStackSizeOkTrap hiQAudProcRunningTrap
hiQAudProcStackAboveMajorThld 1.3.6.1.4.1.4329.2.18.2.2.1.47.102.422	Major	hiQAuditStartingTrap hiQAudProcStackSizeChanged1Trap hiQAudProcStackSizeChanged2Trap hiQAudProcStackSizeChanged3Trap hiQAudProcStackSizeChanged4Trap hiQAudProcStackSizeOkTrap hiQAudProcRunningTrap
hiQAudProcStackAboveMinorThld 1.3.6.1.4.1.4329.2.18.2.2.1.47.102.423	Minor	hiQAuditStartingTrap hiQAudProcStackSizeChanged1Trap hiQAudProcStackSizeChanged2Trap hiQAudProcStackSizeChanged3Trap hiQAudProcStackSizeChanged4Trap hiQAudProcStackSizeOkTrap hiQAudProcessRunningTrap
hiQAudProcStackSizeChanged1Trap 1.3.6.1.4.1.4329.2.18.2.2.1.47.102.431	Clear	N/A
hiQAudProcStackSizeChanged2Trap 1.3.6.1.4.1.4329.2.18.2.2.1.47.102.432	Clear	N/A
hiQAudProcStackSizeChanged3Trap 1.3.6.1.4.1.4329.2.18.2.2.1.47.102.433	Clear	N/A
hiQAudProcStackSizeChanged4Trap 1.3.6.1.4.1.4329.2.18.2.2.1.47.102.434	Clear	N/A
hiQAudProcStackSizeOkTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.102.435	Clear	N/A
hiQAudOSProcNotRunningTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.102.481	Major	hiQAuditStartingTrap hiQAudProcessRunningTrap
hiQAudOSProcInstanceNotRunningTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.102.482	Major	hiQAuditStartingTrap hiQAudProcessRunningTrap
hiQAudProcNotRunningCriticalTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.102.491	Critical	hiQAuditStartingTrap hiQAudProcessRunningTrap
hiQAudProcessNotRunningMajorTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.102.492	Major	hiQAuditStartingTrap hiQAudProcessRunningTrap
hiQAudProcessNotRunningMinorTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.102.493	Minor	hiQAuditStartingTrap hiQAudProcessRunningTrap
hiQAudProcessRunningTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.102.496	Clear	Refer to Table 21 for additional information.

Table 14 Audit Fault Manager Traps (Seite 4 von 7)

Trap Name OID Name	Severity	Clearing Trap Name
hiQAudCPUUtilAboveCritThld 1.3.6.1.4.1.4329.2.18.2.2.1.47.102.620	Critical	hiQAuditStartingTrap hiQAudCPUUtilTrap hiQAudCPUUtilBelowThreshTrap hiQAudCPUUtilChangedTrap
hiQAudCPUUtilAboveMajorThld 1.3.6.1.4.1.4329.2.18.2.2.1.47.102.621	Major	hiQAuditStartingTrap hiQAudCPUUtilTrap hiQAudCPUUtilBelowThreshTrap hiQAudCPUUtilChangedTrap
hiQAudCPUUtilAboveMinorThld 1.3.6.1.4.1.4329.2.18.2.2.1.47.102.622	Minor	hiQAuditStartingTrap hiQAudCPUUtilTrap hiQAudCPUUtilBelowThreshTrap hiQAudCPUUtilChangedTrap
hiQAudCPUUtilTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.102.628	Info	N/A
hiQAudCPUUtilBelowThreshTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.102.629	Clear	N/A
hiQAudCPUUtilChangedTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.102.630	Clear	N/A
hiQAudSwapSpaceAboveCritThld 1.3.6.1.4.1.4329.2.18.2.2.1.47.102.640	Critical	hiQAuditStartingTrap hiQAudSwapUtilTrap hiQAudSwapUtilBelowThreshTrap hiQAudSwapUtilChangedTrap
hiQAudSwapSpaceAboveMajorThld 1.3.6.1.4.1.4329.2.18.2.2.1.47.102.641	Major	hiQAuditStartingTrap hiQAudSwapUtilTrap hiQAudSwapUtilBelowThreshTrap hiQAudSwapUtilChangedTrap
hiQAudSwapSpaceAboveMinorThld 1.3.6.1.4.1.4329.2.18.2.2.1.47.102.642	Minor	hiQAuditStartingTrap hiQAudSwapUtilTrap hiQAudSwapUtilBelowThreshTrap hiQAudSwapUtilChangedTrap
hiQAudSwapUtilTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.102.648	Clear	N/A
hiQAudSwapUtilBelowThreshTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.102.649	Clear	N/A
hiQAudSwapUtilChangedTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.102.650	Clear	N/A
hiQAudShMemUtilTooAboveCrit 1.3.6.1.4.1.4329.2.18.2.2.1.47.102.680	Critical	hiQAuditStartingTrap hiQAudShMemUtilTrap hiQAudShMemUtilBelowThreshTrap hiQAudShMemUtilChangedTrap
hiQAudShMemUtilTooAboveMajor 1.3.6.1.4.1.4329.2.18.2.2.1.47.102.681	Major	hiQAuditStartingTrap hiQAudShMemUtilTrap hiQAudShMemUtilBelowThreshTrap hiQAudShMemUtilChangedTrap\

Table 14 Audit Fault Manager Traps (Seite 5 von 7)

Trap Name OID Name	Severity	Clearing Trap Name
hiQAudShMemUtilTooAboveMinor 1.3.6.1.4.1.4329.2.18.2.2.1.47.102.682	Minor	hiQAuditStartingTrap hiQAudShMemUtilTrap hiQAudShMemUtilBelowThreshTrap hiQAudShMemUtilChangedTrap
hiQAudShMemUtilTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.102.688	Clear	N/A
hiQAudShMemUtilBelowThreshTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.102.689	Clear	N/A
hiQAudShMemUtilChangedTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.102.690	Clear	N/A
hiQAudSemUtilAboveCritThld 1.3.6.1.4.1.4329.2.18.2.2.1.47.102.700	Critical	hiQAuditStartingTrap hiQAudSemUtilTrap hiQAudSemUtilBelowThreshTrap hiQAudSemUtilChangedTrap
hiQAudSemUtilAboveMajorThld 1.3.6.1.4.1.4329.2.18.2.2.1.47.102.701	Major	hiQAuditStartingTrap hiQAudSemUtilTrap hiQAudSemUtilBelowThreshTrap hiQAudSemUtilChangedTrap
hiQAudSemUtilAboveMinorThld 1.3.6.1.4.1.4329.2.18.2.2.1.47.102.702	Minor	hiQAuditStartingTrap hiQAudSemUtilTrap hiQAudSemUtilBelowThreshTrap hiQAudSemUtilChangedTrap
hiQAudSemUtilTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.102.708	Clear	N/A
hiQAudSemUtilBelowThreshTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.102.709	Clear	N/A
hiQAudSemUtilChangedTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.102.710	Clear	N/A
hiQAudSwapFrequencyAboveCritThld 1.3.6.1.4.1.4329.2.18.2.2.1.47.102.720	Critical	hiQAuditStartingTrap hiQAudSwapFrequencyUtilTrap hiQAudSwapFrequencyBelowThreshTrap hiQAudSwapFrequencyUtilChangedTrap
hiQAudSwapFrequencyAboveMajorThld 1.3.6.1.4.1.4329.2.18.2.2.1.47.102.721	Major	hiQAuditStartingTrap hiQAudSwapFrequencyUtilTrap hiQAudSwapFrequencyBelowThreshTrap hiQAudSwapFrequencyUtilChangedTrap
hiQAudSwapFrequencyAboveMinorThld 1.3.6.1.4.1.4329.2.18.2.2.1.47.102.722	Minor	hiQAuditStartingTrap hiQAudSwapFrequencyUtilTrap hiQAudSwapFrequencyBelowThreshTrap hiQAudSwapFrequencyUtilChangedTrap
hiQAudSwapFrequenyAboveWarningThld 1.3.6.1.4.1.4329.2.18.2.2.1.47.102.723	Warning	hiQAuditStartingTrap hiQAudSwapFrequencyUtilTrap hiQAudSwapFrequencyBelowThreshTrap hiQAudSwapFrequencyUtilChangedTrap

Table 14 Audit Fault Manager Traps (Seite 6 von 7)

Trap Name OID Name	Severity	Clearing Trap Name
hiQAudSwapFrequencyUtilTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.102.728	Clear	hiQAudSwapFrequencyAboveCritThld hiQAudSwapFrequencyAboveMajorThld hiQAudSwapFrequencyAboveMinorThld hiQAudSwapFrequenyAboveWarningThld
hiQAudSwapFrequencyBelowThreshTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.102.729	Clear	hiQAudSwapFrequencyAboveCritThld hiQAudSwapFrequencyAboveMajorThld hiQAudSwapFrequencyAboveMinorThld hiQAudSwapFrequenyAboveWarningThld
hiQAudSwapFrequencyUtilChangedTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.102.730	Clear	hiQAudSwapFrequencyAboveCritThld hiQAudSwapFrequencyAboveMajorThld hiQAudSwapFrequencyAboveMinorThld hiQAudSwapFrequenyAboveWarningThld

Table 14 Audit Fault Manager Traps (Seite 7 von 7)

5.1.4 hiQCacFaultMgt (231)

Table 15 outlines the SNMP traps that are associated with the call admission control (CAC) Faults.

Trap Name OID Number	Severity	Clearing Trap Name
hiQCacHighThreshTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.231.1	Major	hiQCacLowThreshTrap
hiQCacLowThreshTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.231.2	Clear	N/A

Table 15 CAC Fault Traps

5.1.5 hiQGlobalFaultMgt (217)

Table 16 outlines the SNMP traps that are associated with the Global Fault Mangement.

Trap Name OID Number	Severity	Clearing Trap Name
hiQGlobalCriticalLossOfCommsTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.217.1	Critical	hiQGlobalCommsEstablished
hiQGlobalMajorLossOfCommsTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.217.2	Major	hiQGlobalCommsEstablished
hiQGlobalMinorLossOfCommsTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.217.3	Minor	hiQGlobalCommsEstablished
hiQGlobalCommsEstablishedTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.217.4	Clear	N/A
hiQGlobalProcessInitActiveTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.217.5	Clear	Refer to Table 21 for additional information.
hiQGlobalProcSevereInitFailTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.217.6	Major	hiQGlobalProcessInitActiveTrap
hiQGlobalProcPartialInitFailTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.217.7	Major	hiQGlobalProcessInitActiveTrap
hiQGlobalProcAbnormalTermTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.217.8	Major	hiQGlobalProcessInitActiveTrap
hiQGlobalProcessAliasGrpAvail 1.3.6.1.4.1.4329.2.18.2.2.1.47.217.9	Clear	N/A NOTE: Only sent when there is a corresponding alarm. One global clear at startup.
hiQGlobalProcessAliasGrpUnavail 1.3.6.1.4.1.4329.2.18.2.2.1.47.217.10	Critical	hiQGlobalProcessAliasGrpAvail NOTE: OpenScape Voice system remembers that such an alarm was sent.
hiQGlobalResourceExceedLimitTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.217.11	Minor	hiQGlobalResourceWithinLimitTrap
hiQGlobalResourceWithinLimitTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.217.12	Clear	N/A
hiQVeryImportantFuncUnavailTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.217.13	Critical	hiQGlobalFuncAvailTrap
hiQImportantFuncUnavailTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.217.14	Major	hiQGlobalFuncAvailTrap
hiQGlobalFuncUnavailTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.217.15	Minor	hiQGlobalFuncAvailTrap
hiQGlobalFuncAvailTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.217.16	Clear	N/A
hiQGlobalMsgQueueAboveHigh 1.3.6.1.4.1.4329.2.18.2.2.1.47.217.17	Critical	hiQGlobalMsgQueueBelowThld
hiQGlobalMsgQueueAboveMed 1.3.6.1.4.1.4329.2.18.2.2.1.47.217.18	Major	hiQGlobalMsgQueueBelowThld

Table 16 Global Fault Management Traps (Seite 1 von 2)

Trap Name OID Number	Severity	Clearing Trap Name
hiQGlobalMsgQueueAboveLow 1.3.6.1.4.1.4329.2.18.2.2.1.47.217.19	Minor	hiQGlobalMsgQueueBelowThld
hiQGlobalMsgQueueBelow 1.3.6.1.4.1.4329.2.18.2.2.1.47.217.20	Clear	N/A
hiQGlobalVerySevereDegradedCommsTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.217.21	Critical	hiQGlobalCommsOperationalTrap
hiQGlobalSevereDegradedCommsTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.217.22	Major	hiQGlobalCommsOperationalTrap
hiQGlobalDegradedCommsTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.217.23	Minor	hiQGlobalCommsOperationalTrap
hiQGlobalCommsOperationalTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.217.24	Clear	N/A
hiQOperationModeStateChange 1.3.6.1.4.1.4329.2.18.2.2.1.47.217.25	Warning	N/A
hiQMinorOperationModeStateChange 1.3.6.1.4.1.4329.2.18.2.2.1.47.217.26	Minor	hiQNormalOperationMode
hiQMajorOperationModeStateChange 1.3.6.1.4.1.4329.2.18.2.2.1.47.217.27	Major	hiQNormalOperationMode
hiQCritOperationModeStateChange 1.3.6.1.4.1.4329.2.18.2.2.1.47.217.28	Critical	hiQNormalOperationMode
hiQNormalOperationMode 1.3.6.1.4.1.4329.2.18.2.2.1.47.217.29	Clear	N/A
hiQResourceMediumLimitExceeded 1.3.6.1.4.1.4329.2.18.2.2.1.47.217.30	Major	hiQGlobalResourceWithinLimitTrap
hiQResourceHIghLimitExceeded 1.3.6.1.4.1.4329.2.18.2.2.1.47.217.31	Critical	hiQGlobalResourceWithinLimitTrap
hiqCSTAAppConnectionStateUp 1.3.6.1.4.1.4329.2.18.2.2.1.47.217.32	Clear	N/A
hiqCSTAAppConnectionStateDown 1.3.6.1.4.1.4329.2.18.2.2.1.47.217.33	Major	hiqCSTAAppConnectionStateUp
hiqCSTAAppConnectionStateFailed 1.3.6.1.4.1.4329.2.18.2.2.1.47.217.34	Minor	hiqCSTAAppConnectionStateUp
hiqCSTAAppConnectionStateRetrieved 1.3.6.1.4.1.4329.2.18.2.2.1.47.217.35	Clear	N/A
hiqCSTASystemStatusChanged 1.3.6.1.4.1.4329.2.18.2.2.1.47.217.36	Warning	

Table 16 Global Fault Management Traps (Seite 2 von 2)

5.1.6 hiQHardwareFaultMgt (219)

Table 17 outlines the SNMP traps that are associated with the Hardware Faults.

Trap Name OID Number	Severity	Clearing Trap Name
hiQVerySevereHardwareFailureTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.219.1	Critical	hiQHardwareInServiceTrap
hiQSevereHardwareTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.219.2	Major	hiQHardwareInServiceTrap
hiQHardwareFailureTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.219.3	Minor	hiQHardwareInServiceTrap
hiQHardwareInServiceTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.219.4	Clear	N/A

Table 17 Hardware Managment Fault Traps

5.1.7 hiQLicensingFaultMgt (220)

Table 18 outlines the SNMP traps that are associated with the Licensing Faults. Note that the FaultyObject attribute associated with the following traps will indicate the specific license type with the problem, i.e. FaultyObject = Resource OSMO.

Trap Name OID Number	Severity	Clearing Trap Name
hiQLicensesExceededTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.220.1	Critical	hiQLicenseCountOkTrap
hiQLicenseCountOkTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.220.2	Clear	N/A
hiQLicenseCountMismatchTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.220.3	Major	hiQLicenseCountSyncTrap
hiQLicenseCountSyncTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.220.4	Clear	N/A
hiQLicenseSessionsTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.220.5	Minor	hiQLicenseSessionCountOkTrap
hiQLicenseSessionCountOkTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.220.6	Clear	N/A
hiQLicenseRestoreTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.220.7	Minor	hiQLicenseRestoreOkTrap
hiQLicenseEndOfSupportTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.220.27	Warning	N/A

Table 18 License Fault Traps

5.1.8 hiQNmFaultMgt (107)

Table 19 outlines the SNMP traps that are associated with the Node Manager Faults.

Trap Name OID Number	Severity	Clearing Trap Name
hiQNmProcessInitCompleteTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.107.1	Clear	N/A
hiQNmDbUnreachable1Trap 1.3.6.1.4.1.4329.2.18.2.2.1.47.107.5	Critical	hiQNmNodeMgrStartingTrap hiQNmProcessInitCompleteTrap
hiQNmDbMaxProcGrpExceededTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.107.8	Major	hiQNmNodeMgrStartingTrap hiQNmProcessInitCompleteTrap
hiQNmDbUnreachable2Trap 1.3.6.1.4.1.4329.2.18.2.2.1.47.107.9	Critical	hiQNmNodeMgrStartingTrap hiQNmProcessInitCompleteTrap
hiQNmDbTableNotOpenedTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.107.10	Major	hiQNmNodeMgrStartingTrap hiQNmProcessInitCompleteTrap
hiQNmDbTableNotClosedTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.107.11	Major	hiQNmNodeMgrStartingTrap hiQNmProcessInitCompleteTrap
hiQNmProcessReadyTimeoutTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.107.12	Major	hiQNmNodeMgrStartingTrap hiQNmProcessInitCompleteTrap
hiQNmProcessHealthChkTimeoutTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.107.13	Major	hiQNmProcessInitCompleteTrap hiQNmNodeMgrStartingTrap
hiQNmNodeShutdownTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.107.19	Major	hiQNmNodeMgrStartingTrap
hiQNmQueueCorruptedTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.107.22	Major	hiQNmNodeMgrStartingTrap hiQNmProcessInitCompleteTrap
hiQNmNodeMgrStartingTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.107.31	Clear	N/A
hiQNmProcessRestartShortTimeTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.107.36	Major	hiQNmNodeMgrStartingTrap hiQNmProcessInitCompleteTrap
hiQNmQueueAllocErrorTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.107.39	Major	hiQNmNodeMgrStartingTrap hiQNmProcessInitCompleteTrap
hiQNmResizeGlobalProcTblTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.107.42	Critical	hiQNmNodeMgrStartingTrap hiQNmProcessInitCompleteTrap
hiQNmAliasTableLenExceededTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.107.43	Critical	hiQNmNodeMgrStartingTrap hiQNmProcessInitCompleteTrap
hiQNmAliasMembersExceededTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.107.44	Critical	hiQNmNodeMgrStartingTrap hiQNmProcessInitCompleteTrap
hiQNmProcessExecvErrorTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.107.46	Major	hiQNmNodeMgrStartingTrap hiQNmProcessInitCompleteTrap
hiQNmProcessExitedwithCodeTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.107.47	Warning	hiQNmProcessInitCompleteTrap hiQNmNodeMgrStartingTrap
hiQNmProcessCoreCreatedTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.107.49	Major	Must be cleared manually.
hiQNmDiagnosticErrorTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.107.53	Major	Must be cleared manually.
hiQNmNodeDownMsgErrorTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.107.102	Critical	hiQNmNodeMgrStartingTrap

Table 19 Node Manager Fault Traps (Seite 1 von 2)

Trap Name OID Number	Severity	Clearing Trap Name
hiQNmNodeMgrSignalRestartTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.107.104	Major	hiQNmNodeMgrStartingTrap

Table 19 Node Manager Fault Traps (Seite 2 von 2)

5.1.8.1 Failed Software Processes

Table 20 outlines the SNMP traps that are reported when software processes fail. It is recommended that the OpenScape Voice surveillance Operations Support System (OSS) logs these events and informs the craft about an unusual number of occurrences. For example, more than five in one hour and/or more than one per day for more than seven days.

Also, as routine maintenance, customer service should periodically use these events to analyze the RTP dump logs and stored Pstacks.

Note: In general, warning traps are not stored in the OpenScape Voice alarm database and, therefore, there is no alarm correlation trap when the faulty condition is cleared (most likely by a successful process restart).

Trap Name OID Number	Severity	Clearing Trap Name
hiQNmProcessExitedwithCodeTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.107.47	Warning	see Note above (page 56)

Table 20 SNMP Traps Reported When Software Processes Fail

When an OpenScape Voice process writes a Pstack, it usually terminates itself with signal 9 afterward, which is reported with event hiQNmProcessTerminatedBySignalTrap (107-48); however, sometimes the process failure is reported with hiQNmProcessExitedTrap (107-3).

A process in an endless loop or deadlock is stopped by the RTP healthcheck hiQNmProcessHealthChkTimeoutTrap (107-13). This event is followed by another event reporting the process termination, e.g., hiQNmProcessExitedTrap (107-3).

Failed software processes restart automatically, which are reported with one or more of the following clearance traps outlined in Table 21.

Clearing Trap Name OID Number	Severity	Trap Name
hiQNmProcessInitCompleteTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.107.1	Clear	Related to 107.3 and 107.48 in Table 20
hiQNmNodeMgrStartingTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.107.13	Clear	Related to 107.3 and 107.48 in Table 20
hiQGlobalProcessInitActiveTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.217.5	Clear	
hiQAudProcessRunningTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.102.496	Clear	

Table 21 Clearance Traps for Failed Software Processes

5.1.9 hiQOvlFaultMgmt (190)

Table 22 outlines the SNMP traps that are associated with the Overload Manager Faults.

Trap Name OID Number	Severity	Clearing Trap Name
hiQOvlCongLevelToCL3Trap 1.3.6.1.4.1.4329.2.18.2.2.1.47.190.2	Major	hiQOvlCongLevelChangeTrap
hiQOvlCongLevelToCL2Trap 1.3.6.1.4.1.4329.2.18.2.2.1.47.190.3	Minor	hiQOvlCongLevelChangeTrap
hiQOvlCongLevelToCL1Trap 1.3.6.1.4.1.4329.2.18.2.2.1.47.190.4	Minor	hiQOvlCongLevelChangeTrap
hiQOvlCongLevelToCL0Trap 1.3.6.1.4.1.4329.2.18.2.2.1.47.190.5	Info	N/A
hiQOvlCongLevelChangeTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.190.10	Clear	N/A

Table 22 Overload Fault Manager Traps

5.1.10 hiQSecurityFaultMgt (218)

Table 23 outlines the SNMP traps that are associated with the Security Manager Faults.

Trap Name OID Number	Severity	Clearing Trap Name
hiQSecurityFirewallTrigTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.218.1	Critical	hiQSecurityFirewallTrigClearTrap
hiQSecurityFirewallTrigClearTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.218.2	Clear	N/A

Table 23 Security Fault Manager Traps (Seite 1 von 2)

Trap Name OID Number	Severity	Clearing Trap Name
hiQSIPRegistrationCountingStarted 1.3.6.1.4.1.4329.2.18.2.2.1.47.218.3	Clear	
hiQSIPDeviceRegistrationQuarantined 1.3.6.1.4.1.4329.2.18.2.2.1.47.218.4	Minor	
hiQSIPDeviceRegistrationAccepted 1.3.6.1.4.1.4329.2.18.2.2.1.47.218.5	Clear	N/A

Table 23 Security Fault Manager Traps (Seite 2 von 2)

5.1.11 hiQSipFaultMgmt (230)

Table 26 outlines the SNMP traps that are associated with the SIP faults.

Trap Name OID Number	Severity	Clearing Trap Name
hiPathSIPCounterAboveHighThld 1.3.6.1.4.1.4329.2.18.2.2.1.47.230.1	Major	hiPathSIPCounterBelowThld
hiPathSIPCounterAboveLowThld 1.3.6.1.4.1.4329.2.18.2.2.1.47.230.2	Minor	N/A
hiPathSIPCounterBelowThld 1.3.6.1.4.1.4329.2.18.2.2.1.47.230.3	Clear	N/A

Table 24 Service Registration Traps

5.1.12 hiQSnmFaultMgt (119)

Table 25 outlines the SNMP traps that are associated with the Super Node Subsystem Manager Faults.

Trap Name OID Number	Severity	Clearing Trap Name
hiQSnmSubsysAlreadyRunningTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.119.1	Clear	N/A
hiQSnmSubsystemStartErrorTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.119.2	Minor	hiQSnmStartupSuccessTrap hiQSnmSubsysAlreadyRunningTrap hiQSnmSubysytemStartSuccessTrap hiQSnmSubsysRestartSuccessTrap
hiQSnmSubsysAdmInterventionTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.119.7	Major	hiQSnmStartupSuccessTrap hiQSnmSubsysAlreadyRunningTrap hiQSnmSubysytemStartSuccessTrap

Table 25 Super Node Manager Traps (Seite 1 von 2)

Trap Name OID Number	Severity	Clearing Trap Name
hiQSnmRtpRestartforSubsystemTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.119.10	Major	hiQSnmStartupSuccessTrap hiQSnmSubysytemStartSuccessTrap hiQSnmSubsysAlreadyRunningTrap
hiQSnmRebootForSubsystemTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.119.11	Critical	hiQSnmStartupSuccessTrap
hiQSnmSystemSwitchOffTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.119.13	Critical	hiQSnmStartupSuccessTrap
hiQSnmSpecialActScrExecTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.119-14		
hiQSnmSpecialActScrSuccessTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.119.18	Clear	N/A
hiQSnmStartupSuccessTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.119.22	Clear	N/A
hiQSnmStartupFailedTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.119.39	Major	hiQSnmStartupSuccessTrap hiQSnmSubsysAlreadyRunningTrap hiQSnmSubysytemStartSuccessTrap
hiQSnmSubsysRestartSuccessTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.119.45	Clear	N/A
hiQSnmRtpNodeUpTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.119.100	Clear	N/A
hiQSnmRtpNodeUpWasDownTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.119.101	Clear	N/A
hiQSnmRtpNodeDownTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.119.102	Major	hiQSnmRtpNodeUpWasDownTrap hiQSnmRtpNodeUpTrap
hiQSnmRtpNodeDownWasUpTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.119.103	Major	hiQSnmRtpNodeUpTrap hiQSnmRtpNodeUpWasDownTrap

Table 25 Super Node Manager Traps (Seite 2 von 2)

5.1.13 hiQSoapServerFaultMgmt (207)

Table 26 outlines the SNMP traps that are associated with the Soap Server Faults.

Trap Name OID Number	Severity	Clearing Trap Name
hiQSubMgmtRemoveResourceError 1.3.6.1.4.1.4329.2.18.2.2.1.47.207.5	Minor	hiQSubMgmtRemoveResourceSuccessTrap
hiQSubMgmtRemoveResourceSuccess 1.3.6.1.4.1.4329.2.18.2.2.1.47.207.6	Clear	N/A

Table 26 Subscriber Manager (SOAP) Traps

5.1.14 hiQSolidFaultMgt (141)

Table 27 outlines the SNMP traps that are associated with the Solid Database Faults.

Trap Name OID Number	Severity	Clearing Trap Name
hiQSolidUserConnected 1.3.6.1.4.1.4329.2.18.2.2.1.47.141.6	Clear	
hiQSolidTooManyClientsTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.141.12	Major	Must be cleared manually.
hiQSolidNewConnsAllowedTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.141.13	Clear	N/A
hiQSolidNoNewConnsAllowedTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.141.20	Major	hiQSolidNewConnsAllowedTrap
hiQSolidShutdownTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.141.105		
hiQSolidServerStartFailedTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.141.120	Major	Must be cleared manually.
hiQSolidFlowEngineIntErrorTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.141.130	Major	hiQSolidFlowEngineStartedTrap
hiQSolidFatalErrSrvShutdownTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.141.149	Major	Must be cleared manually.
hiQSolidFatalErrSrvNotStartTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.141.150	Major	hiQSolidFlowEngineStartedTrap
hiQSolidDatabaseStartedTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.141.151	Clear	N/A
hiQSolidDbConvertedTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.141.201	Clear	N/A
hiQSolidOldDbVersionTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.141.204	Major	Must be cleared manually.
hiQSolidNewDbNotCreatedTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.141.205	Major	Must be cleared manually.
hiQSolidDbDoesNotExistsTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.141.206	Major	Must be cleared manually.
hiQSolidDbOpenFailureTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.141.207	Major	Must be cleared manually.
hiQSolidDbIndexTestSuccessTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.141.224	Clear	N/A
hiQSolidDbIndexErrorTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.141.225	Major	Must be cleared manually.
hiQSolidDbTstOpenFailureTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.141.226	Major	Must be cleared manually.
hiQSolidDbTstConnectFailureTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.141.227	Major	Must be cleared manually.

Table 27 Solid Database Traps (Seite 1 von 2)

Trap Name OID Number	Severity	Clearing Trap Name
hiQSolidCreateNewDbFailedTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.141.240	Major	hiQSolidDatabaseStartedTrap
hiQSolidTableConvertedTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.141.247	Clear	N/A
hiQSolidDbOpeningProblemTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.141.249	Major	Must be cleared manually.
hiQSolidDbBrokenCopyTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.141.254	Major	Must be cleared manually.
hiQSolidBackupFailedTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.141.304	Major	hiQSolidBackupSuccessTrap
hiQSolidStartedHSBPrimaryTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.141.500	Clear	N/A
hiQSolidStartedHSBSecondaryTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.141.501	Clear	N/A
hiQSolidHSBSwitchPrimErrTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.141.512	Major	Must be cleared manually.
hiQSolidHSBSwitchSecErrTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.141.513	Major	Must be cleared manually.
hiQSolidBothHSBDbPrimaryTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.141.515	Major	hiQSolidStartedHSBPrimaryTrap
hiQSolidDbServerCorruptTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.141.1101	Major	Must be cleared manually.
hiQSolidLocalDbServerCorruptTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.141.1103	Major	Must be cleared manually.

Table 27 Solid Database Traps (Seite 2 von 2)

5.1.15 hiQTicFaultMgmt (111)

Table 28 outlines the SNMP traps that are associated with the RTP Ticket Manager Faults.

Trap Name OID Number	Severity	Clearing Trap Name
hiQTicDiskFullTicketPoolFailed 1.3.6.1.4.1.4329.2.18.2.2.1.47.111.7	Major	N/A
hiQTicCopyToTicketPoolFailed 1.3.6.1.4.1.4329.2.18.2.2.1.47.111.23	Major	hiQNmProcessInitCompleteTrap 111-265
hiQTicPoolDiskDevNotAccessible 1.3.6.1.4.1.4329.2.18.2.2.1.47.111.47	Critical	hiQNmProcessInitCompleteTrap

Table 28 RTP Ticket Manager Traps

5.1.16 hiQTcaFaultMgt (216)

Warnings generally do not show up in correlation traps which is why Minor/Major Threshold Crossing Alarm (TCA) traps will automatically disappear, while a Warning TCA either never clears (when the OSS relies on correlation traps) or disappears after a couple of minutes (when the OSS runs an alarm synchronization with the OpenScape Voice alarm database). However, the TCA Generation subsystem can generate warning traps for certain log categories (refer to Section 5.1.8.1, “Failed Software Processes”).

Table 29 outlines the SNMP traps that are associated with the Threshold Crossing Alarm (TCA) Faults.

Trap Name OID Number	Severity	Clearing Trap Name
hiQTcaL3CommunicationTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.216.1	Major	hiQTcaClearedTrap
hiQTcaL2CommunicationTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.216.2	Minor	hiQTcaClearedTrap
hiQTcaL1CommunicationTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.216.3	Warning	hiQTcaClearedTrap
hiQTcaL3ServiceTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.216.4	Major	hiQTcaClearedTrap
hiQTcaL2ServiceTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.216.5	Minor	hiQTcaClearedTrap
hiQTcaL1ServiceTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.216.6	Warning	hiQTcaClearedTrap
hiQTcaL3ProcessingTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.216.7	Major	hiQTcaClearedTrap
hiQTcaL2ProcessingTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.216.8	Minor	hiQTcaClearedTrap
hiQTcaL1ProcessingTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.216.9	Warning	hiQTcaClearedTrap
hiQTcaL3EquipmentTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.216.10	Major	hiQTcaClearedTrap
hiQTcaL2EquipmentTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.216.11	Minor	hiQTcaClearedTrap
hiQTcaL1EquipmentTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.216.12	Warning	hiQTcaClearedTrap
hiQTcaL3EnvironmentTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.216.13	Major	hiQTcaClearedTrap
hiQTcaL2EnvironmentTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.216.14	Minor	hiQTcaClearedTrap
hiQTcaL1EnvironmentTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.216.15	Warning	hiQTcaClearedTrap

Table 29 Threshold Crossing Alarm (TCA) Fault Traps (Seite 1 von 3)

Trap Name OID Number	Severity	Clearing Trap Name
hiQTcaL3DatabaseTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.216.16	Major	hiQTcaClearedTrap
hiQTcaL2DatabaseTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.216.17	Minor	hiQTcaClearedTrap
hiQTcaL1DatabaseTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.216.18	Warning	hiQTcaClearedTrap
hiQTcaL3MibTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.216.19	Major	hiQTcaClearedTrap
hiQTcaL2MibTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.216.20	Minor	hiQTcaClearedTrap
hiQTcaL1MibTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.216.21	Warning	hiQTcaClearedTrap
hiQTcaL3SecurityTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.216.25	Major	hiQTcaClearedTrap
hiQTcaL2SecurityTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.216.26	Minor	hiQTcaClearedTrap
hiQTcaL1SecurityTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.216.27	Warning	hiQTcaClearedTrap
hiQTcaL3IndicationTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.216.31	Major	hiQTcaClearedTrap
hiQTcaL2IndicationTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.216.32	Minor	hiQTcaClearedTrap
hiQTcaL1IndicationTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.216.33	Warning	hiQTcaClearedTrap
hiQTcaL4CommunicationTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.216.34	Critical	hiQTcaClearedTrap
hiQTcaL4ServiceTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.216.35	Critical	hiQTcaClearedTrap
hiQTcaL4ProcessingTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.216.36	Critical	hiQTcaClearedTrap
hiQTcaL4EquipmentTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.216.37	Critical	hiQTcaClearedTrap
hiQTcaL4EnvironmentTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.216.38	Critical	hiQTcaClearedTrap
hiQTcaL4DatabaseTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.216.39	Critical	hiQTcaClearedTrap
hiQTcaL4MibTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.216.40	Critical	hiQTcaClearedTrap
hiQTcaL4SecurityTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.216.41	Critical	hiQTcaClearedTrap
hiQTcaL4IndicationTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.216.42	Critical	hiQTcaClearedTrap

Table 29 Threshold Crossing Alarm (TCA) Fault Traps (Seite 2 von 3)

Trap Name OID Number	Severity	Clearing Trap Name
hiQTcaClearedTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.216.100	Clear	N/A

Table 29 Threshold Crossing Alarm (TCA) Fault Traps (Seite 3 von 3)

5.1.17 hiQUCEServicesFaultMgmt (193)

Table 26 outlines the SNMP traps that are associated with the service registration faults.

Note: This trap is used for **any** service registration.

Trap Name OID Number	Severity	Clearing Trap Name
hiQUCEServicesRegistrationFailedTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.193.2	Major	UCE services failed registration. hiQUCEServicesRegisteringTrap
hiQUCEServicesRegisteringTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.193.5	Clear	N/A

Table 30 Service Registration Traps

5.1.18 hiQTcgFaultMgmt (233)

Table 31 outlines the SNMP traps that are associated with the Test Call Generator Faults.

Trap Name OID Number	Severity	Clearing Trap Name
hiQTestCallGeneratorOkTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.233.1	Clear	N/A
hiQTestCallGeneratorProvErrTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.233.2	Major	hiQTestCallGeneratorOkTrap
hiQTestCallGenOverloadDetTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.233.3	Warning	hiQTestCallGeneratorOkTrap
hiQTestCallGeneratorNotOkTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.233.4	Major	hiQTestCallGeneratorOkTrap
hiQTestCallGenNotOkProcRestart 1.3.6.1.4.1.4329.2.18.2.2.1.47.233.5	Major	hiQTestCallGeneratorOkTrap
hiQTestCallGenNotOkNodeRestart 1.3.6.1.4.1.4329.2.18.2.2.1.47.233.6	Critical	hiQTestCallGeneratorOkTrap

Table 31 Test Call Generator Fault Traps

5.1.19 hiQPlatformFaultMgmt (234)

Table 32 outlines the SNMP traps that are associated with the Rolling Process Restart and Node Recovery Faults.

Trap Name OID Number	Severity	Clearing Trap Name
hiQRollingProcessRestart 1.3.6.1.4.1.4329.2.18.2.2.1.47.234.1	Major	hiQRollingProcessRestartAlarmReset
hiQRollingProcessRestartAlarmReset 1.3.6.1.4.1.4329.2.18.2.2.1.47.234.2	Clear	N/A
hiQNoMoreRollingProcessRestarts 1.3.6.1.4.1.4329.2.18.2.2.1.47.234.3	Clear	N/A
hiQNodeRecoveryByRestart 1.3.6.1.4.1.4329.2.18.2.2.1.47.234.4	Critical	hiQNodeRecovery hiQNodeRecoveryFailed
hiQNodeDownAfterFailedRecovery 1.3.6.1.4.1.4329.2.18.2.2.1.47.234.5	Critical	hiQNoMoreRollingProcessRestarts hiQNodeRecovery
hiQNodeRecovery 1.3.6.1.4.1.4329.2.18.2.2.1.47.234.6	Clear	N/A
hiQNodeRecoveryFailed 1.3.6.1.4.1.4329.2.18.2.2.1.47.234.7	Clear	N/A
hiQSwapSpaceFull 1.3.6.1.4.1.4329.2.18.2.2.1.47.234.8	Critical	hiQSwapSpaceOk
hiQSwapSpaceAlarmReset 1.3.6.1.4.1.4329.2.18.2.2.1.47.234.9	Clear	
hiQSwapSpaceOk 1.3.6.1.4.1.4329.2.18.2.2.1.47.234.10	Clear	
hiQRebootBecauseStopRTPHasFailedPreviously 1.3.6.1.4.1.4329.2.18.2.2.1.47.234.11	Minor	

Table 32 Rolling Process Restart and Node Recovery Fault Traps

5.1.20 hiQRapidStatFaultMgmt (235)

Table 33 outlines the SNMP traps that are associated with the RapidStat Faults.

Trap Name OID Number	Severity	Clearing Trap Name
hiQRapidStatStarting 1.3.6.1.4.1.4329.2.18.2.2.1.47.235.1	Clear	N/A
hiQRapidStatWarningsFound 1.3.6.1.4.1.4329.2.18.2.2.1.47.235.2	Warning	hiQRapidStatStarting

Table 33 RapidStat Fault Traps (Seite 1 von 2)

Trap Name OID Number	Severity	Clearing Trap Name
hiQRapidStatErrorsFound 1.3.6.1.4.1.4329.2.18.2.2.1.47.235.3	Minor	hiQRapidStatStarting
hiQRapidStatSevereErrorsFound 1.3.6.1.4.1.4329.2.18.2.2.1.47.235.4	Major	hiQRapidStatStarting
hiQRapidStatVerySevereErrorsFound 1.3.6.1.4.1.4329.2.18.2.2.1.47.235.5	Critical	hiQRapidStatStarting

Table 33 RapidStat Fault Traps (Seite 2 von 2)

5.1.21 hiQSmdiFaultMgmt (208)

Table 34 outlines the SNMP traps that are associated with the SMDI (Simplified Message Desk Interface) Faults.

Trap Name OID Number	Severity	Clearing Trap Name
hiQSmdiREcvIPAddrPortError 1.3.6.1.4.1.4329.2.18.2.2.1.47.208.7	Major	hiQSmdiRecvIPAddrPortOk
hiQSmdiRecvIPAddrPortOk 1.3.6.1.4.1.4329.2.18.2.2.1.47.208.8	Clear	N/A

Table 34 SMDI Fault Traps

5.1.22 hiQNotificationMgmt (250)

Table 35 outlines the SNMP traps that are associated with the OSV processing an Emergency Call. The FaultyObject attribute identifies the endpoint and DN that made the emergency call, e.g.

> "FaultyObject = Endpoint/5619232258/100.22.3.17: Emergency Call from Endpoint DN 5619232258 to Emergency Number 911. <free form text with additional information>"

Trap Name OID Number	Severity	Clearing Trap Name
hiQEmergencycallidtrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.250.1	Warning	N/A

Table 35 Notification (Emergency Call) Trap

5.1.23 hiQDatabaseSizeMgmt (215)

Table 34 outlines the SNMP traps that are associated with Database Size Management Faults.

Trap Name OID Number	Severity	Clearing Trap Name
hiQDatabaseSizeOK 1.3.6.1.4.1.4329.2.18.2.2.1.47.215.1	Clear	N/A
hiQDatabaseSizeHigh 11.3.6.1.4.1.4329.2.18.2.2.1.47.215.4	Warning	hiQDatabaseSizeOK
hiQDatabaseSizeTooHigh 1.3.6.1.4.1.4329.2.18.2.2.1.47.215.4	Major	hiQDatabaseSizeOK
hiQDatabaseFull 1.3.6.1.4.1.4329.2.18.2.2.1.47.215.5	Critical	hiQDatabaseSizeOK

Table 36 Database Size Fault Traps

5.1.24 hiQSurvivalAuthorityObjects (222)

Table 34 outlines the SNMP traps that are associated with the Survival Authority.

Trap Name OID Number	Severity	Clearing Trap Name
hiQSurvivalTrapType 1.3.6.1.4.1.4329.2.18.2.2.1.47.222.1		
hiQSurvivalNodeName 1.3.6.1.4.1.4329.2.18.2.2.1.47.222.2		
hiQSurvivalClusterName 1.3.6.1.4.1.4329.2.18.2.2.1.47.222.3		
hiQSurvivalNodeIPAddress 1.3.6.1.4.1.4329.2.18.2.2.1.47.222.4		
hiQSurvivalCommunityString 1.3.6.1.4.1.4329.2.18.2.2.1.47.222.5		

Table 37 Survival AuthorityTraps

5.1.25 hiQInterfaceSecurityFaultMgmt (236)

Table 34 outlines the SNMP traps that are associated with the Interface Security faults.

Trap Name OID Number	Severity	Clearing Trap Name
hiqCertificateExpirationWarning 1.3.6.1.4.1.4329.2.18.2.2.1.47.236.1	Major	
hiqCertificateRemovedOrUpdated 1.3.6.1.4.1.4329.2.18.2.2.1.47.236.2	Clear	
hiqCertificateExpired 1.3.6.1.4.1.4329.2.18.2.2.1.47.236.3	Major	
hiqCRLDownloadFailure 1.3.6.1.4.1.4329.2.18.2.2.1.47.236.4	Warning	
hiqCRLRemovedOrUpdated 1.3.6.1.4.1.4329.2.18.2.2.1.47.236.5	Clear	
hiqCRLExpired 1.3.6.1.4.1.4329.2.18.2.2.1.47.236.6	Major	
hiqCRLInvalid 1.3.6.1.4.1.4329.2.18.2.2.1.47.236.7	Major	
hiqCRLCopyFailure 1.3.6.1.4.1.4329.2.18.2.2.1.47.236.8	Warning	
hiqTLSConnectionAcceptWithoutCRLCheck 1.3.6.1.4.1.4329.2.18.2.2.1.47.236.9	Minor	
hiqCRLCheckOnTLSConnectionOK 1.3.6.1.4.1.4329.2.18.2.2.1.47.236.10	Clear	
hiqTLSConnectionClearedRevokedCert 1.3.6.1.4.1.4329.2.18.2.2.1.47.236.11	Major	
hiqTLSSIPIdentityMismatch 1.3.6.1.4.1.4329.2.18.2.2.1.47.236.12	Major	

Table 38 Interface Security Traps

5.1.26 hiQNotificationMgmt (250)

Table 34 outlines the SNMP traps that are associated with the Notification Mgmt faults.

Trap Name OID Number	Severity	Clearing Trap Name
hiQEmergencyCallIdTrap 1.3.6.1.4.1.4329.2.18.2.2.1.47.250.1	Warning	

Table 39 Notification Mgmt Traps

6 SNMP Performance Measurements

6.1 OpenScape Voice MIBs

SNMP Performance Measurements are required to support third party Network Operations Centers (NOC), operated by either customers or via Unify Managed Service Offerings. The reporting enhancements consist of the following existing measurements and associated MIBs:

OpenScape Voice MIBs

- SIP
- MGCP
- UCE
- Services
- Session Licenses for Trunking and SIPQ
- SNMP V2 MIBs
  - IF-MIB II
  - IP-MIB II
  - TCP - MIB II
  - UDP - MIB II
  - SNMP - MIB II
  - UCD-SNMP-MIB

The following sections outlines the details and information regarding each MIBs' reporting counters/measurements. The Object Identifier (OID) is provided for each measurement/count. Refer to Section 5.1, "Object Identifier", on page 43 for more information.

6.1.1 SIP Signaling Manager Statistics

Attention: The applicable SNMP MIB is **us_srxSip.mib**.

6.1.1.1 SIP Statistics on System-Wide Basis

These statistics include User Agent (UA) Client, User Agent (UA) Server, and Proxy. Table 40 outlines the available SNMP SIP performance statistics and measurement parameters.

Measurement Name	Description Details
usSrxSipPerfInviteMsgsSentByClient	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.1.1 This value identifies the count of INVITE messages sent from the SIP Client. Priority: 1-Critical Service Affecting Operator Hint: Monitor for abnormal low
usSrxSipPerfUACRcv4xx6xxSubs	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.1.39 This value identifies the 4xx-6xx for SUBSCRIBE messages received by the SIP Client. Possible errors are Client, Server, or Global. Priority: 2-Major Configuration Problem Operator Hints: Monitor for abnormal high.
usSrxSipPerf100TryingMsgsRcvdByClient	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.1.2 This value identifies the 100 TRYING messages received by the SIP Client. The request has been received and continues to process the request. Priority: 6-Engineering Info
usSrxSipPerfUACSntInfo	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.1.40 This value identifies the INFO messages (DTMF digits) sent by the SIP Client. Priority: 6-Engineering Info

Table 40 SIP Signaling Manager Measurement Parameters (Seite 1 von 15)

Measurement Name	Description Details
usSrxSipPerf180RingingMsgsRcvdByClient	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.1.3 This value identifies the 180 RINGING messages received by the SIP Client. The request has been received and continues to process. Priority: 6-Engineering Info
usSrxSipPerfUACRcv200OKInfo	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.1.41 This value identifies the 200 OK for INFO messages received by the SIP Client. The INFO was successfully received, understood, and accepted Priority: 6-Engineering Info
usSrxSipPerf200OKForInviteMsgsRcvdByClient	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.1.4 This value identifies the 200 OK for INVITE messages received by the SIP Client. The action was successfully received, understood, and accepted. Priority: 1-Critical Service Affecting Operator Hints: Monitor for abnormal low.
usSrxSipPerfUACRcv300Multiple	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.1.42 This value identifies the 300 MULTIPLE CHOICES messages received by the SIP Client (i.e., redirected). Priority: 2-Major Configuration Problem Operator Hints: Monitor for abnormal high.
usSrxSipPerf301MsgsRcvdByClient	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.1.5 This value identifies the 301 (Moved Permanently) messages received by the SIP Client (i.e., redirected). Priority: 2-Major Configuration Problem Operator Hints: Monitor for abnormal high.

Table 40 SIP Signaling Manager Measurement Parameters (Seite 2 von 15)

Measurement Name	Description Details
usSrxSipPerfUASRcvRefer	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.1.43 This value identifies the REFER messages received by the SIP Server. Priority: 2-Major Configuration Problem Operator Hints: Monitor for abnormal high.
usSrxSipPerf302MsgsRcvdByClient	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.1.6 This value identifies the 302 (Moved Temporarily) messages received by the SIP Client (i.e., redirected). Priority: 6-Engineering Info
usSrxSipPerfUASSnt202Accepted	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.1.44 This value identifies the 202 ACCEPTED messages sent by the SIP Server. The REFER was successfully received, understood, and accepted. Priority: 6-Engineering Info
usSrxSipPerfAckForInviteMsgsSentByClient	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.1.7 This value identifies the Ack for INVITE messages sent by the SIP Client. Acknowledgement (handshake) is done and a call is going to be setup. Priority: 6-Engineering Info.
usSrxSipPerfUASSnt4xx6xxRefer	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.1.45 This value identifies the 4xx-6xx for REFER messages sent by the SIP Server. Possible errors are Client, Server, or Global Priority: 2-Major Configuration Problem Operator Hints: Monitor for abnormal high.

Table 40 SIP Signaling Manager Measurement Parameters (Seite 3 von 15)

Measurement Name	Description Details
usSrxSipPerfAckForErrorMsgsSentByClient	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.1.8 This value identifies the Ack For ERROR messages sent by the SIP Client. Acknowledgement (handshake) is done and a call is going to be setup. Priority: 6-Engineering Info.
usSrxSipPerfUASRcvNotify	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.1.46 This value identifies the NOTIFY messages received by the SIP Server. There has been a service session status change. Priority: 2-Major Configuration Problem Operator Hints: Monitor for abnormal high.
usSrxSipPerfErrorMsgsRcvdByClient	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.1.9 This value identifies the ERROR messages received by the SIP Client. Possible errors are Client, Server, or Global. Priority: 1-Critical Service Affecting Operator Hints: Monitor for abnormal high.
usSrxSipPerfUASSnt200OKNotify	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.1.47 This value identifies the 200OK for NOTIFY messages sent by the SIP Server. There has been a service session status change. The action was successfully received, understood, and accepted. Priority: 6-Engineering Info
usSrxSipPerfByeMsgsSentByClient	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.1.10 This value identifies the BYE messages Sent by the SIP Client. Priority: 1-Critical Service Affecting Operator Hints: Monitor for abnormal low.

Table 40 SIP Signaling Manager Measurement Parameters (Seite 4 von 15)

Measurement Name	Description Details
usSrxSipPerfUASSnt4xx6xxNotify	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.1.48 This value identifies the 4xx-6xx for NOTIFY messages sent by the SIP Server. Priority: 2-Major Configuration Problem Operator Hints: Monitor for abnormal high
usSrxSipPerfByeMsgsRecdByServer	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.1.26 This value identifies the BYE messages received by the SIP Server. Priority: 1-Critical Service Affecting Operator Hints: Monitor for abnormal low
usSrxSipPerfUASRcvSubscribe	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.1.49 This value identifies the SUBSCRIBE messages received by the SIP Server. Priority: 6-Engineering Info.
usSrxSipPerfCancelMsgsSentByClient	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.1.12 This value identifies the CANCEL messages sent by the SIP Client. Priority: 1-Critical Service Affecting Operator Hints: Monitor for abnormal high
usSrxSipPerfUASSnt200OKSubs	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.1.50 This value identifies the 200OK for SUBSCRIBE messages sent by the SIP Server. The action was successfully received, understood, and accepted. Priority: 6-Engineering Info.
usSrxSipPerf200OKforCancelMsgsRecvd ByClient	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.1.13 This value identifies the 200 OK for CANCEL messages received by the SIP Client. The action was successfully received, understood, and accepted. Priority: 6-Engineering Info.

Table 40 SIP Signaling Manager Measurement Parameters (Seite 5 von 15)

Measurement Name	Description Details
usSrxSipPerfUASSnt4xx6xxSubs	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.1.51 This value identifies the 4xx-6xx for SUBSCRIBE messages sent by the SIP Server. Priority: 2-Major Configuration Problem Operator Hints: Monitor for abnormal high.
usSrxSipPerf487MsgsRcvdByClient	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.1.14 This value identifies the 487 (Request Terminated) messages received by the SIP Client. This is a client error that indentifies that the request contains bad syntax or cannot be fulfilled at this server. Priority: 1-Critical Service Affecting Operator Hints: Monitor for abnormal high
usSrxSipPerfUASRcvInfo	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.1.52 This value identifies the INFO messages (DTMF digits) received by the SIP Server. Priority: 6-Engineering Info.
usSrxSipPerfAckForCancelMsgsSentByClient	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.1.15 This value identifies the acknowledgement (Ack) for CANCEL messages sent by the SIP Client. Acknowledgement (handshake) is done. Priority: 6-Engineering Info.
usSrxSipPerfUASSnt200OKInfo	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.1.53 This value identifies the 200OK for INFO messages Sent by the SIP Server. Priority: 6-Engineering Info.

Table 40 SIP Signaling Manager Measurement Parameters (Seite 6 von 15)

Measurement Name	Description Details
usSrxSipPerf200OKforRegisterMsgsSent ByServer	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.1.16 This value identifies the 200 OK for REGISTER messages sent by the SIP Server. The action was successfully received, understood, and accepted. Priority: 6-Engineering Info.
usSrxSipPerf183MsgRcvByClient	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.1.54 This value identifies the total 183 messages received. Priority: 6-Engineering Info.
usSrxSipPerf1xxMsgRcvByClient	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.1.55 This value identifies the rest of supported 1xx messages received. The request has been received and continues to process. Priority: 6-Engineering Info.
usSrxSipPerf2xxMsgRcvByClient	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.1.56 This value identifies the rest of supported 2xx messages received. The action was successfully received, understood, and accepted. Priority: 6-Engineering Info.
usSrxSipPerf3xxMsgRcvByClient	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.1.57 This value identifies the rest of supported 3xx messages received. Redirection -- further action needs to be taken in order to complete the request. Priority: 2-Major Configuration Problem Operator Hints: Monitor for abnormal high.

Table 40 SIP Signaling Manager Measurement Parameters (Seite 7 von 15)

Measurement Name	Description Details
usSrxSipPerf4xxMsgRcvByClient	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.1.58 This value identifies the rest of supported 4xx messages received. Client Error -- the request contains bad syntax or cannot be fulfilled at this server. Priority: 2-Major Configuration Problem Operator Hints: Monitor for abnormal high.
usSrxSipPerf5xxMsgRcvByClient	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.1.59 This value identifies the rest of supported 5xx messages received. Server Error -- the server failed to fulfill an apparently valid request. Priority: 2-Major Configuration Problem Operator Hints: Monitor for abnormal high.
usSrxSipPerf6xxMsgRcvByClient	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.1.60 This value identifies the rest of supported 6xx messages received. Global Failure -- the request cannot be fulfilled at any server. Priority: 1-Critical Service Affecting Operator Hints: Monitor for abnormal high.
usSrxSipPerf183MsgSentByServer	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.1.61 This value identifies the total 183 messages sent. Session Progress Priority: 6-Engineering Info
usSrxSipPerf1xxMsgSentByServer	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.1.62 This value identifies the rest of supported 1xx messages sent. The request has been received and continuing to process. Priority: 6-Engineering Info

Table 40 SIP Signaling Manager Measurement Parameters (Seite 8 von 15)

Measurement Name	Description Details
usSrxSipPerf2xxMsgSentByServer	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.1.63 This value identifies the rest of supported 2xx messages sent. The action was successfully received, understood, and accepted. Priority: 6-Engineering Info
usSrxSipPerf3xxMsgSentByServer	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.1.64 This value identifies the rest of supported 3xx messages sent. Redirection: further action needs to be taken in order to complete the request. Priority: 2-Major Configuration Problem Operator Hints: Monitor for abnormal high.
usSrxSipPerf4xxMsgSentByServer	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.1.65 This value identifies the rest of supported 4xx messages sent. Client Error: the request contains bad syntax or cannot be fulfilled at this server. Priority: 2-Major Configuration Problem Operator Hints: Monitor for abnormal high.
usSrxSipPerf5xxMsgSentByServer	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.1.66 This value identifies the rest of supported 5xx messages sent. Server Error: the server failed to fulfill an apparently valid request. Priority: 2-Major Configuration Problem Operator Hints: Monitor for abnormal high.
usSrxSipPerf6xxMsgSentByServer	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.1.67 This value identifies the rest of supported 6xx messages sent. Global Failure: the request cannot be fulfilled at any server. Priority: 2-Major Configuration Problem Operator Hints: Monitor for abnormal high.

Table 40 SIP Signaling Manager Measurement Parameters (Seite 9 von 15)

Measurement Name	Description Details
usSrxSipPerfRegisterMsgsReceivedByServer	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.1.17 This value identifies the REGISTER messages received by the SIP Server. Priority: 1-Critical Service Affecting Operator Hints: Monitor for abnormal high and low
usSrxSipPerf100TryingMsgsSentByServer	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.1.18 This value identifies the 100 TRYING messages sent by the SIP Server. The request has been received and continues to process. Priority: 6-Engineering Info.
usSrxSipPerfNoSupportRcvByClient	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.1.68 This value identifies the number of unsupported messages received. Priority: 2-Major Configuration Problem Operator Hints: Monitor for abnormal high.
usSrxSipPerfAckforInviteMsgsRecdByServer	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.1.22 This value identifies the acknowledgement for INVITE messages received by the OpenScape Voice system. Handshake is done and a call is going to be setup. Priority: 6-Engineering Info
usSrxSipPrackMsgRcvByClient	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.1.69 This value identifies the PRACK messages received. Priority: 6-Engineering Info
usSrxSipPerf180RingingMsgsSentByServer	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.1.20 This value identifies the 180 RINGING messages sent by the SIP Server. Provisional: request received, continuing to process the request. Priority: 6-Engineering Info

Table 40 SIP Signaling Manager Measurement Parameters (Seite 10 von 15)

Measurement Name	Description Details
usSrxSipUpdateMsgRcvByClient	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.1.70 This value identifies the UPDATE messages received. Priority: 6-Engineering Info
usSrxSipPerf200OKforInviteMsgsSentBy Server	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.1.21 This value identifies the 200 OKs for INVITE messages sent by the SIP Server. The action was successfully received, understood, and accepted. Priority: 1-Critical Service Affecting Operator Hints: Monitor for abnormal low
usSrxSipPrackMsgSentByServer	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.1.71 This value identifies the PRACK messages sent. Priority: 6-Engineering Info
usSrxSipPerfInviteMsgsRecdByServer	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.1.19 This value identifies the INVITE messages received by the SIP Server. Priority: 1-Critical Service Affecting Operator Hints: Monitor for abnormal low
usSrxSipUpdateMsgSentByServer	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.1.72 This value identifies the UPDATE messages sent. Priority: 6-Engineering Info
usSrxSipPerfErrorMsgsSentByServer	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.1.23 This value identifies the ERROR messages Sent by the SIP Server. Possible errors are Client, Server, or Global. Priority: 1-Critical Service Affecting Operator Hints: Monitor for abnormal low

Table 40 SIP Signaling Manager Measurement Parameters (Seite 11 von 15)

Measurement Name	Description Details
usSrxSip200OKForPrackRcvByServ	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.1.73 This value identifies the 200 OKs received for PRACK messages. The action was successfully received, understood, and accepted. Priority: 6-Engineering Info
usSrxSipPerfAckForErrorMsgsRecdBySer ver	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.1.24 This value identifies the Ack for ERROR messages received by the SIP Server. Handshake is complete. Priority: 6-Engineering Info
usSrxSip200OKForUpdateRcvByServ	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.1.74 This value identifies the 200 OKs received for UPDATE messages. The action was successfully received, understood, and accepted. Priority: 6-Engineering Info
usSrxSipPerf200OKforByeMsgsSentBy S erver	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.1.25 This value identifies the 200 OKs for BYE messages sent by the SIP Server. The action was successfully received, understood, and accepted. Priority: 6-Engineering Info
usSrxSip200OKForPrackSentByCli	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.1.75 This value identifies the 200 OKs sent for PRACK messages. The action was successfully received, understood, and accepted. Priority: 6-Engineering Info
usSrxSipPerf200OKForByeMsgsRcvdByC lient	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.1.11 This value identifies the 200 OK for BYE messages received by the SIP Client. Priority: 1-Critical Service Affecting Operator Hints: Monitor for abnormal low

Table 40 SIP Signaling Manager Measurement Parameters (Seite 12 von 15)

Measurement Name	Description Details
usSrxSip200OKForUpdateSentByCli	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.1.76 This value identifies the 200 OKs sent for Update messages. The action was successfully received, understood, and accepted. Priority: 6-Engineering Info
usSrxSipPerf200OKforCancelMsgsSentByServer	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.1.27 This value identifies the 200 OKs for CANCEL messages sent by the SIP Server. The action was successfully received, understood, and accepted. Priority: 6-Engineering Info
usSrxSipAckFor3xxSentByClient	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.1.77 This value identifies the Acks sent in response to 3xx messages. Priority: 6-Engineering Info
usSrxSipPerfCancelMsgsRecdByServer	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.1.28 This value identifies the CANCEL messages Received by the SIP Server. Priority: 1-Critical Service Affecting Operator Hints: Monitor for abnormal high
usSrxSipPerfUACSntNotify	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.1.34 This value identifies the NOTIFY messages sent by the SIP Client. There has been a service session status change. Priority: 2-Major Configuration Problem Operator Hints: Monitor for abnormal high

Table 40 SIP Signaling Manager Measurement Parameters (Seite 13 von 15)

Measurement Name	Description Details
usSrxSipPerf487MsgsSentByServer	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.1.29 This value identifies the 487 (Connection Terminated) messages sent by the SIP Server. Client Error: the request contains bad syntax or cannot be fulfilled at this server. Priority: 1-Critical Service Affecting Operator Hints: Monitor for abnormal high
usSrxSipPerfUACRcv200OKNotify	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.1.35 This value identifies the 200 OKs for NOTIFY messages received by the SIP Client. Service Session Status Change The NOTIFY was successfully received, understood, and accepted. Priority: 6-Engineering Info
usSrxSipPerfAckforCancelMsgsRecdByServer	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.1.30 This value identifies the ACK for CANCEL messages received by the SIP Server. Handshake is complete and a call is going to be setup. Priority: 6-Engineering Info
usSrxSipPerfUACRcv4xx6xxNotify	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.1.36 This value identifies the 4xx-6xx for NOTIFY messages received by the SIP Client. Service Session Status Change. Possible errors are Client, Server, or Global. Priority: 2-Major Configuration Problem Operator Hints: Monitor for abnormal high
usSrxSipPerfUACSntRefer	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.1.31 This value identifies the REFER messages sent by the SIP Client. Priority: 2-Major Configuration Problem Operator Hints: Monitor for abnormal high

Table 40 SIP Signaling Manager Measurement Parameters (Seite 14 von 15)

Measurement Name	Description Details
usSrxSipPerfUACSntSubscribe	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.1.37 This value identifies the SUBSCRIBE messages sent by the SIP Client. Priority: 6-Engineering Info
usSrxSipPerfUACRcv202Accepted	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.1.32 This value identifies the 202 ACCEPTED messages received by the SIP Client. The REFER was successfully received, understood, and accepted. Priority: 6-Engineering Info
usSrxSipPerfUACRcv200OKSubs	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.1.38 This value identifies the 200 OKs for SUBSCRIBE messages received by the SIP Client. The SUBSCRIBE was successfully received, understood, and accepted. Priority: 6-Engineering Info
usSrxSipPerfUACRcv4xx6xxRefer	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.1.33 This value identifies the 4xx-6xx for REFER messages received by the SIP Client. Possible errors are Client, Server, or Global. Priority: 2-Major Configuration Problem Operator Hints: Monitor for abnormal high

Table 40 SIP Signaling Manager Measurement Parameters (Seite 15 von 15)

6.1.1.2 SIP Statistics Per Endpoint

The following SIP Performance Measurements are available per End-Point (e.g. Gateway). Table 41 outlines the available SNMP SIP endpoint performance statistics and measurement parameters.

Measurement Name	Description Details
usSrxSipEPPrfInviteMsSbC	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.3.1.1.5 This value identifies the count of Invite messages sent from Client. Priority:1-Critical Service Affecting Operator Hint: Monitor For Abnormal Low
usSrxSipEPPrf100TryingMsgRbC	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.3.1.1.6 This value identifies the 100 Trying messages Received by the SIP Client. Priority: 6-Engineering Info
usSrxSipEPPrf180RingingMsgRbC.	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.3.1.1.7 This value identifies the 180 Ringing messages Received by the SIP Client. Priority: 6-Engineering Info
usSrxSipEPPrf200OKForInvtMsgRbC	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.3.1.1.8 This value identifies the 200 OK for Invite messages Received by the SIP Client. Priority: 1-Critical Service Affecting Operator Hint: Monitor For Abnormal Low
usSrxSipEPPrf301MsgRbC	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.3.1.1.9 This value identifies the 301 (Moved Permanently) messages Received by the SIP Client. Priority: 2-Major Configuration Problem Operator Hint: Monitor For Abnormal High
usSrxSipEPPrf302MsgRbC	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.3.1.1.10 This value identifies the 302 (Moved Temporarily) messages Received by the SIP Client. Priority: 6-Engineering Info :

Table 41 SIP Signaling Measurements Per Endpoint Parameters (Seite 1 von 13)

Measurement Name	Description Details
usSrxSipEPPrfAckForInvtMsgSbC	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.3.1.1.11 This value identifies the Ack for Invite messages sent by the SIP Client. Priority: 6-Engineering Info :
usSrxSipEPPrfAckForErrorMsgSbC	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.3.1.1.12 This value identifies the Ack For Error messages sent by the SIP Client. Priority: 6-Engineering Info
usSrxSipEPPrfErrorMsgRbC	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.3.1.1.13 This value identifies the Error messages Received by the SIP Client. Priority: 1-Critical Service Affecting Operator Hint: Monitor For Abnormal High
usSrxSipEPPrfByeMsgSbC	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.3.1.1.14 This value identifies the Bye messages Sent by the SIP Client. Priority: 1-Critical Service Affecting Operator Hint: Monitor For Abnormal Low
usSrxSipEPPrf200OKForByeMsgRbC	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.3.1.1.15 This value identifies the 200 OK for Bye messages Received by the SIP Client. Priority: 6-Engineering Info
usSrxSipEPPrfCancelMsgSbC	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.3.1.1.16 This value identifies the Cancel messages Sent by the SIP Client. Priority: 1-Critical Service Affecting Operator Hint: Monitor For Abnormal High

Table 41 SIP Signaling Measurements Per Endpoint Parameters (Seite 2 von 13)

Measurement Name	Description Details
usSrxSipEPPrf200OKforCancMsgRbC	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.3.1.1.17 This value identifies the 200 OK for Cancel messages Received by the SIP Client. Priority: 6-Engineering Info
usSrxSipEPPrf487MsgRbC	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.3.1.1.18 This value identifies the 487 (Request Terminated) messages Received by the SIP Client. Priority: 1-Critical Service Affecting Operator Hint: Monitor For Abnormal High
usSrxSipEPPrfAckForCancMsgSbC	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.3.1.1.19 This value identifies the Ack For Cancel messages Sent by the SIP Client. Priority: 6-Engineering Info
usSrxSipEPPrf200OKfRgstrMsgSbS	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.3.1.1.20 This value identifies the 200 OK for Register messages Sent by the SIP Server. Priority: 6-Engineering Info:
usSrxSipEPPrfRegisterMsgRbS	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.3.1.1.21 This value identifies the Register messages Received by the SIP Server. Priority: 1-Critical Service Affecting Operator Hint: Monitor For Abnormal High& Low
usSrxSipEPPrf100TryingMsgSbS	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.3.1.1.22 This value identifies the 100 Trying messages Sent by the SIP Server. Priority: 6-Engineering Info

Table 41 SIP Signaling Measurements Per Endpoint Parameters (Seite 3 von 13)

Measurement Name	Description Details
usSrxSipEPPrfInviteMsgRbS	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.3.1.1.23 This value identifies the Invite messages Received by the SIP Server. Priority: 1-Critical Service Affecting Operator Hint: Monitor For Abnormal Low
usSrxSipEPPrf180RingingMsgSbS	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.3.1.1.24 This value identifies the 180 Ringing messages Sent by the SIP Server. Priority: 6-Engineering Info
usSrxSipEPPrf200OKforInvtMsgSbS	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.3.1.1.25 This value identifies the 200 OK for Invite messages Sent by the SIP Server. Priority: 1-Critical Service Affecting Operator Hint: Monitor For Abnormal Low
usSrxSipEPPrfAckforInvtMsgRbS	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.3.1.1.26 This value identifies the for Ack messages Received by the SIP Server. Priority: 6-Engineering Info
usSrxSipEPPrfErrorMsgSbS	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.3.1.1.27 This value identifies the Error messages Sent by the SIP Server. Priority: 1-Critical Service Affecting Operator Hint: Monitor For Abnormal High
usSrxSipEPPrfAckForErrorMsgRbS	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.3.1.1.28 This value identifies the Ack for Error messages Received by the SIP Server. Priority: 6-Engineering Info

Table 41 SIP Signaling Measurements Per Endpoint Parameters (Seite 4 von 13)

Measurement Name	Description Details
usSrxSipEPPrf200OKforByeMsgSbS	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.3.1.1.29 This value identifies the 200 OK for Bye messages Sent by the SIP Server. Priority: 6-Engineering Info
usSrxSipEPPrfByeMsgRbS	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.3.1.1.30 This value identifies the Bye messages Received by the SIP Server. Priority: 1-Critical Service Affecting Operator Hint: Monitor For Abnormal Low
usSrxSipEPPrf200OKforCancMsgSbS	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.3.1.1.31 This value identifies the 200 OK for Cancel messages Sent by the SIP Server. Priority: 6-Engineering Info
usSrxSipEPPrfCancMsgRbS	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.3.1.1.32 This value identifies the Cancel messages Received by the SIP Server. Priority: 1-Critical Service Affecting Operator Hint: Monitor For Abnormal High
usSrxSipEPPrf487MsgSbS	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.3.1.1.33 This value identifies the 487 (Connection Terminated) messages Sent by the SIP Server. Priority: 1-Critical Service Affecting Operator Hint: Monitor For Abnormal High
usSrxSipEPPrfAckforCancelMsgRbS	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.3.1.1.34 This value identifies the ACK for Cancel messages Received by the SIP Server. Priority: 6-Engineering Info

Table 41 SIP Signaling Measurements Per Endpoint Parameters (Seite 5 von 13)

Measurement Name	Description Details
usSrxSipEPPrfUACSntRefer	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.3.1.1.35 This value identifies the REFER messages Sent by the SIP Client. Priority: 2-Major Configuration Problem Operator Hint: Monitor For Abnormal High
usSrxSipEPPrfUACRcv202Accepted	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.3.1.1.36 This value identifies the 202 ACCEPTED messages Received by the SIP Client. Priority: 6-Engineering Info
usSrxSipEPPrfUACRcv4xx6xxRefer	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.3.1.1.37 This value identifies the 4xx-6xx for REFER messages Received by the SIP Client. Priority: 2-Major Configuration Problem Operator Hint: Monitor For Abnormal High
usSrxSipEPPrfUACSntNotify	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.3.1.1.38 This value identifies the NOTIFY messages Sent by the SIP Client. Priority: 2-Major Configuration Problem Operator Hint: Monitor For Abnormal High
usSrxSipEPPrfUACRcv200OKNotify	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.3.1.1.39 This value identifies the 200OK for NOTIFY messages Received by the SIP Client. Priority: 6-Engineering Info
usSrxSipEPPrfUACRcv4xx6xxNotify	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.3.1.1.40 This value identifies the 4xx-6xx for NOTIFY messages Received by the SIP Client. Priority: 2-Major Configuration Problem Operator Hint: Monitor For Abnormal High

Table 41 SIP Signaling Measurements Per Endpoint Parameters (Seite 6 von 13)

Measurement Name	Description Details
usSrxSipEPPrfUACSntSubscribe	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.3.1.1.41 This value identifies the SUBSCRIBE messages Sent by the SIP Client. Priority: 6-Engineering Info
usSrxSipEPPrfUACRcv200OKSubs	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.3.1.1.42 This value identifies the 200OK for SUBSCRIBE messages Received by the SIP Client. Priority: 6-Engineering Info
usSrxSipEPPrfUACRcv4xx6xxSubs	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.3.1.1.43 This value identifies the 4xx-6xx for SUBSCRIBE messages Received by the SIP Server. Priority: 2-Major Configuration Problem Operator Hint: Monitor For Abnormal High
usSrxSipEPPrfUACSntInfo	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.3.1.1.44 This value identifies the INFO messages Sent by the SIP Client. Priority: 6-Engineering Info
usSrxSipEPPrfUACRcv200OKInfo	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.3.1.1.45 This value identifies the 200OK for INFO messages Received by the SIP Client. Priority: 6-Engineering Info
usSrxSipEPPrfUACRcv300Multiple	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.3.1.1.46 This value identifies the 300 MULTIPLE CHOICES messages Received by the SIP Client. Priority: 2-Major Configuration Problem Operator Hint: Monitor For Abnormal High

Table 41 SIP Signaling Measurements Per Endpoint Parameters (Seite 7 von 13)

Measurement Name	Description Details
usSrxSipEPPrfUASRcvRefer	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.3.1.1.47 This value identifies the REFER messages Received by the SIP Server. Priority: 2-Major Configuration Problem Operator Hint: Monitor For Abnormal High
usSrxSipEPPrfUASSnt202Accepted	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.3.1.1.48 This value identifies the 202 ACCEPTED messages Sent by the SIP Server. Priority: 6-Engineering Info
usSrxSipEPPrfUASSnt4xx6xxRefer	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.3.1.1.49 This value identifies the 4xx-6xx for REFER messages Sent by the SIP Server. Priority: 2-Major Configuration Problem Operator Hint: Monitor For Abnormal High
usSrxSipEPPrfUASRcvNotify.	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.3.1.1.50 This value identifies the NOTIFY messages Received by the SIP Server Priority: 2-Major Configuration Problem Operator Hint: Monitor For Abnormal High
usSrxSipEPPrfUASSnt200OKNotify	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.3.1.1.51 This value identifies the 200OK for NOTIFY messages Sent by the SIP Server. Priority: 6-Engineering Info

Table 41 SIP Signaling Measurements Per Endpoint Parameters (Seite 8 von 13)

Measurement Name	Description Details
usSrxSipEPPrfUASSnt4xx6xxNotify	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.3.1.1.52 This value identifies the 4xx-6xx for NOTIFY messages Sent by the SIP Server. Priority: 2-Major Configuration Problem Operator Hint: Monitor For Abnormal High
usSrxSipEPPrfUASRcvSubscribe	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.3.1.1.53 This value identifies the SUBSCRIBE messages Received by the SIP Server. Priority: 6-Engineering Info
usSrxSipEPPrfUASSnt200OKSubs	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.3.1.1.54 This value identifies the 200OK for SUBSCRIBE messages Sent by the SIP Server. Priority: 6-Engineering Info
usSrxSipEPPrfUASSnt4xx6xxSubs	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.3.1.1.55 This value identifies the 4xx-6xx for SUBSCRIBE messages Sent by the SIP Server. Priority: 2-Major Configuration Problem Operator Hint: Monitor For Abnormal High
usSrxSipEPPrfUASRcvInfo	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.3.1.1.56 This value identifies the INFO messages Received by the SIP Server. Priority: 6-Engineering Info
usSrxSipEPPrfUASSnt200OKInfo	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.3.1.1.57 This value identifies the 200OK for INFO messages Sent by the SIP Server. Priority: 6-Engineering Info

Table 41 SIP Signaling Measurements Per Endpoint Parameters (Seite 9 von 13)

Measurement Name	Description Details
usSrxSipEPPrf183MsgRbC	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.3.1.1.58 This value identifies the total 183 messages received. Priority: 6-Engineering Info
usSrxSipEPPrf1xxMsgRbC	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.3.1.1.59 This value identifies the rest of supported 1xx messages received. Priority: 6-Engineering Info
usSrxSipEPPrf2xxMsgRbC.	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.3.1.1.60 This value identifies the rest of supported 2xx messages received Priority: 6-Engineering Info
usSrxSipEPPrf3xxMsgRbC.	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.3.1.1.61 This value identifies the rest of supported 3xx messages received Priority: 2-Major Configuration Problem Operator Hint: Monitor For Abnormal High
usSrxSipEPPrf4xxMsgRbC	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.3.1.1.62 This value identifies the rest of supported 4xx messages received. Priority: 2-Major Configuration Problem Operator Hint: Monitor For Abnormal High
usSrxSipEPPrf5xxMsgRbC	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.3.1.1.63 This value identifies the rest of supported 5xx messages received. Priority: 2-Major Configuration Problem Operator Hint: Monitor For Abnormal High

Table 41 SIP Signaling Measurements Per Endpoint Parameters (Seite 10 von 13)

Measurement Name	Description Details
usSrxSipEPPrf6xxMsgRbC	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.3.1.1.64 This value identifies the rest of supported 6xx messages received. Priority: 1-Critical Service Affecting Operator Hint: Monitor For Abnormal High
usSrxSipEPPrf183MsgSbS	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.3.1.1.65 This value identifies the total 183 messages sent. Priority: 6-Engineering Info
usSrxSipEPPrf1xxMsgSbS	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.3.1.1.66 This value identifies the rest of supported 1xx messages sent. Priority: 6-Engineering Info
usSrxSipEPPrf2xxMsgSbS	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.3.1.1.67 This value identifies the rest of supported 2xx messages sent. Priority: 6-Engineering Info
usSrxSipEPPrf3xxMsgSbS	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.3.1.1.68 This value identifies the rest of supported 3xx messages sent. Priority: 2-Major Configuration Problem Operator Hint: Monitor For Abnormal High
usSrxSipEPPrf4xxMsgSbS	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.3.1.1.69 This value identifies the rest of supported 4xx messages sent. Priority: 2-Major Configuration Problem Operator Hint: Monitor For Abnormal High

Table 41 SIP Signaling Measurements Per Endpoint Parameters (Seite 11 von 13)

Measurement Name	Description Details
usSrxSipEPPrf5xxMsgSbS	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.3.1.1.70 This value identifies the rest of supported 5xx messages sent. Priority: 2-Major Configuration Problem Operator Hint: Monitor For Abnormal High
usSrxSipEPPrf6xxMsgSbS	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.3.1.1.71 This value identifies the rest of supported 6xx messages sent. Priority: 1-Critical Service Affecting Operator Hint: Monitor For Abnormal High
usSrxSipEPPrfNoSupportRbC	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.3.1.1.72 This value identifies the number of unsupported messages received. Priority: 2-Major Configuration Problem Operator Hint: Monitor For Abnormal High
usSrxSipEPPrackMsgRbC	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.3.1.1.73 This value identifies the number of unsupported messages received. Priority: 6-Engineering Info
usSrxSipEPUpdateMsgRbC	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.3.1.1.74 This value identifies the Update messages received. Priority: 6-Engineering Info
usSrxSipEPPrackMsgSbS	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.3.1.1.75 This value identifies the PRACK messages sent. Priority: 6-Engineering Info

Table 41 SIP Signaling Measurements Per Endpoint Parameters (Seite 12 von 13)

Measurement Name	Description Details
usSrxSipEPUpdateMsgSbS	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.3.1.1.76 This value identifies the Update messages sent. Priority: 6-Engineering Info
usSrxSipEP200OKForPrackRbS	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.3.1.1.77 This value identifies the 200OKs received for PRACK messages. Priority: 6-Engineering Info Operator Hint:
usSrxSipEP200OKForUpdateRbS	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.3.1.1.78 This value identifies the 200OKs received for Update messages. Priority: 6-Engineering Info
usSrxSipEP200OKForPrackSbC	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.3.1.1.79 This value identifies the 200OKs sent for PRACK messages. Priority: 6-Engineering Info
usSrxSipEP200OKForUpdateSbC	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.3.1.1.80 This value identifies the 200OKs sent for Update messages. Priority: 6-Engineering Info
usSrxSipEpAckFor3xxSbC	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.3.1.1.81 This value identifies the Acks sent in response to 3xx messages. Priority: 6-Engineering Info
usSrxSipEPPrfUsage	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.2.1.3.1.1.82 This value identifies the local call durations for the EP in CCS. Priority: 6-Engineering Info

Table 41 SIP Signaling Measurements Per Endpoint Parameters (Seite 13 von 13)

6.1.2 MGCP Signaling Manager Statistics

Attention: The applicable SNMP MIB is **us_srxMgcp.mib**.

Table 42 outlines the available SNMP MGCP performance statistics and measurement parameters. Note that every statistics counter will be shared by all instances of the MGCP process.

Measurement Name	Description Details
usSrxMgcpCreateConnSentCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.3.1.1.1 This object refers to the counter of total CREATE CONNECTION messages sent. Priority: 1-Critical Service Affecting Operator Hints: Monitor for abnormal low
usSrxMgcpCreateConnAckReceivedCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.3.1.1.2 This object refers to the counter of total CREATE CONNECTION acknowledgements received. Priority: 6-Engineering Info Operator Hints: Monitor for abnormal low
usSrxMgcpModifyConnSentCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.3.1.1.3 This object refers to the counter of total MODIFY CONNECCTION messages sent. Priority: 6-Engineering Info
usSrxMgcpModifyConnAckReceivedCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.3.1.1.4 This object refers to the counter of total MODIFY CONNECTION acknowledgements received. Priority: 6-Engineering Info

Table 42 MGCP Signaling Manager Performance Counters (Seite 1 von 14)

Measurement Name	Description Details
usSrxMgcpDeleteConnSentCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.3.1.1.5 This object refers to the counter of total DELETE CONNECTION messages sent. Priority: 1-Critical Service Affecting Operator Hints: Monitor for abnormal low
usSrxMgcpDeleteConnAckReceivedCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.3.1.1.6 This object refers to the counter of total DELETE CONNECTION acknowledgements received. Priority: 1-Critical Service Affecting Operator Hints: Monitor for abnormal low
usSrxMgcpDeleteConnReceivedCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.3.1.1.7 This object refers to the counter of total DELETE CONNECTION messages received. Priority: 1-Critical Service Affecting Operator Hints: Monitor for abnormal high
usSrxMgcpDeleteConnAckSentCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.3.1.1.8 This object refers to the counter of total DELETE CONNECTION acknowledgements sent. Priority: 6-Engineering Info
usSrxMgcpRestartInProgressReceivedCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.3.1.1.9 This object refers to the counter of total ‘Gateway Restart in Progress’ messages received. Priority: 1-Critical Service Affecting Operator Hints: Monitor for abnormal high

Table 42 MGCP Signaling Manager Performance Counters (Seite 2 von 14)

Measurement Name	Description Details
usSrxMgcpRestartInProgressAckSent Counter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.3.1.1.10 This object refers to the counter of total 'Gateway Restart in Progress' acknowledgements sent. Priority: 6-Engineering Info
usSrxMgcpNotifyRequestSentCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.3.1.1.11 This object refers to the counter of total NOTIFY REQUEST messages sent. Priority: 6-Engineering Info
usSrxMgcpNotifyRequestAckReceived Counter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.3.1.1.12 This object refers to the counter of total NOTIFY REQUEST acknowledgements received. Priority: 6-Engineering Info
usSrxMgcpNotifyReceivedCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.3.1.1.13 This object refers to the counter of total NOTIFY messages received. Priority: 6-Engineering Info
usSrxMgcpNotifyAckSentCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.3.1.1.14 This object refers to the counter of total NOTIFY acknowledgements sent. Priority: 6-Engineering Info
usSrxMgcpAuditEndPointSentCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.3.1.1.15 This object refers to the counter of total AUDIT ENDPOINT messages sent. Priority: 6-Engineering Info

Table 42 MGCP Signaling Manager Performance Counters (Seite 3 von 14)

Measurement Name	Description Details
usSrxMgcpAuditEndPointAckReceived Counter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.3.1.1.16 This object refers to the counter of total AUDIT ENDPOINT acknowledgements received. Priority: 6-Engineering Info
usSrxMgcpAuditConnSentCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.3.1.1.17 This object refers to the counter of total AUDIT CONNECTION messages sent. Priority: 6-Engineering Info
usSrxMgcpAuditConnAckReceivedCou nter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.3.1.1.18 This object refers to the counter of total AUDIT CONNECTION acknowledgements received. Priority: 6-Engineering Info
usSrxMgcpEndPointConfigSentCounte r	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.3.1.1.19 This object refers to the counter of total ENDPOINT CONFIG messages sent. Priority: 6-Engineering Info
usSrxMgcpEndPointConfigAckReceive dCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.3.1.1.20 This object refers to the counter of total ENDPOINT CONFIG acknowledgements received. Priority: 6-Engineering Info
usSrxMgcpMTATransientErrorCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.3.1.1.21 This object refers to the counter of MTA Transient Errors with ranges from 400-499. Priority: 3-Minor Problem Operator Hints: Monitor for abnormal high

Table 42 MGCP Signaling Manager Performance Counters (Seite 4 von 14)

Measurement Name	Description Details
usSrxMgcp500ErrorCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.3.1.1.22 This object refers to the counter of MGCP return code 500: The transaction could not be executed, because the endpoint is unknown. There has been a provisioning mismatch. Priority: 2-Major Configuration Problem Operator Hints: Monitor for abnormal high
usSrxMgcp501ErrorCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.3.1.1.23 This object refers to the counter of MGCP return code 501:The transaction could not be executed, because the endpoint is not ready. This includes the case where the endpoint is out-of-service. Priority: 1-Critical Service Affecting Operator Hints: Monitor for abnormal high
usSrxMgcp502ErrorCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.3.1.1.24 This object refers to the counter of MGCP return code 502: The transaction could not be executed because the endpoint does not have sufficient resources (permanent condition). Priority: 1-Critical Service Affecting Operator Hints: Monitor for abnormal high
usSrxMgcp503ErrorCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.3.1.1.25 This object refers to the counter of MGCP return code 503: Wildcard too complicated. There has been a provisioning mismatch. Priority: 2-Major Configuration Problem Operator Hints: Monitor for abnormal high
usSrxMgcp504ErrorCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.3.1.1.26 This object refers to the counter of MGCP return code 504: Unknown or unsupported command. There has been a provisioning mismatch. Priority: 2-Major Configuration Problem Operator Hints: Monitor for abnormal high

Table 42 MGCP Signaling Manager Performance Counters (Seite 5 von 14)

Measurement Name	Description Details
usSrxMgcp505ErrorCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.3.1.1.27 This object refers to the counter of MGCP return code 505: Unsupported RemoteConnectionDescriptor. This **should** be used when one or more mandatory parameters or values in the RemoteConnectionDescriptor is not supported. Priority: 2-Major Configuration Problem Operator Hints: Monitor for abnormal high
usSrxMgcp506ErrorCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.3.1.1.28 This object refers to the counter of MGCP return code 506: Unable to satisfy both LocalConnectionOptions and RemoteConnectionDescriptor. This **should** be used when the LocalConnectionOptions and RemoteConnectionDescriptor contain one or more mandatory parameters or values that conflict with each other and/or cannot be supported at the same time (except for codec negotiation failure - see error code 534). Priority: 2-Major Configuration Problem Operator Hints: Monitor for abnormal high
usSrxMgcp507ErrorCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.3.1.1.29 This object refers to the counter of MGCP return code 507:Unsupported functionality. Some unspecified functionality required to carry out the command is not supported. There has been a provisioning mismatch. NOTE: Several other error codes have been defined for specific areas of unsupported functionality (e.g. 508, 511, etc.), and this error code should only be used if another more specific error code for the unsupported functionality is not available. Priority: 2-Major Configuration Problem Operator Hints: Monitor for abnormal high
usSrxMgcp508ErrorCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.3.1.1.30 This object refers to the counter of MGCP return code 508: Unknown or unsupported quarantine handling. There has been a provisioning mismatch. Priority: 2-Major Configuration Problem Operator Hints: Monitor for abnormal high

Table 42 MGCP Signaling Manager Performance Counters (Seite 6 von 14)

Measurement Name	Description Details
usSrxMgcp509ErrorCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.3.1.1.31 This object refers to the counter of MGCP return code 509: Error in RemoteConnectionDescriptor. This **should** be used when there is a syntax or semantic error in the RemoteConnectionDescriptor." Priority: 2-Major Configuration Problem Operator Hints: Monitor for abnormal high
usSrxMgcp510ErrorCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.3.1.1.32 This object refers to the counter of MGCP return code 510: The transaction could not be executed, because some unspecified protocol error was detected. There has been a provisioning mismatch. Automatic recovery from such an error will be very difficult; therefore, this code should only be used as a last resort. Priority: 2-Major Configuration Problem Operator Hints: Monitor for abnormal high
usSrxMgcp511ErrorCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.3.1.1.33 This object refers to the counter of MGCP return code 511:The transaction could not be executed because the command contained an unrecognized extension. There has been a provisioning mismatch. This code should be used for unsupported critical parameter extensions. Priority: 2-Major Configuration Problem Operator Hints: Monitor for abnormal high
usSrxMgcp512ErrorCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.3.1.1.34 This object refers to the counter of MGCP return code 512: The transaction could not be executed because the gateway is not equipped to detect one of the requested events. Priority: 2-Major Configuration Problem Operator Hints: Monitor for abnormal high

Table 42 MGCP Signaling Manager Performance Counters (Seite 7 von 14)

Measurement Name	Description Details
usSrxMgcp513ErrorCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.3.1.1.35 This object refers to the counter of MGCP return code 513: The transaction could not be executed, because the gateway is not equipped to generate one of the requested signals. Priority: 2-Major Configuration Problem Operator Hints: Monitor for abnormal high
usSrxMgcp514ErrorCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.3.1.1.36 This object refers to the counter of MGCP return code 514: The transaction could not be executed because the gateway cannot send the specified announcement. There has been a provisioning mismatch. Priority: 2-Major Configuration Problem Operator Hints: Monitor for abnormal high
usSrxMgcp515ErrorCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.3.1.1.37 This object refers to the counter of MGCP return code 515: The transaction refers to an incorrect connection-id (may have been already deleted). There has been a state mismatch. Priority: 3-Minor Problem Operator Hints: Monitor for abnormal high
usSrxMgcp516ErrorCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.3.1.1.38 This object refers to the counter of MGCP return code 516: The transaction refers to an unknown caller-id, or the caller-id supplied is incorrect. There has been a state mismatch. Priority: 3-Minor Problem Operator Hints: Monitor for abnormal high

Table 42 MGCP Signaling Manager Performance Counters (Seite 8 von 14)

Measurement Name	Description Details
usSrxMgcp517ErrorCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.3.1.1.39 This object refers to the counter of MGCP return code 517: Unsupported or invalid mode. There has been a provisioning mismatch. Priority: 2-Major Configuration Problem Operator Hints: Monitor for abnormal high
usSrxMgcp518ErrorCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.3.1.1.40 This object refers to the counter of MGCP return code 518: Unsupported or unknown package. There has been a provisioning mismatch. It is recommended to include a PackageList parameter with the list of supported packages in the response, especially if the response is generated by the Call Agent. Priority: 2-Major Configuration Problem Operator Hints: Monitor for abnormal high
usSrxMgcp519ErrorCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.3.1.1.41 This object refers to the counter of MGCP return code 519: Endpoint does not have a digit map. There has been a state mismatch. Priority: 3-Minor Problem Operator Hints: Monitor for abnormal high
usSrxMgcp520ErrorCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.3.1.1.42 This object refers to the counter of MGCP return code 520: The transaction could not be executed because the endpoint is 'restarting'. There has been a failure in service. In most cases this would be a transient error, in which case, error code 405 should be used instead. The error code is only included here for backwards compatibility. Priority: 1-Critical Service Affecting Operator Hints: Monitor for abnormal high

Table 42 MGCP Signaling Manager Performance Counters (Seite 9 von 14)

Measurement Name	Description Details
usSrxMgcp521ErrorCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.3.1.1.43 This object refers to the counter of MGCP return code 521: Endpoint redirected to another Call Agent. The associated redirection behavior is only well-defined when this response is issued for a RestartInProgress command. Priority: 2-Major Configuration Problem Operator Hints: Monitor for abnormal high
usSrxMgcp522ErrorCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.3.1.1.44 This object refers to the counter of MGCP return code 522: No such event or signal. There has been a provisioning mismatch. The request referred to an event or signal that is not defined in the relevant package (which could be the default package). Priority: 2-Major Configuration Problem Operator Hints: Monitor for abnormal high
usSrxMgcp523ErrorCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.3.1.1.45 This object refers to the counter of MGCP return code 523: Unknown action or illegal combination of actions. There has been a provisioning mismatch. Priority: 2-Major Configuration Problem Operator Hints: Monitor for abnormal high
usSrxMgcp524ErrorCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.3.1.1.46 This object refers to the counter of MGCP return code 524: Internal inconsistency in LocalConnectionOptions. There has been a provisioning mismatch. Priority: 2-Major Configuration Problem Operator Hints: Monitor for abnormal high

Table 42 MGCP Signaling Manager Performance Counters (Seite 10 von 14)

Measurement Name	Description Details
usSrxMgcp525ErrorCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.3.1.1.47 This object refers to the counter of MGCP return code 525: Unknown extension in LocalConnectionOptions. There has been a provisioning mismatch. This code should be used for unsupported mandatory vendor extensions. Priority: 2-Major Configuration Problem Operator Hints: Monitor for abnormal high
usSrxMgcp526ErrorCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.3.1.1.48 This object refers to the counter of MGCP return code 526: Insufficient bandwidth. There has been a provisioning mismatch. In cases where this is a transient error, error code 404 should be used instead. Priority: 2-Major Configuration Problem Operator Hints: Monitor for abnormal high
usSrxMgcp527ErrorCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.3.1.1.49 This object refers to the counter of MGCP return code 527: Missing RemoteConnectionDescriptor. Remote Descriptor Error, or State MisMatch Priority: 3-Minor Problem Operator Hints: Monitor for abnormal high
usSrxMgcp528ErrorCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.3.1.1.50 This object refers to the counter of MGCP return code 528: Incompatible protocol version. There has been a provisioning mismatch. Priority: 2-Major Configuration Problem Operator Hints: Monitor for abnormal high

Table 42 MGCP Signaling Manager Performance Counters (Seite 11 von 14)

Measurement Name	Description Details
usSrxMgcp529ErrorCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.3.1.1.51 This object refers to the counter of MGCP return code 529: Internal hardware failure. There has been a service failure. Priority: 1-Critical Service Affecting Operator Hints: Monitor for abnormal high
usSrxMgcp530ErrorCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.3.1.1.52 This object refers to the counter of MGCP return code 530: CAS signaling protocol error.
usSrxMgcp531ErrorCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.3.1.1.53 This object refers to the counter of MGCP return code 531: Failure of a grouping of trunks (e.g., facility failure). There has been a service failure. Priority: 1-Critical Service Affecting Operator Hints: Monitor for abnormal high
usSrxMgcp532ErrorCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.3.1.1.54 This object refers to the counter of MGCP return code 532: Unsupported value(s) in LocalConnectionOptions. There has been a provisioning mismatch. Priority: 2-Major Configuration Problem Operator Hints: Monitor for abnormal high
usSrxMgcp533ErrorCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.3.1.1.55 This object refers to the counter of MGCP return code 533: Response too large. Likely to occur only in the case of an audit Priority: 6-Engineering Info

Table 42 MGCP Signaling Manager Performance Counters (Seite 12 von 14)

Measurement Name	Description Details
usSrxMgcp534ErrorCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.3.1.1.56 This object refers to the counter of MGCP return code 534: Codec negotiation failure. There has been a provisioning mismatch. Priority: 2-Major Configuration Problem Operator Hints: Monitor for abnormal high
usSrxMgcp535ErrorCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.3.1.1.57 This object refers to the counter of MGCP return code 535: Packetization period not supported. Normally this error should not be generated Priority: 6-Engineering Info
usSrxMgcp536ErrorCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.3.1.1.58 This object refers to the counter of MGCP return code 536: Unknown or unsupported RestartMethod. There has been a provisioning mismatch. Priority: 2-Major Configuration Problem Operator Hints: Monitor for abnormal high
usSrxMgcp537ErrorCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.3.1.1.59 This object refers to the counter of MGCP return code 537: Unknown or unsupported digit map extension. There has been a provisioning mismatch. Priority: 2-Major Configuration Problem Operator Hints: Monitor for abnormal high
usSrxMgcp538ErrorCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.3.1.1.60 This object refers to the counter of MGCP return code 538: Event/ signal parameter error. Response valid for NotificationRequest Priority: 6-Engineering Info

Table 42 MGCP Signaling Manager Performance Counters (Seite 13 von 14)

Measurement Name	Description Details
usSrxMgcp539ErrorCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.3.1.1.61 This object refers to the counter of MGCP return code 539: Invalid or unsupported command parameter. There has been a provisioning mismatch. This code should only be used when the parameter is neither a package nor a vendor extension parameter. Priority: 2-Major Configuration Problem Operator Hints: Monitor for abnormal high
usSrxMgcp540ErrorCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.3.1.1.62 This object refers to the counter of MGCP return code 540: Per endpoint connection limit exceeded. State Mismatch Priority: 3-Minor Problem Operator Hints: Monitor for abnormal high
usSrxMgcp541ErrorCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.3.1.1.63 This object refers to the counter of MGCP return code 541: Invalid or unsupported LocalConnectionOptions. There has been a provisioning mismatch. This code SHOULD only be used when the LocalConnectionOptions is neither a package nor a vendor extension LocalConnectionOptions. Priority: 2-Major Configuration Problem Operator Hints: Monitor for abnormal high

Table 42 MGCP Signaling Manager Performance Counters (Seite 14 von 14)

6.1.3 UCE Statistics

Attention: The applicable SNMP MIB is **us_srxUce.mib**.

Table 43 outlines the available SNMP UCE performance statistics and measurement parameters. These statistics include interworked, completed and aborted calls.

Measurement Name	Description Details
usSrxUceIncomingHalfCallsCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.1.1.1.1.1 This object refers to the total number of incoming half calls. Priority: 6-Engineering Info
usSrxUceForwardReleaseCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.1.1.1.1.2 This object refers to the total number of Forward Release calls. Priority: 6-Engineering Info
usSrxUceOutgoingHalfCallsCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.1.1.1.1.3 This object refers to the total number of outgoing half calls. Priority: 6-Engineering Info
usSrxUceCallsReachAddrCompleteCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.1.1.1.1.4 This object refers to the total number of calls reaching address completion. Priority: 6-Engineering Info
usSrxUceCallsReachAnswerCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.1.1.1.1.5 This object refers to the total number of calls reaching answering. Priority: 6-Engineering Info
usSrxUceBackwardReleaseCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.1.1.1.1.6 This object refers to the total number of backward release calls. Priority: 6-Engineering Info

Table 43 UCE Performance Measurement Parameters (Seite 1 von 3)

Measurement Name	Description Details
usSrxUceTotalReleaseCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.1.1.1.7 This object refers to the total number of total release calls. Priority: 6-Engineering Info
usSrxUceAbortForUnavailableResourcesCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.1.1.1.8 This object refers to the total number of abort calls caused by unavailable resources. Priority: 2-Major Configuration Problem Operator Hints: Monitor for abnormal high
usSrxUceAbortForNoRouteAvailableCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.1.1.1.9 This object refers to the total number of abort calls caused by no route availabe. Priority: 2-Major Configuration Problem Operator Hints: Monitor for abnormal high
usSrxUceAbortForNoTrunkAvailableCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.1.1.1.10 This object refers to the total number of abort calls caused by no trunk available.
usSrxUceAbortForGatewayResourceUnavailableCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.1.1.1.11 This object refers to the total number of abort calls caused by gateway resources unavailable. Priority: 2-Major Configuration Problem Operator Hints: Monitor for abnormal high
usSrxUceAbortForCodecUnavailableCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.1.1.1.12 This object refers to the total number of abort calls caused by codec unavailable. Priority: 2-Major Configuration Problem Operator Hints: Monitor for abnormal high

Table 43 UCE Performance Measurement Parameters (Seite 2 von 3)

Measurement Name	Description Details
usSrxUceAbortForAuthFailCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.1.1.1.1.13 This object refers to the total number of abort calls caused by authorization failure. Priority: 2-Major Configuration Problem Operator Hints: Monitor for abnormal high
usSrxUceAbortForMiscErrorCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.1.1.1.1.14 This object refers to the total number of abort calls because of other misc error. Priority: 2-Major Configuration Problem Operator Hints: Monitor for abnormal high
usSrxUceTermToTreatmentCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.1.1.1.1.15 This object refers to the total number of terminated calls to treatment. Priority: 6-Engineering Info
usSrxUceSipToMgcpCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.1.1.1.2.1 This object refers to the total number of SIP to MGCP calls. Priority: 1-Critical Service Affecting Operator Hints: Monitor for abnormal low
usSrxUceSipToSipCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.1.1.1.2.2 This object refers to the total number of SIP to SIP calls. Priority: 1-Critical Service Affecting Operator Hints: Monitor for abnormal low

Table 43 UCE Performance Measurement Parameters (Seite 3 von 3)

6.1.4 Service Statistics

Service statistics focus on traffic and maintenance measurements. Every statistics counter is shared by all instances of the Services process.

Attention: The applicable SNMP MIB for all Service Statistics is **us_srxService.mib**.

6.1.4.1 Call Forwarding Measurements

Table 44 describes the Call Forwarding measurement parameters.

Measurement Name	Description Details
usSrxServiceCFActToAllowedNumber Counter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.1.1 This object refers to the total number of times a subscriber of the feature attempts to activate call forwarding. An activation attempt is defined as dialing the activation code plus a complete legitimate telephone number. Priority: 6-Engineering Info.
usSrxServiceCFActToNonAllowedNum berCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.1.2 This object refers to the total number of times a subscriber of the feature attempts to activate call forwarding but dials a non-allowed number. Priority: 6-Engineering Info.
usSrxServiceCFFirstAttemptSuccessC ounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.1.3 This object refers to the total number of activation successfully completed by answer of remote station. Priority: 6-Engineering Info.

Table 44 Call Forwarding Performance Traffic Measurement (Seite 1 von 4)

Measurement Name	Description Details
usSrxServiceCFSecondAttemptSuccessCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.1.4 This object refers to the total number of activation successfully completed by a second activation procedure. Priority: 6-Engineering Info.
usSrxServiceCFCFVOccuredCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.1.5 This object refers to the total number of times call forwarding occurs for the Call Forwarding Variable Feature. Priority: 6-Engineering Info.
usSrxServiceCFCFBLOccuredCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.1.6 This object refers to the total number of times call forwarding occurs for the Call Forwarding Busy feature. Priority: 6-Engineering Info.
usSrxServiceCFCFDAOccuredCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.1.7 This object refers to the total number of times Call Forwarding occurs for the Call Forwarding No Reply feature. Priority: 6-Engineering Info.
usSrxServiceSCFServAccCdDialedCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.1.8 This object refers to the total number of times the Call Forwarding Access Code is dialed. Priority: 6-Engineering Info.
usSrxServiceSCFFeatActivatedCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.1.9 This object refers to the total number of times the Call Forwarding Feature is activated to a remote DN. Priority: 6-Engineering Info.

Table 44 Call Forwarding Performance Traffic Measurement (Seite 2 von 4)

Measurement Name	Description Details
usSrxServiceSCFOccurredCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.1.10 This object refers to the total number of forwardings that occur due to the Call Forwarding feature. Priority: 6-Engineering Info.
usSrxServiceSCFFailedCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.1.11 This object refers to the total number of forwarding attempts that fail. Priority: 6-Engineering Info
usSrxServiceRCFCallsOfferedCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.1.12 This object refers to the total number of times calls are 'offered' to be forwarded to the RCF remote DN. Before forwarding a call to the RCF remote DN, a check is made to see if the customer-specified limit of simultaneous calls has been reached. If this limit has been reached, the calling party shall be given busy tone from the base switching office. Priority: 6-Engineering Info
usSrxServiceRCFCallsForwardedCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.1.13 This object refers to the total number of times calls are forwarded to the RCF remote DN. Priority: 6-Engineering Info
usSrxServiceRCFCallsOverflowCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.1.14 This object refers to the total number of times the calling parties are given busy tone from the base switching office in response to exceeding the customer-specified limit of simultaneous calls. Priority: 6-Engineering Info

Table 44 Call Forwarding Performance Traffic Measurement (Seite 3 von 4)

Measurement Name	Description Details
usSrxServiceSCFScrnEditCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.1.15 This object refers to the total number of times the Selective Call Forwarding Screen Editing Service is accessed. Priority: 6-Engineering Info
usSrxServiceSCFCallsFwdedCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.1.16 This object refers to the total number of forwardings that occur due to the Selective Call Forwarding feature. Priority: 6-Engineering Info
usSrxServiceSCFActvRemoteDNCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.1.17 This object refers to the total number of times the Selective Call Forwarding feature activates the Remote DN. Priority: 6-Engineering Info
usSrxServiceSCFResUnavilCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.1.18 This object refers to the total number of times a customer could not activate SCF due to unavailable resources on the OpenScape Voice system. Priority: 6-Engineering Info
usSrxServiceCFVoiceMailCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.1.19 This object refers to the total number of times a customer's call is forwarded to Voice Mail. Priority: 6-Engineering Info

Table 44 Call Forwarding Performance Traffic Measurement (Seite 4 von 4)

6.1.4.2 Calling Identity Delivery Measurements

Attention: The applicable SNMP MIB for all Service Statistics is **us_srxService.mib**.

Table 45 describes the Callling Identity Delivery measurement parameters.

Measurement Name	Description Details
usSrxServiceCIDDNToCalledCPECounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.2.1 This object refers to the total number of times a calling party's directory number is delivered to a subscriber with the Calling Number Delivery Service. Priority: 6-Engineering Info
usSrxServiceCIDAnonymousDNToCalledCPECounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.2.2 This object refers to the total number of times a Private Number indication is delivered to a subscriber with the Calling Number Delivery Service. Priority: 6-Engineering Info
usSrxServiceCIDUnavailDNToCalledCPECounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.2.3 This object refers to the total number of times an out of area/ unavailable indication is delivered to a subscriber with the Calling Number Delivery Service. Priority: 6-Engineering Info
usSrxServiceCIDCNDActivateBySubscriberCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.2.4 This object refers to the total number of times the Calling Number Delivery (CND) feature is activated by a subscriber with the Usage Sensitive version of the feature. Priority: 6-Engineering Info
usSrxServiceCIDCNDDeactivateBySubscriberCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.2.5 This object refers to the total number of times the Calling Number Delivery feature is deactivated by a subscriber with the Usage Sensitive version of the feature. Priority: 6-Engineering Info

Table 45 Calling Identity Delivery Traffic Measurements (Seite 1 von 4)

Measurement Name	Description Details
usSrxServiceCIDCallingNameToCalled CPECounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.2.6 This object refers to the total number of times a calling party's name is delivered to a subscriber with the Calling Name Delivery Service. Priority: 6-Engineering Info
usSrxServiceCIDAnonymousNameToC alledCPECounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.2.7 This object refers to the total number of times an Anonymous Name indication is delivered to a subscriber with the Calling Name Delivery Service. Priority: 6-Engineering Info
usSrxServiceCIDUnavailNameToCalle dCPECounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.2.8 This object refers to the total number of times an out of area/ unavailable name indication is delivered to a subscriber with the Calling Name Delivery Service. Priority: 6-Engineering Info
usSrxServiceCIDTCAPNameQueryCou nter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.2.9 This object refers to the total number of times a TCAP Name Query is sent to the SCP. Priority: 6-Engineering Info
usSrxServiceCIDTCAPNameQueryTim eoutCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.2.10 This object refers to the total number of timeouts that occured while the SRX was waiting for the response from the SCP for a Calling Name Query. Priority: 6-Engineering Info

Table 45 Calling Identity Delivery Traffic Measurements (Seite 2 von 4)

Measurement Name	Description Details
usSrxServiceCIDCNDBlockingActivate Counter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.2.11 This object refers to the total number of times the Calling Number Delivery Blocking feature was activated due to subscriber dialing the Service Access Code for the feature. Priority: 6-Engineering Info
usSrxServiceCIDCNDBlockingActMad eDNPublicCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.2.12 This object refers to the total number of times the Calling Number Delivery Blocking feature Activation made the DN public. Priority: 6-Engineering Info
usSrxServiceCIDCNDBlockingActMad eDNPrivateCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.2.13 This object refers to the total number of times the Calling Number Delivery Blocking feature Activation made the DN private. Priority: 6-Engineering Info
usSrxServiceCIDCallingNameDelivery BlockingActCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.2.14 This object refers to the total number of times the Calling Name Delivery Blocking feature was activated due to subscriber dialing the Service Access Code for the feature. Priority: 6-Engineering Info
usSrxServiceCIDCIDSDeliveryActCou nter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.2.15 This object refers to the total number of times the Calling Identity Delivery and Suppression's (CIDS) Delivery Feature was activated due to subscriber dialing the Service Access Code for the feature. Priority: 6-Engineering Info

Table 45 Calling Identity Delivery Traffic Measurements (Seite 3 von 4)

Measurement Name	Description Details
usSrxServiceCIDCIDSSuppressionAct Counter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.2.16 This object refers to the total number of times the Calling Identity Delivery and Suppression's (CIDS) Suppression Feature was activated due to subscriber dialing the Service Access Code for the feature. Priority: 6-Engineering Info

Table 45 Calling Identity Delivery Traffic Measurements (Seite 4 von 4)

6.1.4.3 Anonymous Call Rejection Measurements

Attention: The applicable SNMP MIB for all Service Statistics is **us_srxService.mib**.

Table 46 describes the Anonymous Call Rejection measurement parameters.

Measurement Name	Description Details
usSrxServiceACRActBySubscriberCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.3.1 This object refers to the total number of times the ACR feature was activated due to subscriber dialing the Service Access Code for the feature. Priority: 6-Engineering Info
usSrxServiceACRDeactBySubscriberCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.3.2 This object refers to the total number of times the ACR feature was deactivated due to subscriber dialing the Service Access Code for the feature. Priority: 6-Engineering Info
usSrxServiceACRNotActDueToResourceUnavailCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.3.3 This object refers to the total number of times a customer could not activate ACR due to unavailable resources on the SRX. Priority: 6-Engineering Info
usSrxServiceACRNotDeactDueToResourceUnavailCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.3.4 This object refers to the total number of times a customer could not deactivate ACR due to unavailable resources on the SRX. Priority: 6-Engineering Info

Table 46 Anonymous Call Rejection Traffic Measurements (Seite 1 von 3)

Measurement Name	Description Details
usSrxServiceACRCallToDenialAnnouncCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.3.5 This object refers to the total number of times a call was routed to the ACR Denial Announcement. Priority: 6-Engineering Info
usSrxServiceACRDenialAnnounceUnavailCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.3.6 This object refers to the total number of times the ACR Denial Announcement facility is unavailable. Priority: 6-Engineering Info
usSrxServiceACRActConfirmAnnounceUnavailCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.3.7 This object refers to the total number of times the ACR Activation Confirmation Announcement facility is unavailable. Priority: 6-Engineering Info
usSrxServiceACRDeactConfirmAnnounceUnavailCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.3.8 This object refers to the total number of times the ACR Deactivation Confirmation Announcement facility is unavailable. Priority: 6-Engineering Info
usSrxServiceEACRNotActDueToResUnavailCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.3.9 This object refers to the total number of times Enhanced Anonymous Call Rejection (EACR) is not activated due to unavailability of resources. Priority: 6-Engineering Info
usSrxServiceEACRNotDeactDueToResUnavailCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.3.10 This object refers to the total number of times Enhanced Anonymous Call Rejection (EACR) is not deactivated because of unavailability of resources. Priority: 6-Engineering Info

Table 46 Anonymous Call Rejection Traffic Measurements (Seite 2 von 3)

Measurement Name	Description Details
usSrxServiceEACRActConfirmAnnouncementUnavailCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.3.11 This object refers to the total number of times the EACR Activation Confirmation Announcement facility is unavailable. Priority: 6-Engineering Info
usSrxServiceEACRDeactConfirmAnnounceUnavailCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.3.12 This object refers to the total number of times the EACR Deactivation Confirmation Announcement facility is unavailable. Priority: 6-Engineering Info
usSrxServiceEACRActBySubscriberCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.3.13 This object refers to the total number of times the EACR feature was activated due to subscriber dialing the Service Access Code for the feature. Priority: 6-Engineering Info
usSrxServiceEACRDeactBySubscriberCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.3.14 This object refers to the total number of times the EACR feature was deactivated due to subscriber dialing the Service Access Code for the feature. Priority: 6-Engineering Info

Table 46 Anonymous Call Rejection Traffic Measurements (Seite 3 von 3)

6.1.4.4 Speed Calling Measurements

Attention: The applicable SNMP MIB for all Service Statistics is **us_srxService.mib**.

Table 47 describes the Speed Calling measurement parameters.

Measurement Name	Description Details
usSrxServiceSCOneDigitCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.4.1 This object refers to the total number of times that customers place calls to a repertory of frequently called numbers by dialing a 1-digit speed calling code. Eight numbers(2 through 9) can be placed in the list for non-business group users and six numbers (2 through 7) for Business Group customers. Priority: 6-Engineering Info
usSrxServiceSCTwoDigitCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.4.2 This object refers to the total number of times that customers place calls to a repertory of 30 frequently called numbers by dialing the 2-digit speed calling code (20 through 49). Priority: 6-Engineering Info
usSrxServiceSCCCSCSuccessCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.4.3 This object refers to the total number of times that Customer-Changeable Speed Calling (CCSC) customers successfully dial a change speed calling list access code and a new telephone number to assign their own speed calling codes directly and immediately from their own telephone. The CCSC feature is available for 1-digit and/or 2-digit speed calling list owners. Priority: 6-Engineering Info

Table 47 Speed Calling Traffic Measurements

6.1.4.5 Screen List Editing Measurements

Attention: The applicable SNMP MIB for all Service Statistics is **us_srxService.mib**.

Table 48 describes the Speed Calling measurement parameters.

Measurement Name	Description Details
usSrxServiceInvokingSLEAttemptsCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.5.1 This object specifies the peg counts of attempts to invoke Screen List Editing as a result of dialing the access code. The Service is responsible in incrementing this count. Priority: 6-Engineering Info
usSrxServiceInvokingSLESuccessfulCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.5.2 This object provides usage counts of successful innvocations of Screen List Editing as a result of dialing the access code. The Service is responsible in incrementing this count. Priority: 6-Engineering Info
usSrxServiceDeniedSLECounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.5.3 This object provides overflow counts of the number of customers denied access to Screen List Editing as a result of unavailable resources. The Service is responsible in incrementing this count. Priority: 6-Engineering Info

Table 48 Screen List Editing Traffic Measurements

6.1.4.6 Selective Call Acceptance Measurements

Attention: The applicable SNMP MIB for all Service Statistics is **us_srxService.mib**.

Table 49 describes the Selective Call Acceptance measurement parameters.

Measurement Name	Description Details
usSrxServiceSCAAccessCodeAttemptedCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.6.4 This object refers to the total number of hourly peg counts and usage counts with a usage-scan rate of 1 per 10 seconds for SCA screening list editing and for attempts to invoke control procedures as a result of dialing an SCA service access code. These counts should be available per hour on an individual SPCS basis. Priority: 6-Engineering Info
usSrxServiceSCAUnacceptedCallsCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.6.5 This object refers to the total number of hourly peg counts of unaccepted calls. These counts should be available per hour on an individual SPCS basis. Priority: 6-Engineering Info
usSrxServiceSCAValidationCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.6.6 This object refers to the total number of hourly peg counts of all calls checked against the screening list of a customer with SCA active. These counts should be available per hour on an individual SPCS basis. Priority: 6-Engineering Info
usSrxServiceSCAPinValidatedCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.6.7 This object refers to the total number of calls on which a caller successfully entered a PIN. These counts should be available hourly on a per-SPCS and a per-line basis. Priority: 6-Engineering Info

Table 49 Selective Call Acceptance Traffic Measurements (Seite 1 von 2)

Measurement Name	Description Details
usSrxServiceSCAPinFailedCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.6.8 This object refers to the total number of calls on which a caller unsuccessfully attempted PIN entry. These counts should be available hourly on a per-SPCS and a per-line basis. Priority: 6-Engineering Info
usSrxServiceSCACusDeniedResUnavailCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.6.9 This object refers to the total number of overflow counts for the number of customers denied access to SCA because of unavailable Stored Program Control Switch (SPCS) resources. These counts should be available on an individual SPCS basis. Priority: 6-Engineering Info
usSrxServiceSCATrtDeniedResUnavailCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.6.10 This object refers to the total number of overflow counts for the number of unaccepted calls. These counts should be available on an individual SPCS basis. Priority: 6-Engineering Info
usSrxServiceSCAAttpDeniedResUnavailCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.6.11 This object refers to the total number of overflow counts for the SPCS and/or any circuits used to provide SCA control procedures. These counts should be available on an individual SPCS basis. Priority: 6-Engineering Info

Table 49 Selective Call Acceptance Traffic Measurements (Seite 2 von 2)

6.1.4.7 Selective Call Rejection Measurements

Attention: The applicable SNMP MIB for all Service Statistics is **us_srxService.mib**.

Table 50 describes the Selective Call Rejection measurement parameters.

Measurement Name	Description Details
usSrxServiceSCRAttemptCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.7.1 This object refers to the hourly peg counts and usage counts with a usage scan rate of 1 per 10 seconds for Selective Call Rejection (SCR) screen editing and for attempts to invoke control procedures as a result of dialing the SCR service success code. Priority: 6-Engineering Info
usSrxServiceSCRCallToDenialAnncCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.7.2 This object refers to the hourly peg counts of rejected calls. Priority: 6-Engineering Info
usSrxServiceSCRAllCallsScreenedCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.7.3 This object refers to the hourly peg counts of all calls screened for a customer with Selective Call Rejection (SCR) active. Priority: 6-Engineering Info
usSrxServiceSCRCusDeniedResUnaCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.7.4 This object refers to the overflow counts for the number of customers denied access to Selective Call Rejection (SCR) because of unavailable system resources. Priority: 6-Engineering Info

Table 50 Selective Call Rejection Traffic Measurements (Seite 1 von 2)

Measurement Name	Description Details
usSrxServiceSCRDeniedAnncUnaCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.7.5 This object refers to the overflow counts for the number of rejected calls because of denied access to Selective Call Rejection (SCR). Priority: 6-Engineering Info
usSrxServiceSCRAccDeniedResUnaCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.7.6 This object refers to the overflow counts for the system and/or any circuits used to provide Selective Call Rejection (SCR) control procedures. Priority: 6-Engineering Info

Table 50 Selective Call Rejection Traffic Measurements (Seite 2 von 2)

6.1.4.8 Malicious Call Trace Measurements

Attention: The applicable SNMP MIB for all Service Statistics is **us_srxService.mib**.

Table 51 describes the Malicious Call Trace measurement parameters.

Measurement Name	Description Details
usSrxServiceMCTStatAccessesCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.8.1 This object refers to the number of times the subscriber accesses the service by dialing the service access code. Priority: 6-Engineering Info
usSrxServiceMCTStatActivCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.8.2 This object refers to the number of times a call trace is attempted after a subscriber accesses the service. Priority: 6-Engineering Info

Table 51 Malicious Call Trace Traffic Measurements (Seite 1 von 3)

Measurement Name	Description Details
usSrxServiceMCTStatRecsSentCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.8.3 This object refers to the number of call trace records successfully written to file. Priority: 6-Engineering Info
usSrxServiceMCTStatConfirmsCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.8.4 This object refers to the number of successful activations completed. Priority: 6-Engineering Info
usSrxServiceMCTStatOpFailCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.8.5 This object refers to the number of times that the service cannot be successfully completed after subscriber access. Priority: 6-Engineering Info
usSrxServiceMCTStatInvalDnCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.8.6 This object refers to the number of times the subscriber accesses the service, but the service cannot proceed due to an invalid or missing calling DN in the subscriber's incoming memory slot (ie, the calling party number of the last received call is invalid or unavailable). Priority: 6-Engineering Info
usSrxServiceMCTStatNoAuth	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.8.7 This object refers to the number of times the subscribers attempt to use Malicious Call Trace, but are denied access. Priority: 6-Engineering Info
usSrxServiceMCTStatAbort	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.8.8 This object refers to the number of times that the subscriber dialed the MCT access code, but did not proceed with the activation. Priority: 6-Engineering Info

Table 51 Malicious Call Trace Traffic Measurements (Seite 2 von 3)

Measurement Name	Description Details
usSrxServiceMCTStatAfterCallCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.8.9 This object refers to the number of call trace records successfully written to file when malicious call trace method 'after a call' is activated. This counter applies to both ANSI and ITU. Priority: 6-Engineering Info
usSrxServiceMCTStatDuringCallCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.8.10 This object refers to the number of call trace records successfully written to file when malicious call trace method 'during a call' is activated. This counter applies to both ANSI and ITU. Priority: 6-Engineering Info
usSrxServiceMCTStatOnNoReplyCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.8.11 This object refers to the number of call trace records successfully written to file when malicious call trace method 'Not-Answered calls' is activated. This counter applies to both ANSI and ITU. Priority: 6-Engineering Info
usSrxServiceMCTStatOnAnswerCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.8.12 This object refers to the number of call trace records successfully written to file when malicious call trace method 'Upon an answer' is activated. This counter applies to both ANSI and ITU. Priority: 6-Engineering Info
usSrxServiceMCTStatOnAlertingCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.8.13 This object refers to the number of call trace records successfully written to file when malicious call trace method 'Upon alerting' is activated. This counter applies to both ANSI and ITU. Priority: 6-Engineering Info

Table 51 Malicious Call Trace Traffic Measurements (Seite 3 von 3)

6.1.4.9 Three Way Calling Measurements

Attention: The applicable SNMP MIB for all Service Statistics is **us_srxService.mib**.

Table 52 describes the Three Way Calling measurement parameters.

Measurement Name	Description Details
usSrxServiceTWCAttemptedCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.9.1 This object refers to the number of times TWC service customers attempt to add on a thid party. The count indicates the customer involved in a stable talking connection has flashed and dialed a complete set of digits that are valid for calling. Priority: 6-Engineering Info
usSrxServiceTWCFormedCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.9.2 This object refers to the number of times successful Three Way Calling is formed by a customer with TWC service. Priority: 6-Engineering Info

Table 52 Three Way Calling Traffic Measurements

6.1.4.10 Intercom Call Measurements

Attention: The applicable SNMP MIB for all Service Statistics is **us_srxService.mib**.

Table 53 describes the Intercom Calling measurement parameters.

Measurement Name	Description Details
usSrxServiceICDIncommingAttempte dCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.10.1 This object refers to the number of times ICD service customers attempt to connect an incomming intercom call. Priority: 6-Engineering Info

Table 53 Intercom Calling Traffic Measurements (Seite 1 von 2)

Measurement Name	Description Details
usSrxServiceICDIncommingCompletedCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.10.2 This object refers to the number of successful times an incomming Intercom Call is formed by a customer with ICD service. Priority: 6-Engineering Info
usSrxServiceICDOutgoingAttemptedCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.10.3 This object refers to the number of times ICD service customers attempt to connect an outgoing intercom call. Priority: 6-Engineering Info
usSrxServiceICDOutgoingCompletedCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.10.4 This object refers to the number of successful times an outgoing Intercom Call is formed by a customer with ICD service. Priority: 6-Engineering Info

Table 53 Intercom Calling Traffic Measurements (Seite 2 von 2)

6.1.4.11 Voice Mail Measurements

Attention: The applicable SNMP MIB for all Service Statistics is **us_srxService.mib**.

Table 54 describes the Voice Mail measurement parameters.

Measurement Name	Description Details
usSrxServiceVMMWIOperCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.11.1 This object refers to the number of times Voice Mail service customers trigger Message Waiting Indication. Priority: 6-Engineering Info

Table 54 Voice Mail Traffic Measurements (Seite 1 von 6)

Measurement Name	Description Details
usSrxServiceVMMWIRemCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.11.2 This object refers to the number of times Voice Mail service customers trigger the removal of Message Waiting Indication. Priority: 6-Engineering Info
usSrxServiceVMMWIQuerySentSuccessCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.11.3 This object refers to the number of times TCAP Message Waiting Indicator queries are successfully sent. Priority: 6-Engineering Info
usSrxServiceVMMWIQuerySentUnsuccessCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.11.4 This object refers to the number of times TCAP Message Waiting Indicator queries are unsuccessfully sent. . Priority: 6-Engineering Info
usSrxServiceVMMWIQueryReceivedSuccessCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.11.5 This object refers to the number of times TCAP Message Waiting Indicator queries are successfully received. Priority: 6-Engineering Info
usSrxServiceVMMWIQueryReceivedUnsuccessCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.11.6 This object refers to the number of times TCAP Message Waiting Indicator queries are unsuccessfully received. Priority: 6-Engineering Info
usSrxServiceVMMWIQueryFailureCounter	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.11.7 This object refers to the number of times TCAP Message Waiting Indicator queries fail. Priority: 6-Engineering Info

Table 54 Voice Mail Traffic Measurements (Seite 2 von 6)

Measurement Name	Description Details
usSrxServiceVMMWIInvRecNumOper	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.11.8 This object refers to the number of times the E164 number provided to identify the receiving user is not a valid number (Operate). Priority: 6-Engineering Info
usSrxServiceVMMWIInvRecNumRem	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.11.9 This object refers to the number of times the E164 number provided to identify the receiving user is not a valid number (Remove). Priority: 6-Engineering Info
usSrxServiceVMMWIResUnavOper	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.11.10 This object refers to the number of times the resources required to perform adequately the MWI supplementary service are not available (Operate). Priority: 6-Engineering Info
usSrxServiceVMMWIResUnavRem	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.11.11 This object refers to the number of times the resources required to perform adequately the MWI supplementary service are not available (Remove). Priority: 6-Engineering Info
usSrxServiceVMMWIInvUsrNumOper	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.11.12 This object refers to the number of times the received E164 number identifying the controlling user is a non authorized number (in case of registration subscription option applies) or an invalid number (Operate). Priority: 6-Engineering Info

Table 54 Voice Mail Traffic Measurements (Seite 3 von 6)

Measurement Name	Description Details
usSrxServiceVMMWIInvUsrNumberRem	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.11.13 This object refers to the number of times the received E164 number identifying the controlling user is a non authorized number (in case of registration subscription option applies) or an invalid number (Remove). Priority: 6-Engineering Info
usSrxServiceVMMWIRecUsrNotSubOper	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.11.14 This object refers to the number of times the MWI supplementary service has not been subscribed to by the receiving user (Operate). Priority: 6-Engineering Info
usSrxServiceVMMWIRecUsrNotSubRem	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.11.15 This object refers to the number of times the MWI supplementary service has not been subscribed to by the receiving user (Remove). Priority: 6-Engineering Info
usSrxServiceVMMWIIndNotDelOper	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.11.16 This object refers to the number of times indication is not delivered by the access signaling system (Operate). Priority: 6-Engineering Info
usSrxServiceVMMWIIndNotDelRem	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.11.17 This object refers to the number of times indication is not delivered by the access signaling system (Remove). Priority: 6-Engineering Info
usSrxServiceVMMWIMaxNumUsrRch	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.11.18 This object refers to the number of times the receiving user's network cannot handle any further controlling users. Priority: 6-Engineering Info

Table 54 Voice Mail Traffic Measurements (Seite 4 von 6)

Measurement Name	Description Details
usSrxServiceVMMWIMaxNumInstRch	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.11.19 This error value is used when the maximum number of activations for the receiving user has been reached and a further activation has been requested. Priority: 6-Engineering Info
usSrxServiceVMMWISSIIntOper	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.11.20 This object refers to the number of times an error response indicating ‘supplementary services interaction' is received by the far end system, in responce to a MWI Set operation, sent by the OpenScape Voice system. Priority: 6-Engineering Info
usSrxServiceVMMWISSIIntRem	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.11.21 This object refers to the number of times an error response indicating 'supplementary services interaction' is received by the far end system, in response to a MWI Reset operation, sent by the OpenScape Voice system. Priority: 6-Engineering Info
usSrxServiceVMMWIRecUsrNoSubOperSnd	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.11.22 This object refers to the number of times an error response indicating that the Receiving user is not subscribed, is sent by the system in response to a received MWI Set operation. Priority: 6-Engineering Info
usSrxServiceVMMWIRecUsrNoSubRemSnd	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.11.23 This object refers to the number of times an error responce indicating that the Receiving user is not subscribed, is sent by the system in response to a received MWI Reset operation. Priority: 6-Engineering Info

Table 54 Voice Mail Traffic Measurements (Seite 5 von 6)

Measurement Name	Description Details
usSrxServiceVMMWIIndNoDelOpeSnd	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.11.24 This object refers to the number of times an error response indicating that Indication is Not Delivered, is sent by the system in response to a received MWI Set operation. Priority: 6-Engineering Info
usSrxServiceVMMWIIndNoDelRemSnd	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.11.25 This object refers to the number of times an error response indicating that Indication is Not Delivered, is sent by the system in response to a received MWI Reset operation. Priority: 6-Engineering Info

Table 54 Voice Mail Traffic Measurements (Seite 6 von 6)

6.1.4.12 Do Not Disturb Measurements

Attention: The applicable SNMP MIB for all Service Statistics is **us_srxService.mib**.

Table 56 describes the Do Not Disturb measurement parameters.

Measurement Name	Description Details
usSrxServiceDNDSucActivCntr	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.12.1 This object refers to the total number of successful activations of the Do Not Disturb service. Priority: 6-Engineering Info
usSrxServiceDNDUnSucActivCntr	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.12.2 This object refers to the total number of unsuccessful activations of the Do Not Disturb service. Priority: 6-Engineering Info

Table 55 Do Not Disturb Traffic Measurements (Seite 1 von 2)

Measurement Name	Description Details
usSrxServiceDNDSucDeActivCntr	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.12.3 This object refers to the total number of successful deactivations of the Do Not Disturb service. Priority: 6-Engineering Info
usSrxServiceDNDUnSucDeActivCntr	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.12.4 This object refers to the total number of unsuccessful deactivations of the Do Not Disturb service. Priority: 6-Engineering Info

Table 55 Do Not Disturb Traffic Measurements (Seite 2 von 2)

6.1.4.13 CSTA Monitor Measurements

Attention: The applicable SNMP MIB for all Service Statistics is **us_srxService.mib**.

Table 56 describes the CSTA Monitor measurement parameters.

Measurement Name	Description Details
usSrxServiceCSTAMonitoredAll	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.13.1 This object refers to the total number active CSTA monitor – All CSTA applications. Priority: 6-Engineering Info
usSrxServiceCSTAMonitoredSiemens	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.13.2 This object refers to the total number active CSTA monitors for application type = OpenScape. Priority: 6-Engineering Info

Table 56 CSTA Monitor Measurements (Seite 1 von 2)

Measurement Name	Description Details
usSrxServiceCSTAMonitoredOther	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.13.3 This object refers to the total number active CSTA monitors for application type = 3rd Party Priority: 6-Engineering Info
usSrxServiceCSTAMonitoredTelefonica	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.13.4 This object refers to the total number active CSTA monitors for application type = Telefonica. Priority: 6-Engineering Info

Table 56 CSTA Monitor Measurements (Seite 2 von 2)

6.1.4.14 CSTA Routing Measurements

Attention: The applicable SNMP MIB for all Service Statistics is **us_srxService.mib**.

Table 56 describes the CSTA Routing measurement parameters. This provides the number of devices that currently have an active CSTA Route Registration.

Measurement Name	Description Details
us_srxServiceCSTARoutingAll	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.14.1 This object refers to the total number active CSTA Route Registration – All CSTA applications. Priority: 6-Engineering Info
us_srxServiceCSTARoutingSiemens	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.14.2 This object refers to the total number active CSTA monitors for application type = OpenScape. Priority: 6-Engineering Info

Table 57 CSTA Routing Measurements (Seite 1 von 2)

Measurement Name	Description Details
us_srxServiceCSTARoutingOther	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.14.3 This object refers to the total number active CSTA monitors for application type = 3rd Party Priority: 6-Engineering Info
us_srxServiceCSTARoutingTelefonica	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.14.4 This object refers to the total number active CSTA monitors for application type = Telefonica Priority: 6-Engineering Info

Table 57 CSTA Routing Measurements (Seite 2 von 2)

6.1.4.15 CSTA Monitor List

Attention: The applicable SNMP MIB for all Service Statistics is **us_srxService.mib**.

Table 56 describes the CSTA Monitor List elements. These entries provide a list of devices that currently have an active CSTA Monitor.

Measurement Name	Description Details
usSrxServiceCSTAMonitoredAll	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.15.1 This object refers to the list of active CSTA monitored devices – All applications. Priority: 6-Engineering Info
usSrxServiceCSTAMonitoredSiemens	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.15.2 This object refers to the list of active CSTA monitored devices for application type = OpenScape. Priority: 6-Engineering Info

Table 58 CSTA Monitor Measurements (Seite 1 von 2)

Measurement Name	Description Details
usSrxServiceCSTAMonitoredOther	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.15.3 This object refers to the list of active CSTA monitored devices for application type = 3rd Party. Priority: 6-Engineering Info
usSrxServiceCSTAMonitoredTelefonica	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.15.4 This object refers to the list of active CSTA monitor devices for application type = Telefonica. *NOTE: Device ID is EID+Ext* Priority: 6-Engineering Info

Table 58 CSTA Monitor Measurements (Seite 2 von 2)

6.1.4.16 CSTA Routing List

Attention: The applicable SNMP MIB for all Service Statistics is **us_srxService.mib**.

Table 56 describes the CSTA Routing measurement parameters. These entries will provide a list of devices that currently have a active CSTA Route Registrations.

Measurement Name	Description Details
us_srxServiceCSTARoutingAll	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.16.1 This object refers to the list of devices with an active CSTA Route Registration – All applications. Priority: 6-Engineering Info
us_srxServiceCSTARoutingSiemens	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.16.2 This object refers to the list of devices with an active CSTA Route Registration for application type = OpenScape. Priority: 6-Engineering Info

Table 59 CSTA Routing Measurements (Seite 1 von 2)

Measurement Name	Description Details
us_srxServiceCSTARoutingOther	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.16.3 This object refers to the list of devices with an active CSTA Route Registration for application type = 3rd Party. Priority: 6-Engineering Info
us_srxServiceCSTARoutingTelefonica	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.4.1.1.16.4 This object refers to the list of devices with an active CSTA Route Registration for application type = Telefonica. *NOTE: Device ID is EID+Ext.* Priority: 6-Engineering Info

Table 59 CSTA Routing Measurements (Seite 2 von 2)

6.1.5 License Usage / Measurements

Attention: The applicable SNMP MIB for License Usage counters **hiqFeatLic.mib**.

Table 60 describes the License performance statistics and measurement parameters. This includes the Trunk Average usage, Dynamic usage, OSMO licenses, and Basic and Essential licenses.

Measurement Name	Description Details
hiqFeatLicTrunkAverageUsage	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.5.1.2 The average usage within one hour. License Manager will take snapshots of current usage counter every 5 minutes and get the average of the values during an hour. Priority: 2-Major Configuration Problem Operator Hints: Monitor for abnormal low.

Table 60 License Usage Traffic Measurements (Seite 1 von 4)

Measurement Name	Description Details
hiqFeatLicTrunkMaxAverageUsage	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.5.1.3 The maximum average usage within one hour, during a 24 hour period. Priority: 6-Engineering Info
hiqFeatLicDynamicInUse	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.5.2.2 This object represents the number of Dynamic licenses currently in use in the system. There is One Home DN per Dynamic license. This value must be less or equal to the number of Dynamic licenses Purchased.
hiqFeatLicDynamicMaxInUse	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.5.2.3 This number represents the maximum usage of Dynamic licenses over the last 24 hour period. Priority: 6-Engineering Info
hiqFeatLicDynamicViolations	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.5.2.4 This object is a counter holding the number of usage violations. License Manager detects Dynamic licensing violations based on the maximum usage. Therefore, system counts one violation per day maximum, regardless of how many times the actual usage exceeded the licensing limits during that day. If this number exceeds the violation limit, the system activates the license enforcement. The default violation limit is 10 and this number cannot be modified by the system Administrator. Priority: 6-Engineering Info
hiqFeatLicDynamicViolationsLimit	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.5.2.5 This is the number of usage violations the system allows,before activating the enforcement. Priority: 6-Engineering Info

Table 60 License Usage Traffic Measurements (Seite 2 von 4)

Measurement Name	Description Details
hiqFeatLicOSMOLicensesAssigned	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.5.3.1 Number of OSMO licenses assigned to the system Priority: 6-Engineering Info
hiqFeatLicOSMOLicensesInUse	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.5.3.2 Number of OSMO licenses currently in use. Priority: 6-Engineering Info
hiqFeatLicOSMOMaxInUsedOver24Hour	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.5.3.3 Maximum Number of OSMO licenses used over the last 24 hour period Priority: 6-Engineering Info
hiqFeatLicBasicLicensesAvailable	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.5.5.1 Number of Basic licenses available in the license file Priority: 6-Engineering Info
hiqFeatLicBasicLicensesInUse	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.5.5.2 Number of Basic licenses currently in use Priority: 6-Engineering Info
hiqFeatLicBasicLicensesUsedOver24Hour	Interaction: Read Only Syntax: Counter32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.5.5.3 Maximum Number of Basic licenses used over the last 24 hour period Priority: 6-Engineering Info

Table 60 License Usage Traffic Measurements (Seite 3 von 4)

Measurement Name	Description Details
hiqFeatLicEssentialLicensesAvailable	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.5.6.1 Number of Essential licenses available in the license file Priority: 6-Engineering Info
hiqFeatLicEssentialLicensesInUse	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.5.6.2 Number of Essential licenses currently in use Priority: 6-Engineering Info
hiqFeatLicEssentialLicensesUsedOver24Hour	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.5.6.3 Maximum Number of Essential licenses used over the last 24 hour period Priority: 6-Engineering Info
hiqFeatLicUnifyPhoneLicensesAvailable	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.5.7.1 Number of available Unify Phone licenses assigned to the system Priority: 6-Engineering Info
hiqFeatLicUnifyPhoneLicensesInUse	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.5.7.2 Number of Unify Phone licenses currently in use to the system Priority: 6-Engineering Info
hiqFeatLicUnifyPhoneLicensesUsedOver24Hour	Interaction: Read Only Syntax: Integer32 OID - 1.3.6.1.4.1.4329.2.18.2.2.1.5.7.3 Maximum Number of Unify Phone licenses used over the last 24 hour period Priority: 6-Engineering Info

Table 60 License Usage Traffic Measurements (Seite 4 von 4)

6.2 SNMPv2 MIBs

6.2.1 IF-MIB II

Table 61 describes the IF-MIB II performance statistics and measurement parameters.

Measurement Name	Description Details
ifOperStatus	This measurement identifies the current operational state of the interface. Operator Hints: Use TRAP instead.
ifInOctets	The total number of octets received on the interface, including framing characters. OID - 1.3.6.1.2.1.2.2.1.10 Priority: 1-Critical Service Affecting Operator Hints: Monitor for Abnormal Low
ifInUcastPkts	The number of subnetwork-unicast packets delivered to a higher-layer protocol. OID - 1.3.6.1.2.1.2.2.1.11 Priority: 1-Critical Service Affecting Operator Hints: Monitor for Abnormal Low
ifInDiscards	The number of inbound packets which were discarded even though no errors had been detected. (E.g. buffer overflow). OID - 1.3.6.1.2.1.2.2.1.13 Priority: 1-Critical Service Affecting Operator Hints: Monitor for Abnormal Low
ifInErrors	The number of inbound packets that contained errors preventing them from being deliverable to a higher-layer protocol. OID - 1.3.6.1.2.1.2.2.1.14 Priority: 12-Major Configuration Problem Operator Hints: Monitor for Abnormal High
ifInUnknownProtos	The number of packets received via the interface which were discarded because of an unknown or unsupported protocol. OID - 1.3.6.1.2.1.2.2.1.15 Priority: 12-Major Configuration Problem Operator Hints: Monitor for Abnormal High

Table 61 IF-MIB II Measurements (Seite 1 von 4)

Measurement Name	Description Details
ifOutOctets	The total number of octets transmitted out of the interface, including framing characters. OID - 1.3.6.1.2.1.2.2.1.16 Priority: 1-Critical Service Affecting Operator Hints: Monitor for Abnormal Low
ifOutUcastPkts	The total number of packets that higher-level protocols requested be transmitted to a subnetwork-unicast address, including those that were discarded or not sent. OID - 1.3.6.1.2.1.2.2.1.17 Priority: 1-Critical Service Affecting Operator Hints: Monitor for Abnormal Low
ifOutDiscards	The number of outbound packets which were discarded even though no errors had been detected. (E.g. buffer overflow). OID - 1.3.6.1.2.1.2.2.1.19 Priority: 1-Critical Service Affecting Operator Hints: Monitor for Abnormal High
ifOutErrors	The number of outbound packets that could not be transmitted because of errors. OID - 1.3.6.1.2.1.2.2.1.20 Priority: 2-Major Configuration Problem Operator Hints: Monitor for Abnormal High
ifInMulticastPkts	The number of packets, delivered by this sub-layer to a higher (sub-)layer, which were addressed to a multicastaddress at this sub-layer. OID - 1.3.6.1.2.1.31.1.1.1.2 Priority: 2-Major Configuration Problem Operator Hints: Monitor for Abnormal High
ifInBroadcastPkts	The number of packets, delivered by this sub-layer to a higher (sub-)layer, which were addressed to a broadcast address at this sub-layer. OID - 1.3.6.1.2.1.31.1.1.1.3 Priority: 2-Major Configuration Problem Operator Hints: Monitor for Abnormal High

Table 61 IF-MIB II Measurements (Seite 2 von 4)

Measurement Name	Description Details
ifOutMulticastPkts	The total number of packets that higher-level protocols requested be transmitted, and which were addressed to a multicast address at this sub-layer, including those that were discarded or not sent. OID - 1.3.6.1.2.1.31.1.1.1.4 Priority: 2-Major Configuration Problem Operator Hints: Monitor for Abnormal High
ifOutBroadcastPkts	The total number of packets that higher-level protocols requested be transmitted, and which were addressed to a broadcast address at this sub-layer, including those that were discarded or not sent. OID - 1.3.6.1.2.1.31.1.1.1.5 Priority: 2-Major Configuration Problem Operator Hints: Monitor for Abnormal High
ifHCInOctets	64 bit version of ifInOctets OID - 1.3.6.1.2.1.31.1.1.1.6 Priority: 1-Critical Service Affecting Operator Hints: Monitor for Abnormal Low
ifHCInUcastPkts	64 bit version of ifInUcastPkts OID - 1.3.6.1.2.1.31.1.1.1.7 Priority: 1-Critical Service Affecting Operator Hints: Monitor for Abnormal Low
ifHCInMulticastPkts	64 bit version of ifInMulticastPkts OID - 1.3.6.1.2.1.31.1.1.1.8 Priority: 2-Major Configuration Problem Operator Hints: Monitor for Abnormal High
ifHCInBroadcastPkts	64 bit version of ifInBroadcastPkts OID - 1.3.6.1.2.1.31.1.1.1.9 Priority: 2-Major Configuration Problem Operator Hints: Monitor for Abnormal High
ifHCOutOctets	64 bit version of ifOutOctets OID - 1.3.6.1.2.1.31.1.1.1.10 Priority: 1-Critical Service Affecting Operator Hints: Monitor for Abnormal Low

Table 61 IF-MIB II Measurements (Seite 3 von 4)

Measurement Name	Description Details
ifHCOutUcastPkts	64 bit version of ifOutUcastPkts OID - 1.3.6.1.2.1.31.1.1.1.11 Priority: 1-Critical Service Affecting Operator Hints: Monitor for Abnormal Low
ifHCOutMulticastPkts	64 bit version of ifOutMulticastPkts OID - 1.3.6.1.2.1.31.1.1.1.12 Priority: 2-Major Configuration Problem Operator Hints: Monitor for Abnormal High
ifHCOutBroadcastPkts	64 bit version of ifOutBroadcastPkts OID - 1.3.6.1.2.1.31.1.1.1.13 Priority: 2-Major Configuration Problem Operator Hints: Monitor for Abnormal High

Table 61 IF-MIB II Measurements (Seite 4 von 4)

6.2.2 IP-MIB II

Table 62 describes the IP-MIB II performance statistics and measurement parameters.

Measurement Name	Description Details
icmpStatsInMsgs	The total number of ICMP messages that the entity received. OID - 1.3.6.1.2.1.5.29.1.2 Priority: 2-Major Configuration Problem Operator Hints: Monitor for Abnormal High and Low
icmpStatsInErrors	The number of ICMP messages that the entity received but determined as having ICMP-specific errors. OID - 1.3.6.1.2.1.5.29.1.3 Priority: 2-Major Configuration Problem Operator Hints: Monitor for Abnormal High
icmpStatsOutMsgs	The total number of ICMP messages that the entity attempted to send. OID - 1.3.6.1.2.1.5.29.1.4 Priority: 2-Major Configuration Problem Operator Hints: Monitor for Abnormal High and Low

Table 62 IP-MIB II Measurements (Seite 1 von 14)

Measurement Name	Description Details
icmpStatsOutErrors	The number of ICMP messages that this entity did not send due to problems discovered within ICMP, such as a lack of buffers. OID - 1.3.6.1.2.1.5.29.1.5 Priority: 2-Major Configuration Problem Operator Hints: Monitor for Abnormal High
icmpMsgStatsInPkts	The number of input packets for this AF and type. OID - 1.3.6.1.2.1.5.30.1.2 Priority: 2-Major Configuration Problem Operator Hints: Monitor for Abnormal High and Low
icmpMsgStatsOutPkts	The number of output packets for this AF and type. OID - 1.3.6.1.2.1.5.30.1.3 Priority: 2-Major Configuration Problem Operator Hints: Monitor for Abnormal High and Low
ipSystemStatsInReceives	The total number of input IP datagrams received, including those received in error. OID - 1.3.6.1.2.1.4.31.1.1.3 Priority: 1-Critical Service Affecting Operator Hints: Monitor for Abnormal Low
ipSystemStatsHCInReceives	64 bit equivalent of ipSystemStatsInReceives OID - 1.3.6.1.2.1.4.31.1.1.4 Priority: 1-Critical Service Affecting Operator Hints: Monitor for Abnormal Low
ipSystemStatsInOctets	The total number of octets received in input IP datagrams, including those received in error. OID - 1.3.6.1.2.1.4.31.1.1.5 Priority: 1-Critical Service Affecting Operator Hints: Monitor for Abnormal Low
ipSystemStatsHCInOctets	64 bit equivalent of ipSystemStatsInOctets OID - 1.3.6.1.2.1.4.31.1.1.6 Priority: 1-Critical Service Affecting Operator Hints: Monitor for Abnormal Low

Table 62 IP-MIB II Measurements (Seite 2 von 14)

Measurement Name	Description Details
ipSystemStatsInHdrErrors	The number of input IP datagrams discarded due to errors in their IP headers, including version number mismatch, other format errors, hop count exceeded, errors discovered in processing their IP options, etc. OID - 1.3.6.1.2.1.4.31.1.1.7 Priority: 2-Major Configuration Problem Operator Hints: Monitor for Abnormal High
ipSystemStatsInNoRoutes	The number of input IP datagrams discarded because no route could be found to transmit them to their destination. OID - 1.3.6.1.2.1.4.31.1.1.8 Priority: 2-Major Configuration Problem Operator Hints: Monitor for Abnormal High
ipSystemStatsInAddrErrors	The number of input IP datagrams discarded because the IP address in their IP header's destination field was not a valid address to be received at this entity. OID - 1.3.6.1.2.1.4.31.1.1.9 Priority: 2-Major Configuration Problem Operator Hints: Monitor for Abnormal High
ipSystemStatsInUnknownProtos	The number of locally-addressed IP datagrams received successfully but discarded because of an unknown or unsupported protocol. OID - 1.3.6.1.2.1.4.31.1.1.10 Priority: 2-Major Configuration Problem Operator Hints: Monitor for Abnormal High
ipSystemStatsInTruncatedPkts	The number of input IP datagrams discarded because the datagram frame didn't carry enough data. OID - 1.3.6.1.2.1.4.31.1.1.11 Priority: 2-Major Configuration Problem Operator Hints: Monitor for Abnormal High
ipSystemStatsInForwDatagrams	The number of input datagrams for which this entity was not their final IP destination and for which this entity attempted to find a route to forward them to that final destination. OID - 1.3.6.1.2.1.4.31.1.1.12 Priority: 2-Major Configuration Problem Operator Hints: Monitor for Abnormal High

Table 62 IP-MIB II Measurements (Seite 3 von 14)

Measurement Name	Description Details
ipSystemStatsInHCForwDatagrams	64 bit equivalent of ipSystemStatsInForwDatagrams OID - 1.3.6.1.2.1.4.31.1.1.13 Priority: 2-Major Configuration Problem Operator Hints: Monitor for Abnormal High
ipSystemStatsReasmReqds	The number of IP fragments received that needed to be reassembled at this interface. OID - 1.3.6.1.2.1.4.31.1.1.14 Priority: 6-Engineering Info.
ipSystemStatsReasmOKs	The number of IP datagrams successfully reassembled. OID - 1.3.6.1.2.1.4.31.1.1.15 Priority: 6-Engineering Info.
ipSystemStatsReasmFails	The number of failures detected by the IP re-assembly algorithm (for whatever reason: timed out, errors, etc.). OID - 1.3.6.1.2.1.4.31.1.1.16 Priority: 2-Major Configuration Problem Operator Hints: Monitor for Abnormal High
ipSystemStatsInDiscards	The number of input IP datagrams for which no problems were encountered to prevent their continued processing, but were discarded (e.g., for lack of buffer space). OID - 1.3.6.1.2.1.4.31.1.1.17 Priority: 1-Critical Service Affecting Operator Hints: Monitor for Abnormal High
ipSystemStatsInDelivers	The total number of datagrams successfully delivered to IP user-protocols (including ICMP). OID - 1.3.6.1.2.1.4.31.1.1.18 Priority: 1-Critical Service Affecting Operator Hints: Monitor for Abnormal Low
ipSystemStatsHCInDelivers	64 bit equivalent of ipSystemStatsInDelivers OID - 1.3.6.1.2.1.4.31.1.1.19 Priority: 1-Critical Service Affecting Operator Hints: Monitor for Abnormal Low

Table 62 IP-MIB II Measurements (Seite 4 von 14)

Measurement Name	Description Details
ipSystemStatsOutRequests	The total number of IP datagrams that local IP user-protocols (including ICMP) supplied to IP in requests for transmission. OID - 1.3.6.1.2.1.4.31.1.1.20 Priority: 1-Critical Service Affecting Operator Hints: Monitor for Abnormal Low
ipSystemStatsHCOutRequests	64 bit equivalent of ipSystemStatsOutRequests OID - 1.3.6.1.2.1.4.31.1.1.21 Priority: 1-Critical Service Affecting Operator Hints: Monitor for Abnormal Low
ipSystemStatsOutNoRoutes	The number of locally generated IP datagrams discarded because no route could be found to transmit them to their destination. OID - 1.3.6.1.2.1.4.31.1.1.22 Priority: 2-Major Configuration Problem Operator Hints: Monitor for Abnormal High
ipSystemStatsOutForwDatagrams	The number of datagrams for which this entity was not their final IP destination and for which it was successful in finding a path to their final destination. OID - 1.3.6.1.2.1.4.31.1.1.23 Priority: 2-Major Configuration Problem Operator Hints: Monitor for Abnormal High
ipSystemStatsHCOutForwDatagrams	64 bit equivalent of ipSystemStatsOutForwDatagrams OID - 1.3.6.1.2.1.4.31.1.1.24 Priority: 2-Major Configuration Problem Operator Hints: Monitor for Abnormal High
ipSystemStatsOutDiscards	The number of output IP datagrams for which no problem was encountered to prevent their transmission to their destination, but were discarded (e.g., for lack of buffer space). OID - 1.3.6.1.2.1.4.31.1.1.25 Priority: 1-Critical Service Affecting Operator Hints: Monitor for Abnormal Low
ipSystemStatsOutFragReqds	The number of IP datagrams that would require fragmentation in order to be transmitted. OID - 1.3.6.1.2.1.4.31.1.1.26 Priority: 6-Engineering Info.

Table 62 IP-MIB II Measurements (Seite 5 von 14)

Measurement Name	Description Details
ipSystemStatsOutFragOKs	The number of IP datagrams that have been successfully fragmented. OID - 1.3.6.1.2.1.4.31.1.1.27 Priority: 6-Engineering Info.
ipSystemStatsOutFragFails	The number of IP datagrams that have been discarded because they needed to be fragmented but could not be. OID - 1.3.6.1.2.1.4.31.1.1.28 Priority: 2-Major Configuration Problem Operator Hints: Monitor for Abnormal High
ipSystemStatsOutFragCreates	The number of output datagram fragments that have been generated as a result of IP fragmentation. OID - 1.3.6.1.2.1.4.31.1.1.29 Priority: 6-Engineering Info.
ipSystemStatsOutTransmits	The total number of IP datagrams that this entity supplied to the lower layers for transmission. OID - 1.3.6.1.2.1.4.31.1.1.30 Priority: 1-Critical Service Affecting Operator Hints: Monitor for Abnormal Low
ipSystemStatsHCOutTransmits	64 bit equivalent of ipSystemStatsOutTransmits OID - 1.3.6.1.2.1.4.31.1.1.31 Priority: 1-Critical Service Affecting Operator Hints: Monitor for Abnormal Low
ipSystemStatsOutOctets	The total number of octets in IP datagrams delivered to the lower layers for transmission. OID - 1.3.6.1.2.1.4.31.1.1.32 Priority: 1-Critical Service Affecting Operator Hints: Monitor for Abnormal Low
ipSystemStatsHCOutOctets	64 bit equivalent of ipSystemStatsOutOctets OID - 1.3.6.1.2.1.4.31.1.1.33 Priority: 1-Critical Service Affecting Operator Hints: Monitor for Abnormal Low
ipSystemStatsInMcastPkts	The number of IP multicast datagrams received. OID - 1.3.6.1.2.1.4.31.1.1.34 Priority: 2-Major Configuration Problem Operator Hints: Monitor for Abnormal High

Table 62 IP-MIB II Measurements (Seite 6 von 14)

Measurement Name	Description Details
ipSystemStatsHCInMcastPkts	64 bit equivalent of ipSystemStatsInMcastPkts OID - 1.3.6.1.2.1.4.31.1.1.35 Priority: 2-Major Configuration Problem Operator Hints: Monitor for Abnormal High
ipSystemStatsInMcastOctets	The total number of octets received in IP multicast datagrams OID - 1.3.6.1.2.1.4.31.1.1.36 Priority: 2-Major Configuration Problem Operator Hints: Monitor for Abnormal High
ipSystemStatsHCInMcastOctets	64 bit equivalent of ipSystemStatsInMcastOctets OID - 1.3.6.1.2.1.4.31.1.1.37 Priority: 2-Major Configuration Problem Operator Hints: Monitor for Abnormal High
ipSystemStatsOutMcastPkts	The number of IP multicast datagrams transmitted. OID - 1.3.6.1.2.1.4.31.1.1.38 Priority: 2-Major Configuration Problem Operator Hints: Monitor for Abnormal High
ipSystemStatsHCOutMcastPkts	64 bit equivalent of ipSystemStatsOutMcastPkts OID - 1.3.6.1.2.1.4.31.1.1.39 Priority: 2-Major Configuration Problem Operator Hints: Monitor for Abnormal High
ipSystemStatsOutMcastOctets	The total number of octets transmitted in IP multicast datagrams. OID - 1.3.6.1.2.1.4.31.1.1.40 Priority: 2-Major Configuration Problem Operator Hints: Monitor for Abnormal High
ipSystemStatsHCOutMcastOctets	64 bit equivalent of ipSystemStatsOutMcastOctets OID - 1.3.6.1.2.1.4.31.1.1.41 Priority: 2-Major Configuration Problem Operator Hints: Monitor for Abnormal High
ipSystemStatsInBcastPkts	The number of IP broadcast datagrams received. OID - 1.3.6.1.2.1.4.31.1.1.42 Priority: 2-Major Configuration Problem Operator Hints: Monitor for Abnormal High

Table 62 IP-MIB II Measurements (Seite 7 von 14)

Measurement Name	Description Details
ipSystemStatsHCInBcastPkts	64 bit equivalent of ipSystemStatsInBcastPkts OID - 1.3.6.1.2.1.4.31.1.1.43 Priority: 2-Major Configuration Problem Operator Hints: Monitor for Abnormal High
ipSystemStatsOutBcastPkts	The number of IP broadcast datagrams transmitted. OID - 1.3.6.1.2.1.4.31.1.1.44 Priority: 2-Major Configuration Problem Operator Hints: Monitor for Abnormal High
ipSystemStatsHCOutBcastPkts	64 bit equivalent of ipSystemStatOutBcastPkts OID - 1.3.6.1.2.1.4.31.1.1.45 Priority: 2-Major Configuration Problem Operator Hints: Monitor for Abnormal High
ipIfStatsInReceives	The total number of input IP datagrams received, including those received in error. OID - 1.3.6.1.2.1.4.31.3.1.3 Priority: 1-Critical Service Affecting Operator Hints: Monitor for Abnormal Low
ipIfStatsHCInReceives	64 bit equivalent of ipIfStatsInReceives OID - 1.3.6.1.2.1.4.31.3.1.4 Priority: 1-Critical Service Affecting Operator Hints: Monitor for Abnormal Low
ipIfStatsInOctets	The total number of octets received in input IP datagrams, including those received in error. OID - 1.3.6.1.2.1.4.31.3.1.5 Priority: 1-Critical Service Affecting Operator Hints: Monitor for Abnormal Low
ipIfStatsHCInOctets	64 bit equivalent of ipIfStatsInOctets OID - 1.3.6.1.2.1.4.31.3.1.6 Priority: 1-Critical Service Affecting Operator Hints: Monitor for Abnormal Low

Table 62 IP-MIB II Measurements (Seite 8 von 14)

Measurement Name	Description Details
ipIfStatsInHdrErrors	The number of input IP datagrams discarded due to errors in their IP headers, including version number mismatch, other format errors, hop count exceeded, errors discovered in processing their IP options, etc. OID - 1.3.6.1.2.1.4.31.3.1.7 Priority: 2-Major Configuration Problem Operator Hints: Monitor for Abnormal High
ipIfStatsInNoRoutes	The number of input IP datagrams discarded because no route could be found to transmit them to their destination. OID - 1.3.6.1.2.1.4.31.3.1.8 Priority: 2-Major Configuration Problem Operator Hints: Monitor for Abnormal High
ipIfStatsInAddrErrors	The number of input IP datagrams discarded because the IP address in their IP header's destination field was not a valid address to be received at this entity. OID - 1.3.6.1.2.1.4.31.3.1.9 Priority: 2-Major Configuration Problem Operator Hints: Monitor for Abnormal High
ipIfStatsInUnknownProtos	The number of locally-addressed IP datagrams received successfully but discarded because of an unknown or unsupported protocol. OID - 1.3.6.1.2.1.4.31.3.1.10 Priority: 2-Major Configuration Problem Operator Hints: Monitor for Abnormal High
ipIfStatsInTruncatedPkts	The number of input IP datagrams discarded because the datagram frame didn't carry enough data. OID - 1.3.6.1.2.1.4.31.3.1.11 Priority: 2-Major Configuration Problem Operator Hints: Monitor for Abnormal High
ipIfStatsInForwDatagrams	The number of input datagrams for which this entity was not their final IP destination and for which this entity attempted to find a route to forward them to that final destination. OID - 1.3.6.1.2.1.4.31.3.1.12 Priority: 2-Major Configuration Problem Operator Hints: Monitor for Abnormal High

Table 62 IP-MIB II Measurements (Seite 9 von 14)

Measurement Name	Description Details
ipIfStatsHCInForwDatagrams	64 bit equivalent of ipIfStatsInForwDatagrams OID - 1.3.6.1.2.1.4.31.3.1.13 Priority: 2-Major Configuration Problem Operator Hints: Monitor for Abnormal High
ipIfStatsReasmReqds	The number of IP fragments received that needed to be reassembled at this interface. OID - 1.3.6.1.2.1.4.31.3.1.14 Priority: 6-Engineering Info.
ipIfStatsReasmOKs	The number of IP datagrams successfully reassembled. OID - 1.3.6.1.2.1.4.31.3.1.15 Priority: 6-Engineering Info.
ipIfStatsReasmFails	The number of failures detected by the IP re-assembly algorithm (for whatever reason: timed out, errors, etc.). OID - 1.3.6.1.2.1.4.31.3.1.16 Priority: 2-Major Configuration Problem Operator Hint: Monitor for Abnormal High
ipIfStatsInDiscards	The number of input IP datagrams for which no problems were encountered to prevent their continued processing, but were discarded (e.g., for lack of buffer space). OID - 1.3.6.1.2.1.4.31.3.1.17 Priority: 1-Critical Service Affecting Operator Hints: Monitor for Abnormal High
ipIfStatsInDelivers	The total number of datagrams successfully delivered to IP user-protocols (including ICMP). OID - 1.3.6.1.2.1.4.31.3.1.18 Priority: 1-Critical Service Affecting Operator Hints: Monitor for Abnormal Low
ipIfStatsHCInDelivers	64 bit equivalent of ipIfStatsInDelivers OID - 1.3.6.1.2.1.4.31.3.1.19 Priority: 1-Critical Service Affecting Operator Hints: Monitor for Abnormal Low

Table 62 IP-MIB II Measurements (Seite 10 von 14)

Measurement Name	Description Details
ipIfStatsOutRequests	The total number of IP datagrams that local IP user-protocols (including ICMP) supplied to IP in requests for transmission. OID - 1.3.6.1.2.1.4.31.3.1.20 Priority: 1-Critical Service Affecting Operator Hints: Monitor for Abnormal Low
ipIfStatsHCOutRequests	64 bit equivalent of ipIfStatsOutRequests OID - 1.3.6.1.2.1.4.31.3.1.21 Priority: 1-Critical Service Affecting Operator Hints: Monitor for Abnormal Low
ipIfStatsOutForwDatagrams	The number of datagrams for which this entity was not their final IP destination and for which it was successful in finding a path to their final destination. OID - 1.3.6.1.2.1.4.31.3.1.23 Priority: 2-Major Configuration Problem Operator Hint: Monitor for Abnormal High
ipIfStatsHCOutForwDatagrams	64 bit equivalent of ipIfStatsOutForwDatagrams OID - 1.3.6.1.2.1.4.31.3.1.24 Priority: 2-Major Configuration Problem Operator Hint: Monitor for Abnormal High
ipIfStatsOutDiscards	The number of output IP datagrams for which no problem was encountered to prevent their transmission to their destination, but were discarded (e.g., for lack of buffer space). OID - 1.3.6.1.2.1.4.31.3.1.25 Priority: 1-Critical Service Affecting Operator Hints: Monitor for Abnormal High
ipIfStatsOutFragReqds	The number of IP datagrams that would require fragmentation in order to be transmitted. OID - 1.3.6.1.2.1.4.31.3.1.26 Priority: 6-Engineering Info.
ipIfStatsOutFragOKs	The number of IP datagrams that have been successfully fragmented. OID - 1.3.6.1.2.1.4.31.3.1.27 Priority: 6-Engineering Info.

Table 62 IP-MIB II Measurements (Seite 11 von 14)

Measurement Name	Description Details
ipIfStatsOutFragFails	The number of IP datagrams that have been discarded because they needed to be fragmented but could not be. OID - 1.3.6.1.2.1.4.31.3.1.28 Priority: 2-Major Configuration Problem Operator Hint: Monitor for Abnormal High
ipIfStatsOutFragCreates	The number of output datagram fragments that have been generated as a result of IP fragmentation. OID - 1.3.6.1.2.1.4.31.3.1.29 Priority: 6-Engineering Info.
ipIfStatsOutTransmits	The total number of IP datagrams that this entity supplied to the lower layers for transmission. OID - 1.3.6.1.2.1.4.31.3.1.30 Priority: 1-Critical Service Affecting Operator Hints: Monitor for Abnormal Low
ipIfStatsHCOutTransmits	64 bit equivalent of ipIfStatsOutTransmits OID - 1.3.6.1.2.1.4.31.3.1.31 Priority: 1-Critical Service Affecting Operator Hints: Monitor for Abnormal Low
ipIfStatsOutOctets	The total number of octets in IP datagrams delivered to the lower layers for transmission. OID - 1.3.6.1.2.1.4.31.3.1.32 Priority: 1-Critical Service Affecting Operator Hints: Monitor for Abnormal Low
ipIfStatsHCOutOctets	64 bit equivalent of ipIfStatsOutOctets OID - 1.3.6.1.2.1.4.31.3.1.33 Priority: 1-Critical Service Affecting Operator Hints: Monitor for Abnormal Low
ipIfStatsInMcastPkts	The number of IP multicast datagrams received. OID - 1.3.6.1.2.1.4.31.3.1.34 Priority: 2-Major Configuration Problem Operator Hint: Monitor for Abnormal High

Table 62 IP-MIB II Measurements (Seite 12 von 14)

Measurement Name	Description Details
ipIfStatsHCInMcastPkts	64 bit equivalent of ipIfStatsInMcastPkts OID - 1.3.6.1.2.1.4.31.3.1.35 Priority: 2-Major Configuration Problem Operator Hint: Monitor for Abnormal High
ipIfStatsInMcastOctets	The total number of octets received in IP multicast datagrams. OID - 1.3.6.1.2.1.4.31.3.1.36 Priority: 2-Major Configuration Problem Operator Hint: Monitor for Abnormal High
ipIfStatsHCInMcastOctets	64 bit equivalent of ipIfStatsInMcastOctets OID - 1.3.6.1.2.1.4.31.3.1.37 Priority: 2-Major Configuration Problem Operator Hint: Monitor for Abnormal High
ipIfStatsOutMcastPkts	The number of IP multicast datagrams transmitted. OID - 1.3.6.1.2.1.4.31.3.1.38 Priority: 2-Major Configuration Problem Operator Hint: Monitor for Abnormal High
ipIfStatsHCOutMcastPkts	64 bit equivalent of ipIfStatsOutMcastPkts OID - 1.3.6.1.2.1.4.31.3.1.39 Priority: 2-Major Configuration Problem Operator Hint: Monitor for Abnormal High
ipIfStatsOutMcastOctets	The total number of octets transmitted in IP multicast datagrams. OID - 1.3.6.1.2.1.4.31.3.1.40 Priority: 2-Major Configuration Problem Operator Hint: Monitor for Abnormal High
ipIfStatsHCOutMcastOctets	64 bit equivalent of ipIfStatsOutMcastOctets OID - 1.3.6.1.2.1.4.31.3.1.41 Priority: 2-Major Configuration Problem Operator Hint: Monitor for Abnormal High
ipIfStatsInBcastPkts	The number of IP broadcast datagrams received. OID - 1.3.6.1.2.1.4.31.3.1.42 Priority: 2-Major Configuration Problem Operator Hint: Monitor for Abnormal High

Table 62 IP-MIB II Measurements (Seite 13 von 14)

Measurement Name	Description Details
ipIfStatsHCInBcastPkts	64 bit equivalent of ipIfStatsInBcastPkts OID - 1.3.6.1.2.1.4.31.3.1.43 Priority: 2-Major Configuration Problem Operator Hint: Monitor for Abnormal High
ipIfStatsOutBcastPkts	The number of IP broadcast datagrams transmitted. OID - 1.3.6.1.2.1.4.31.3.1.44 Priority: 2-Major Configuration Problem Operator Hint: Monitor for Abnormal High
ipIfStatsHCOutBcastPkts	64 bit equivalent of ipIfStatsOutBcastPkts OID - 1.3.6.1.2.1.4.31.3.1.45 Priority: 2-Major Configuration Problem Operator Hint: Monitor for Abnormal High

Table 62 IP-MIB II Measurements (Seite 14 von 14)

6.2.3 TCP - MIB II

Table 63 describes the TCP-MIB II performance statistics and measurement parameters.

Measurement Name	Description Details
tcpActiveOpens	The number of times TCP connections have made a direct transition to the SYN-SENT state from the CLOSED state. OID - 1.3.6.1.2.1.6.5 Priority: 1-Critical Service Affecting Operator Hints: Monitor for Abnormal Low
tcpPassiveOpens	The number of times TCP connections have made a direct transition to the SYN-RCVD state from the LISTEN state. OID - 1.3.6.1.2.1.6.6 Priority: 1-Critical Service Affecting Operator Hints: Monitor for Abnormal Low

Table 63 TCP - MIB II Measurements (Seite 1 von 3)

Measurement Name	Description Details
tcpAttemptFails	The number of times TCP connections made a transition to the CLOSED state from either the SYN-SENT state or the SYN-RCVD state, plus the number of times TCP connections made a transition to the LISTEN state from the SYN-RCVD state. OID - 1.3.6.1.2.1.6.7 Priority: 2-Major Configuration Problem Operator Hints: Monitor for Abnormal High
tcpEstabResets	The number of times TCP connections have made a direct transition to the CLOSED state from either the ESTABLISHED state or the CLOSE-WAIT state. OID - 1.3.6.1.2.1.6.8 Priority: 2-Major Configuration Problem Operator Hints: Monitor for Abnormal High
tcpCurrEstab	The number of TCP connections for which the current state is either ESTABLISHED or CLOSE-WAIT. OID - 1.3.6.1.2.1.6.9 Priority: 1-Critical Service Affecting Operator Hints: Monitor for Abnormal Low
tcpInSegs	The total number of segments received, including those received in error. This count includes segments received on currently established connections. OID - 1.3.6.1.2.1.6.10 Priority: 1-Critical Service Affecting Operator Hints: Monitor for Abnormal Low
tcpHCInSegs	64 bit equivalent of tcpInSegs. OID - 1.3.6.1.2.1.6.17 Priority: 1-Critical Service Affecting Operator Hints: Monitor for Abnormal Low
tcpOutSegs	The total number of segments sent, including those on current connections but excluding those containing only retransmitted octets. OID - 1.3.6.1.2.1.6.11 Priority: 1-Critical Service Affecting Operator Hints: Monitor for Abnormal Low

Table 63 TCP - MIB II Measurements (Seite 2 von 3)

Measurement Name	Description Details
tcpHCOutSegs	64 bit equivalent of tcpOutSegs. OID - 1.3.6.1.2.1.6.18 Priority: 1-Critical Service Affecting Operator Hints: Monitor for Abnormal Low
tcpRetransSegs	The total number of segments retransmitted - that is, the number of TCP segments transmitted containing one or more previously transmitted octets. OID - 1.3.6.1.2.1.6.12 Priority: 2-Major Configuration Problem Operator Hints: Monitor for Abnormal High
tcpInErrs	The total number of segments received in error (e.g., bad TCP checksums). OID - 1.3.6.1.2.1.6.14 Priority: 2-Major Configuration Problem Operator Hints: Monitor for Abnormal High
tcpOutRsts	The number of TCP segments sent containing the RST flag. OID - 1.3.6.1.2.1.6.15 Priority: 2-Major Configuration Problem Operator Hints: Monitor for Abnormal High

Table 63 TCP - MIB II Measurements (Seite 3 von 3)

6.2.4 UDP - MIB II

Table 64 describes the UDP-MIB II performance statistics and measurement parameters.

Measurement Name	Description Details
udpInDatagrams	The total number of UDP datagrams delivered to UDP users. OID - 1.3.6.1.2.1.7.1 Priority: 1-Critical Service Affecting Operator Hints: Monitor for Abnormal Low
udpHCInDatagrams	64 bit equivalent of udpInDatagrams OID - 1.3.6.1.2.1.7.8 Priority: 1-Critical Service Affecting Operator Hints: Monitor for Abnormal Low

Table 64 UDP - MIB II Measurements (Seite 1 von 2)

Measurement Name	Description Details
udpNoPorts	The total number of received UDP datagrams for which there was no application at the destination port. OID - 1.3.6.1.2.1.7.2 Priority: 2-Major Configuration Problem Operator Hints: Monitor for Abnormal High
udpInErrors	The number of received UDP datagrams that could not be delivered for reasons other than the lack of an application at the destination port. OID - 1.3.6.1.2.1.7.3 Priority: 2-Major Configuration Problem Operator Hints: Monitor for Abnormal High
udpOutDatagrams	The total number of UDP datagrams sent from this entity. OID - 1.3.6.1.2.1.7.4 Priority: 1-Critical Service Affecting Operator Hints: Monitor for Abnormal Low
udpHCOutDatagrams	64 bit equivalent of udpOutDatagrams. OID - 1.3.6.1.2.1.7.9 Priority: 1-Critical Service Affecting Operator Hints: Monitor for Abnormal Low

Table 64 UDP - MIB II Measurements (Seite 2 von 2)

6.2.5 SNMP - MIB II

Table 65 describes the SNMP-MIB II performance statistics and measurement parameters.

Measurement Name	Description Details
snmpInPkts	The total number of Messages delivered to the SNMP entity from the transport service. OID - 1.3.6.1.2.1.11.1 Priority: 1-Critical Service Affecting Operator Hints: Monitor for Abnormal Low

Table 65 SNMP - MIB II Measurements (Seite 1 von 3)

Measurement Name	Description Details
snmpInBadVersions	The total number of SNMP Messages which were delivered to the SNMP protocol entity and were for an unsupported SNMP version. OID - 1.3.6.1.2.1.11.3 Priority: 2-Major Configuration Problem Operator Hints: Monitor for Abnormal High
snmpInBadCommunityNames	The total number of SNMP Messages delivered to the SNMP protocol entity which used a SNMP community name not known to said entity. OID - 1.3.6.1.2.1.11.4 Priority: 2-Major Configuration Problem Operator Hints: Monitor for Abnormal High
snmpInBadCommunityUses	The total number of SNMP Messages delivered to the SNMP protocol entity which represented an SNMP operation which was not allowed by the SNMP community named in the Message. OID - 1.3.6.1.2.1.11.5 Priority: 2-Major Configuration Problem Operator Hints: Monitor for Abnormal High
snmpInASNParseErrs	The total number of ASN.1 or BER errors encountered by the SNMP protocol entity when decoding received SNMP messages. OID - 1.3.6.1.2.1.11.6 Priority: 2-Major Configuration Problem Operator Hints: Monitor for Abnormal High
snmpEnableAuthenTraps	Indicates whether the SNMP entity is permitted to generate authenticationFailure traps. OID - 1.3.6.1.2.1.11.31 Priority: 6-Engineering Info.
snmpSilentDrops	The total number of Confirmed Class PDUs delivered to the SNMP entity wich were silently dropped because the size of the reply exceeded either a local constraint or the maximum message size associated with the originator of the request. OID - 1.3.6.1.2.1.11.31 Priority: 2-Major Configuration Problem Operator Hints: Monitor for Abnormal High

Table 65 SNMP - MIB II Measurements (Seite 2 von 3)

Measurement Name	Description Details
snmpProxyDrops	The total number of Confirmed Class PDUs delivered to the SNMP entity which were silently dropped because the transmission of the message to a proxy target failed in a manner such that no Response Class PDU could be returned. OID - 1.3.6.1.2.1.11.32 Priority: 2-Major Configuration Problem Operator Hints: Monitor for Abnormal High

Table 65 SNMP - MIB II Measurements (Seite 3 von 3)

6.2.6 UCD-SNMP-MIB

OpenScape Voice Memory, IO and CPU measurements are available via the UCD-SNMP-MIB and Host-Resources MIB.

Note: Please note that Unify does not control the SW supporting these MIBs. Some of the information may not be supported by a particular HW platform.

6.2.6.1 Example of the data provided by the UCD-SNMP-MIB

Note: There is only a single average counter and not one for each CPU. The number is in clock ticks so the interpreting software at a surveillance OSS will have to poll and create an average over time. The formula for a percentage is: Idle CPU = (idle2 - idle1)*100/((idle2 - idle1)+(user2 - user1)+(nice2 -nice1)+(system2 - system1))

The memory is as reported by vmstat.

+--systemStats

```
| +-- ssIndex
| +-- ssErrorName
| +-- ssSwapIn
| +-- ssSwapOut
| +-- ssIOSent
| +-- ssIOReceive
| +-- ssSysInterrupts
| +-- ssSysContext
| +-- ssCpuUser
| +-- ssCpuSystem
| +-- ssCpuIdle
| +-- ssCpuRawUser
| +-- ssCpuRawNice
| +-- ssCpuRawSystem
| +-- ssCpuRawIdle
| +-- ssCpuRawWait
| +-- ssCpuRawKernel
| +-- ssCpuRawInterrupt
```

```
| +-- ssIORawSent(
| +-- ssIORawReceived
| +-- ssRawInterrupts
| +-- ssRawContexts
| +-- ssCpuRawSoftIRQ
| +-- ssRawSwapIn
| +-- ssRawSwapOut
|
+--memory
   +-- memIndex
   +-- memErrorName
   +-- memTotalSwap
   +-- memAvailSwap
   +-- memTotalReal
   +-- memAvailReal
   +-- memTotalSwapTXT
   +-- memAvailSwapTXT
   +-- memTotalRealTXT
   +-- memAvailRealTXT
   +-- memTotalFree
   +-- memMinimumSwap
   +-- memShared
   +-- memBuffer
   +-- memCached
   +-- memSwapError
   +-- memSwapErrorMsg
```

```
# snmpwalk -v2c -c SENSnmp  localhost ucdavis
UCD-SNMP-MIB::memIndex.0 = INTEGER: 0
UCD-SNMP-MIB::memErrorName.0 = STRING: swap
UCD-SNMP-MIB::memTotalSwap.0 = INTEGER: 4000144 kB
UCD-SNMP-MIB::memAvailSwap.0 = INTEGER: 4000144 kB
UCD-SNMP-MIB::memTotalReal.0 = INTEGER: 8151292 kB
UCD-SNMP-MIB::memAvailReal.0 = INTEGER: 3492536 kB
UCD-SNMP-MIB::memTotalFree.0 = INTEGER: 7492680 kB
UCD-SNMP-MIB::memMinimumSwap.0 = INTEGER: 16000 kB
UCD-SNMP-MIB::memShared.0 = INTEGER: 0 kB
UCD-SNMP-MIB::memBuffer.0 = INTEGER: 554308 kB
UCD-SNMP-MIB::memCached.0 = INTEGER: 2891548 kB
```

```
UCD-SNMP-MIB::memSwapError.0 = INTEGER: noError(0)
UCD-SNMP-MIB::memSwapErrorMsg.0 = STRING:
UCD-SNMP-MIB::laIndex.1 = INTEGER: 1
UCD-SNMP-MIB::laIndex.2 = INTEGER: 2
UCD-SNMP-MIB::laIndex.3 = INTEGER: 3
UCD-SNMP-MIB::laNames.1 = STRING: Load-1
UCD-SNMP-MIB::laNames.2 = STRING: Load-5
UCD-SNMP-MIB::laNames.3 = STRING: Load-15
UCD-SNMP-MIB::laLoad.1 = STRING: 13.01
UCD-SNMP-MIB::laLoad.2 = STRING: 13.05
UCD-SNMP-MIB::laLoad.3 = STRING: 13.00
UCD-SNMP-MIB::laConfig.1 = STRING: 12.00
UCD-SNMP-MIB::laConfig.2 = STRING: 12.00
UCD-SNMP-MIB::laConfig.3 = STRING: 12.00
UCD-SNMP-MIB::laLoadInt.1 = INTEGER: 1301
UCD-SNMP-MIB::laLoadInt.2 = INTEGER: 1305
UCD-SNMP-MIB::laLoadInt.3 = INTEGER: 1300
UCD-SNMP-MIB::laLoadFloat.1 = Opaque: Float: 13.010000
UCD-SNMP-MIB::laLoadFloat.2 = Opaque: Float: 13.050000
UCD-SNMP-MIB::laLoadFloat.3 = Opaque: Float: 13.000000
UCD-SNMP-MIB::laErrorFlag.1 = INTEGER: error(1)
UCD-SNMP-MIB::laErrorFlag.2 = INTEGER: error(1)
UCD-SNMP-MIB::laErrorFlag.3 = INTEGER: error(1)
UCD-SNMP-MIB::laErrMessage.1 = STRING: 1 min Load Average too
high (= 13.01)
UCD-SNMP-MIB::laErrMessage.2 = STRING: 5 min Load Average too
high (= 13.05)
UCD-SNMP-MIB::laErrMessage.3 = STRING: 15 min Load Average too
high (= 13.00)
UCD-SNMP-MIB::ssIndex.0 = INTEGER: 1
UCD-SNMP-MIB::ssErrorName.0 = STRING: systemStats
UCD-SNMP-MIB::ssSwapIn.0 = INTEGER: 0 kB
UCD-SNMP-MIB::ssSwapOut.0 = INTEGER: 0 kB
UCD-SNMP-MIB::ssIOSent.0 = INTEGER: 85 blocks/s
UCD-SNMP-MIB::ssIOReceive.0 = INTEGER: 0 blocks/s
UCD-SNMP-MIB::ssSysInterrupts.0 = INTEGER: 326 interrupts/s
UCD-SNMP-MIB::ssSysContext.0 = INTEGER: 2214 switches/s
UCD-SNMP-MIB::ssCpuUser.0 = INTEGER: 5
UCD-SNMP-MIB::ssCpuSystem.0 = INTEGER: 0
UCD-SNMP-MIB::ssCpuIdle.0 = INTEGER: 93
```

```
UCD-SNMP-MIB::ssCpuRawUser.0 = Counter32: 9615391
UCD-SNMP-MIB::ssCpuRawNice.0 = Counter32: 16683
UCD-SNMP-MIB::ssCpuRawSystem.0 = Counter32: 2182167
UCD-SNMP-MIB::ssCpuRawIdle.0 = Counter32: 1103073847
UCD-SNMP-MIB::ssCpuRawWait.0 = Counter32: 1230820
UCD-SNMP-MIB::ssCpuRawKernel.0 = Counter32: 0
UCD-SNMP-MIB::ssCpuRawInterrupt.0 = Counter32: 8340
UCD-SNMP-MIB::ssIORawSent.0 = Counter32: 66757546
UCD-SNMP-MIB::ssIORawReceived.0 = Counter32: 3891576
UCD-SNMP-MIB::ssRawInterrupts.0 = Counter32: 245262872
UCD-SNMP-MIB::ssRawContexts.0 = Counter32: 1939711745
UCD-SNMP-MIB::ssCpuRawSoftIRQ.0 = Counter32: 41496
UCD-SNMP-MIB::ssRawSwapIn.0 = Counter32: 0
UCD-SNMP-MIB::ssRawSwapOut.0 = Counter32: 0
UCD-DLMOD-MIB::dlmodNextIndex.0 = INTEGER: 1
UCD-DISKIO-MIB::diskIOIndex.1 = INTEGER: 1
UCD-DISKIO-MIB::diskIOIndex.2 = INTEGER: 2
UCD-DISKIO-MIB::diskIOIndex.3 = INTEGER: 3
UCD-DISKIO-MIB::diskIOIndex.4 = INTEGER: 4
UCD-DISKIO-MIB::diskIOIndex.5 = INTEGER: 5
UCD-DISKIO-MIB::diskIOIndex.6 = INTEGER: 6
UCD-DISKIO-MIB::diskIOIndex.7 = INTEGER: 7
UCD-DISKIO-MIB::diskIOIndex.8 = INTEGER: 8
UCD-DISKIO-MIB::diskIOIndex.9 = INTEGER: 9
UCD-DISKIO-MIB::diskIOIndex.10 = INTEGER: 10
UCD-DISKIO-MIB::diskIOIndex.11 = INTEGER: 11
UCD-DISKIO-MIB::diskIOIndex.12 = INTEGER: 12
UCD-DISKIO-MIB::diskIOIndex.13 = INTEGER: 13
UCD-DISKIO-MIB::diskIOIndex.14 = INTEGER: 14
UCD-DISKIO-MIB::diskIOIndex.15 = INTEGER: 15
UCD-DISKIO-MIB::diskIOIndex.16 = INTEGER: 16
UCD-DISKIO-MIB::diskIOIndex.17 = INTEGER: 17
UCD-DISKIO-MIB::diskIOIndex.18 = INTEGER: 18
UCD-DISKIO-MIB::diskIOIndex.19 = INTEGER: 19
UCD-DISKIO-MIB::diskIOIndex.20 = INTEGER: 20
UCD-DISKIO-MIB::diskIOIndex.21 = INTEGER: 21
UCD-DISKIO-MIB::diskIOIndex.22 = INTEGER: 22
UCD-DISKIO-MIB::diskIOIndex.23 = INTEGER: 23
UCD-DISKIO-MIB::diskIOIndex.24 = INTEGER: 24
```

```
UCD-DISKIO-MIB::diskIOIndex.25 = INTEGER: 25
UCD-DISKIO-MIB::diskIOIndex.26 = INTEGER: 26
UCD-DISKIO-MIB::diskIOIndex.27 = INTEGER: 27
UCD-DISKIO-MIB::diskIOIndex.28 = INTEGER: 28
UCD-DISKIO-MIB::diskIOIndex.29 = INTEGER: 29
UCD-DISKIO-MIB::diskIOIndex.30 = INTEGER: 30
UCD-DISKIO-MIB::diskIOIndex.31 = INTEGER: 31
UCD-DISKIO-MIB::diskIOIndex.32 = INTEGER: 32
UCD-DISKIO-MIB::diskIOIndex.33 = INTEGER: 33
UCD-DISKIO-MIB::diskIOIndex.34 = INTEGER: 34
UCD-DISKIO-MIB::diskIOIndex.35 = INTEGER: 35
UCD-DISKIO-MIB::diskIOIndex.36 = INTEGER: 36
UCD-DISKIO-MIB::diskIOIndex.37 = INTEGER: 37
UCD-DISKIO-MIB::diskIOIndex.38 = INTEGER: 38
UCD-DISKIO-MIB::diskIOIndex.39 = INTEGER: 39
UCD-DISKIO-MIB::diskIOIndex.40 = INTEGER: 40
UCD-DISKIO-MIB::diskIOIndex.41 = INTEGER: 41
UCD-DISKIO-MIB::diskIOIndex.42 = INTEGER: 42
UCD-DISKIO-MIB::diskIOIndex.43 = INTEGER: 43
UCD-DISKIO-MIB::diskIOIndex.44 = INTEGER: 44
UCD-DISKIO-MIB::diskIOIndex.45 = INTEGER: 45
UCD-DISKIO-MIB::diskIOIndex.46 = INTEGER: 46
UCD-DISKIO-MIB::diskIODevice.1 = STRING: ram0
UCD-DISKIO-MIB::diskIODevice.2 = STRING: ram1
UCD-DISKIO-MIB::diskIODevice.3 = STRING: ram2
UCD-DISKIO-MIB::diskIODevice.4 = STRING: ram3
UCD-DISKIO-MIB::diskIODevice.5 = STRING: ram4
UCD-DISKIO-MIB::diskIODevice.6 = STRING: ram5
UCD-DISKIO-MIB::diskIODevice.7 = STRING: ram6
UCD-DISKIO-MIB::diskIODevice.8 = STRING: ram7
UCD-DISKIO-MIB::diskIODevice.9 = STRING: ram8
UCD-DISKIO-MIB::diskIODevice.10 = STRING: ram9
UCD-DISKIO-MIB::diskIODevice.11 = STRING: ram10
UCD-DISKIO-MIB::diskIODevice.12 = STRING: ram11
UCD-DISKIO-MIB::diskIODevice.13 = STRING: ram12
UCD-DISKIO-MIB::diskIODevice.14 = STRING: ram13
UCD-DISKIO-MIB::diskIODevice.15 = STRING: ram14
UCD-DISKIO-MIB::diskIODevice.16 = STRING: ram15
UCD-DISKIO-MIB::diskIODevice.17 = STRING: sr0
```

```
UCD-DISKIO-MIB::diskIODevice.18 = STRING: sda
UCD-DISKIO-MIB::diskIODevice.19 = STRING: sda1
UCD-DISKIO-MIB::diskIODevice.20 = STRING: sda2
UCD-DISKIO-MIB::diskIODevice.21 = STRING: sda3
UCD-DISKIO-MIB::diskIODevice.22 = STRING: sda4
UCD-DISKIO-MIB::diskIODevice.23 = STRING: sda5
UCD-DISKIO-MIB::diskIODevice.24 = STRING: sda6
UCD-DISKIO-MIB::diskIODevice.25 = STRING: sda7
UCD-DISKIO-MIB::diskIODevice.26 = STRING: sda8
UCD-DISKIO-MIB::diskIODevice.27 = STRING: sda9
UCD-DISKIO-MIB::diskIODevice.28 = STRING: sda10
UCD-DISKIO-MIB::diskIODevice.29 = STRING: sda11
UCD-DISKIO-MIB::diskIODevice.30 = STRING: sda12
UCD-DISKIO-MIB::diskIODevice.31 = STRING: sda13
UCD-DISKIO-MIB::diskIODevice.32 = STRING: sda14
UCD-DISKIO-MIB::diskIODevice.33 = STRING: sda15
UCD-DISKIO-MIB::diskIODevice.34 = STRING: sdb
UCD-DISKIO-MIB::diskIODevice.35 = STRING: md0
UCD-DISKIO-MIB::diskIODevice.36 = STRING: loop0
UCD-DISKIO-MIB::diskIODevice.37 = STRING: loop1
UCD-DISKIO-MIB::diskIODevice.38 = STRING: loop2
UCD-DISKIO-MIB::diskIODevice.39 = STRING: loop3
UCD-DISKIO-MIB::diskIODevice.40 = STRING: loop4
UCD-DISKIO-MIB::diskIODevice.41 = STRING: loop5
UCD-DISKIO-MIB::diskIODevice.42 = STRING: loop6
UCD-DISKIO-MIB::diskIODevice.43 = STRING: loop7
UCD-DISKIO-MIB::diskIODevice.44 = STRING: md1
UCD-DISKIO-MIB::diskIODevice.45 = STRING: md2
UCD-DISKIO-MIB::diskIODevice.46 = STRING: md3
UCD-DISKIO-MIB::diskIONRead.1 = Counter32: 0
UCD-DISKIO-MIB::diskIONRead.2 = Counter32: 0
UCD-DISKIO-MIB::diskIONRead.3 = Counter32: 0
UCD-DISKIO-MIB::diskIONRead.4 = Counter32: 0
UCD-DISKIO-MIB::diskIONRead.5 = Counter32: 0
UCD-DISKIO-MIB::diskIONRead.6 = Counter32: 0
UCD-DISKIO-MIB::diskIONRead.7 = Counter32: 0
UCD-DISKIO-MIB::diskIONRead.8 = Counter32: 0
UCD-DISKIO-MIB::diskIONRead.9 = Counter32: 0
UCD-DISKIO-MIB::diskIONRead.10 = Counter32: 0
```

```
UCD-DISKIO-MIB::diskIONRead.11 = Counter32: 0
UCD-DISKIO-MIB::diskIONRead.12 = Counter32: 0
UCD-DISKIO-MIB::diskIONRead.13 = Counter32: 0
UCD-DISKIO-MIB::diskIONRead.14 = Counter32: 0
UCD-DISKIO-MIB::diskIONRead.15 = Counter32: 0
UCD-DISKIO-MIB::diskIONRead.16 = Counter32: 0
UCD-DISKIO-MIB::diskIONRead.17 = Counter32: 0
UCD-DISKIO-MIB::diskIONRead.18 = Counter32: 1992004096
UCD-DISKIO-MIB::diskIONRead.19 = Counter32: 206336
UCD-DISKIO-MIB::diskIONRead.20 = Counter32: 910244864
UCD-DISKIO-MIB::diskIONRead.21 = Counter32: 1572864
UCD-DISKIO-MIB::diskIONRead.22 = Counter32: 3072
UCD-DISKIO-MIB::diskIONRead.23 = Counter32: 414607872
UCD-DISKIO-MIB::diskIONRead.24 = Counter32: 1318912
UCD-DISKIO-MIB::diskIONRead.25 = Counter32: 12714496
UCD-DISKIO-MIB::diskIONRead.26 = Counter32: 4743680
UCD-DISKIO-MIB::diskIONRead.27 = Counter32: 159392256
UCD-DISKIO-MIB::diskIONRead.28 = Counter32: 3940864
UCD-DISKIO-MIB::diskIONRead.29 = Counter32: 3342848
UCD-DISKIO-MIB::diskIONRead.30 = Counter32: 283406848
UCD-DISKIO-MIB::diskIONRead.31 = Counter32: 1110528
UCD-DISKIO-MIB::diskIONRead.32 = Counter32: 2757120
UCD-DISKIO-MIB::diskIONRead.33 = Counter32: 192178688
UCD-DISKIO-MIB::diskIONRead.34 = Counter32: 499712
UCD-DISKIO-MIB::diskIONRead.35 = Counter32: 0
UCD-DISKIO-MIB::diskIONRead.36 = Counter32: 0
UCD-DISKIO-MIB::diskIONRead.37 = Counter32: 0
UCD-DISKIO-MIB::diskIONRead.38 = Counter32: 0
UCD-DISKIO-MIB::diskIONRead.39 = Counter32: 0
UCD-DISKIO-MIB::diskIONRead.40 = Counter32: 0
UCD-DISKIO-MIB::diskIONRead.41 = Counter32: 0
UCD-DISKIO-MIB::diskIONRead.42 = Counter32: 0
UCD-DISKIO-MIB::diskIONRead.43 = Counter32: 0
UCD-DISKIO-MIB::diskIONRead.44 = Counter32: 0
UCD-DISKIO-MIB::diskIONRead.45 = Counter32: 0
UCD-DISKIO-MIB::diskIONRead.46 = Counter32: 0
UCD-DISKIO-MIB::diskIONWritten.1 = Counter32: 0
UCD-DISKIO-MIB::diskIONWritten.2 = Counter32: 0
UCD-DISKIO-MIB::diskIONWritten.3 = Counter32: 0
```

```
UCD-DISKIO-MIB::diskIONWritten.4 = Counter32: 0
UCD-DISKIO-MIB::diskIONWritten.5 = Counter32: 0
UCD-DISKIO-MIB::diskIONWritten.6 = Counter32: 0
UCD-DISKIO-MIB::diskIONWritten.7 = Counter32: 0
UCD-DISKIO-MIB::diskIONWritten.8 = Counter32: 0
UCD-DISKIO-MIB::diskIONWritten.9 = Counter32: 0
UCD-DISKIO-MIB::diskIONWritten.10 = Counter32: 0
UCD-DISKIO-MIB::diskIONWritten.11 = Counter32: 0
UCD-DISKIO-MIB::diskIONWritten.12 = Counter32: 0
UCD-DISKIO-MIB::diskIONWritten.13 = Counter32: 0
UCD-DISKIO-MIB::diskIONWritten.14 = Counter32: 0
UCD-DISKIO-MIB::diskIONWritten.15 = Counter32: 0
UCD-DISKIO-MIB::diskIONWritten.16 = Counter32: 0
UCD-DISKIO-MIB::diskIONWritten.17 = Counter32: 0
UCD-DISKIO-MIB::diskIONWritten.18 = Counter32: 2247980032
UCD-DISKIO-MIB::diskIONWritten.19 = Counter32: 0
UCD-DISKIO-MIB::diskIONWritten.20 = Counter32: 4134790144
UCD-DISKIO-MIB::diskIONWritten.21 = Counter32: 131072
UCD-DISKIO-MIB::diskIONWritten.22 = Counter32: 0
UCD-DISKIO-MIB::diskIONWritten.23 = Counter32: 1793713152
UCD-DISKIO-MIB::diskIONWritten.24 = Counter32: 3458048
UCD-DISKIO-MIB::diskIONWritten.25 = Counter32: 87937024
UCD-DISKIO-MIB::diskIONWritten.26 = Counter32: 798013440
UCD-DISKIO-MIB::diskIONWritten.27 = Counter32: 792976384
UCD-DISKIO-MIB::diskIONWritten.28 = Counter32: 34331136
UCD-DISKIO-MIB::diskIONWritten.29 = Counter32: 133648896
UCD-DISKIO-MIB::diskIONWritten.30 = Counter32: 3508507648
UCD-DISKIO-MIB::diskIONWritten.31 = Counter32: 202240
UCD-DISKIO-MIB::diskIONWritten.32 = Counter32: 305664
UCD-DISKIO-MIB::diskIONWritten.33 = Counter32: 1417307136
UCD-DISKIO-MIB::diskIONWritten.34 = Counter32: 0
UCD-DISKIO-MIB::diskIONWritten.35 = Counter32: 0
UCD-DISKIO-MIB::diskIONWritten.36 = Counter32: 0
UCD-DISKIO-MIB::diskIONWritten.37 = Counter32: 0
UCD-DISKIO-MIB::diskIONWritten.38 = Counter32: 0
UCD-DISKIO-MIB::diskIONWritten.39 = Counter32: 0
UCD-DISKIO-MIB::diskIONWritten.40 = Counter32: 0
UCD-DISKIO-MIB::diskIONWritten.41 = Counter32: 0
UCD-DISKIO-MIB::diskIONWritten.42 = Counter32: 0
```

```
UCD-DISKIO-MIB::diskIONWritten.43 = Counter32: 0
UCD-DISKIO-MIB::diskIONWritten.44 = Counter32: 0
UCD-DISKIO-MIB::diskIONWritten.45 = Counter32: 0
UCD-DISKIO-MIB::diskIONWritten.46 = Counter32: 0
UCD-DISKIO-MIB::diskIOReads.1 = Counter32: 0
UCD-DISKIO-MIB::diskIOReads.2 = Counter32: 0
UCD-DISKIO-MIB::diskIOReads.3 = Counter32: 0
UCD-DISKIO-MIB::diskIOReads.4 = Counter32: 0
UCD-DISKIO-MIB::diskIOReads.5 = Counter32: 0
UCD-DISKIO-MIB::diskIOReads.6 = Counter32: 0
UCD-DISKIO-MIB::diskIOReads.7 = Counter32: 0
UCD-DISKIO-MIB::diskIOReads.8 = Counter32: 0
UCD-DISKIO-MIB::diskIOReads.9 = Counter32: 0
UCD-DISKIO-MIB::diskIOReads.10 = Counter32: 0
UCD-DISKIO-MIB::diskIOReads.11 = Counter32: 0
UCD-DISKIO-MIB::diskIOReads.12 = Counter32: 0
UCD-DISKIO-MIB::diskIOReads.13 = Counter32: 0
UCD-DISKIO-MIB::diskIOReads.14 = Counter32: 0
UCD-DISKIO-MIB::diskIOReads.15 = Counter32: 0
UCD-DISKIO-MIB::diskIOReads.16 = Counter32: 0
UCD-DISKIO-MIB::diskIOReads.17 = Counter32: 0
UCD-DISKIO-MIB::diskIOReads.18 = Counter32: 95442
UCD-DISKIO-MIB::diskIOReads.19 = Counter32: 214
UCD-DISKIO-MIB::diskIOReads.20 = Counter32: 63964
UCD-DISKIO-MIB::diskIOReads.21 = Counter32: 1396
UCD-DISKIO-MIB::diskIOReads.22 = Counter32: 3
UCD-DISKIO-MIB::diskIOReads.23 = Counter32: 24159
UCD-DISKIO-MIB::diskIOReads.24 = Counter32: 712
UCD-DISKIO-MIB::diskIOReads.25 = Counter32: 6151
UCD-DISKIO-MIB::diskIOReads.26 = Counter32: 8740
UCD-DISKIO-MIB::diskIOReads.27 = Counter32: 25357
UCD-DISKIO-MIB::diskIOReads.28 = Counter32: 6413
UCD-DISKIO-MIB::diskIOReads.29 = Counter32: 5808
UCD-DISKIO-MIB::diskIOReads.30 = Counter32: 41102
UCD-DISKIO-MIB::diskIOReads.31 = Counter32: 1756
UCD-DISKIO-MIB::diskIOReads.32 = Counter32: 4853
UCD-DISKIO-MIB::diskIOReads.33 = Counter32: 78431
UCD-DISKIO-MIB::diskIOReads.34 = Counter32: 45
UCD-DISKIO-MIB::diskIOReads.35 = Counter32: 0
```

```
UCD-DISKIO-MIB::diskIOReads.36 = Counter32: 0
UCD-DISKIO-MIB::diskIOReads.37 = Counter32: 0
UCD-DISKIO-MIB::diskIOReads.38 = Counter32: 0
UCD-DISKIO-MIB::diskIOReads.39 = Counter32: 0
UCD-DISKIO-MIB::diskIOReads.40 = Counter32: 0
UCD-DISKIO-MIB::diskIOReads.41 = Counter32: 0
UCD-DISKIO-MIB::diskIOReads.42 = Counter32: 0
UCD-DISKIO-MIB::diskIOReads.43 = Counter32: 0
UCD-DISKIO-MIB::diskIOReads.44 = Counter32: 0
UCD-DISKIO-MIB::diskIOReads.45 = Counter32: 0
UCD-DISKIO-MIB::diskIOReads.46 = Counter32: 0
UCD-DISKIO-MIB::diskIOWrites.1 = Counter32: 0
UCD-DISKIO-MIB::diskIOWrites.2 = Counter32: 0
UCD-DISKIO-MIB::diskIOWrites.3 = Counter32: 0
UCD-DISKIO-MIB::diskIOWrites.4 = Counter32: 0
UCD-DISKIO-MIB::diskIOWrites.5 = Counter32: 0
UCD-DISKIO-MIB::diskIOWrites.6 = Counter32: 0
UCD-DISKIO-MIB::diskIOWrites.7 = Counter32: 0
UCD-DISKIO-MIB::diskIOWrites.8 = Counter32: 0
UCD-DISKIO-MIB::diskIOWrites.9 = Counter32: 0
UCD-DISKIO-MIB::diskIOWrites.10 = Counter32: 0
UCD-DISKIO-MIB::diskIOWrites.11 = Counter32: 0
UCD-DISKIO-MIB::diskIOWrites.12 = Counter32: 0
UCD-DISKIO-MIB::diskIOWrites.13 = Counter32: 0
UCD-DISKIO-MIB::diskIOWrites.14 = Counter32: 0
UCD-DISKIO-MIB::diskIOWrites.15 = Counter32: 0
UCD-DISKIO-MIB::diskIOWrites.16 = Counter32: 0
UCD-DISKIO-MIB::diskIOWrites.17 = Counter32: 0
UCD-DISKIO-MIB::diskIOWrites.18 = Counter32: 2747399
UCD-DISKIO-MIB::diskIOWrites.19 = Counter32: 0
UCD-DISKIO-MIB::diskIOWrites.20 = Counter32: 3106950
UCD-DISKIO-MIB::diskIOWrites.21 = Counter32: 68
UCD-DISKIO-MIB::diskIOWrites.22 = Counter32: 0
UCD-DISKIO-MIB::diskIOWrites.23 = Counter32: 439607
UCD-DISKIO-MIB::diskIOWrites.24 = Counter32: 869
UCD-DISKIO-MIB::diskIOWrites.25 = Counter32: 21672
UCD-DISKIO-MIB::diskIOWrites.26 = Counter32: 195202
UCD-DISKIO-MIB::diskIOWrites.27 = Counter32: 1242466
UCD-DISKIO-MIB::diskIOWrites.28 = Counter32: 9723
```

```
UCD-DISKIO-MIB::diskIOWrites.29 = Counter32: 32770
UCD-DISKIO-MIB::diskIOWrites.30 = Counter32: 857082
UCD-DISKIO-MIB::diskIOWrites.31 = Counter32: 115
UCD-DISKIO-MIB::diskIOWrites.32 = Counter32: 261
UCD-DISKIO-MIB::diskIOWrites.33 = Counter32: 2445171
UCD-DISKIO-MIB::diskIOWrites.34 = Counter32: 0
UCD-DISKIO-MIB::diskIOWrites.35 = Counter32: 0
UCD-DISKIO-MIB::diskIOWrites.36 = Counter32: 0
UCD-DISKIO-MIB::diskIOWrites.37 = Counter32: 0
UCD-DISKIO-MIB::diskIOWrites.38 = Counter32: 0
UCD-DISKIO-MIB::diskIOWrites.39 = Counter32: 0
UCD-DISKIO-MIB::diskIOWrites.40 = Counter32: 0
UCD-DISKIO-MIB::diskIOWrites.41 = Counter32: 0
UCD-DISKIO-MIB::diskIOWrites.42 = Counter32: 0
UCD-DISKIO-MIB::diskIOWrites.43 = Counter32: 0
UCD-DISKIO-MIB::diskIOWrites.44 = Counter32: 0
UCD-DISKIO-MIB::diskIOWrites.45 = Counter32: 0
UCD-DISKIO-MIB::diskIOWrites.46 = Counter32: 0
UCD-SNMP-MIB::logMatchMaxEntries.0 = INTEGER: 50
UCD-SNMP-MIB::versionIndex.0 = INTEGER: 1
UCD-SNMP-MIB::versionTag.0 = STRING: 5.4
UCD-SNMP-MIB::versionDate.0 = STRING: $Date: 2006/09/15 00:48:42
$
UCD-SNMP-MIB::versionCDate.0 = STRING: Tue Nov 10 16:05:33 2009
UCD-SNMP-MIB::versionIdent.0 = STRING: $Id: versioninfo.c,v 5.3
2006/09/15 00:48:42 tanders Exp $
UCD-SNMP-MIB::versionConfigureOptions.0 = STRING: '--
host=x86_64-suse-linux-gnu' '--build=x86_64-suse-linux-gnu' '--
target=x86_64-suse-linux' '--program-prefix=' '--prefix=/usr' '-
-exec-prefix=/usr' '--bindir=/usr/bin' '--sbindir=/usr/sbin' '--
sysconfdir=/etc' '--datadir=/usr/share' '--includedir=/usr/
include' '--libdir=/usr/lib64' '--libexecdir=/u
UCD-SNMP-MIB::versionClearCache.0 = INTEGER: 0
UCD-SNMP-MIB::versionUpdateConfig.0 = INTEGER: 0
UCD-SNMP-MIB::versionRestartAgent.0 = INTEGER: 0
UCD-SNMP-MIB::versionSavePersistentData.0 = INTEGER: 0
UCD-SNMP-MIB::versionDoDebugging.0 = INTEGER: 0
UCD-SNMP-MIB::snmperrIndex.0 = INTEGER: 0
UCD-SNMP-MIB::snmperrNames.0 = STRING: snmp
UCD-SNMP-MIB::snmperrErrorFlag.0 = INTEGER: noError(0)
UCD-SNMP-MIB::snmperrErrMessage.0 = STRING:
```

7 Managing SNMP Users

A SNMP user must be created and assigned with authentication and optionally encryption in order to OpenScape Voice system be able to respond to Snmp monitoring requests. If the system is clustered system (2 node), this configuration should be done on both nodes.

Note: Unlimited SNMP users can be created in the OpenScape Voice system.

7.1 Creating a SNMPV3 User

To create a new SNMPV3 user, perform the following steps:

1. Login as root in the OpenScape Voice system.

2. Stop the snmpd daemon:

```
systemctl stop snmpd
```

3. Create the SNMPV3 User:

```
net-snmp-create-v3-user [-ro] [-A authpass] [-X
encryptpass][-a MD5|SHA] [-x DES|AES] [username]
```

   Configure the following parameters of the command:

   - **username**: Enter the user name of the SNMPV3 user
   - **SHA**: Enter the authentication protocol of the SNMPV3 user
   - **authpass**: Enter the authentication password of the SNMPV3 user
   - **AES**: Enter optionally the encryption protocol of the SNMPV3 user
   - **encryptpass**: Enter optionally the encryption password of the SNMPV3 user

4. Start the snmpd daemon:

```
systemctl start snmpd
```

A new SNMPV3 user is now created with read-only permissions which means that it is only possible to receive and not repsond to SNMPV3 requests.

7.2 Assigning Write Permission to a SNMPV3 User

If the SNMPV3 user is assigned with only read-only permission, it is not possible responding to snmpset requests.

In order to be able responding to nmpset requests you must assign to the SNMPV3 user write permission by performing the following steps:

1. Login as root in the OpenScape Voice system.
2. Stop the snmpd daemon:

```
systemctl stop snmpd
```

3. Navigate to */usr/share/snmp* directory.
4. Open the *snmpd.conf* file for editing.
5. Replace **rouser** with **rwuser** next to the SNMPV3 user's username. e.g.: *rwuser username*
6. Start the snmpd daemon:

```
systemctl start snmpd
```

7.3 Deleting a SNMPV3 User

To delete a SNMPV3 user, perform the following steps:

1. Login as root in the OpenScape Voice system.
2. Stop the snmpd daemon:

```
systemctl stop snmpd
```

3. Navigate to */usr/share/snmp* directory.
4. Open the *snmpd.conf* file for editing.
5. Remove **usmUser** and **rouser** or **rwuser** information that corresponds to the SNMPV3 user you want to delete.
6. Start the snmpd daemon:

```
systemctl start snmpd
```

8 Managing SNMP Trap Destinations

Normally, the SNMP trap destinations are configured during installation; however, additional trap destinations can be created, modified, displayed and/or deleted using the other associated SnmpEventFilter commands in the RTP CLI or via EZIP from the OpenScape Common Management Platform.

Note: SNMP v1 is outdated and should not be used anymore.

8.1 Creating SNMP Trap v2c Destinations

To create a new SNMP trap destination using SNMP v2c, perform the following steps:

1. From the **Main Menu** (shown below), at the Selection prompt, enter the following menu selection: **2 (Fault Management)**.

```
Main Menu:

        Configuration Management.....................1
        Fault Management.............................2
        Performance Management.......................3
        Security Management..........................4
        System Management............................5
        Application-level Management.................6

        Open Logfile.............................93
        Show Callback Output.....................94
        Wait for Callbacks.......................95
        Change Password..........................96
        New Login................................97
        Expert Mode..............................98
        Exit.....................................99

        Selection: 2
```

2. From the **Fault Management** (shown below), at the Selection prompt, enter the following menu selection: **1 (Events)**.

```
Fault Management:

        Events.......................................1
        Alarms.......................................2
        Trace........................................3
        Audit........................................4
        Recovery.....................................5

        Return.............................99

        Selection: 1
```

3. From the **Events menu** (shown below), at the Selection prompt, enter the following menu selection: **14 (createSnmpEventFilter)**.

```
Events (methods):

        registerForEvents.............................1
        unregisterForEvents...........................2
        reRegisterForEvents...........................3
        recoverEvents.................................4
        getEventSets..................................5
        getEventBasicDescriptions.....................6
        getFullEventDescription.......................7
        modifyEventParameters.........................8
        getEventEscalationFilters.....................9
        addEventEscalationFilter.....................10
        removeEventEscalationFilter..................11
        removeEvents.................................12
        getLatestEventSequenceNumber.................13
        createSnmpEventFilter........................14
        modifySnmpEventFilter........................15
        removeSnmpEventFilter........................16
        getSnmpEventFilters..........................17
        getCriticalEventDescriptions.................18
        addCriticalEvent.............................19
        removeCriticalEvent..........................20

        Display Class Name.....................98
        Return.................................99

        Selection (default: 17): 14
```

4. The **createSnmpEventFilter** displays the following message and requests the input the IP address of the trap destination (x.x.x.x) and press **Enter**.

```
executing method createSnmpEventFilter...

        ipAddr:
```

5. The following is displayed; press **Enter**.

```
eventSets[0] <end: <Return>>:
```

6. The following is displayed; enter **1**.

```
        severities[0] <EVT_SEV_CRITICAL: 1,
                 EVT_SEV_MAJOR: 2,
                 EVT_SEV_MINOR: 3,
                 EVT_SEV_WARNING: 4,
                 EVT_SEV_INFORMATION: 5,
                 EVT_SEV_CLEAR: 6,
                 end: <Return>>: 1
```

7. The following is displayed; enter **2**.

```
severities[1] <EVT_SEV_CRITICAL: 1,
         EVT_SEV_MAJOR: 2,
         EVT_SEV_MINOR: 3,
         EVT_SEV_WARNING: 4,
         EVT_SEV_INFORMATION: 5,
         EVT_SEV_CLEAR: 6,
         end: <Return>>: 2
```

8. The following is displayed; enter **3**.

```
severities[2] <EVT_SEV_CRITICAL: 1,
         EVT_SEV_MAJOR: 2,
         EVT_SEV_MINOR: 3,
         EVT_SEV_WARNING: 4,
         EVT_SEV_INFORMATION: 5,
         EVT_SEV_CLEAR: 6,
         end: <Return>>: 3
```

9. The following is displayed; enter **4**.

```
severities[3] <EVT_SEV_CRITICAL: 1,
         EVT_SEV_MAJOR: 2,
         EVT_SEV_MINOR: 3,
         EVT_SEV_WARNING: 4,
         EVT_SEV_INFORMATION: 5,
         EVT_SEV_CLEAR: 6,
         end: <Return>>: 4
```

Attention: Event Severity, EVT_SEV_INFORMATION (5), typically should not be sent to any trap destination.

---

10. The following is displayed; enter **6**.

```
severities[4] <EVT_SEV_CRITICAL: 1,
         EVT_SEV_MAJOR: 2,
         EVT_SEV_MINOR: 3,
         EVT_SEV_WARNING: 4,
         EVT_SEV_INFORMATION: 5,
         EVT_SEV_CLEAR: 6,
         end: <Return>>: 6
```

11. The following is displayed; press **Enter**.

```
severities[5] <EVT_SEV_CRITICAL: 1,
         EVT_SEV_MAJOR: 2,
         EVT_SEV_MINOR: 3,
         EVT_SEV_WARNING: 4,
         EVT_SEV_INFORMATION: 5,
         EVT_SEV_CLEAR: 6,
         end: <Return>>:
```

12. The following is displayed; enter **2** when configuring SNMPv2c.

```
snmpVersion <EVT_SNMP_TRAP_V1: 1,
          EVT_SNMP_TRAP_V2c: 2,
          EVT_SNMP_TRAP_V3: 3,
          EVT_SNMP_INFORM_V2c: 4,
          EVT_SNMP_INFORM_V3: 5>: 3
```

13. The following is displayed; enter the destination port of the SNMP server to which the trap should be sent (default port:162):

```
trapDestPort <(1..32767)> (default: -1): 162

Press <Return> to continue
```

8.2 Creating SNMP V3 Trap Destinations

Before add a new SNMP V3 Trap destination, the *Rtp/Adm/eventMgmt/impl/snmp/securityLevelV3* SRX Parameter must be set to the desired security policy value. The security policy must match the configured security policy on the receiving SNMP V3 Server.

Possible values for *Rtp/Adm/eventMgmt/impl/snmp/securityLevelV3* are:

- *noAuthNoPriv* - no authentication and no privacy
- *authNoPriv* - authentication and no privacy
- *authPriv* - authentication and privacy

According to the configured security level, additional configuration elements are displayed and can be configured.

Note: The SNMP V3 security policy is a global parameter in the OpenScape Voice, which means that all SNMP V3 Trap destinations must support the same security policy.
The SNMP V3 Engine ID can be found by checking the follwoing SRX Parameters:
Rtp/Adm/eventMgmt/impl/snmp/snmpEngineID01
Rtp/Adm/eventMgmt/impl/snmp/snmpEngineID02

---

1. From the **Main Menu** (shown below), at the Selection prompt, enter the following menu selection: **2 (Fault Management)**.

```
Main Menu:

        Configuration Management.....................1
        Fault Management.............................2
        Performance Management.......................3
```

```
        Security Management.........................4
        System Management...........................5
        Application-level Management................6

        Open Logfile..........................93
        Show Callback Output..................94
        Wait for Callbacks....................95
        Change Password.......................96
        New Login.............................97
        Expert Mode...........................98
        Exit..................................99

        Selection: 2
```

2. From the **Fault Management** (shown below), at the Selection prompt, enter the following menu selection: **1 (Events)**.

```
Fault Management:

        Events.....................................1
        Alarms.....................................2
        Trace......................................3
        Audit......................................4
        Recovery...................................5

        Return.............................99

        Selection: 1
```

3. From the **Events menu** (shown below), at the Selection prompt, enter the following menu selection: **14 (createSnmpEventFilter)**.

```
Events (methods):

        registerForEvents..........................1
        unregisterForEvents........................2
        reRegisterForEvents........................3
        recoverEvents..............................4
        getEventSets...............................5
        getEventBasicDescriptions..................6
        getFullEventDescription....................7
        modifyEventParameters......................8
        getEventEscalationFilters..................9
        addEventEscalationFilter..................10
        removeEventEscalationFilter...............11
        removeEvents..............................12
        getLatestEventSequenceNumber..............13
        createSnmpEventFilter.....................14
        modifySnmpEventFilter.....................15
        removeSnmpEventFilter.....................16
        getSnmpEventFilters.......................17
        getCriticalEventDescriptions..............18
        addCriticalEvent..........................19
        removeCriticalEvent.......................20

        Display Class Name.....................98
        Return.............................99
```

```
        Selection (default: 17): 14
```

4. The **createSnmpEventFilter** displays the following message and requests the input the IP address of the trap destination (x.x.x.x) and press **Enter**.

```
executing method createSnmpEventFilter...

        ipAddr:
```

5. The following is displayed; press **Enter**.

```
eventSets[0] <end: <Return>>:
```

6. The following is displayed; enter **1**.

```
        severities[0] <EVT_SEV_CRITICAL: 1,
                EVT_SEV_MAJOR: 2,
                EVT_SEV_MINOR: 3,
                EVT_SEV_WARNING: 4,
                EVT_SEV_INFORMATION: 5,
                EVT_SEV_CLEAR: 6,
                end: <Return>>: 1
```

7. The following is displayed; enter **2**.

```
        severities[1] <EVT_SEV_CRITICAL: 1,
                EVT_SEV_MAJOR: 2,
                EVT_SEV_MINOR: 3,
                EVT_SEV_WARNING: 4,
                EVT_SEV_INFORMATION: 5,
                EVT_SEV_CLEAR: 6,
                end: <Return>>: 2
```

8. The following is displayed; enter **3**.

```
        severities[2] <EVT_SEV_CRITICAL: 1,
                EVT_SEV_MAJOR: 2,
                EVT_SEV_MINOR: 3,
                EVT_SEV_WARNING: 4,
                EVT_SEV_INFORMATION: 5,
                EVT_SEV_CLEAR: 6,
                end: <Return>>: 3
```

9. The following is displayed; enter **4**.

```
        severities[3] <EVT_SEV_CRITICAL: 1,
                EVT_SEV_MAJOR: 2,
                EVT_SEV_MINOR: 3,
                EVT_SEV_WARNING: 4,
                EVT_SEV_INFORMATION: 5,
                EVT_SEV_CLEAR: 6,
                end: <Return>>: 4
```

Attention: Event Severity, EVT_SEV_INFORMATION (5), typically should not be sent to any trap destination.

---

10. The following is displayed; enter **6**.

```
severities[4] <EVT_SEV_CRITICAL: 1,
         EVT_SEV_MAJOR: 2,
         EVT_SEV_MINOR: 3,
         EVT_SEV_WARNING: 4,
         EVT_SEV_INFORMATION: 5,
         EVT_SEV_CLEAR: 6,
         end: <Return>>: 6
```

11. The following is displayed; press **Enter**.

```
severities[5] <EVT_SEV_CRITICAL: 1,
         EVT_SEV_MAJOR: 2,
         EVT_SEV_MINOR: 3,
         EVT_SEV_WARNING: 4,
         EVT_SEV_INFORMATION: 5,
         EVT_SEV_CLEAR: 6,
         end: <Return>>:
```

12. The following is displayed; enter **3**.

```
snmpVersion <EVT_SNMP_TRAP_V1: 1,
         EVT_SNMP_TRAP_V2c: 2,
         EVT_SNMP_TRAP_V3: 3,
         EVT_SNMP_INFORM_V2c: 4,
         EVT_SNMP_INFORM_V3: 5>: 3
```

13. The following is displayed; enter the destination port of the SNMP server to which the traps should be sent (default port:162).

```
trapDestPort <(1..32767)> (default: -1): 162
```

14. The following is displayed; enter the user name of the SNMP V3 user.

```
securityName (default: ): osvSecName
```

Note: The following steps are only displayed if Rtp/Adm/eventMgmt/impl/snmp/securityLevelV3 SRX parameter is set to **authNoPriv** or **authPriv**.

---

15. The following is displayed; select the authentication protocol.

```
authentication protocol <MD5: 1,
                         SHA:2>: 2
```

16. The following is displayed; enter the authentication passphrase.

```
authentification password: : secureSnmpPwd
```

Note: The following steps are only displayed if Rtp/Adm/eventMgmt/impl/snmp/securityLevelV3 SRX parameter is set to **authPriv**.

---

17. The following is displayed; select the encryption protocol.

```
        encryption protocol < AES: 1,
                              DES:2>: 1
```

18. TThe following is displayed; enter the encryption passphrase.

```
        encryption password: : SnmpEncryptPwd

Press <Return> to continue
```

8.3 Modifying SNMP V2 Trap Destinations

To modify an existing SNMP V2 trap destination, perform the following steps:

1. From the **Main Menu** (shown below), at the Selection prompt, enter the following menu selection: **2 (Fault Management)**.

```
Main Menu:

        Configuration Management.....................1
        Fault Management.............................2
        Performance Management.......................3
        Security Management..........................4
        System Management............................5
        Application-level Management.................6

        Open Logfile.............................94
        Show Callback Output.....................95
        Wait for Callbacks.......................96
        Change Password..........................97
        Expert Mode..............................98
        Exit.....................................99

        Selection: 2
```

2. From the **Fault Management** (shown below), at the Selection prompt, enter the following menu selection: **1 (Events)**.

```
Fault Management:

        Events.......................................1
        Alarms.......................................2
        Trace........................................3
        Audit........................................4
        Recovery.....................................5

        Return.................................99

        Selection: 1
```

3. From the **Events menu** (shown below), at the Selection prompt, enter the following menu selection: **15 (modifySnmpEventFilter)**.

```
Events (methods):

        registerForEvents.............................1
        unregisterForEvents...........................2
        reRegisterForEvents...........................3
        recoverEvents.................................4
        getEventSets..................................5
        getEventBasicDescriptions.....................6
        getFullEventDescription.......................7
        modifyEventParameters.........................8
        getEventEscalationFilters.....................9
        addEventEscalationFilter.....................10
        removeEventEscalationFilter..................11
        removeEvents.................................12
        getLatestEventSequenceNumber.................13
        createSnmpEventFilter........................14
        modifySnmpEventFilter........................15
        removeSnmpEventFilter........................16
        getSnmpEventFilters..........................17

        Return.................................99

        Selection: 15
```

4. The **modifySnmpEventFilter** displays the following message and requests the input the IP address of the trap destination (x.x.x.x) and press **Enter**.

```
executing method modifySnmpEventFilter...

        ipAddr:
```

5. The following is displayed; press **Enter**.

```
eventSets[0] <end: <Return>>:
```

6. The following is displayed; enter **1**.

```
        severities[0] <EVT_SEV_CRITICAL: 1,
                 EVT_SEV_MAJOR: 2,
                 EVT_SEV_MINOR: 3,
                 EVT_SEV_WARNING: 4,
                 EVT_SEV_INFORMATION: 5,
                 EVT_SEV_CLEAR: 6,
                 end: <Return>>: 1
```

7. The following is displayed; enter **2**.

```
        severities[1] <EVT_SEV_CRITICAL: 1,
                 EVT_SEV_MAJOR: 2,
                 EVT_SEV_MINOR: 3,
                 EVT_SEV_WARNING: 4,
                 EVT_SEV_INFORMATION: 5,
                 EVT_SEV_CLEAR: 6,
                 end: <Return>>: 2
```

8. The following is displayed; enter **3**.

```
        severities[2] <EVT_SEV_CRITICAL: 1,
```

```
                EVT_SEV_MAJOR: 2,
                EVT_SEV_MINOR: 3,
                EVT_SEV_WARNING: 4,
                EVT_SEV_INFORMATION: 5,
                EVT_SEV_CLEAR: 6,
                end: <Return>>: 3
```

9. The following is displayed; enter **4**.

```
severities[3] <EVT_SEV_CRITICAL: 1,
                EVT_SEV_MAJOR: 2,
                EVT_SEV_MINOR: 3,
                EVT_SEV_WARNING: 4,
                EVT_SEV_INFORMATION: 5,
                EVT_SEV_CLEAR: 6,
                end: <Return>>: 4
```

Attention: Event Severity, EVT_SEV_INFORMATION (5), typically should not be sent to any trap destination.

---

10. The following is displayed; enter **6**.

```
severities[4] <EVT_SEV_CRITICAL: 1,
                EVT_SEV_MAJOR: 2,
                EVT_SEV_MINOR: 3,
                EVT_SEV_WARNING: 4,
                EVT_SEV_INFORMATION: 5,
                EVT_SEV_CLEAR: 6,
                end: <Return>>: 6
```

11. The following is displayed; press **Enter**.

```
severities[5] <EVT_SEV_CRITICAL: 1,
                EVT_SEV_MAJOR: 2,
                EVT_SEV_MINOR: 3,
                EVT_SEV_WARNING: 4,
                EVT_SEV_INFORMATION: 5,
                EVT_SEV_CLEAR: 6,
                end: <Return>>:
```

12. The following is displayed; enter **2** when configuring SNMPv2c.

```
snmpVersion <EVT_SNMP_TRAP_V1: 1,
                EVT_SNMP_TRAP_V2c: 2,
                EVT_SNMP_TRAP_V3: 3,
                EVT_SNMP_INFORM_V2c: 4,
                EVT_SNMP_INFORM_V3: 5>: 3
```

13. The following is displayed; enter the destination port of the SNMP server to which the trap should be sent (default port:162):

```
trapDestPort <(1..32767)> (default: -1):
```

14. The following is displayed; securityName should be left blank when configuring SNMPv2c

```
securityName (default: ): osvSecName
```

```
Press <Return> to continue
```

8.4 Modifying SNMP V3 Trap Destinations

To modify an existing SNMP V3 trap destination, perform the following steps:

1. From the **Main Menu** (shown below), at the Selection prompt, enter the following menu selection: **2 (Fault Management)**.

```
Main Menu:

        Configuration Management.....................1
        Fault Management.............................2
        Performance Management.......................3
        Security Management..........................4
        System Management............................5
        Application-level Management.................6

        Open Logfile............................94
        Show Callback Output....................95
        Wait for Callbacks......................96
        Change Password.........................97
        Expert Mode.............................98
        Exit....................................99

        Selection: 2
```

2. From the **Fault Management** (shown below), at the Selection prompt, enter the following menu selection: **1 (Events)**.

```
Fault Management:

        Events......................................1
        Alarms......................................2
        Trace.......................................3
        Audit.......................................4
        Recovery....................................5

        Return..................................99

        Selection: 1
```

3. From the **Events menu** (shown below), at the Selection prompt, enter the following menu selection: **15 (modifySnmpEventFilter)**.

```
Events (methods):

        registerForEvents...........................1
        unregisterForEvents.........................2
        reRegisterForEvents.........................3
        recoverEvents...............................4
        getEventSets................................5
        getEventBasicDescriptions...................6
```

```
getFullEventDescription.....................7
modifyEventParameters.......................8
getEventEscalationFilters...................9
addEventEscalationFilter...................10
removeEventEscalationFilter................11
removeEvents...............................12
getLatestEventSequenceNumber...............13
createSnmpEventFilter......................14
modifySnmpEventFilter......................15
removeSnmpEventFilter......................16
getSnmpEventFilters........................17

Return.............................99

Selection: 15
```

4. The **modifySnmpEventFilter** displays the following message and requests the input the IP address of the trap destination (x.x.x.x) and press **Enter**.

```
executing method modifySnmpEventFilter...

        ipAddr:
```

5. The following is displayed; press **Enter**.

```
eventSets[0] <end: <Return>>:
```

6. The following is displayed; enter **1**.

```
        severities[0] <EVT_SEV_CRITICAL: 1,
                 EVT_SEV_MAJOR: 2,
                 EVT_SEV_MINOR: 3,
                 EVT_SEV_WARNING: 4,
                 EVT_SEV_INFORMATION: 5,
                 EVT_SEV_CLEAR: 6,
                 end: <Return>>: 1
```

7. The following is displayed; enter **2**.

```
        severities[1] <EVT_SEV_CRITICAL: 1,
                 EVT_SEV_MAJOR: 2,
                 EVT_SEV_MINOR: 3,
                 EVT_SEV_WARNING: 4,
                 EVT_SEV_INFORMATION: 5,
                 EVT_SEV_CLEAR: 6,
                 end: <Return>>: 2
```

8. The following is displayed; enter **3**.

```
        severities[2] <EVT_SEV_CRITICAL: 1,
                 EVT_SEV_MAJOR: 2,
                 EVT_SEV_MINOR: 3,
                 EVT_SEV_WARNING: 4,
                 EVT_SEV_INFORMATION: 5,
                 EVT_SEV_CLEAR: 6,
                 end: <Return>>: 3
```

9. The following is displayed; enter **4**.

```
severities[3] <EVT_SEV_CRITICAL: 1,
         EVT_SEV_MAJOR: 2,
         EVT_SEV_MINOR: 3,
         EVT_SEV_WARNING: 4,
         EVT_SEV_INFORMATION: 5,
         EVT_SEV_CLEAR: 6,
         end: <Return>>: 4
```

Attention: Event Severity, EVT_SEV_INFORMATION (5), typically should not be sent to any trap destination.

---

10. The following is displayed; enter **6**.

```
severities[4] <EVT_SEV_CRITICAL: 1,
         EVT_SEV_MAJOR: 2,
         EVT_SEV_MINOR: 3,
         EVT_SEV_WARNING: 4,
         EVT_SEV_INFORMATION: 5,
         EVT_SEV_CLEAR: 6,
         end: <Return>>: 6
```

11. The following is displayed; press **Enter**.

```
severities[5] <EVT_SEV_CRITICAL: 1,
         EVT_SEV_MAJOR: 2,
         EVT_SEV_MINOR: 3,
         EVT_SEV_WARNING: 4,
         EVT_SEV_INFORMATION: 5,
         EVT_SEV_CLEAR: 6,
         end: <Return>>:
```

12. The following is displayed; enter **3**.

```
snmpVersion <EVT_SNMP_TRAP_V1: 1,
         EVT_SNMP_TRAP_V2c: 2,
         EVT_SNMP_TRAP_V3: 3,
         EVT_SNMP_INFORM_V2c: 4,
         EVT_SNMP_INFORM_V3: 5>: 3
```

13. The following is displayed; enter the destination port of the SNMP server to which the trap should be sent (default port:162):

```
trapDestPort <(1..32767)> (default: -1):
```

14. The following is displayed; enter the user name of the SNMP V3 user.

```
securityName (default: ): osvSecName
```

Note: The following steps are only displayed if *Rtp/Adm/eventMgmt/impl/snmp/securityLevelV3* SRX parameter is set to **authNoPriv** or **authPriv**.

---

15. The following is displayed; select the authentication protocol.

```
authentication protocol <MD5: 1,
                         SHA:2>: 2
```

16. The following is displayed; enter the authentication passphrase.

```
authentification password: : secureSnmpPwd
```

Note: The following steps are only displayed if *Rtp/Adm/eventMgmt/impl/snmp/securityLevelV3* SRX parameter is set to **authPriv**.

---

17. The following is displayed; select the encryption protocol

```
encryption protocol < AES: 1,
                      DES:2>: 1
```

18. The following is displayed; Enter the Encryption Passphrase

```
encryption password: : SnmpEncryptPwd

Press <Return> to continue
```

8.5 Deleting SNMP Trap Destinations

To remove an SNMP trap destination, perform the following steps:

1. From the **Main Menu** (shown below), at the Selection prompt, enter the following menu selection: **2 (Fault Management)**.

```
Main Menu:

        Configuration Management.....................1
        Fault Management.............................2
        Performance Management.......................3
        Security Management..........................4
        System Management............................5
        Application-level Management.................6

        Open Logfile.............................93
        Show Callback Output.....................94
        Wait for Callbacks.......................95
        Change Password..........................96
        New Login................................97
        Expert Mode..............................98
        Exit.....................................99

        Selection: 2
```

2. From the **Fault Management** (shown below), at the Selection prompt, enter the following menu selection: **1 (Events)**.

```
Fault Management:
```

```
        Events.....................................1
        Alarms.....................................2
        Trace......................................3
        Audit......................................4
        Recovery...................................5

        Return.................................99

        Selection: 1
```

3. From the **Events menu** (shown below), at the Selection prompt, enter the following menu selection: **16 (removeSnmpEventFilter)**.

```
Events (methods):

        registerForEvents..........................1
        unregisterForEvents........................2
        reRegisterForEvents........................3
        recoverEvents..............................4
        getEventSets...............................5
        getEventBasicDescriptions..................6
        getFullEventDescription....................7
        modifyEventParameters......................8
        getEventEscalationFilters..................9
        addEventEscalationFilter..................10
        removeEventEscalationFilter...............11
        removeEvents..............................12
        getLatestEventSequenceNumber..............13
        createSnmpEventFilter.....................14
        modifySnmpEventFilter.....................15
        removeSnmpEventFilter.....................16
        getSnmpEventFilters.......................17
        getCriticalEventDescriptions..............18
        addCriticalEvent..........................19
        removeCriticalEvent.......................20

        Display Class Name.....................98
        Return.................................99

        Selection (default: 17): 16
```

4. The **removeSnmpEventFilter** displays the following message and requests the input the IP address of the trap destination (x.x.x.x) and press **Enter**.

```
executing method removeSnmpEventFilter...

        ipAddr: 172.20.1.100


        Do you want to execute this action? (default: yes):


Press <Return> to continue
```

8.6 Displaying SNMP Trap Destinations

To display an SNMP trap destination, perform the following steps:

1. From the **Main Menu** (shown below), at the Selection prompt, enter the following menu selection: **2 (Fault Management)**.

```
Main Menu:

        Configuration Management.....................1
        Fault Management.............................2
        Performance Management.......................3
        Security Management..........................4
        System Management............................5
        Application-level Management.................6

        Open Logfile.............................93
        Show Callback Output.....................94
        Wait for Callbacks.......................95
        Change Password..........................96
        New Login................................97
        Expert Mode..............................98
        Exit.....................................99

        Selection: 2
```

2. From the **Fault Management** (shown below), at the Selection prompt, enter the following menu selection: **1 (Events)**.

```
Fault Management:

        Events.......................................1
        Alarms.......................................2
        Trace........................................3
        Audit........................................4
        Recovery.....................................5

        Return.............................99

        Selection: 1
```

3. From the **Events menu** (shown below), at the Selection prompt, enter the following menu selection: **17 (getSnmpEventFilter)**.

```
Events (methods):

        registerForEvents............................1
        unregisterForEvents..........................2
        reRegisterForEvents..........................3
        recoverEvents................................4
        getEventSets.................................5
        getEventBasicDescriptions....................6
        getFullEventDescription......................7
        modifyEventParameters........................8
        getEventEscalationFilters....................9
        addEventEscalationFilter....................10
        removeEventEscalationFilter.................11
        removeEvents................................12
```

```
getLatestEventSequenceNumber..................13
createSnmpEventFilter.........................14
modifySnmpEventFilter.........................15
removeSnmpEventFilter.........................16
getSnmpEventFilters...........................17
getCriticalEventDescriptions..................18
addCriticalEvent..............................19
removeCriticalEvent...........................20

Display Class Name......................98
Return..................................99

Selection (default: 17): 17
```

4. The **getSnmpEventFilter** displays the following:

```
executing method getSnmpEventFilters...

Ok.

{
(de.siemens.icp.rtp.eventMgmt.SnmpEventFilterInfo@1cffeb4)
ipAddr: 10.22.100.100
eventSets:
severityLevels: 1 2 3 4 6
snmpVersion: 2
lastTransId: 0
trapDestPort: -1
}

{
(de.siemens.icp.rtp.eventMgmt.SnmpEventFilterInfo@5b0668)
ipAddr: 10.22.100.105
eventSets:
severityLevels: 1 2 3 4 6
snmpVersion: 2
lastTransId: 0
trapDestPort: 162
}

{ (de.siemens.icp.rtp.eventMgmt.SnmpEventFilterInfo@1d5a0)
ipAddr: 10.22.140.240
eventSets:
severityLevels: 1 2 3 4 6
snmpVersion: 2
lastTransId: 0
trapDestPort: 162
}

{
(de.siemens.icp.rtp.eventMgmt.SnmpEventFilterInfo@701a27)
ipAddr: 10.22.21.40
eventSets:
severityLevels: 1 2 3 4 6
snmpVersion: 2
lastTransId: 0
trapDestPort: 162
}

Press <Return> to continue
```

8.7 Troubleshooting

Attention: For help with expert mode commands or RTP CLI Application-level commands, refer to the *OpenScape Voice Configuration Manual: Volume 3, Config and Admin Using CLI Application-level Mgmt* book.

8.7.1 Testing Alarms

To test an alarm, refer to the below example:

1. Login as root and type the following commands to test the alarm.

```
su - srx
../SendAlarm 217 1 fo1 fo2 fo3 "Test Alarm"
```

A trap is sent to the configured trap destinations. Additionally, the active alarm is shown in the active alarm table and can be verified by displaying the alarms via the RTP CLI. In this particular example, there would be a critical alarm with the short text:

```
"FaultyObject = fo1/fo2/fo3: Loss of communication".
```

2. Clear the alarm via the command:

```
SendAlarm 217 4 fo1 fo2 fo3 "Test Alarm"
```

3. A clear trap and correlation trap must be sent to the trap destinations.

The alarm should no longer be present in the CLI display.

8.7.2 Checking the node.cfg File

Attention: Checking the node.cfg file is generally used *before* system installation to set up the trap destinations.

To determine if there is an entry for the OpenScape Voice File Management Server, open the node.cfg file to check if an IP address for the SNMP trap destination is provided. Type the following command:

```
# vi /etc/hiq8000/node.cfg
```

An address should display, as shown in the example below:

```
…snmp_server4: 10.22.140.240
```

8.8 Expert Mode Commands

Below are the expert mode commands for the create and modify commands for SnmpEventFilter as well as examples for all.

```
ipAddr { [ eventSets ... ] }     //   {} = ALL
 { [ severityLevels <1=EVT_SEV_CRITICAL | 2=EVT_SEV_MAJOR |
3=EVT_SEV_MINOR | 4=EVT_SEV_WARNING | 5|EVT_SEV_INFORMATION
| 6=EVT_SEV_CLEAR > ... ] }   // {} = ALL
snmpVersion < 1=EVT_SNMP_TRAP_V1 | 2=EVT_SNMP_TRAP_V2c |
3=EVT_SNMP_TRAP_V3 >
trapDestPort < 1..32767 | -1=DEFAULT_PORT>
```

examples:

```
evtCreateSnmpEventFilter "172.25.99.66" {} { 1 2 3 4 6 } 2 -1
evtGetSnmpEventFilters
evtModifySnmpEventFilter ("172.25.99.66"  {}  { 3 4 5 } 2
8086)
evtRemoveSnmpEventFilter "172.25.99.66"
```

Index

I

M

N

O

R

S

T

U

Z