Reference Manual

EDACS® NETWORK MANAGEMENT

ENTERPRISE MANAGEMENT INFORMATION BASE (MIB)

ERICSSON

NOTICE!

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NOTICE!

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LIST OF ILLUSTRATIONS

1. INTRODUCTION

This manual describes the Enhanced Digital Access Communication System (EDACS) Private Radio System (PRS) Enterprise Management Information Base (MIB) files and defines each item identified within the file groups. These MIBs are intended for use by network management stations (NMS) employing the Simple Network Management Protocol (SNMP).

The MIB definitions and files presented in this manual were written using the Abstract Syntax Notation, version 1 (ASN.1) standards.

The following MIB files are included in this manual:

MIB FILE	CONTENTS OVERVIEW
edacs100.mib	Primary EDACS enterprise hierarchy and product identification.
edacs101.mib	Common system (network element) management information. Implementation of this MIB is mandatory for all EDACS elements which will communicate directly with the Network Manager.
edacs102.mib	Alarm threshold. Provides a general purpose alarming mechanism for subject matter which is threshold oriented in nature (for example, a disk becoming full).
edacs103.mib	Site level general performance information.
edacs104.mib	Node level (e.g. IMC) general performance information.

2. EDACS MANAGED ELEMENT IDENTIFICATION MIB

The EDACS Managed Element Identification MIB provides the primary object identifiers in the Enhanced Digital Communication System (EDACS) branch of the Ericsson private enterprise tree. The Ericsson (LM Ericsson AB) Enterprise number is 193. EDACS is assigned node 10 under the Ericsson tree as shown in Figure 1. The ASN.1 prefix to, and including the Ericsson (193).edacs (10) node is 1.3.6.4.1.193.10.

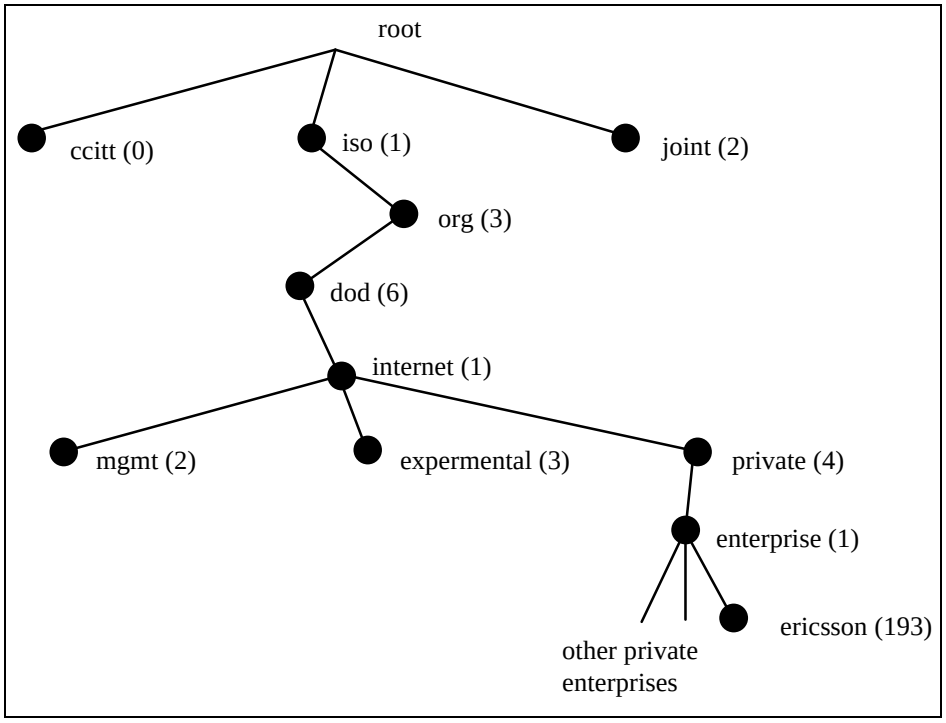

Figure 1 - Standard SNMP MIB Tree

The graphical representation in Figure 2 shows the primary branches in the ericsson (193).edacs (10) enterprises subtree. The private (4) node is derived from the iso (1) root shown in Figure 1. Each of the primary nodes is assigned an identifier and fully described in Table 1.

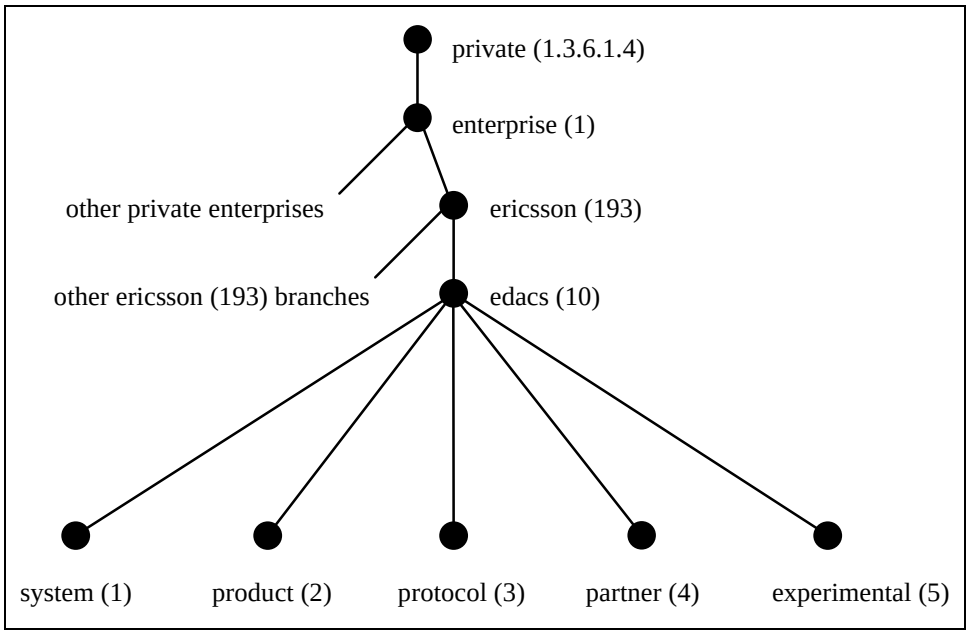

Figure 2 - EDACS Enterprise Subtree Primary Branches

Table 1 - EDACS Enterprise Primary Nodes

NODE	IDENTIFIER	DESCRIPTION
edacs	1.3.6.1.4.1.193.10	Start of the EDACS subtree, relative to the ericsson (193) private enterprises assignment.
system	1.3.6.1.4.1.193.10.1	Start of subtree for EDACS system MIB extensions. This branch is intended to be as platform independent (e.g. common) as possible.
product	1.3.6.1.4.1.193.10.2	Start of subtree for EDACS product specific MIB extensions.
protocol	1.3.6.1.4.1.193.10.3	Start of subtree for EDACS proprietary protocols MIB extensions. This branch is similar to the transmission (10) group of MIB-II.
partner	1.3.6.1.4.1.193.10.4	Start of subtree reserved for EDACS strategic partners MIB extensions. For example, HP's Automated Test and Measurement System.
experimental	1.3.6.1.4.1.193.10.5	Reserved for EDACS experimental MIB development. MIBs developed under this branch are not intended for release to customers.

2.1 EDACS SYSTEM NODE

The graphical representation in Figure 3 shows the primary branches in the EDACS System Node. Each of the branches under the System subtree (general, SNMP, alarm, site and node) are fully detailed in the following chapters of this manual.

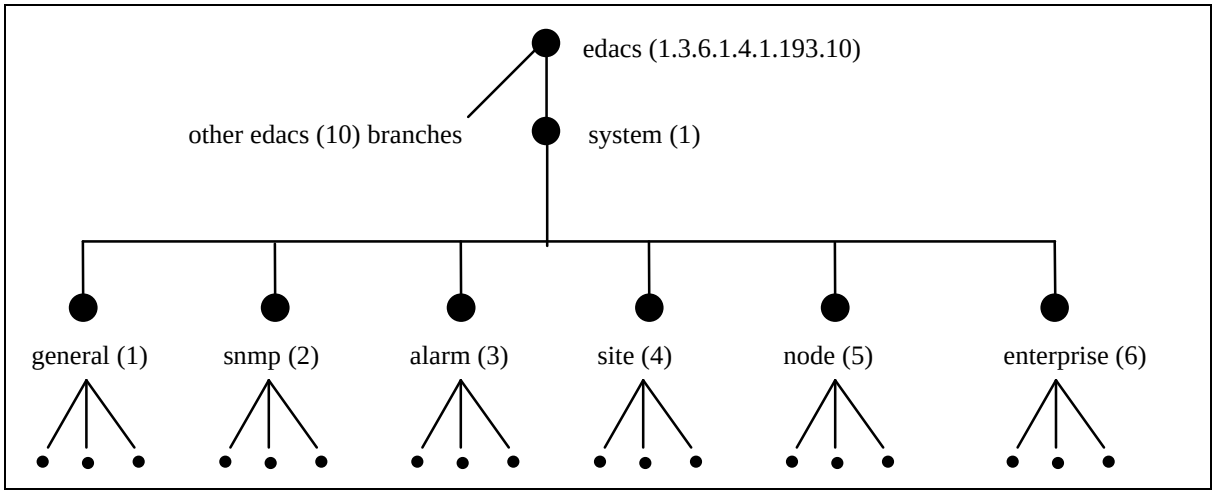

Figure 3 - EDACS System Node

2.2 EDACS PRODUCT NODE

The graphical representation in Figure 4 shows the primary branches in the EDACS Product Node.

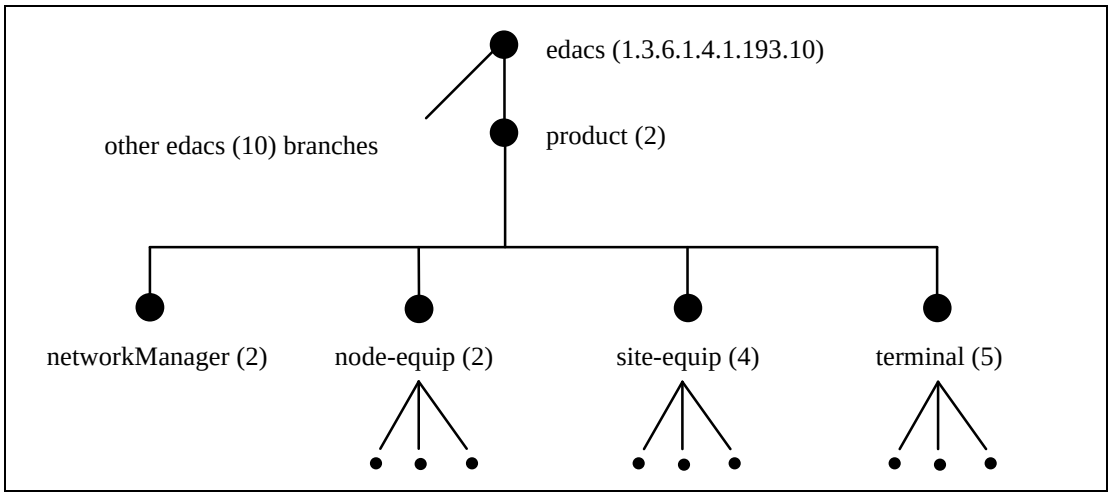

Figure 4 - EDACS Product Group

The following is a listing of the products currently identified under the node-equip (2) and site-equip (3) branches.

networkManager	1.3.6.1.4.1.193.10.2.1
node-equip	1.3.6.1.4.1.193.10.2.2
systemManager	1.3.6.1.4.1.193.10.2.2.1
imcManager	1.3.6.1.4.1.193.10.2.2.2
jessica	1.3.6.1.4.1.193.10.2.2.3
pi	1.3.6.1.4.1.193.10.2.2.3.1
datagateway	1.3.6.1.4.1.193.10.2.2.4
edgCentralActivityProcessor	1.3.6.1.4.1.193.10.2.2.4.1

edgTrunkingSystemInterface	1.3.6.1.4.1.193.10.2.2.4.2
edgHostDataInterface	1.3.6.1.4.1.193.10.2.2.4.3
bcu-cal	1.3.6.1.4.1.193.10.2.2.5
cec-imc	1.3.6.1.4.1.193.10.2.2.6
site-equip	1.3.6.1.4.1.193.10.2.3
base-station	1.3.6.1.4.1.193.10.2.3.1
master	1.3.6.1.4.1.193.10.2.3.1.1
master-II3	1.3.6.1.4.1.193.10.2.3.1.1.1
master-III	1.3.6.1.4.1.193.10.2.3.1.1.2
prism	1.3.6.1.4.1.193.10.2.3.1.2
siteController	1.3.6.1.4.1.193.10.2.3.2
getc	1.3.6.1.4.1.193.10.2.3.3
getcProgrammer	1.3.6.1.4.1.193.10.2.3.4
eli	1.3.6.1.4.1.193.10.2.3.5

2.3 EDACS TERMINAL NODE

The graphical representation in Figure 5 shows the primary branches in the EDACS Product Terminal Node. It is not anticipated that many of the products in the terminal node will have MIB extensions developed. However, they are assigned an authoritative identity for data-basing purposes (subscriber management, inventory purposes, etc.).

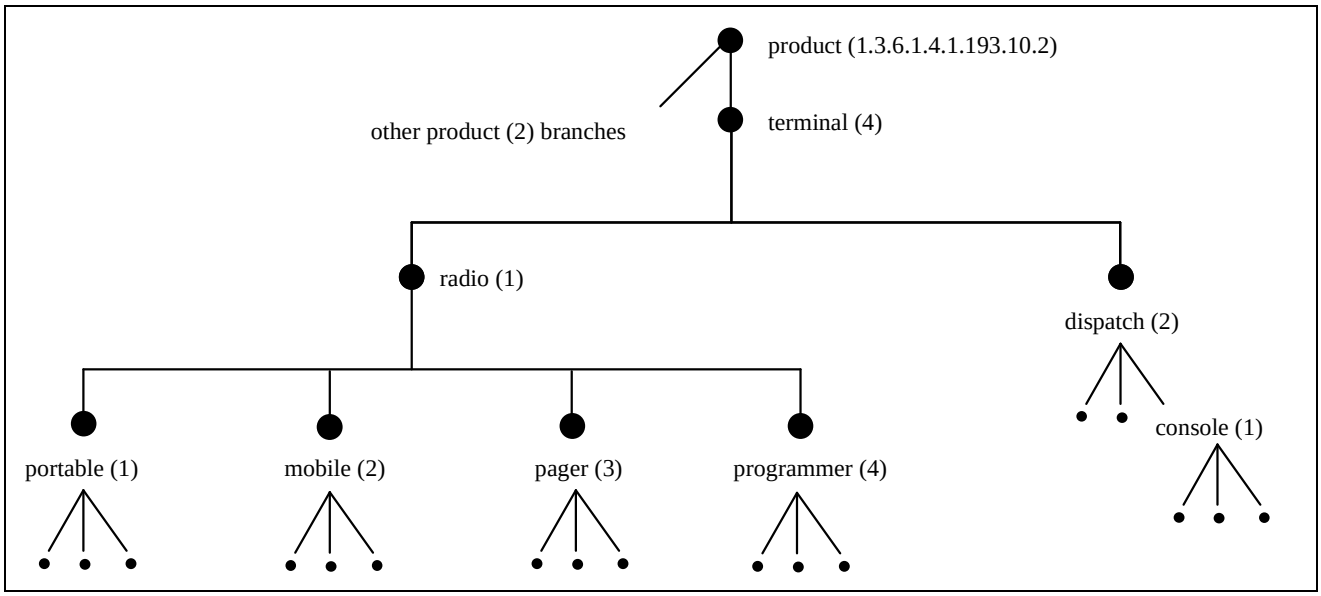

Figure 5 - EDACS Product Terminal Node

The following provides a listing of the products currently identified under the terminal (4) branch.

radio	1.3.6.1.4.1.193.10.2.4.1
portable	1.3.6.1.4.1.193.10.2.4.1.1
mp-pa	1.3.6.1.4.1.193.10.2.4.1.1.1
mp-rk	1.3.6.1.4.1.193.10.2.4.1.1.2
mtl-sx	1.3.6.1.4.1.193.10.2.4.1.1.3
tpx	1.3.6.1.4.1.193.10.2.4.1.1.4

pcs	1.3.6.1.4.1.193.10.2.4.1.1.5
mpi	1.3.6.1.4.1.193.10.2.4.1.1.6
mpi-I	1.3.6.1.4.1.193.10.2.4.1.1.6.1
mpi-II	1.3.6.1.4.1.193.10.2.4.1.1.6.2
jane	1.3.6.1.4.1.193.10.2.4.1.1.7
mobile	1.3.6.1.4.1.193.10.2.4.1.2
fmd	1.3.6.1.4.1.193.10.2.4.1.2.1
mtd	1.3.6.1.4.1.193.10.2.4.1.2.2
mls	1.3.6.1.4.1.193.10.2.4.1.2.3
mls-I	1.3.6.1.4.1.193.10.2.4.1.2.3.1
mls-II	1.3.6.1.4.1.193.10.2.4.1.2.3.2
mvs	1.3.6.1.4.1.193.10.2.4.1.2.4
mds	1.3.6.1.4.1.193.10.2.4.1.2.5
mdr	1.3.6.1.4.1.193.10.2.4.1.2.6
tmx-8825	1.3.6.1.4.1.193.10.2.4.1.2.7
rangr	1.3.6.1.4.1.193.10.2.4.1.2.8
delta	1.3.6.1.4.1.193.10.2.4.1.2.9
delta-s	1.3.6.1.4.1.193.10.2.4.1.2.9.1
delta-sx	1.3.6.1.4.1.193.10.2.4.1.2.9.2
orion	1.3.6.1.4.1.193.10.2.4.1.2.10
pager	1.3.6.1.4.1.193.10.2.4.1.3
beacon	1.3.6.1.4.1.193.10.2.4.1.3.1
beacon-I	1.3.6.1.4.1.193.10.2.4.1.3.1.1
beacon-II	1.3.6.1.4.1.193.10.2.4.1.3.1.2
programmer	1.3.6.1.4.1.193.10.2.4.1.4
dispatch	1.3.6.1.4.1.193.10.2.4.2
console	1.3.6.1.4.1.193.10.2.4.2.1
maestro-C3	1.3.6.1.4.1.193.10.2.4.2.1.1

3. SYSTEM GENERAL GROUP

The System General Group is detailed in the Common Management Information Base (MIB). The MIB file "edacs101.mib," located in Appendix A, provides instrumentation of identification, software configuration, asset utilization, and remote operations common to all EDACS Managed Element (ME) resources. Implementation of this MIB is mandatory for all managed elements communicating directly with an EDACS Network Management Station (NMS).

The graphical representation in Figure 6 shows the primary branches in the EDACS System General Group.

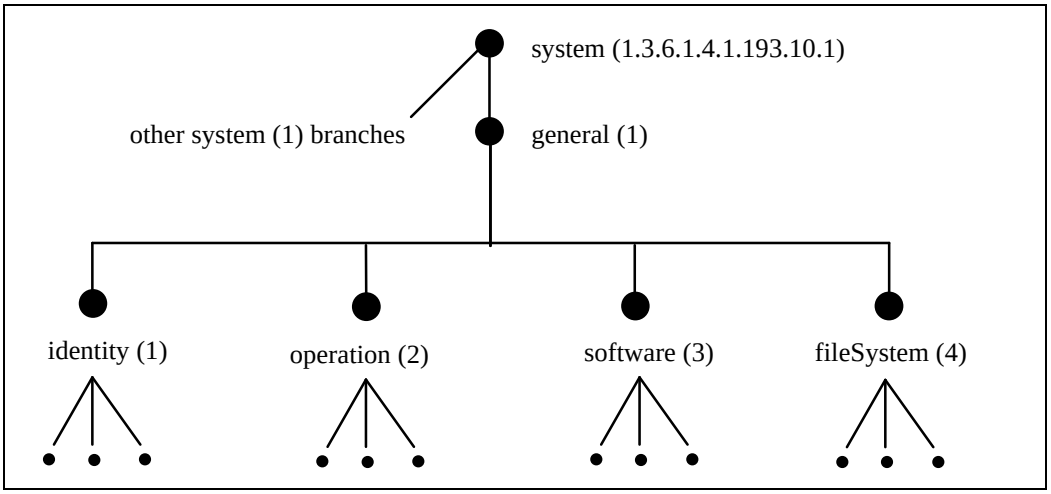

Figure 6 - EDACS System General Group

The following summarizes the items currently identified under the general (1) branch.

identity	1.3.6.1.4.1.193.10.1.1.1
identSysObjectID	1.3.6.1.4.1.193.10.1.1.1.1
identServiceNodeNumber	1.3.6.1.4.1.193.10.1.1.1.2
operation	1.3.6.1.4.1.193.10.1.1.2
operDateAndTime	1.3.6.1.4.1.193.10.1.1.2.1
operRemoteReset	1.3.6.1.4.1.193.10.1.1.2.2
operAnnounceReset	1.3.6.1.4.1.193.10.1.1.2.3
operRemoteStatus	1.3.6.1.4.1.193.10.1.1.2.4
operAnnounceStatus	1.3.6.1.4.1.193.10.1.1.2.5
software	1.3.6.1.4.1.193.10.1.1.3
softwareTable	1.3.6.1.4.1.193.10.1.1.3.1
softwareEntry	1.3.6.1.4.1.193.10.1.1.3.1.1
softwareIndex	1.3.6.1.4.1.193.10.1.1.3.1.1.1
softwareType	1.3.6.1.4.1.193.10.1.1.3.1.1.2
softwarePartNumber	1.3.6.1.4.1.193.10.1.1.3.1.1.3
softwareRevMajorID	1.3.6.1.4.1.193.10.1.1.3.1.1.4
softwareRevMinorID	1.3.6.1.4.1.193.10.1.1.3.1.1.5
softwareTargetDevice	1.3.6.1.4.1.193.10.1.1.3.1.1.6
softwareDescription	1.3.6.1.4.1.193.10.1.1.3.1.1.7
softwareExtraInfo	1.3.6.1.4.1.193.10.1.1.3.1.1.8

softwarePath	1.3.6.1.4.1.193.10.1.1.3.1.1.9
softwareStatus	1.3.6.1.4.1.193.10.1.1.3.1.1.10
softwareInstallDate	1.3.6.1.4.1.193.10.1.1.3.1.1.11
softwareFeatureCode	1.3.6.1.4.1.193.10.1.1.3.2
fileSystem	1.3.6.1.4.1.193.10.1.1.4
fsDiskTable	1.3.6.1.4.1.193.10.1.1.4.1
fsDiskEntry	1.3.6.1.4.1.193.10.1.1.4.1.1
fsDiskIndex	1.3.6.1.4.1.193.10.1.1.4.1.1.1
fsDiskVolumeName	1.3.6.1.4.1.193.10.1.1.4.1.1.2
fsDiskVolumeDescr	1.3.6.1.4.1.193.10.1.1.4.1.1.3
fsDiskMediaType	1.3.6.1.4.1.193.10.1.1.4.1.1.4
fsDiskAccess	1.3.6.1.4.1.193.10.1.1.4.1.1.5
fsDiskRemovable	1.3.6.1.4.1.193.10.1.1.4.1.1.6
fsDiskBlockSize	1.3.6.1.4.1.193.10.1.1.4.1.1.7
fsDiskTotalBlocks	1.3.6.1.4.1.193.10.1.1.4.1.1.8
fsDiskBlocksFree	1.3.6.1.4.1.193.10.1.1.4.1.1.9
fsDiskPercentBlocksUsed	1.3.6.1.4.1.193.10.1.1.4.1.1.10
fsDiskTotalInodes	1.3.6.1.4.1.193.10.1.1.4.1.1.11
fsDiskInodesFree	1.3.6.1.4.1.193.10.1.1.4.1.1.12
fsDiskPercentInodesUsed	1.3.6.1.4.1.193.10.1.1.4.1.1.13

3.1 IDENTITY GROUP

EDACS Network Element (NE) Identification Group is mandatory for all managed EDACS network elements.

Table 2 - Identity Group [1.3.6.1.4.1.193.10.1.1.1]

OBJECT IDENTIFIER	SYNTAX	ACCESS	DESCRIPTION
identSysObjectID 1.3.6.1.4.1.193.10.1.1.1.1	EdacsProductID	read-only	The EDACS System Object Identification object instance provides authoritative identification of this managed EDACS network element. This value is assigned under the edacs (10).product (2) subtree of the ericsson (193) enterprise. This object provides an easy and unambiguous identification of what type of EDACS box this entity is associated with. This value will, typically, be identical to the sysObjectID object instance in the MIB-II system group. Note, however, that some EDACS entities may be managed using a third party agent which "hardcodes" the sysObjectID to a value assigned under that vendor's private enterprise naming authority. As such, the identSysObjectID is the preferred means by which to identify this EDACS entity.
identServiceNodeNumber 1.3.6.1.4.1.193.10.1.1.1.2	PositiveInteger32T	read-only	The administratively assigned number of the EDACS service node for which this entity is providing service.

3.2 OPERATION GROUP

The Remote Operations Group is mandatory for all managed EDACS network elements.

Table 3 - Operation Group [1.3.6.1.4.1.193.10.1.1.2]

OBJECT IDENTIFIER	SYNTAX	ACCESS	DESCRIPTION
operDateAndTime 1.3.6.1.4.1.193.10.1.1.2.1	DateAndTime	read-write	The local date and time, as perceived by this managed network element. Note, this date-time specification is identical to the "DateAndTime" textual conversion as presented in the host resources sub-group of MIB-II. This data type is intended to provide a consistent method of reporting date and time information. field / octets / contents / range 1 / 1-2 / year (in network byte order) / 0..65535 2 / 3 / month / 1..12 3 / 4 / day / 1..31 4 / 5 / hour / 0..23 5 / 6 / minutes / 0..59 6 / 7 / seconds (use 60 for leap-second) / 0..60 7 / 8 / deci-seconds / 0..9 8 / 9 / direction from UTC (in ASCII notation) / "+" or "-" 9 / 10 / hours from UTC / 0..11 10 / 11 / minutes from UTC / 0..59 Note that if only local time is known, then timezone information (fields 8-10) is not present.

OBJECT IDENTIFIER	SYNTAX	ACCESS	DESCRIPTION
			If this information is not known, then this variable shall have the value corresponding to January 1, year 0000, 00:00:00.0, which is encoded as (hex) "00 00 01 01 00 00 00 00".
operRemoteReset 1.3.6.1.4.1.193.10.1.1.2.2	INTEGER supported (1) notSupported (2) inProgress (3) finalNotice (4) reset (5)	read-write	This object provides a common method to remotely reset any managed EDACS network element. The only value a management station may attempt to set is reset (5), which requests a full system reset of this entity. If the request is accepted by the agent, this object instance will transition to inProgress (3). The value inProgress (3) indicates that this entity is performing any housekeeping duties (disk synchronization, active call tear-down, etc.) associated with a graceful system shutdown. Note that the amount of time an entity remains in the inProgress (3) state is an implementation specific issue; a duration of several minutes is not uncommon. It is highly recommended that upon entering the inProgress (3) state, the agent return a "genErr" value for ANY further write operations attempted by a management station. After completion of any housekeeping duties, this value shall transition from inProgress (3) to finalNotice (4), which indicates that system reset is immediately imminent. At this point, no further network communications with the entity will be possible. This condition will exist until the entity completes re-initialization, which is typically announced via a coldStart (0) trap to the network management station(s).
operAnnounceReset 1.3.6.1.4.1.193.10.1.1.2.3	Boolean	read-write	This object controls the generation of traps for significant changes in state of the operRemoteReset object instance. A true (1) value indicates that traps will be generated. A false (2) value suppresses the generation of traps. It is recommended that this value be maintained in non-volatile storage, for consistency across system reboots." DEFVAL { 2 } -- false(2)
operRemoteStatus 1.3.6.1.4.1.193.10.1.1.2.4	INTEGER unknown(1) other(2) systemActive(3) systemShutdown(4) shutdownInProgress(5) shutdownComplete(6) activationInProgress(7) activationComplete(8)	read-write	This object provides a common mechanism to inspect and alter the operational state of this managed entity. This mechanism is useful for taking an entity in and out of normal, mission oriented, service (typically for trouble shooting purposes). systemActive 3) indicates that this entity is completely "on-line", with all mission operational parameters functioning within nominal parameters. systemShutdown (4) indicates that this entity is completely "off-line" (e.g. dormant, with regard to its normal mission requirements within an EDACS network infrastructure). shutdownInProgress (5) indicates that this entity is in transition towards a state of shutdownComplete (6), either at the request of a management station, or due to behavioral aspects of said entity. If an entity can not achieve shutdownComplete (6), it shall remain in the

OBJECT IDENTIFIER	SYNTAX	ACCESS	DESCRIPTION
			shutdownInProgress (5) state. shutdownComplete (6) indicates that this entity has performed any pre-shutdown processing, and is intending to immediately enter a (mission critical) dormant state. Note that this state is potentially transient in nature (e.g. an entity may, choose to transition directly from a shutdownInProgress(5) to that of systemShutdown (4)). activationInProgress (7) indicates that this entity is performing any processing required for an orderly transition from a systemShutdown (4) state to that of systemActive (3). activationComplete (8) indicates that this entity has completed any processing required for an attempt to transition to a state of systemActive (3). Note that this state is potentially transient in nature (e.g. an entity may, choose to transition from activationInProgress (7) directly to systemActive (3)). The only values a management station may attempt to set are systemActive (3) and systemShutdown (4). Note that placing an EDACS entity in the systemShutdown(4) shall not impact network communication services between the entity and network management stations.
operAnnounceStatus 1.3.6.1.4.1.193.10.1.1.2.5	Boolean	read-write	This object controls the generation of traps for significant changes in state of the operRemoteStatus object instance. A true (1) value indicates that traps will be generated. A false (2) value suppresses the generation of traps. It is recommended that this value be maintained in non-volatile storage, for consistency across system reboots." DEFVAL { 2 } -- false(2)

3.3 SOFTWARE GROUP

The EDACS Software Configuration Group provides a common mechanism for identifying the software components and features installed on this entity. This information is useful for identifying and inventorying software installed on an entity, and for diagnosing incompatibility and version mismatch problems between various pieces of software. Implementation of the software configuration group is mandatory for all managed EDACS network elements.

Table 4 - Software Group [1.3.6.1.4.1.193.10.1.1.3]

OBJECT IDENTIFIER	SYNTAX	ACCESS	DESCRIPTION
softwareTable 1.3.6.1.4.1.193.10.1.1.3.1	SEQUENCE of SoftwareEntry	not-accessible	A (conceptual) table of the software components installed on this managed element.
softwareEntry 1.3.6.1.4.1.193.10.1.1.3.1.1	SoftwareEntry	not-accessible	A (conceptual) entry for a specific software component installed on this managed element.
softwareIndex 1.3.6.1.4.1.193.10.1.1.3.1.1.1	SoftwareIndexType	read-only	A unique value for each software component installed on this managed element. This value serves as an index to a particular entry in the softwareTable.
softwareType 1.3.6.1.4.1.193.10.1.1.3.1.1.2	INTEGER other(1) bootstrap(2) operatingSystem(3)	read-only	The functional type of this software component.

OBJECT IDENTIFIER	SYNTAX	ACCESS	DESCRIPTION
	application(4) thirdParty(5)		
softwarePartNumber 1.3.6.1.4.1.193.10.1.1.3.1.1.3	DisplayString (SIZE (0..128))	read-only	A textual string which provides the part number of this software component. By convention, this is the Software Media Kit part number, including the group number postfix (e.g. an identifier used by the customer to reference and/or order this specific software component). For example, "350A1103G2." If this software component is a member of a Software Media Kit containing multiple part numbers, the part number postfix shall be appended in the form of "-Px"; where "x" designates the specific part number. For example, "350A1103G2-P2" would indicate that this software component is identified as Part Number two (2) of the software media kit 350A1103G2."
softwareRevMajorID 1.3.6.1.4.1.193.10.1.1.3.1.1.4	INTEGER (0..65535)	read-only	The major revision number of this software component.
softwareRevMinorID 1.3.6.1.4.1.193.10.1.1.3.1.1.5	INTEGER (0..65535)	read-only	The minor revision number of this software component.
softwareTargetDevice 1.3.6.1.4.1.193.10.1.1.3.1.1.6	EdacsProductID	read-only	The product identification of the EDACS (sub)component(s) which execute this software component. This value will, typically, be the same as the identSysObjectID object instance. If this entity is acting as a load host, or proxy agent, for some other (sub)component, then this object instance may be used to identify that specific target device.
softwareDescription 1.3.6.1.4.1.193.10.1.1.3.1.1.7	DisplayString (SIZE (0..255))	read-only	A textual string describing this software component. For example, "First incremental load segment of the Billing Correlation Unit/Centralized Activity Logger." This description should also include any applicable copyright or patent notice, as well as any (re)distribution restrictions or liabilities.
softwareExtraInfo 1.3.6.1.4.1.193.10.1.1.3.1.1.8	DisplayString (SIZE (0..255))	read-only	A textual string providing any additional information describing this software component. For example, "Provided on exception release to customer ABC, for reasons XYZ." If the softwareType value for this component is thirdParty (5), then this variable shall provide the manufacturer, revision, and module name of this third party software component. This object instance will be a null (size 0) string if the agent does not have any additional information of interest regarding this software component.
softwarePath 1.3.6.1.4.1.193.10.1.1.3.1.1.9	DisplayString (SIZE(0..128))	read-only	A fully qualified path specification identifying the location in long-term storage (e.g. a disk drive) where this software component is stored. For example, "1.2/loads/BCU.SX." This object instance shall contain a specification of "ROM" (or similarly designated identification) for a software component which is not stored on this entity's file system.
softwareStatus	INTEGER other (1)	read-only	The execution status of this software component.

OBJECT IDENTIFIER	SYNTAX	ACCESS	DESCRIPTION
1.3.6.1.4.1.193.10.1.1.3.1.1.10	unknown (2) running (3) runnable (4) notRunnable (5) notLoaded (6) targetProxied (7)		
softwareInstallDate 1.3.6.1.4.1.193.10.1.1.3.1.1.11	DateAndTime	read-only	The last-modification date of this software component as it would appear in a directory listing. If this information is not known, or not applicable (e.g. ROM resident), then this object instance shall have the value corresponding to January 1, year 0000, 00:00:00.0, which is encoded as (hex) “00 00 01 01 00 00 00 00”.
softwareFeatureCode 1.3.6.1.4.1.193.10.1.1.3.2	OCTET STRING	read-write	An (encrypted) code which identifies any additional software features licensed for operation on this entity. Interpretation of the feature code requires examination of the relevant identSysObjectID object instance. Two disparate methods of encryption are enforced, both of which are solely proprietary to Ericsson, Inc., Private Radio Systems (PRS) division. For read operations, EDACS network management software is required to decrypt the code and provide identification of the installed feature set. Write operations are supported for remote upgrades in feature capability, under the restricted authority of Ericsson PRS software services. A prudent agent will recognize that repeated write attempts that fail decryption validation may indicate an unauthorized attempt to adjust this entity’s software feature licensing. Customers should note that attempts to modify the feature code may result in this entity performing a “self-destruct” of any additional features provided by this entity. This self-destruct will not render the entity in-operable. It will, however, result in the entity assuming its baseline (minimal) operational configuration. Restoration of additional services will require consultation with Ericsson PRS software services personnel.

3.4 FILE SYSTEM GROUP

The EDACS File System Group provides a common mechanism for managing long-term data storage devices (such as disk drives, CD-ROM, etc.). Implementation of the mass storage group is mandatory for all managed EDACS network elements which contain mass storage devices.

Table 5 - File System Group [1.3.6.1.4.1.193.10.1.1.4]

OBJECT IDENTIFIER	SYNTAX	ACCESS	DESCRIPTION
fsDiskTable 1.3.6.1.4.1.193.10.1.1.4.1	SEQUENCE of DiskEntry	not-accessible	A (conceptual) table of disk oriented storage devices resident on this managed network element. Note that this table does not include disks which are accessed remotely over a network (e.g. NFS mounted).
fsDiskEntry 1.3.6.1.4.1.193.10.1.1.4.1.1	DiskEntry	not-accessible	A (conceptual) entry for each disk oriented storage device resident on this managed network element.
fsDiskIndex 1.3.6.1.4.1.193.10.1.1.4.1.1.1	DiskIndexType	read-only	A unique value for each disk oriented storage device. This value serves as an index to a particular entry in the fsDiskTable.
fsDiskVolumeName 1.3.6.1.4.1.193.10.1.1.4.1.1.2	DisplayString (SIZE (0..255))	read-only	A textual string describing this disk device. By convention, this value is the same as the volume name used to identify this disk (e.g. file system component).
fsDiskVolumeDescr 1.3.6.1.4.1.193.10.1.1.4.1.1.3	DisplayString (SIZE (0..255))	read-only	A textual string providing any available additional information regarding this disk. This value should provide information such as the vendor, model name and/or part number, and firmware version of this file system component. This value will be a null (size zero) string if the agent does not have any additional information available regarding this disk.
fsDiskMediaType 1.3.6.1.4.1.193.10.1.1.4.1.1.4	INTEGER other(1) unknown(2) hardDisk(3) floppyDisk(4) ramDisk(5) opticalDiskCDROM(6) opticalDiskWORM(7) opticalDiskRW(8)	read-only	An indication of the type of media used by this disk.
fsDiskAccess 1.3.6.1.4.1.193.10.1.1.4.1.1.5	INTEGER readWrite(1) readOnly(2) writeOnly(3)	read-only	An indication of the access mode currently in force for this disk. This should reflect the media type, any write-protect mechanism, and any device configuration that affects the entire disk device accessibility.
fsDiskRemovable 1.3.6.1.4.1.193.10.1.1.4.1.1.6	INTEGER removable(1) notRemovable(2)	read-only	Denotes whether or not the disk media may be removed from the drive.
fsDiskBlockSize 1.3.6.1.4.1.193.10.1.1.4.1.1.7	PositiveInteger32T	read-only	The fundamental block size, in bytes (octets), of this disk.
fsDiskTotalBlocks 1.3.6.1.4.1.193.10.1.1.4.1.1.8	PositiveInteger32T	read-only	The total number of blocks which this disk provides for long-term storage. Note that the fundamental size of each block is specified by the fsDiskBlockSize object

OBJECT IDENTIFIER	SYNTAX	ACCESS	DESCRIPTION
			instance.
fsDiskBlocksFree 1.3.6.1.4.1.193.10.1.1.4.1.1.9	PositiveInteger32T	read-only	The total number of blocks on this disk which are currently available. Note that the fundamental size of each block is specified by the fsDiskBlockSize object instance.
fsDiskPercentBlocksUsed 1.3.6.1.4.1.193.10.1.1.4.1.1.10	PercentDiskUsed	read-only	The (coarse) percentage of disk storage capacity, with regard to blocks, which has been consumed. Note that this value may be more accurately calculated from the fsDiskTotalBlocks and fsDiskBlocksFree object instances. This value is intended to provide network management stations with a convenient object instance for monitoring disk utilization.
fsDiskTotalInodes 1.3.6.1.4.1.193.10.1.1.4.1.1.11	PositiveInteger32T	read-only	The total number of file descriptors/inodes (e.g. ordinary files, directories, links, etc.) which this disk provides for long-term storage. This value will always be zero for disks which are part of a file system that does not implement the concept of an inode.
fsDiskInodesFree 1.3.6.1.4.1.193.10.1.1.4.1.1.12	PositiveInteger32T	read-only	The total number of file descriptors/inodes (e.g. ordinary files, directories, links, etc.) which are currently available. This value will always be zero for disks which are part of a file system that does not implement the concept of an inode.
fsDiskPercentInodesUsed 1.3.6.1.4.1.193.10.1.1.4.1.1.13	PercentDiskUsed	read-only	The (coarse) percentage of disk storage capacity, with regard to file descriptors/inodes, which has been consumed. Note that this value may be more accurately calculated from the fsDiskTotalInodes and fsDiskInodesFree object instances. This value is intended to provide network management stations with a convenient object instance for monitoring disk utilization. This value will always be zero for disks which are part of a file system that does not implement the concept of an inode.

4. SYSTEM SNMP GROUP

The System SNMP Group (2) is a sub branch of the System Node. The SNMP Group is included and detailed in the Common MIB file "edacs101.mib" located in Appendix A.

The graphical representation in Figure 7 shows the primary branches in the EDACS System SNMP Group.

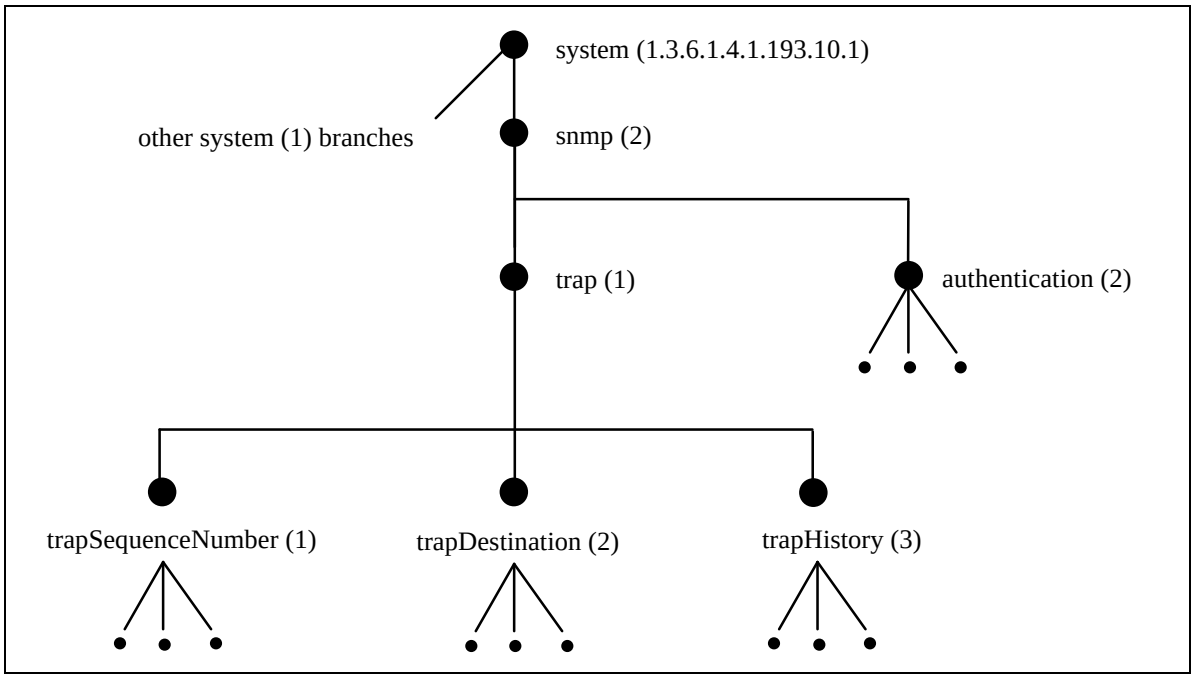

Figure 7 - EDACS System SNMP Group

The following summarizes the items currently identified under the snmp (2) branch.

trap	1.3.6.1.4.1.193.10.1.2.1
trapSequenceNumber	1.3.6.1.4.1.193.10.1.2.1.1
trapDestination	1.3.6.1.4.1.193.10.1.2.1.2
trapDestinationNumber	1.3.6.1.4.1.193.10.1.2.1.2.1
trapDestinationTable	1.3.6.1.4.1.193.10.1.2.1.2.2
trapDestinationEntry	1.3.6.1.4.1.193.10.1.2.1.2.2.1
trapDestinationAddr	1.3.6.1.4.1.193.10.1.2.1.2.2.1.1
trapHistory	1.3.6.1.4.1.193.10.1.2.1.3
trapSentTable	1.3.6.1.4.1.193.10.1.2.1.3.1
trapSentEntry	1.3.6.1.4.1.193.10.1.2.1.3.1.1
trapSentIpAddress	1.3.6.1.4.1.193.10.1.2.1.3.1.1.1
trapSentSeqNumber	1.3.6.1.4.1.193.10.1.2.1.3.1.1.2
trapSentTime	1.3.6.1.4.1.193.10.1.2.1.3.1.1.3
trapSentGeneric	1.3.6.1.4.1.193.10.1.2.1.3.1.1.4
trapSentSpecific	1.3.6.1.4.1.193.10.1.2.1.3.1.1.5
trapSentVblItems	1.3.6.1.4.1.193.10.1.2.1.3.1.1.6

authentication	1.3.6.1.4.1.193.10.1.2.2
authFailTable	1.3.6.1.4.1.193.10.1.2.2.1
authFailEntry	1.3.6.1.4.1.193.10.1.2.2.1.1
authFailIpAddress	1.3.6.1.4.1.193.10.1.2.2.1.1.1
authFailTime	1.3.6.1.4.1.193.10.1.2.2.1.1.2
authFailCommunityName	1.3.6.1.4.1.193.10.1.2.2.1.1.3

4.1 SNMP TRAP GROUP

4.1.1 SNMP Trap Sequence Number Group

Table 6 - Trap Sequence Number Group [1.3.6.1.4.1.193.10.1.2.2.1]

OBJECT IDENTIFIER	SYNTAX	ACCESS	DESCRIPTION
trapSequenceNumber 1.3.6.1.4.1.193.10.1.2.1.1	Counter	read-only	The sequence number used in the most recent trap packet(s) which this entity has sent. This counter is incremented each time a particular trap type is sent to one, or more, network management stations.

4.1.2 SNMP Trap Destination Group

The Trap Destination Group is mandatory for all managed EDACS network elements.

Table 7 - Trap Destination Group [1.3.6.1.4.1.193.10.1.2.1.2]

OBJECT IDENTIFIER	SYNTAX	ACCESS	DESCRIPTION
trapDestinationNumber 1.3.6.1.4.1.193.10.1.2.1.2.1	Gauge	read-only	The number of trap destinations in affect for this agent. Note that this variable corresponds to the number of "valid" entries in the trapDestinationTable, and may not directly reflect the actual size of said table.
trapDestinationTable 1.3.6.1.4.1.193.10.1.2.1.2.2	SEQUENCE of TrapDestinationEntry	not-accessible	A (conceptual) table which lists the (NMS) network addresses to which this agent will send traps. Note that most agents will implement this table with a fixed maximum number of entries, as opposed to employing dynamic row create and delete operations. Accordingly, management stations must be prepared to receive tabular entries not associated with a valid network address. By convention, an IP address of either 0.0.0.0 or 255.225.255.255 is used to delineate such an address.
trapDestinationEntry 1.3.6.1.4.1.193.10.1.2.1.2.2.1	TrapDestinationEntry	not-accessible	Each (conceptual) entry contains the network address of a management station to which traps will be sent.
trapDestinationAddr 1.3.6.1.4.1.193.10.1.2.1.2.2.1.1	IpAddress	read-write	A network address to which this agent will send traps. Setting this value to an IP address of either 0.0.0.0 or 255.225.255.255 effectively invalidates this entry (e.g. the agent shall never attempt to send a trap to either of these two addresses). It is an implementation-specific matter as to whether the agent removes an invalidated entry from the table, or simply replaces said entry with the invalid address. A prudent agent should return a "badValue" if an

OBJECT IDENTIFIER	SYNTAX	ACCESS	DESCRIPTION
			attempt is made to set the destination to the same value as the agents network address. It is further recommended that the agent reject any destination to which no network route is currently known.

4.1.3 SNMP Trap History Group

Implementation of the Trap History Group is optional, buy strongly recommended.

Table 8 - Trap History Group [1.3.6.1.4.1.193.10.1.2.1.3]

OBJECT IDENTIFIER	SYNTAX	ACCESS	DESCRIPTION
trapSentTable 1.3.6.1.4.1.193.10.1.2.1.3.1	SEQUENCE of TrapSentEntry	not-accessible	A (conceptual) table which provides a list of the traps most recently sent to some network management station(s).
trapSentEntry 1.3.6.1.4.1.193.10.1.2.1.3.1.1	TrapSentEntry	not-accessible	A (conceptual) entry in the trapSentTable. Each conceptual row describes the last trap packet sent to a specific network management station.
trapSentIpAddress 1.3.6.1.4.1.193.10.1.2.1.3.1.1.1	IpAddress	read-only	The network (IP) address of a network management station to which this entity has last sent a trap.
trapSentSeqNumber 1.3.6.1.4.1.193.10.1.2.1.3.1.1.2	Counter	read-only	The sequence number of the trap packet used when this entity sent the trap to this network management station.
trapSentTime 1.3.6.1.4.1.193.10.1.2.1.3.1.1.3	TimeTicks	read-only	The value of sysUpTime when the trap was sent to this network management station.
trapSentGeneric 1.3.6.1.4.1.193.10.1.2.1.3.1.1.4	INTEGER other(1), -- None of the following, which is an error. coldStart(2) warmStart(3) linkUp(4) linkDown(5) authenticationFailure(6) egpNeighborLoss(7) enterpriseSpecific(8)	read-only	The “generic-trap” code value of the trap sent to this network management station.
trapSentSpecific 1.3.6.1.4.1.193.10.1.2.1.3.1.1.5	INTEGER	read-only	The “specific-trap” code value of the trap sent to this network management station.
trapSentVblItems 1.3.6.1.4.1.193.10.1.2.1.3.1.1.6	INTEGER	read-only	The number of Variable Binding List (VBL) items contained in the trap sent to this network management station.

4.1.4 SNMP Trap Definitions

Table 9 - SNMP Trap Definitions

TRAP TYPE	ENTERPRISE	VARIABLES	DESCRIPTION
operResetEventTrap	edacs	trapSequenceNumber, operRemoteReset	An indication that the sending entity is in the process of performing a complete system reset. The operRemoteReset object instance contains the current state of the reset process, which will (typically) be either inProgress (3) or finalNotice (4).
operStatusEventTrap	edacs	trapSequenceNumber, operRemoteReset	An indication that the sending entity has detected a significant change in its operational status. The operRemoteStatus object instance contains the current operational state.

4.2 SNMP AUTHENTICATION GROUP

4.2.1 SNMPv1 Authentication Failure History Group

Implementation of the Authentication Failure Trap History Group is optional, buy strongly recommended.

Table 10 - Trap Authentication Group [1.3.6.1.4.1.193.10.1.2.2]

OBJECT IDENTIFIER	SYNTAX	ACCESS	DESCRIPTION
authFailTable 1.3.6.1.4.1.193.10.1.2.2.1	SEQUENCE of AuthFailEntry	not-accessible	A (conceptual) table which provides a list of network management stations that have caused an SNMPv1 authentication failure in an attempt to access this entity.
authFailEntry 1.3.6.1.4.1.193.10.1.2.2.1.1	AuthFailEntry	not-accessible	A (conceptual) entry in the authentication failure table. Each entry contains, and is indexed by, the IP address of the management station which caused the authentication failure.
authFailIpAddress 1.3.6.1.4.1.193.10.1.2.2.1.1.1	IpAddress	read-only	The IP address of the management station that sent a request to this agent with an incorrect community name.
authFailTime 1.3.6.1.4.1.193.10.1.2.2.1.1.2	TimeTicks	read-only	The value of sysUpTime when this entity received the un-authenticated request.
authFailCommunityName 1.3.6.1.4.1.193.10.1.2.2.1.1.3	OCTET STRING	read-only	The community name used in the failed request.

5. SYSTEM ALARM GROUP

5.1 EDACS ALARM-THRESHOLD MIB

The EDACS Alarm-Threshold MIB provides a flexible method for Network Management Station(s) (NMS) to control the sampling of any integer SNMP object on an EDACS server-agent. The periodic samples are compared to a user configurable set of threshold values. If a sample crosses a threshold, an event will be generated. This event may be configured to result in the generation of an SNMP TRAP to one or more NMS. The variables contained in the TRAP PDU are manifested at the end of this document. Only variables that resolve to an ASN.1 primitive type of INTEGER (INTEGER, Counter, Gauge, or TimeTicks) may be monitored with this MIB.

Two methods of sampling a selected variable are supported, which control calculating the value to be compared against the thresholds (see alarmThreshSampleType). The absoluteValue (1) specifies that the value of the selected variable will be compared directly with the thresholds at the end of the sampling interval. The deltaValue (2) specifies that the value of the selected variable at the last sample will be subtracted from the current value, and the difference compared with the thresholds.

It should be noted that deltaValue (2) sampling has the potential to generate a large number of rising and falling threshold crossings in a short period of time. The sample time and threshold values should be chosen to avoid this problem. Also this simple threshold method may not catch changes that occur across sample boundaries. This effect can be minimized by reducing the sample interval.

The Alarm-Threshold function has a hysteresis mechanism to limit the generation of events. This mechanism generates one event as a threshold is crossed in the appropriate direction. No more events are generated for that threshold until the opposite threshold is crossed.

The Alarm-Threshold MIB employs two disparate notions of alarm entry “ownership”, which govern NMS abilities to SET certain aspects of said alarm entries (see alarmThreshOwner). Specifically, one set of alarm entries are owned by the server-agent resident on this entity, which are responsible for monitoring certain mission critical variables. A second set of

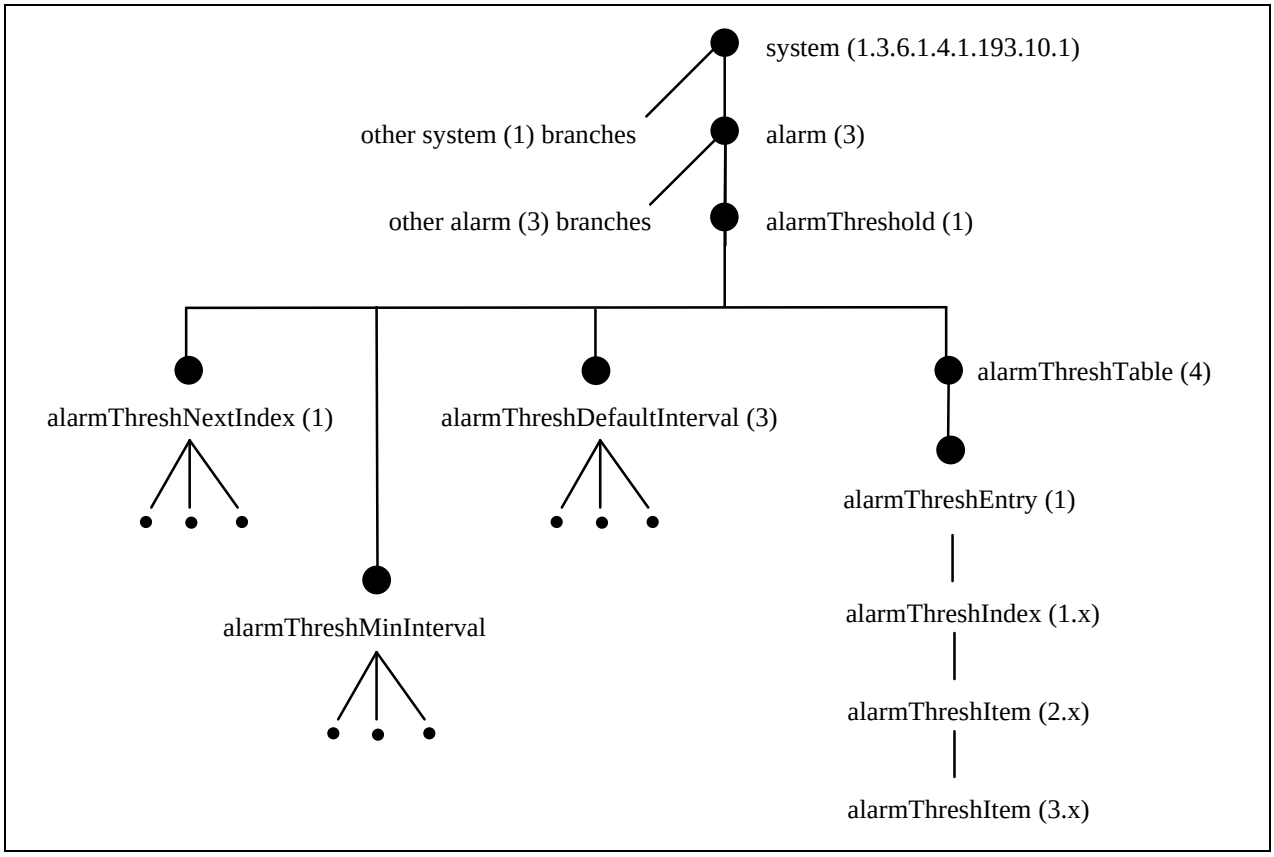

Figure 8 - EDACS Alarm Threshold Group

alarm variable(s) may be imposed upon the target entity, on behalf of an NMS, for monitoring variables deemed of significance to the end user. All EDACS network elements which provide alarming of threshold oriented conditions shall adhere their implementation to this MIB.

Detailed information on the Alarm-Threshold MIB in contained in the MIB file "edacs102.mib" located in Appendix A.

The graphic representation in Figure 8 shows the primary branches in the EDACS Alarm Group.

The following summarizes the items currently identified under the alarmThreshold (1) branch.

alarmThreshold	1.3.6.1.4.1.193.10.1.3.1
alarmThreshNextIndex	1.3.6.1.4.1.193.10.1.3.1.1
alarmThreshMinInterval	1.3.6.1.4.1.193.10.1.3.1.2
alarmThreshDefaultInterval	1.3.6.1.4.1.193.10.1.3.1.3
alarmThreshTable	1.3.6.1.4.1.193.10.1.3.1.4
alarmThreshEntry	1.3.6.1.4.1.193.10.1.3.1.4.1
alarmThreshIndex	1.3.6.1.4.1.193.10.1.3.1.4.1.1
alarmThreshStatus	1.3.6.1.4.1.193.10.1.3.1.4.1.2
alarmThreshOwner	1.3.6.1.4.1.193.10.1.3.1.4.1.3
alarmThreshVariable	1.3.6.1.4.1.193.10.1.3.1.4.1.4
alarmThreshSampleType	1.3.6.1.4.1.193.10.1.3.1.4.1.5
alarmThreshValue	1.3.6.1.4.1.193.10.1.3.1.4.1.6
alarmThreshLastTimeSampled	1.3.6.1.4.1.193.10.1.3.1.4.1.7
alarmThreshInterval	1.3.6.1.4.1.193.10.1.3.1.4.1.8
alarmThreshPermanence	1.3.6.1.4.1.193.10.1.3.1.4.1.9
alarmThreshStartupAlarm	1.3.6.1.4.1.193.10.1.3.1.4.1.10
alarmThreshRisingThreshold	1.3.6.1.4.1.193.10.1.3.1.4.1.11
alarmThreshFallingThreshold	1.3.6.1.4.1.193.10.1.3.1.4.1.12
alarmThreshRisingDescription	1.3.6.1.4.1.193.10.1.3.1.4.1.13
alarmThreshFallingDescription	1.3.6.1.4.1.193.10.1.3.1.4.1.14
alarmThreshNotifyThisNMS	1.3.6.1.4.1.193.10.1.3.1.4.1.15
alarmThreshLastRisingSent	1.3.6.1.4.1.193.10.1.3.1.4.1.16
alarmThreshLastFallingSent	1.3.6.1.4.1.193.10.1.3.1.4.1.17

5.2 SYSTEM ALARM THRESHOLD GROUP

Table 11 - System Alarm Threshold Group [1.3.6.1.4.1.193.10.1.3.1]

OBJECT IDENTIFIER	SYNTAX	ACCESS	DESCRIPTION
alarmThreshNextIndex 1.3.6.1.4.1.193.10.1.3.1.1	INTEGER (1..65535)	read-only	The index of the next available entry in the alarm threshold table. If the maximum number of entries to the alarm table has been reached, this index will contain -1.
alarmThreshMinInterval 1.3.6.1.4.1.193.10.1.3.1.2	TimeTicks	read-only	The minimum sampling interval that this agent can support. Any attempt to set alarmThreshInterval to a shorter interval will result in a "badValue" response.

OBJECT IDENTIFIER	SYNTAX	ACCESS	DESCRIPTION
alarmThreshNextIndex 1.3.6.1.4.1.193.10.1.3.1.1	INTEGER (1..65535)	read-only	The index of the next available entry in the alarm threshold table. If the maximum number of entries to the alarm table has been reached, this index will contain -1.
alarmThreshDefaultInterval 1.3.6.1.4.1.193.10.1.3.1.3	TimeTicks	read-write	The default sampling interval. This value will be used as the default value for alarmThreshInterval when a new alarmThreshEntry is created. This value may not be set lower than alarmThreshMinInterval.
alarmThreshTable 1.3.6.1.4.1.193.10.1.3.1.4	SEQUENCE OF AlarmThreshEntry	not-accessible	A (conceptual) table which contains a list of alarm threshold entries maintained on this entity.

5.3 ALARM THRESHOLD TABLE

Table 12 - Alarm Threshold Table [1.3.6.1.4.1.193.10.1.3.1.4]

OBJECT IDENTIFIER	SYNTAX	ACCESS	DESCRIPTION
alarmThreshEntry 1.3.6.1.4.1.193.10.1.3.1.4.1	AlarmThreshEntry	not-accessible	A (conceptual) entry in the alarmThreshTable. Each entry contains a list of parameters that set up a periodic checking for alarm threshold conditions.
alarmThreshIndex 1.3.6.1.4.1.193.10.1.3.1.4.1.1	INTEGER (1..65535)	read-only	An index that uniquely identifies an entry in the alarm table. Each such entry defines a diagnostic sample at a particular interval for an object on the device.
alarmThreshStatus 1.3.6.1.4.1.193.10.1.3.1.4.1.2	INTEGER enabled(1) disabled(2) createRequest(3) underCreation(4) tempUnavailable(6)	read-write	The status of this alarm entry. Setting this object to the value enabled (1) has the effect of initiating monitoring according to the value of alarmThreshSampleType. It also enables the generation of rising and falling traps as specified by alarmThreshRisingThreshold and alarmThreshFallingThreshold. While this object has a status of enabled (1) none of the object s monitoring parameters may be changed. Any attempt to change one of these parameters will return badValue. Setting this object to the value disable (2) disables all variable monitoring and trap generation. It is used to temporarily disable an alarm, or to make changes in the monitoring parameters that cannot be done while the object is enabled (1). An existing instance of this object cannot be set to createRequest (3). A new object can be created using an index obtained from alarmThreshNextIndex and setting the object to the value createRequest (3). When this object is created, the agent may wish to create supplemental object instances to complete a conceptual row in this table. Immediately after completing the create operation, the agent must set this object to underCreation (4). Entries shall exist in the underCreation (4) state until the management station is finished configuring the entry and sets this object to enabled (1), disabled (2), or aborts the entry by setting this object to deleteRequest (5). The agent will deny a request to modify an underCreation (4) entry to be that of createRequest (3) in order to lessen problems arising

OBJECT IDENTIFIER	SYNTAX	ACCESS	DESCRIPTION
			when multiple management stations may be trying to add an entry with the same index. If the agent determines that an entry has been in the underCreation (4) state for an abnormally long time, it may decide that the management station has crashed. If the agent makes this decision, it may delete the object to reclaim the entry. A prudent agent will understand that the management station may need to wait for human input and will allow for that possibility in its determination of this abnormally long period. Setting this object to the value deleteRequest (5) will remove the entry from the table. If the agent has an entry which is enabled (1) and it is unable to query the particular ASN.1 object specified, the agent should set the status to tempUnavailable (6). The agent should continue to query that ASN.1 object, and upon a successful query, the agent should set the status back to enabled (1). If the sample type is deltaValue (2), the value of alarmThreshValue will be set to 0 (No trap will be generated.) and delta sampling will begin again at the end of the next sample interval.
alarmThreshOwner 1.3.6.1.4.1.193.10.1.3.1.4.1.3	DisplayString (SIZE (0..127))	read-write	The entity that configured this entry and is therefore using the resources assigned to it. This string is used to model an administratively assigned name of the owner of a resource. This information is taken from the NVT ASCII character set. It is suggested that this name contain one or more of the following: IP address, management station name, network manager's name, location, or phone number. In some cases the agent itself will be the owner of an entry. In these cases, this string shall be set to a string starting with “monitor”. SNMP access control is articulated entirely in terms of the contents of MIB views; access to a particular SNMP object instance depends only upon its presence or absence in a particular MIB view and never upon its value or the value of related object instances. Thus, objects of this type afford resolution of resource contention only among cooperating managers; they realize no access control function with respect to uncooperative parties.
alarmThreshVariable 1.3.6.1.4.1.193.10.1.3.1.4.1.4	OBJECT IDENTIFIER	read-write	The object identifier of the particular variable to be sampled. Only variables that resolve to an ASN.1 primitive type of INTEGER (INTEGER, Counter, Gauge, or TimeTicks) may be sampled. Because SNMP access control is articulated entirely in terms of the contents of MIB views, no access control mechanism exists that can restrict the value of this object to identify only those objects that exist in a particular MIB view. Because there is thus no acceptable means of restricting the read access that could be obtained through the alarm mechanism, the agent must only grant write access to this object in those views that have read access to all objects on the agent. During a set operation, if the supplied variable name is

OBJECT IDENTIFIER	SYNTAX	ACCESS	DESCRIPTION
			not available in the selected MIB view, a badValue error must be returned. If at any time the variable name of an established alarmThreshEntry is no longer available in the selected MIB view, the agent must change the status of this alarmThreshEntry to tempUnavailable (6). This object may not be modified if the associated alarmThreshStatus object is equal to enabled (1).
alarmThreshSampleType 1.3.6.1.4.1.193.10.1.3.1.4.1.5	INTEGER absoluteValue(1) deltaValue(2)	read-write	The method of sampling the selected variable and calculating the value to be compared against the thresholds. If the value of this object is absoluteValue (1), the value of the selected variable will be compared directly with the thresholds at the end of the sampling interval. If the value of this object is deltaValue (2), the value of the selected variable at the last sample will be subtracted from the current value, and the difference compared with the thresholds. This object may not be modified if the associated alarmThreshStatus object is equal to enabled (1).
alarmThreshValue 1.3.6.1.4.1.193.10.1.3.1.4.1.6	INTEGER	read-only	The value of the object identifier (alarmThreshVariable) during the last sampling period. The value during the current sampling period is not made available until the period is completed. If the sample type (alarmThreshSampleType) is absoluteValue (1), the value (alarmThreshValue) should become the actual value obtained during this sampling period. If the sample type (alarmThreshSampleType) is deltaValue (2), the value (alarmThreshValue) will be 0 when the entry's status is first set to enabled (1). However, this will NOT generate any traps (even if the falling threshold is greater than 0.) The value (alarmThreshValue) should become the most recently sampled value minus the previous sample.
alarmThreshLastTimeSampled 1.3.6.1.4.1.193.10.1.3.1.4.1.7	TimeTicks	read-only	The value of sysUpTime at which the current value of alarmThreshValue was sampled.
alarmThreshInterval 1.3.6.1.4.1.193.10.1.3.1.4.1.8	TimeTicks	read-write	The interval in TimeTicks over which the data is sampled and compared with the rising and falling thresholds. When setting this variable, care should be given to ensure that the variable being monitored will not exceed 2^31 - 1 and roll over the alarmThreshValue object during the interval. This value may not be set less than the value of alarmThreshMinInterval. The first sample will be taken immediately upon the alarmThreshStatus being set to enabled (1). This object may not be modified if the associated alarmThreshStatus object is equal to enabled (1).
alarmThreshPermanence 1.3.6.1.4.1.193.10.1.3.1.4.1.9	INTEGER temporary(1) permanent(2)	read-write	The storage method for this entry. If set to temporary (1) this entry will be stored only in volatile memory and may be deleted if the network management system is re-initialized. If set to permanent (2) this entry will be stored in some

OBJECT IDENTIFIER	SYNTAX	ACCESS	DESCRIPTION
			form of non-volatile storage and will be maintained between re-initializations of the network management system. NOTE: A re-initialization may have the same effect as setting enabled (1) entries to disabled (2) and then setting them back to enabled (1). In particular the values of alarmThreshLastTimeSampled, alarmThreshLastRisingSent, and alarmThreshLastFallingSent will be reset.
alarmThreshStartupAlarm 1.3.6.1.4.1.193.10.1.3.1.4.1.10	INTEGER risingAlarm(1) fallingAlarm(2) risingOrFallingAlarm(3)	read-write	The alarm that may be sent when this entry is first set to enabled (1). If the sample type (alarmThreshSampleType) is absoluteValue (1), then the following comparison is used to generate an event. If alarmThreshStartupAlarm is equal to risingAlarm (1) or risingOrFallingAlarm (3), then a single event will be generated if the first sample after this entry becomes enabled is greater than or equal to this threshold. If alarmThreshStartupAlarm is equal to fallingAlarm (2) or risingOrFallingAlarm (3), then a single event will be generated if the first sample after this entry becomes enabled is less than or equal to this threshold. If the first sample after this entry becomes enabled is greater than or equal to the rising threshold and alarmThreshStartupAlarm is equal to risingAlarm (1) or risingOrFallingAlarm (3), then a single rising alarm will be generated. If the first sample after this entry becomes enabled is less than or equal to the falling threshold and alarmThreshStartupAlarm is equal to fallingAlarm (2) or risingOrFallingAlarm (3), then a single falling alarm will be generated. This object may not be modified if the associated alarmThreshStatus object is equal to enabled(1).
alarmThreshRisingThreshold 1.3.6.1.4.1.193.10.1.3.1.4.1.11	INTEGER	read-write	A threshold for the sampled object identifier (alarmThreshVariable). If the sample type (alarmThreshSampleType) is absoluteValue (1), then the following describes the comparison. When the current sampled value is greater than or equal to this threshold, and the value (alarmThreshValue) at the last sampling interval was less than this threshold, a single event will be generated. If alarmThreshStartupAlarm is equal to risingAlarm (1) or risingOrFallingAlarm (3), then a single event will be generated if the first sample after this entry becomes enabled is greater than or equal to this threshold. After a rising event is generated, another such event will not be generated until the sampled value falls below this threshold and reaches the falling threshold (alarmThreshFallingThreshold). If the sample type (alarmThreshSampleType) is deltaValue (2), then the following describes the comparison. When the most recently sampled value minus the previous sampled value is greater than or equal to the threshold (alarmThreshRisingThreshold), and the current alarm value (alarmThreshValue) is less than the threshold value (alarmThreshRisingThreshold)

OBJECT IDENTIFIER	SYNTAX	ACCESS	DESCRIPTION
			a single event will be generated. After a rising event is generated, another such event will not be generated until the most recently sampled value minus the previous sampled value falls below this threshold (alarmThreshRisingThreshold) and reaches the falling threshold (alarmThreshFallingThreshold). This object may not be modified if the associated alarmThreshStatus object is equal to enabled(1).
alarmThreshFallingThreshold 1.3.6.1.4.1.193.10.1.3.1.4.1.12	INTEGER	read-write	A threshold for the sampled object identifier (alarmThreshVariable). If the sample type (alarmThreshSampleType) is absoluteValue (1), then the following describes the comparison. When the current sampled value is less than or equal to this threshold, and the value (alarmThreshValue) at the last sampling interval was greater than this threshold, a single event will be generated. If alarmThreshStartupAlarm is equal to fallingAlarm (2) or risingOrFallingAlarm (3), then a single event will be generated if the first sample after this entry becomes enabled is less than or equal to this threshold. After a falling event is generated, another such event will not be generated until the sampled value rises above this threshold and reaches the rising threshold (alarmThreshRisingThreshold). If the sample type (alarmThreshSampleType) is deltaValue (2), then the following describes the comparison. When the most recently sampled value minus the previous sampled value is less than or equal to the threshold (alarmThreshFallingThreshold), and the current alarm value (alarmThreshValue) is greater than the threshold value (alarmThreshFallingThreshold) a single event will be generated. After a falling event is generated, another such event will not be generated until the most recently sampled value minus the previous sampled value rises above this threshold (alarmThreshFallingThreshold) and reaches the rising threshold (alarmThreshRisingThreshold). This object may not be modified if the associated alarmThreshStatus object is equal to enabled (1).
alarmThreshRisingDescription 1.3.6.1.4.1.193.10.1.3.1.4.1.13	DisplayString (SIZE (0..255))	read-write	A description of the rising alarm.
alarmThreshFallingDescription 1.3.6.1.4.1.193.10.1.3.1.4.1.14	DisplayString (SIZE (0..255))	read-write	A description of the falling alarm.
alarmThreshNotifyThisNMS 1.3.6.1.4.1.193.10.1.3.1.4.1.15	IpAddress	read-write	The IP address of the network management station that desires notification of any threshold crossings. If set to 0.0.0.0, the agent will send threshold traps to all network management stations which have an entry in this entity's trapDestinationTable.
alarmThreshLastRisingSent 1.3.6.1.4.1.193.10.1.3.1.4.1.16	TimeTicks	read-only	The value of sysUpTime at the time this alarm entry last generated a rising threshold event which resulting in the sending of an SNMP TRAP to one or more NMS. If this entry has not generated any such events, this value

OBJECT IDENTIFIER	SYNTAX	ACCESS	DESCRIPTION
			will be zero.
alarmThreshLastFallingSent 1.3.6.1.4.1.193.10.1.3.1.4.1.17	TimeTicks	read-only	The value of sysUpTime at the time this alarm entry last generated a falling threshold event which resulting in the sending of an SNMP TRAP to one or more NMS. If this entry has not generated any such events, this value will be zero.

5.4 ALARM THRESHOLD TRAP DEFINITIONS

Table 13 - Alarm Threshold Trap Definitions

TRAP TYPE	ENTERPRISE	VARIABLES	DESCRIPTION
alarmRisingThresholdTrap	edacs	trapSequenceNumber alarmThreshVariable alarmThreshSampleType alarmThreshValue alarmThreshRisingThreshold alarmThreshOwner alarmThreshIndex	Rising Threshold passed. An alarm entry has crossed its rising threshold. The instances of those objects contained within the variable list are those of the alarm entry which generated this trap.
alarmFallingThresholdTrap	edacs	trapSequenceNumber alarmThreshVariable alarmThreshSampleType alarmThreshValue alarmThreshFallingThreshold alarmThreshOwner alarmThreshIndex	Falling Threshold passed. An alarm entry has crossed its falling threshold. The instances of those objects contained within the variable list are those of the alarm entry which generated this trap.

6. SYSTEM SITE GROUP

6.1 SYSTEM SITE LEVEL PERFORMANCE MIB

This MIB specifies performance information available at the EDACS Site Level. Detailed information on the Alarm-Threshold MIB in contained in the MIB file "edacs102.mib" located in Appendix A.

The graphical representation in Figure 9 shows the primary branches in the EDACS Site Performance Group.

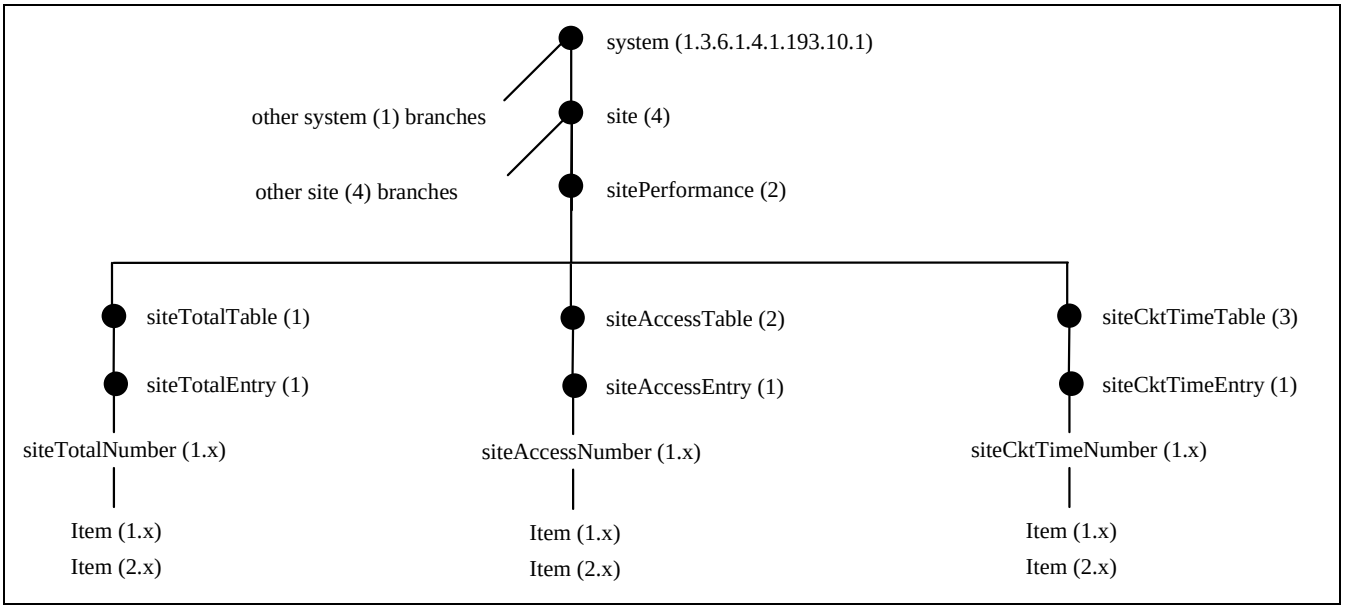

Figure 9 - EDACS Site Performance Group

Each ***item*** is a conceptual columnar component of the antecedent site performance table. The instance identifier ***x*** specifies the actual number of the EDACS site (e.g. a conceptual row in the table).

The following summarizes the items currently identified under the sitePerformance (2) branch. Please refer to the MIB file "edacs103.mib" for detailed information.

site	1.3.6.1.4.1.193.10.1.4
siteConfig	1.3.6.1.4.1.193.10.1.4.1
siteTopology	1.3.6.1.4.1.193.10.1.4.1.1
sitePerformance	1.3.6.1.4.1.193.10.1.4.2

Performance ***items*** in the siteTotalTable:

siteTotalTable	1.3.6.1.4.1.193.10.1.4.2.1
siteTotalEntry	1.3.6.1.4.1.193.10.1.4.2.1.1
siteTotalNumber	1.3.6.1.4.1.193.10.1.4.2.1.1.1
siteTotalEntityID	1.3.6.1.4.1.193.10.1.4.2.1.1.2
siteTotalMibExtension	1.3.6.1.4.1.193.10.1.4.2.1.1.3
siteTotalSampleInterval	1.3.6.1.4.1.193.10.1.4.2.1.1.4
siteTotalAssigned	1.3.6.1.4.1.193.10.1.4.2.1.1.5
siteTotalAssignedEmergencies	1.3.6.1.4.1.193.10.1.4.2.1.1.6
siteTotalAssignedSecondary	1.3.6.1.4.1.193.10.1.4.2.1.1.7
siteTotalAssignedMsgTrunked	1.3.6.1.4.1.193.10.1.4.2.1.1.8

siteTotalDropped	1.3.6.1.4.1.193.10.1.4.2.1.1.9
siteTotalQueued	1.3.6.1.4.1.193.10.1.4.2.1.1.10
siteTotalDenied	1.3.6.1.4.1.193.10.1.4.2.1.1.11
siteTotalSysBusy	1.3.6.1.4.1.193.10.1.4.2.1.1.12
siteTotalChanKeys	1.3.6.1.4.1.193.10.1.4.2.1.1.13
siteTotalChanUnKeys	1.3.6.1.4.1.193.10.1.4.2.1.1.14
siteTotalCktTime	1.3.6.1.4.1.193.10.1.4.2.1.1.15
siteTotalCktQTime	1.3.6.1.4.1.193.10.1.4.2.1.1.16

Performance ***items*** in the siteAccessTable:

siteAccessTable	1.3.6.1.4.1.193.10.1.4.2.2
siteAccessEntry	1.3.6.1.4.1.193.10.1.4.2.2.1
siteAccessNumber	1.3.6.1.4.1.193.10.1.4.2.2.1.1
siteAccessEntityID	1.3.6.1.4.1.193.10.1.4.2.2.1.2
siteAccessMibExtension	1.3.6.1.4.1.193.10.1.4.2.2.1.3
siteAccessSampleInterval	1.3.6.1.4.1.193.10.1.4.2.2.1.4
siteAssignedIndivVoice	1.3.6.1.4.1.193.10.1.4.2.2.1.5
siteAssignedGroupVoice	1.3.6.1.4.1.193.10.1.4.2.2.1.6
siteAssignedIndivData	1.3.6.1.4.1.193.10.1.4.2.2.1.7
siteAssignedGroupData	1.3.6.1.4.1.193.10.1.4.2.2.1.8
siteAssignedIndivOutboundTelephony	1.3.6.1.4.1.193.10.1.4.2.2.1.9
siteAssignedIndivInboundTelephony	1.3.6.1.4.1.193.10.1.4.2.2.1.10
siteAssignedGroupInboundTelephony	1.3.6.1.4.1.193.10.1.4.2.2.1.11
siteAssignedOther	1.3.6.1.4.1.193.10.1.4.2.2.1.12
siteQueuedIndivVoice	1.3.6.1.4.1.193.10.1.4.2.2.1.13
siteQueuedGroupVoice	1.3.6.1.4.1.193.10.1.4.2.2.1.14
siteQueuedIndivData	1.3.6.1.4.1.193.10.1.4.2.2.1.15
siteQueuedGroupData	1.3.6.1.4.1.193.10.1.4.2.2.1.16
siteQueuedIndivOutboundTelephony	1.3.6.1.4.1.193.10.1.4.2.2.1.17
siteQueuedIndivInboundTelephony	1.3.6.1.4.1.193.10.1.4.2.2.1.18
siteQueuedGroupInboundTelephony	1.3.6.1.4.1.193.10.1.4.2.2.1.19
siteQueuedOther	1.3.6.1.4.1.193.10.1.4.2.2.1.20
siteDeniedIndivVoice	1.3.6.1.4.1.193.10.1.4.2.2.1.21
siteDeniedGroupVoice	1.3.6.1.4.1.193.10.1.4.2.2.1.22
siteDeniedIndivData	1.3.6.1.4.1.193.10.1.4.2.2.1.23
siteDeniedGroupData	1.3.6.1.4.1.193.10.1.4.2.2.1.24
siteDeniedIndivOutboundTelephony	1.3.6.1.4.1.193.10.1.4.2.2.1.25
siteDeniedIndivInboundTelephony	1.3.6.1.4.1.193.10.1.4.2.2.1.26
siteDeniedGroupInboundTelephony	1.3.6.1.4.1.193.10.1.4.2.2.1.27
siteDeniedOther	1.3.6.1.4.1.193.10.1.4.2.2.1.28
siteSysBusyIndivVoice	1.3.6.1.4.1.193.10.1.4.2.2.1.29
siteSysBusyGroupVoice	1.3.6.1.4.1.193.10.1.4.2.2.1.30
siteSysBusyIndivData	1.3.6.1.4.1.193.10.1.4.2.2.1.31
siteSysBusyGroupData	1.3.6.1.4.1.193.10.1.4.2.2.1.32
siteSysBusyIndivOutboundTelephony	1.3.6.1.4.1.193.10.1.4.2.2.1.33

siteSysBusyIndivInboundTelephony	1.3.6.1.4.1.193.10.1.4.2.2.1.34
siteSysBusyGroupInboundTelephony	1.3.6.1.4.1.193.10.1.4.2.2.1.35
siteSysBusyOther	1.3.6.1.4.1.193.10.1.4.2.2.1.36
siteConvertedCallerToCallee	1.3.6.1.4.1.193.10.1.4.2.2.1.37

Performance ***items*** in the siteCktTimeTable:

siteCktTimeTable	1.3.6.1.4.1.193.10.1.4.2.3
siteCktTimeEntry	1.3.6.1.4.1.193.10.1.4.2.3.1
siteCktTimeNumber	1.3.6.1.4.1.193.10.1.4.2.3.1.1
siteCktTimeEntityID	1.3.6.1.4.1.193.10.1.4.2.3.1.2
siteCktTimeMibExtension	1.3.6.1.4.1.193.10.1.4.2.3.1.3
siteCktTimeSampleInterval	1.3.6.1.4.1.193.10.1.4.2.3.1.4
siteCktTimeIndivVoice	1.3.6.1.4.1.193.10.1.4.2.3.1.5
siteCktTimeGroupVoice	1.3.6.1.4.1.193.10.1.4.2.3.1.6
siteCktTimeIndivData	1.3.6.1.4.1.193.10.1.4.2.3.1.7
siteCktTimeGroupData	1.3.6.1.4.1.193.10.1.4.2.3.1.8
siteCktTimeIndivOutboundTelephony	1.3.6.1.4.1.193.10.1.4.2.3.1.9
siteCktTimeIndivInboundTelephony	1.3.6.1.4.1.193.10.1.4.2.3.1.10
siteCktTimeGroupInboundTelephony	1.3.6.1.4.1.193.10.1.4.2.3.1.11
siteCktTimeOther	1.3.6.1.4.1.193.10.1.4.2.3.1.12
siteCktQTimeIndivVoice	1.3.6.1.4.1.193.10.1.4.2.3.1.13
siteCktQTimeGroupVoice	1.3.6.1.4.1.193.10.1.4.2.3.1.14
siteCktQTimeIndivData	1.3.6.1.4.1.193.10.1.4.2.3.1.15
siteCktQTimeGroupData	1.3.6.1.4.1.193.10.1.4.2.3.1.16
siteCktQTimeIndivOutboundTelephony	1.3.6.1.4.1.193.10.1.4.2.3.1.17
siteCktQTimeIndivInboundTelephony	1.3.6.1.4.1.193.10.1.4.2.3.1.18
siteCktQTimeGroupInboundTelephony	1.3.6.1.4.1.193.10.1.4.2.3.1.19
siteCktQTimeOther	1.3.6.1.4.1.193.10.1.4.2.3.1.20

6.1.1 Site Level Total Statistics Summary Information

Table 14 - Site Total Table [1.3.6.1.4.1.193.10.1.4.2.1]

OBJECT IDENTIFIER	SYNTAX	ACCESS	DESCRIPTION
siteTotalEntry 1.3.6.1.4.1.193.10.1.4.2.1.1	SEQUENCE OF SiteTotalEntry	not-accessible	A (conceptual) entry in the siteTotalTable which contains statistics information for a particular EDACS site.

OBJECT IDENTIFIER	SYNTAX	ACCESS	DESCRIPTION
siteTotalNumber 1.3.6.1.4.1.193.10.1.4.2.1.1.1	SiteTotalEntry	not-accessible	A unique value for each EDACS site, which serves as an index to a particular (conceptual) entry in the siteTotalTable. By convention, this value is identical to the "actual" number administratively assigned to this site. For example, a value of five (5) literally identifies "site 5". Note that the siteTotalNumber object instance is also used as an index to a specific entry in the siteTotalTable. Thus, management stations must be prepared to receive tabular information whose instance identification is not ordinately based with regard to its (conceptual) position in the siteTotalTable.
siteTotalEntityID 1.3.6.1.4.1.193.10.1.4.2.1.1.2	SiteNumberType	read-only	The authoritative identification of the EDACS product which is providing the accessibility information for this site (a "conceptual row" in the siteTotalTable).
siteTotalMibExtension 1.3.6.1.4.1.193.10.1.4.2.1.1.3	OBJECT IDENTIFIER	read-only	A reference to a MIB definition which this entity implements for extended information regarding sites. If this extension information is not present, then the siteTotalMibExtension object instance value shall be OBJECT IDENTIFIER { 0 0 }, which is a syntactically valid object identifier.
siteTotalSampleInterval 1.3.6.1.4.1.193.10.1.4.2.1.1.4	TimeTicks	read-write	The time interval, expressed in hundredths of a second, during which statistics have been collected for this site. The only value a management station may attempt to set is zero (0), which has the effect of resetting the accessibility statistics for this site to zero. If this entity does not support resetting the statistics, or a value other than zero is attempted to be written, then a "badValue" should be returned.
siteTotalAssigned 1.3.6.1.4.1.193.10.1.4.2.1.1.5	Counter	read-only	The total number of successful resource (e.g. channel) allocations that this site has performed.
siteTotalAssignedEmergencies 1.3.6.1.4.1.193.10.1.4.2.1.1.6	Counter	read-only	The total number of successful resource (e.g. channel) allocations provided for emergency calls. Note that this counter is included in the siteTotalCallAssigned object instance.
siteTotalAssignedSecondary 1.3.6.1.4.1.193.10.1.4.2.1.1.7	Counter	read-only	The total number of successful resource (e.g. channel) allocations made by this site for which this site was not the originating entity for a multi-site call. Note that this counter is included in the siteTotalCallAssigned object instance.
siteTotalAssignedMsgTrunked 1.3.6.1.4.1.193.10.1.4.2.1.1.8	Counter	read-only	The total number of successful resource (e.g. channel) allocations provided for calls which where message trunked. Note that this counter is included in the siteTotalCallAssigned object instance. This variable is useful for determining the relative percentages of transmission and message trunking being performed by this site.
siteTotalDropped 1.3.6.1.4.1.193.10.1.4.2.1.1.9	Counter	read-only	The total number of successful resource (e.g. channel) de-allocations that this site has performed.

OBJECT IDENTIFIER	SYNTAX	ACCESS	DESCRIPTION
siteTotalQueued 1.3.6.1.4.1.193.10.1.4.2.1.1.10	Counter	read-only	The total number of times that an attempt to a allocate a resource (e.g. channel) on this site resulted in the requesting user being queued for access to this site's resources.
siteTotalDenied 1.3.6.1.4.1.193.10.1.4.2.1.1.11	Counter	read-only	The total number of times that an attempt to a allocate a resource (e.g. channel) on this site resulted in the requesting user being denied access to this site's resources.
siteTotalSysBusy 1.3.6.1.4.1.193.10.1.4.2.1.1.12	Counter	read-only	The total number of times that an attempt to a allocate a resource (e.g. channel) on this site could not be granted due to a lack of available system resources.
siteTotalChanKeys 1.3.6.1.4.1.193.10.1.4.2.1.1.13	Counter	read-only	The total number of times that channel keying event was reported by this site. A channel key event occurs during message trunked calls, and indicates that a channel hangtime limit has been re-initialized.
siteTotalChanUnKeys 1.3.6.1.4.1.193.10.1.4.2.1.1.14	Counter	read-only	The total number of times that channel un-key event was reported by this site. A channel un-key event occurs during message trunked calls, and indicates that a channel hangtime counter has begun decrementing. If the hangtime counter expires prior to a subsequent channel keying event, the channel in use will be de-allocated (e.g. dropped).
siteTotalCktTime 1.3.6.1.4.1.193.10.1.4.2.1.1.15	TimeTicks	read-only	The total amount of circuit connection time, in hundredths of a second, that this site has provided.
siteTotalCktQTime 1.3.6.1.4.1.193.10.1.4.2.1.1.16	TimeTicks	read-only	The total amount of time, in hundredths of a second, that requests to allocate a circuit have been queued, pending on access to resource allocation at this site. Note that this variable does not reflect any artifacts of the final outcome of the queuing (e.g. whether or not resources were eventually allocated).

6.1.2 Site Level System Accessibility Statistics

The Site Access Table is a (conceptual) table which contains system accessibility statistics for EDACS sites.

Table 15 - Site Access Table [1.3.6.1.4.1.193.10.1.4.2.2]

OBJECT IDENTIFIER	SYNTAX	ACCESS	DESCRIPTION
siteAccessEntry 1.3.6.1.4.1.193.10.1.4.2.2.1	SiteAccessEntry	not-accessible	A (conceptual) entry in the siteAccessTable which contains accessibility information for a particular EDACS site.
siteAccessNumber 1.3.6.1.4.1.193.10.1.4.2.2.1.1	SiteNumberType	read-only	A unique value for each EDACS site, which serves as an index to a particular (conceptual) entry in the siteAccessTable. By convention, this value is identical to the "actual" number administratively assigned to this site. For example, a value of five (5) literally identifies "site 5". Note that the siteAccessNumber object instance is also

OBJECT IDENTIFIER	SYNTAX	ACCESS	DESCRIPTION
			used as an index to a specific entry in the siteAccessTable. Thus, management stations must be prepared to receive tabular information whose instance identification is not ordinately based with regard to its (conceptual) position in the siteAccessTable. For example, assume that this entity is only collecting information about site five (5). As such, this entity would have only one (conceptual) entry in the siteAccessTable. Next, assume that a management station wishes to inspect the siteAssignedIndivVoice object instance associated with said site. This specific instance would thus be identified as siteAssignedIndivVoice.5, as opposed to siteAssignedIndivVoice.1.
siteAccessEntityID 1.3.6.1.4.1.193.10.1.4.2.2.1.2	OBJECT IDENTIFIER	read-only	The authoritative identification of the EDACS product which is providing the accessibility information for this site (a “conceptual row” in the siteAccessTable).
siteAccessMibExtension 1.3.6.1.4.1.193.10.1.4.2.2.1.3	OBJECT IDENTIFIER	read-only	A reference to a MIB definition which this entity implements for extended information regarding site accessibility. If this extension information is not present, then the siteAccessMibExtension object instance value shall be OBJECT IDENTIFIER { 0 0 }, which is a syntactically valid object identifier.
siteAccessSampleInterval 1.3.6.1.4.1.193.10.1.4.2.2.1.4	TimeTicks	read-write	The time interval, expressed in hundredths of a second, during which accessibility statistics have been collected for this site. The only value a management station may attempt to set is zero (0), which has the effect of resetting the accessibility statistics for this site to zero. If this entity does not support resetting the statistics, or a value other than zero is attempted to be written, then a “badValue” should be returned.
siteAssignedIndivVoice 1.3.6.1.4.1.193.10.1.4.2.2.1.5	Counter	read-only	The total number of successful resource (channel) assignments that this site has provided for individual voice calls.
siteAssignedGroupVoice 1.3.6.1.4.1.193.10.1.4.2.2.1.6	Counter	read-only	The total number of successful resource (channel) assignments that this site has provided for group voice calls.
siteAssignedIndivData 1.3.6.1.4.1.193.10.1.4.2.2.1.7	Counter	read-only	The total number of successful resource (channel) assignments that this site has provided for individual data calls.
siteAssignedGroupData 1.3.6.1.4.1.193.10.1.4.2.2.1.8	Counter	read-only	The total number of successful resource (channel) assignments that this site has provided for group data calls.
siteAssignedIndivOutboundTelephony 1.3.6.1.4.1.193.10.1.4.2.2.1.9	Counter	read-only	The total number of successful resource (channel) assignments that this site has provided for individual outbound interconnect calls (e.g. PRS terminal to a telephony terminal).

OBJECT IDENTIFIER	SYNTAX	ACCESS	DESCRIPTION
siteAssignedIndivInboundTelephony 1.3.6.1.4.1.193.10.1.4.2.2.1.10	Counter	read-only	The total number of successful resource (channel) assignments that this site has provided for individual inbound interconnect calls (e.g. telephony terminal to a PRS terminal).
siteAssignedGroupInboundTelephony 1.3.6.1.4.1.193.10.1.4.2.2.1.11	Counter	read-only	The total number of successful resource (channel) assignments that this site has provided for group inbound interconnect calls (e.g. telephony terminal to multiple PRS terminals).
siteAssignedOther 1.3.6.1.4.1.193.10.1.4.2.2.1.12	Counter	read-only	The total number of successful resource (channel) assignments made by this site which were not counted by the proceeding siteAssigned “CallType” object instances.
siteQueuedIndivVoice 1.3.6.1.4.1.193.10.1.4.2.2.1.13	Counter	read-only	The total number of times that an attempt to place an individual voice call resulted in the requesting user being queued for access to this site's resources.
siteQueuedGroupVoice 1.3.6.1.4.1.193.10.1.4.2.2.1.14	Counter	read-only	The total number of times that an attempt to place a group voice call resulted in the requesting user being queued for access to this site’s resources.
siteQueuedIndivData 1.3.6.1.4.1.193.10.1.4.2.2.1.15	Counter	read-only	The total number of times that an attempt to place an individual data call resulted in the requesting user being queued for access to this site’s resources.
siteQueuedGroupData 1.3.6.1.4.1.193.10.1.4.2.2.1.16	Counter	read-only	The total number of times that an attempt to place a group data call resulted in the requesting user being queued for access to this site’s resources.
siteQueuedIndivOutboundTelephony 1.3.6.1.4.1.193.10.1.4.2.2.1.17	Counter	read-only	The total number of times that an attempt to place an individual outbound interconnect call (e.g. PRS terminal to a telephony terminal) resulted in the requesting user being queued for access to this site’s resources.
siteQueuedIndivInboundTelephony 1.3.6.1.4.1.193.10.1.4.2.2.1.18	Counter	read-only	The total number of times that an attempt to place an individual inbound interconnect call (e.g. telephony terminal to a PRS terminal) resulted in the requesting user being queued for access to this site’s resources.
siteQueuedGroupInboundTelephony 1.3.6.1.4.1.193.10.1.4.2.2.1.19	Counter	read-only	The total number of times that an attempt to place a group inbound interconnect call (e.g. telephony terminal to multiple PRS terminals) resulted in the requesting user being queued for access to this site’s resources.
siteQueuedOther 1.3.6.1.4.1.193.10.1.4.2.2.1.20	Counter	read-only	The total number of that an attempt to allocate resources (e.g. channel) resulted in queuing which were not counted by the proceeding siteQueued “CallType” object instances.
siteDeniedIndivVoice 1.3.6.1.4.1.193.10.1.4.2.2.1.21	Counter	read-only	The total number of times that an attempt to place an individual voice call resulted in the requesting user being denied access to this site’s resources.
siteDeniedGroupVoice 1.3.6.1.4.1.193.10.1.4.2.2.1.22	Counter	read-only	The total number of times that an attempt to place a group voice call resulted in the requesting user being

OBJECT IDENTIFIER	SYNTAX	ACCESS	DESCRIPTION
			denied access to this site's resources.
siteDeniedIndivData 1.3.6.1.4.1.193.10.1.4.2.2.1.23	Counter	read-only	The total number of times that an attempt to place an individual data call resulted in the requesting user being denied access to this site's resources.
siteDeniedGroupData 1.3.6.1.4.1.193.10.1.4.2.2.1.24	Counter	read-only	The total number of times that an attempt to place a group data call resulted in the requesting user being denied access to this site's resources.
siteDeniedIndivOutboundTelephony 1.3.6.1.4.1.193.10.1.4.2.2.1.25	Counter	read-only	The total number of times that an attempt to place an individual outbound interconnect call (e.g. PRS terminal to a telephony terminal) resulted in the requesting user being denied access to this site's resources.
siteDeniedIndivInboundTelephony 1.3.6.1.4.1.193.10.1.4.2.2.1.26	Counter	read-only	The total number of times that an attempt to place an individual inbound interconnect call (e.g. telephony terminal to a PRS terminal) resulted in the requesting user being denied access to this site's resources.
siteDeniedGroupInboundTelephony 1.3.6.1.4.1.193.10.1.4.2.2.1.27	Counter	read-only	The total number of times that an attempt to place a group inbound interconnect call (e.g. telephony terminal to multiple PRS terminals) resulted in the requesting user being denied access to this site's resources.
siteDeniedOther 1.3.6.1.4.1.193.10.1.4.2.2.1.28	Counter	read-only	The total number of that an attempt to allocate resources (e.g. channel) resulted in the user being denied access at this site, which were not counted by the proceeding siteDenied "CallType" object instances.
siteSysBusyIndivVoice 1.3.6.1.4.1.193.10.1.4.2.2.1.29	Counter	read-only	The total number of times that a request to place an individual voice call could not be granted due to a lack of system resources at this site.
siteSysBusyGroupVoice 1.3.6.1.4.1.193.10.1.4.2.2.1.30	Counter	read-only	The total number of times that a request to place a group voice call could not be granted due to a lack of system resources at this site.
siteSysBusyIndivData 1.3.6.1.4.1.193.10.1.4.2.2.1.31	Counter	read-only	The total number of times that a request to place an individual data call could not be granted due to a lack of system resources at this site.
siteSysBusyGroupData 1.3.6.1.4.1.193.10.1.4.2.2.1.32	Counter	read-only	The total number of times that a request to place a group data call could not be granted due to a lack of system resources at this site.
siteSysBusyIndivOutboundTelephony 1.3.6.1.4.1.193.10.1.4.2.2.1.33	Counter	read-only	The total number of times that a request to place an individual outbound interconnect call (e.g. PRS terminal to a telephony terminal) could not be granted due to a lack of system resources at this site.
siteSysBusyIndivInboundTelephony 1.3.6.1.4.1.193.10.1.4.2.2.1.34	Counter	read-only	The total number of times that a request to place an individual inbound interconnect call (e.g. telephony terminal to a PRS terminal) could not be granted due to a lack of system resources at this site.
siteSysBusyGroupInboundTelep	Counter	read-only	The total number of times that an attempt to place a

OBJECT IDENTIFIER	SYNTAX	ACCESS	DESCRIPTION
hony 1.3.6.1.4.1.193.10.1.4.2.2.1.35			group inbound interconnect call (e.g. telephony terminal to multiple PRS terminals) could not be granted due to a lack of system resources at this site.
siteSysBusyOther 1.3.6.1.4.1.193.10.1.4.2.2.1.36	Counter	read-only	The total number of that an attempt to allocate resources (e.g. channel) could not be granted due to a lack of system resources at this site, which were not counted by the proceeding siteSysBusy "CallType" object instances.
siteConvertedCallerToCallee 1.3.6.1.4.1.193.10.1.4.2.2.1.37	Counter	read-only	The total number of times that an originating party (caller) was allocated resources (e.g. a channel), but was re-assigned as the destination party (callee) for the call at this site. This object instance provides an indication of (normal) glare conditions, which may occur during call conversations, which were successfully resolved with regard to resource allocation.

6.1.3 Site Level Circuit Connection Time Statistics

The Site Circuit Time Table is a (conceptual) table which contains circuit connection time statistics for EDACS sites.

Table 16 - Site Circuit Time Table [1.3.6.1.4.1.193.10.1.4.2.3]

OBJECT IDENTIFIER	SYNTAX	ACCESS	DESCRIPTION
siteCktTimeEntry 1.3.6.1.4.1.193.10.1.4.2.3.1	SiteCktTimeEntry	not-accessible	A (conceptual) entry in the siteCktTimeTable which contains circuit connection time statistics for a particular EDACS site.
siteCktTimeNumber 1.3.6.1.4.1.193.10.1.4.2.3.1.1	SiteNumberType	read-only	A unique value for each EDACS site, which serves as an index to a particular (conceptual) entry in the siteCktTimeTable. By convention, this value is identical to the "actual" number administratively assigned to this site. For example, a value of five (5) literally identifies "site 5".
siteCktTimeEntityID 1.3.6.1.4.1.193.10.1.4.2.3.1.2	OBJECT IDENTIFIER	read-only	The authoritative identification of the EDACS product which is providing the accessibility information for this site (a "conceptual row" in the siteCktTimeTable).
siteCktTimeMibExtension 1.3.6.1.4.1.193.10.1.4.2.3.1.3	OBJECT IDENTIFIER	read-only	A reference to a MIB definition which this entity implements for extended information regarding site circuit usage. If this extension information is not present, then the siteAccessMibExtension object instance value shall be OBJECT IDENTIFIER { 0 0 }, which is a syntactically valid object identifier.

OBJECT IDENTIFIER	SYNTAX	ACCESS	DESCRIPTION
siteCktTimeSampleInterval 1.3.6.1.4.1.193.10.1.4.2.3.1.4	TimeTicks	read-write	The time interval, expressed in hundredths of a second, during which circuit connection time usage statistics have been collected for this site. The only value a management station may attempt to set is zero (0), which has the effect of resetting the circuit statistics for this site to zero. If this entity does not support resetting the statistics, or a value other than zero is attempted to be written, then a “badValue” should be returned."
siteCktTimeIndivVoice 1.3.6.1.4.1.193.10.1.4.2.3.1.5	TimeTicks	read-only	The total amount of circuit connection time, in hundredths of a second, that this site has provided for individual voice calls.
siteCktTimeGroupVoice 1.3.6.1.4.1.193.10.1.4.2.3.1.6	TimeTicks	read-only	The total amount of circuit connection time, in hundredths of a second, that this site has provided for group voice calls.
siteCktTimeIndivData 1.3.6.1.4.1.193.10.1.4.2.3.1.7	TimeTicks	read-only	The total amount of circuit connection time, in hundredths of a second, that this site has provided for individual data calls.
siteCktTimeGroupData 1.3.6.1.4.1.193.10.1.4.2.3.1.8	TimeTicks	read-only	The total amount of circuit connection time, in hundredths of a second, that this site has provided for group data calls.
siteCktTimeIndivOutboundTelephony 1.3.6.1.4.1.193.10.1.4.2.3.1.9	TimeTicks	read-only	The total amount of circuit connection time, in hundredths of a second, that this site has provided for individual outbound interconnect calls (e.g. PRS terminal to a telephony terminal).
siteCktTimeIndivInboundTelephony 1.3.6.1.4.1.193.10.1.4.2.3.1.10	TimeTicks	read-only	The total amount of circuit connection time, in hundredths of a second, that this site has provided for individual inbound interconnect calls (e.g. telephony terminal to a PRS terminal).
siteCktTimeGroupInboundTelephony 1.3.6.1.4.1.193.10.1.4.2.3.1.11	TimeTicks	read-only	The total amount of circuit connection time, in hundredths of a second, that this site has provided for group inbound interconnect calls (e.g. telephony terminal to multiple PRS terminals).
siteCktTimeOther 1.3.6.1.4.1.193.10.1.4.2.3.1.12	TimeTicks	read-only	The total amount of circuit connection time, in hundredths of a second, that this site has provided which has not been accumulated by the proceeding siteCktTime “CallType” object instances.
siteCktQTimeIndivVoice 1.3.6.1.4.1.193.10.1.4.2.3.1.13	TimeTicks	read-only	The total amount of time, in hundredths of a second, that requests to place an individual voice call have been queued, pending on access to resource allocation at this site. Note that this variable does not reflect any artifacts of the final outcome of the queuing (e.g. whether or not resources were eventually allocated).

OBJECT IDENTIFIER	SYNTAX	ACCESS	DESCRIPTION
siteCktQTimeGroupVoice 1.3.6.1.4.1.193.10.1.4.2.3.1.14	TimeTicks	read-only	The total amount of time, in hundredths of a second, that requests to place a group voice call have been queued, pending on access to resource allocation at this site. Note that this variable does not reflect any artifacts of the final outcome of the queuing (e.g. whether or not resources were eventually allocated).
siteCktQTimeIndivData 1.3.6.1.4.1.193.10.1.4.2.3.1.15	TimeTicks	read-only	The total amount of time, in hundredths of a second, that requests to place an individual data call have been queued, pending on access to resource allocation at this site. Note that this variable does not reflect any artifacts of the final outcome of the queuing (e.g. whether or not resources were eventually allocated).
siteCktQTimeGroupData 1.3.6.1.4.1.193.10.1.4.2.3.1.16	TimeTicks	read-only	The total amount of time, in hundredths of a second, that requests to place a group data call have been queued, pending on access to resource allocation at this site. Note that this variable does not reflect any artifacts of the final outcome of the queuing (e.g. whether or not resources were eventually allocated).
siteCktQTimeIndivOutboundTelephony 1.3.6.1.4.1.193.10.1.4.2.3.1.17	TimeTicks	read-only	The total amount of time, in hundredths of a second, that requests to place an individual outbound interconnect call (e.g. PRS terminal to a telephony terminal) have been queued, pending on access to resource allocation at this site. Note that this variable does not reflect any artifacts of the final outcome of the queuing (e.g. whether or not resources were eventually allocated).
siteCktQTimeIndivInboundTelephony 1.3.6.1.4.1.193.10.1.4.2.3.1.18	TimeTicks	read-only	The total amount of time, in hundredths of a second, that requests to place an individual inbound interconnect call (e.g. telephony terminal to a PRS terminal) have been queued, pending on access to resource allocation at this site. Note that this variable does not reflect any artifacts of the final outcome of the queuing (e.g. whether or not resources were eventually allocated).
siteCktQTimeGroupInboundTelephony 1.3.6.1.4.1.193.10.1.4.2.3.1.19	TimeTicks	read-only	The total amount of time, in hundredths of a second, that requests to place a group inbound interconnect call (e.g. telephony terminal to multiple PRS terminals) have been queued, pending on access to resource allocation at this site. Note that this variable does not reflect any artifacts of the final outcome of the queuing (e.g. whether or not resources were eventually allocated).
siteCktQTimeOther 1.3.6.1.4.1.193.10.1.4.2.3.1.20	TimeTicks	read-only	The total amount of time, in hundredths of a second, that requests to allocate resources (e.g. channel) have been queued, which were not accumulated by the proceeding siteCktQTime “CallType” object instances. Note that this variable does not reflect any artifacts of the final outcome of the queuing (e.g. whether or not resources were eventually allocated).

7. SYSTEM NODE GROUP

This MIB specifies performance information available at the EDACS Service Node (for example primary switching center) level

7.1 NODE PERFORMANCE GROUP

The graphical representation in Figure 10 shows the primary branches in the EDACS Node Performance Group.

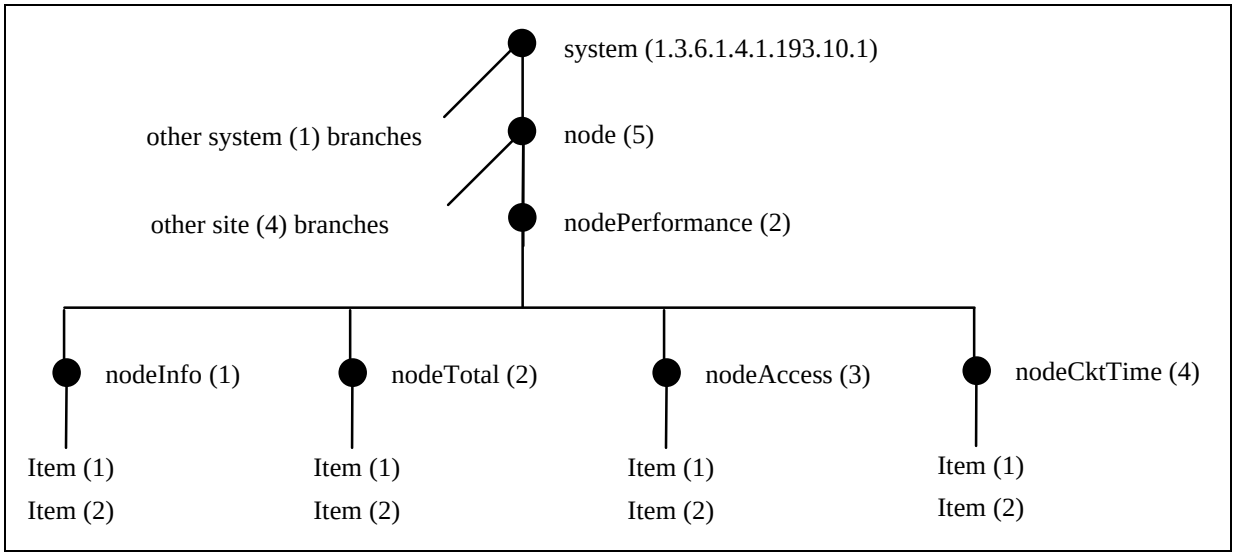

Figure 10 - EDACS Node Performance Group

The following summarizes the items currently identified under the node performance (2) branch. Detailed information for this group may be found in the mib file "edacs104.mib" located in Appendix A.

nodeInfo	1.3.6.1.4.1.193.10.1.5.2.1
nodeInfoEntityID	1.3.6.1.4.1.193.10.1.5.2.1.1
nodeInfoNumber	1.3.6.1.4.1.193.10.1.5.2.1.2
nodeInfoMibExtension	1.3.6.1.4.1.193.10.1.5.2.1.3
nodeTotal	1.3.6.1.4.1.193.10.1.5.2.2
nodeTotalSampleInterval	1.3.6.1.4.1.193.10.1.5.2.2.1
nodeTotalAssigned	1.3.6.1.4.1.193.10.1.5.2.2.2
nodeTotalAssignedEmergencies	1.3.6.1.4.1.193.10.1.5.2.2.3
nodeTotalAssignedSecondary	1.3.6.1.4.1.193.10.1.5.2.2.4
nodeTotalAssignedMsgTrunked	1.3.6.1.4.1.193.10.1.5.2.2.5
nodeTotalDropped	1.3.6.1.4.1.193.10.1.5.2.2.6
nodeTotalQueued	1.3.6.1.4.1.193.10.1.5.2.2.7
nodeTotalDenied	1.3.6.1.4.1.193.10.1.5.2.2.8
nodeTotalSystemBusy	1.3.6.1.4.1.193.10.1.5.2.2.9
nodeTotalCktTime	1.3.6.1.4.1.193.10.1.5.2.2.10
nodeTotalCktQTime	1.3.6.1.4.1.193.10.1.5.2.2.11
nodeAccess	1.3.6.1.4.1.193.10.1.5.2.3

nodeAccessSampleInterval	1.3.6.1.4.1.193.10.1.5.2.3.1
nodeAssignedIndivVoice	1.3.6.1.4.1.193.10.1.5.2.3.2
nodeAssignedGroupVoice	1.3.6.1.4.1.193.10.1.5.2.3.3
nodeAssignedIndivData	1.3.6.1.4.1.193.10.1.5.2.3.4
nodeAssignedGroupData	1.3.6.1.4.1.193.10.1.5.2.3.5
nodeAssignedIndivOutboundTelephony	1.3.6.1.4.1.193.10.1.5.2.3.6
nodeAssignedIndivInboundTelephony	1.3.6.1.4.1.193.10.1.5.2.3.7
nodeAssignedGroupInboundTelephony	1.3.6.1.4.1.193.10.1.5.2.3.8
nodeAssignedOther	1.3.6.1.4.1.193.10.1.5.2.3.9
nodeQueuedIndivVoice	1.3.6.1.4.1.193.10.1.5.2.3.10
nodeQueuedGroupVoice	1.3.6.1.4.1.193.10.1.5.2.3.11
nodeQueuedIndivData	1.3.6.1.4.1.193.10.1.5.2.3.12
nodeQueuedGroupData	1.3.6.1.4.1.193.10.1.5.2.3.13
nodeQueuedIndivOutboundTelephony	1.3.6.1.4.1.193.10.1.5.2.3.14
nodeQueuedIndivInboundTelephony	1.3.6.1.4.1.193.10.1.5.2.3.15
nodeQueuedGroupInboundTelephony	1.3.6.1.4.1.193.10.1.5.2.3.16
nodeQueuedOther	1.3.6.1.4.1.193.10.1.5.2.3.17
nodeDeniedIndivVoice	1.3.6.1.4.1.193.10.1.5.2.3.18
nodeDeniedGroupVoice	1.3.6.1.4.1.193.10.1.5.2.3.19
nodeDeniedIndivData	1.3.6.1.4.1.193.10.1.5.2.3.20
nodeDeniedGroupData	1.3.6.1.4.1.193.10.1.5.2.3.21
nodeDeniedIndivOutboundTelephony	1.3.6.1.4.1.193.10.1.5.2.3.22
nodeDeniedIndivInboundTelephony	1.3.6.1.4.1.193.10.1.5.2.3.23
nodeDeniedGroupInboundTelephony	1.3.6.1.4.1.193.10.1.5.2.3.24
nodeDeniedOther	1.3.6.1.4.1.193.10.1.5.2.3.25
nodeSysBusyIndivVoice	1.3.6.1.4.1.193.10.1.5.2.3.26
nodeSysBusyGroupVoice	1.3.6.1.4.1.193.10.1.5.2.3.27
nodeSysBusyIndivData	1.3.6.1.4.1.193.10.1.5.2.3.28
nodeSysBusyGroupData	1.3.6.1.4.1.193.10.1.5.2.3.29
nodeSysBusyIndivOutboundTelephony	1.3.6.1.4.1.193.10.1.5.2.3.30
nodeSysBusyIndivInboundTelephony	1.3.6.1.4.1.193.10.1.5.2.3.31
nodeSysBusyGroupInboundTelephony	1.3.6.1.4.1.193.10.1.5.2.3.32
nodeSysBusyOther	1.3.6.1.4.1.193.10.1.5.2.3.33

nodeCktTime	1.3.6.1.4.1.193.10.1.5.2.4
nodeCktTimeSampleInterval	1.3.6.1.4.1.193.10.1.5.2.4.1
nodeCktTimeIndivVoice	1.3.6.1.4.1.193.10.1.5.2.4.2
nodeCktTimeGroupVoice	1.3.6.1.4.1.193.10.1.5.2.4.3
nodeCktTimeIndivData	1.3.6.1.4.1.193.10.1.5.2.4.4
nodeCktTimeGroupData	1.3.6.1.4.1.193.10.1.5.2.4.5
nodeCktTimeIndivOutboundTelephony	1.3.6.1.4.1.193.10.1.5.2.4.6
nodeCktTimeIndivInboundTelephony	1.3.6.1.4.1.193.10.1.5.2.4.7
nodeCktTimeGroupInboundTelephony	1.3.6.1.4.1.193.10.1.5.2.4.8
nodeCktTimeOther	1.3.6.1.4.1.193.10.1.5.2.4.9
nodeCktQTimeIndivVoice	1.3.6.1.4.1.193.10.1.5.2.4.10

nodeCktQTimeGroupVoice	1.3.6.1.4.1.193.10.1.5.2.4.11
nodeCktQTimeIndivData	1.3.6.1.4.1.193.10.1.5.2.4.12
nodeCktQTimeGroupData	1.3.6.1.4.1.193.10.1.5.2.4.13
nodeCktQTimeIndivOutboundTelephony	1.3.6.1.4.1.193.10.1.5.2.4.14
nodeCktQTimeIndivInboundTelephony	1.3.6.1.4.1.193.10.1.5.2.4.15
nodeCktQTimeGroupInboundTelephony	1.3.6.1.4.1.193.10.1.5.2.4.16
nodeCktQTimeOther	1.3.6.1.4.1.193.10.1.5.2.4.17

7.1.1 Service Node Performance Information Group

General information provided by the entity which is providing service node performance information.

Table 17 - Node Info Table [1.3.6.1.4.1.193.10.1.5.2.1]

OBJECT IDENTIFIER	SYNTAX	ACCESS	DESCRIPTION
nodeInfoEntityID 1.3.6.1.4.1.193.10.1.5.2.1.1	OBJECT IDENTIFIER	read-only	The authoritative identification of the EDACS product which is providing performance information for this service node.
nodeInfoNumber 1.3.6.1.4.1.193.10.1.5.2.1.2	PositiveInteger	read-only	The administratively assigned node number of this EDACS service node. This value will be zero (0) if the entity supporting the node is not knowledgeable of the administratively assigned number for this service node.
nodeInfoMibExtension 1.3.6.1.4.1.193.10.1.5.2.1.3	OBJECT IDENTIFIER	read-only	A reference to a MIB definition which this entity implements for extended information regarding node level performance. If this extension information is not present, then the nodeInfoMibExtension object instance value shall be OBJECT IDENTIFIER { 0 0 }, which is a syntactically valid object identifier.

7.1.2 Node Level Total Statistics Information Group

Table 18 - Node Total Table [1.3.6.1.4.1.193.10.1.5.2.2]

OBJECT IDENTIFIER	SYNTAX	ACCESS	DESCRIPTION
nodeTotalSampleInterval 1.3.6.1.4.1.193.10.1.5.2.2.1	TimeTicks	read-write	The time interval, expressed in hundredths of a second, during which total summary statistics have been collected for this service node. The only value a management station may attempt to set is zero (0), which has the effect of resetting the total summary statistics for this node to zero. If this entity does not support resetting the statistics, or a value other than zero is attempted to be written, then a “badValue” should be returned.
nodeTotalAssigned 1.3.6.1.4.1.193.10.1.5.2.2.2	Counter	read-only	The total number of successful resource (e.g. channel) allocations provided by this service node’s resources.

OBJECT IDENTIFIER	SYNTAX	ACCESS	DESCRIPTION
nodeTotalAssignedEmergencies 1.3.6.1.4.1.193.10.1.5.2.2.3	Counter	read-only	The total number of successful resource (e.g. channel) allocations provided for emergency calls on this service node. Note that this counter is included in the nodeTotalAssigned object instance.
nodeTotalAssignedSecondary 1.3.6.1.4.1.193.10.1.5.2.2.4	Counter	read-only	The total number of successful resource (e.g. channel) allocations that this service node has performed which were associated with multi-site calls. Note that this counter is included in the nodeTotalAssigned object instance.
nodeTotalAssignedMsgTrunked 1.3.6.1.4.1.193.10.1.5.2.2.5	Counter	read-only	The total number of successful resource (e.g. channel) allocations provided for calls which where message trunked. Note that this counter is included in the nodeTotalAssigned object instance. This variable is useful for determining the relative percentages of transmission and message trunking being performed at this service node.
nodeTotalDropped 1.3.6.1.4.1.193.10.1.5.2.2.6	Counter	read-only	The total number of successful resource (e.g. channel) de-allocations that this service node has performed.
nodeTotalQueued 1.3.6.1.4.1.193.10.1.5.2.2.7	Counter	read-only	The total number of times that an attempt to a allocate a resource (e.g. channel) resulted in the requesting user being queued for access to this service node's resources.
nodeTotalDenied 1.3.6.1.4.1.193.10.1.5.2.2.8	Counter	read-only	The total number of times that an attempt to a allocate a resource (e.g. channel) resulted in the requesting user being denied access to this service node's resources.
nodeTotalSystemBusy 1.3.6.1.4.1.193.10.1.5.2.2.9	Counter	read-only	The total number of times that an attempt to a allocate a resource (e.g. channel) could not be granted due to a lack of resource availability at this service node.
nodeTotalCktTime 1.3.6.1.4.1.193.10.1.5.2.2.10	TimeTicks	read-only	The total amount of circuit connection time, in hundredths of a second, that this service node's resources have provided.
nodeTotalCktQTime 1.3.6.1.4.1.193.10.1.5.2.2.11	TimeTicks	read-only	The total amount of time, in hundredths of a second, that requests to allocate a circuit have been queued, pending on access allocation to this service node's resources. Note that this variable does not reflect any artifacts of the final outcome of the queuing (e.g. whether or not resources were eventually allocated).

7.1.3 Node Level System Accessibility Statistics Group

Table 19 - Node Access Table [1.3.6.1.4.1.193.10.1.5.2.3]

OBJECT IDENTIFIER	SYNTAX	ACCESS	DESCRIPTION
nodeAccessSampleInterval 1.3.6.1.4.1.193.10.1.5.2.3.1	TimeTicks	read-write	The time interval, expressed in hundredths of a second, during which accessibility statistics have been collected for this service node. The only value a management station may attempt to set is zero (0), which has the effect of resetting the accessibility statistics for this node to zero. If this entity does not support resetting the statistics, or a value other than zero is attempted to be written, then a "badValue" should be returned.
nodeAssignedIndivVoice 1.3.6.1.4.1.193.10.1.5.2.3.2	Counter	read-only	The total number of successful resource (channel) assignments that this node has provided for individual voice calls.
nodeAssignedGroupVoice 1.3.6.1.4.1.193.10.1.5.2.3.3	Counter	read-only	The total number of successful resource (channel) assignments that this node has provided for group voice calls.
nodeAssignedIndivData 1.3.6.1.4.1.193.10.1.5.2.3.4	Counter	read-only	The total number of successful resource (channel) assignments that this node has provided for individual data calls.
nodeAssignedGroupData 1.3.6.1.4.1.193.10.1.5.2.3.5	Counter	read-only	The total number of successful resource (channel) assignments that this node has provided for group data calls.
nodeAssignedIndivOutboundTelephony 1.3.6.1.4.1.193.10.1.5.2.3.6	Counter	read-only	The total number of successful resource (channel) assignments that this node has provided for individual outbound interconnect calls (e.g. PRS terminal to a telephony terminal).
nodeAssignedIndivInboundTelephony 1.3.6.1.4.1.193.10.1.5.2.3.7	Counter	read-only	The total number of successful resource (channel) assignments that this node has provided for individual inbound interconnect calls (e.g. telephony terminal to a PRS terminal).
nodeAssignedGroupInboundTelephony 1.3.6.1.4.1.193.10.1.5.2.3.8	Counter	read-only	The total number of successful resource (channel) assignments that this node has provided for group inbound interconnect calls (e.g. telephony terminal to multiple PRS terminals).
nodeAssignedOther 1.3.6.1.4.1.193.10.1.5.2.3.9	Counter	read-only	The total number of successful resource (channel) assignments that this service node has provided which were not counted by the proceeding nodeAssigned "CallType" object instances.
nodeQueuedIndivVoice 1.3.6.1.4.1.193.10.1.5.2.3.10	Counter	read-only	The total number of times that an attempt to place an individual voice call resulted in the requesting user being queued for access to this node's resources.
nodeQueuedGroupVoice 1.3.6.1.4.1.193.10.1.5.2.3.11	Counter	read-only	The total number of times that an attempt to place a group voice call resulted in the requesting user being queued for access to this node's resources.

nodeQueuedIndivData 1.3.6.1.4.1.193.10.1.5.2.3.12	Counter	read-only	The total number of times that an attempt to place an individual data call resulted in the requesting user being queued for access to this node's resources.
nodeQueuedGroupData 1.3.6.1.4.1.193.10.1.5.2.3.13	Counter	read-only	The total number of times that an attempt to place a group data call resulted in the requesting user being queued for access to this node's resources.
nodeQueuedIndivOutboundTelephony 1.3.6.1.4.1.193.10.1.5.2.3.14	Counter	read-only	The total number of times that an attempt to place an individual outbound interconnect call (e.g. PRS terminal to a telephony terminal) resulted in the requesting user being queued for access to this node's resources.
nodeQueuedIndivInboundTelephony 1.3.6.1.4.1.193.10.1.5.2.3.15	Counter	read-only	The total number of times that an attempt to place an individual inbound interconnect call (e.g. telephony terminal to a PRS terminal) resulted in the requesting user being queued for access to this node's resources.
nodeQueuedGroupInboundTelephony 1.3.6.1.4.1.193.10.1.5.2.3.16	Counter	read-only	The total number of times that an attempt to place a group inbound interconnect call (e.g. telephony terminal to multiple PRS terminals) resulted in the requesting user being queued for access to this node's resources.
nodeQueuedOther 1.3.6.1.4.1.193.10.1.5.2.3.17	Counter	read-only	The total number of that an attempt to allocate resources (e.g. channel) resulted in queuing which was not counted by the proceeding nodeQueued "CallType" object instances.
nodeDeniedIndivVoice 1.3.6.1.4.1.193.10.1.5.2.3.18	Counter	read-only	The total number of times that an attempt to place an individual voice call resulted in the requesting user being denied access to this node's resources.
nodeDeniedGroupVoice 1.3.6.1.4.1.193.10.1.5.2.3.19	Counter	read-only	The total number of times that an attempt to place a group voice call resulted in the requesting user being denied access to this node's resources.
nodeDeniedIndivData 1.3.6.1.4.1.193.10.1.5.2.3.20	Counter	read-only	The total number of times that an attempt to place an individual data call resulted in the requesting user being denied access to this node's resources.
nodeDeniedGroupData 1.3.6.1.4.1.193.10.1.5.2.3.21	Counter	read-only	The total number of times that an attempt to place a group data call resulted in the requesting user being denied access to this node's resources.
nodeDeniedIndivOutboundTelephony 1.3.6.1.4.1.193.10.1.5.2.3.22	Counter	read-only	The total number of times that an attempt to place an individual outbound interconnect call (e.g. PRS terminal to a telephony terminal) resulted in the requesting user being denied access to this node's resources.
nodeDeniedIndivInboundTelephony 1.3.6.1.4.1.193.10.1.5.2.3.23	Counter	read-only	The total number of times that an attempt to place an individual inbound interconnect call (e.g. telephony terminal to a PRS terminal) resulted in the requesting user being denied access to this node's resources.
nodeDeniedGroupInboundTelephony 1.3.6.1.4.1.193.10.1.5.2.3.24	Counter	read-only	The total number of times that an attempt to place a group inbound interconnect call (e.g. telephony terminal to multiple PRS terminals) resulted in the requesting user being denied access to this node's resources.

nodeDeniedOther 1.3.6.1.4.1.193.10.1.5.2.3.25	Counter	read-only	The total number of that an attempt to allocate resources (e.g. channel) resulted in the user being denied access at this node, which were not counted by the proceeding nodeDenied "CallType" object instances.
nodeSysBusyIndivVoice 1.3.6.1.4.1.193.10.1.5.2.3.26	Counter	read-only	The total number of times that a request to place an individual voice call could not be granted due to a lack of system resources at this service node.
nodeSysBusyGroupVoice 1.3.6.1.4.1.193.10.1.5.2.3.27	Counter	read-only	The total number of times that a request to place a group voice call could not be granted due to a lack of system resources at this service node.
nodeSysBusyIndivData 1.3.6.1.4.1.193.10.1.5.2.3.28	Counter	read-only	The total number of times that a request to place an individual data call could not be granted due to a lack of system resources at this service node.
nodeSysBusyGroupData 1.3.6.1.4.1.193.10.1.5.2.3.29	Counter	read-only	The total number of times that a request to place a group data call could not be granted due to a lack of system resources at this service node.
nodeSysBusyIndivOutboundTelephony 1.3.6.1.4.1.193.10.1.5.2.3.30	Counter	read-only	The total number of times that a request to place an individual outbound interconnect call (e.g. PRS terminal to a telephony terminal) could not be granted due to a lack of system resources at this service node.
nodeSysBusyIndivInboundTelephony 1.3.6.1.4.1.193.10.1.5.2.3.31	Counter	read-only	The total number of times that a request to place an individual inbound interconnect call (e.g. telephony terminal to a PRS terminal) could not be granted due to a lack of system resources at this service node.
nodeSysBusyGroupInboundTelephony 1.3.6.1.4.1.193.10.1.5.2.3.32	Counter	read-only	The total number of times that an attempt to place a group inbound interconnect call (e.g. telephony terminal to multiple PRS terminals) could not be granted due to a lack of system resources at this service node.
nodeSysBusyOther 1.3.6.1.4.1.193.10.1.5.2.3.33	Counter	read-only	The total number of times that an attempt to allocate resources (e.g. channel) could not be granted due to a lack of system resources at this node, which were not counted by the proceeding nodeSysBusy "CallType" object instances.

7.1.4 Node Level Circuit Statistics Group

Table 20 - Node Circuit Time Table [1.3.6.1.4.1.193.10.1.5.2.4]

OBJECT IDENTIFIER	SYNTAX	ACCESS	DESCRIPTION
nodeCktTimeSampleInterval 1.3.6.1.4.1.193.10.1.5.2.4.1	TimeTicks	read-only	The time interval, expressed in hundredths of a second, during which circuit connection time usage statistics have been collected for this service node. The only value a management station may attempt to set is zero (0), which has the effect of resetting the circuit statistics for this node to zero. If this entity does not support resetting the statistics, or a value other than zero is attempted to be written, then a "badValue" should be returned.

nodeCktTimeIndivVoice 1.3.6.1.4.1.193.10.1.5.2.4.2	TimeTicks	read-only	The total amount of circuit connection time, in hundredths of a second, that this node has provided for individual voice calls.
nodeCktTimeGroupVoice 1.3.6.1.4.1.193.10.1.5.2.4.3	TimeTicks	read-only	The total amount of circuit connection time, in hundredths of a second, that this node has provided for group voice calls.
nodeCktTimeIndivData 1.3.6.1.4.1.193.10.1.5.2.4.4	TimeTicks	read-only	The total amount of circuit connection time, in hundredths of a second, that this node has provided for individual data calls.
nodeCktTimeGroupData 1.3.6.1.4.1.193.10.1.5.2.4.5	TimeTicks	read-only	The total amount of circuit connection time, in hundredths of a second, that this node has provided for group data calls.
nodeCktTimeIndivOutboundTelephony 1.3.6.1.4.1.193.10.1.5.2.4.6	TimeTicks	read-only	The total amount of circuit connection time, in hundredths of a second, that this node has provided for individual outbound interconnect calls (e.g. individual PRS terminal to a telephony terminal).
nodeCktTimeIndivInboundTelephony 1.3.6.1.4.1.193.10.1.5.2.4.7	TimeTicks	read-only	The total amount of circuit connection time, in hundredths of a second, that this node has provided for individual inbound interconnect calls (e.g. telephony terminal to a PRS terminal).
nodeCktTimeGroupInboundTelephony 1.3.6.1.4.1.193.10.1.5.2.4.8	TimeTicks	read-only	The total amount of circuit connection time, in hundredths of a second, that this node has provided for group inbound interconnect calls (e.g. telephony terminal to multiple PRS terminals).
nodeCktTimeOther 1.3.6.1.4.1.193.10.1.5.2.4.9	TimeTicks	read-only	The total amount of circuit connection time, in hundredths of a second, that this node has provided which has not been accumulated by the proceeding nodeCktTime “CallType” object instances.
nodeCktQTimeIndivVoice 1.3.6.1.4.1.193.10.1.5.2.4.10	TimeTicks	read-only	The total amount of time, in hundredths of a second, that requests to place an individual voice call have been queued, pending on access to resource allocation at this node. Note that this variable does not reflect any artifacts of the final outcome of the queuing (e.g. whether or not resources were eventually allocated).
nodeCktQTimeGroupVoice 1.3.6.1.4.1.193.10.1.5.2.4.11	TimeTicks	read-only	The total amount of time, in hundredths of a second, that requests to place a group voice call have been queued, pending on access to resource allocation at this node. Note that this variable does not reflect any artifacts of the final outcome of the queuing (e.g. whether or not resources were eventually allocated).
nodeCktQTimeIndivData 1.3.6.1.4.1.193.10.1.5.2.4.12	TimeTicks	read-only	The total amount of time, in hundredths of a second, that requests to place an individual data call have been queued, pending on access to resource allocation at this node. Note that this variable does not reflect any artifacts of the final outcome of the queuing (e.g. whether or not resources were eventually allocated).

nodeCktQTimeGroupData 1.3.6.1.4.1.193.10.1.5.2.4.13	TimeTicks	read-only	The total amount of time, in hundredths of a second, that requests to place a group data call have been queued, pending on access to resource allocation at this node. Note that this variable does not reflect any artifacts of the final outcome of the queuing (e.g. whether or not resources were eventually allocated).
nodeCktQTimeIndivOutboundTelephony 1.3.6.1.4.1.193.10.1.5.2.4.14	TimeTicks	read-only	The total amount of time, in hundredths of a second, that requests to place an individual outbound interconnect call (e.g. PRS terminal to a telephony terminal) have been queued, pending on access to resource allocation at this node. Note that this variable does not reflect any artifacts of the final outcome of the queuing (e.g. whether or not resources were eventually allocated).
nodeCktQTimeIndivInboundTelephony 1.3.6.1.4.1.193.10.1.5.2.4.15	TimeTicks	read-only	The total amount of time, in hundredths of a second, that requests to place an individual inbound interconnect call (e.g. telephony terminal to a PRS terminal) have been queued, pending on access to resource allocation at this node. Note that this variable does not reflect any artifacts of the final outcome of the queuing (e.g. whether or not resources were eventually allocated).
nodeCktQTimeGroupInboundTelephony 1.3.6.1.4.1.193.10.1.5.2.4.16	TimeTicks	read-only	The total amount of time, in hundredths of a second, that requests to place a group inbound interconnect call (e.g. telephony terminal to multiple PRS terminals) have been queued, pending on access to resource allocation at this node. Note that this variable does not reflect any artifacts of the final outcome of the queuing (e.g. whether or not resources were eventually allocated).
nodeCktQTimeOther 1.3.6.1.4.1.193.10.1.5.2.4.17	TimeTicks	read-only	The total amount of time, in hundredths of a second, that requests to allocate resources (e.g. channel) have been queued, which were not accumulated by the proceeding nodeCktQTime “CallType” object instances. Note that this variable does not reflect any artifacts of the final outcome of the queuing (e.g. whether or not resources were eventually allocated).

APPENDIX A - EDACS MIB FILE LISTINGS

A.1. edacs100.mib

```
--****************************************************************************
-- File:    edacs100.mib
-- Title:   EDACS Managed Element Identification
--          Management Information Base
--
--          Copyright (C) 1995, Ericsson, Inc.
--          Private Radio Systems (PRS) Division.
--          All Rights Reserved.
--
-- PRS MIB STATUS:      PRELIMINARY
--
-- Description:
--   This MIB provides the primary object identifiers in the
-- Enhanced Digital Communication System (EDACS) branch of the
-- Ericsson private enterprise tree.  The Ericsson (LM Ericsson AB)
-- Enterprise number is 193. EDACS is assigned node 10 under the Ericsson
-- tree.  The ASN.1 prefix to, and including the ericsson(193).edacs(10)
-- node is 1.3.6.4.1.193.10.
--
-- NOTICE:
-- (1) The information in this document is subject to change without notice.
--     Ericsson Inc. assumes no responsibility for any errors that may
--     appear in this document.
--****************************************************************************
   EDACS-ID-MIB DEFINITIONS ::= BEGIN

   IMPORTS
      enterprises FROM RFC1155-SMI;

   -- Object Identifiers

   ericsson             OBJECT IDENTIFIER ::= { enterprises 193 }
   edacs                OBJECT IDENTIFIER ::= { ericsson 10 }

   system               OBJECT IDENTIFIER ::= { edacs 1 }


   general              OBJECT IDENTIFIER ::= { system 1 }
   identity             OBJECT IDENTIFIER ::= { general 1 }
   operation            OBJECT IDENTIFIER ::= { general 2 }
   software             OBJECT IDENTIFIER ::= { general 3 }
   fileSystem           OBJECT IDENTIFIER ::= { general 4 }

   snmp                 OBJECT IDENTIFIER ::= { system 2 }
   alarm                OBJECT IDENTIFIER ::= { system 3 }
   alarmThreshold       OBJECT IDENTIFIER ::= { alarm 1 }

   site                 OBJECT IDENTIFIER ::= { system 4 }
   siteConfig           OBJECT IDENTIFIER ::= { site 1 }
   siteTopology         OBJECT IDENTIFIER ::= { siteConfig 1 }
   sitePerformance      OBJECT IDENTIFIER ::= { site 2 }

   node                 OBJECT IDENTIFIER ::= { system 5 }
   nodeConfig           OBJECT IDENTIFIER ::= { node 1 }
   nodeTopology         OBJECT IDENTIFIER ::= { nodeConfig 1 }
   nodePerformanceOBJECT IDENTIFIER ::= { node 2 }

   enterprise           OBJECT IDENTIFIER ::= { system 6 }
```

```
   product              OBJECT IDENTIFIER ::= { edacs 2 }

   protocol             OBJECT IDENTIFIER ::= { edacs 3 }

   partner              OBJECT IDENTIFIER ::= { edacs 4 }
   hp                   OBJECT IDENTIFIER ::= { partner 1 }

   experimental         OBJECT IDENTIFIER ::= { edacs 5 }

--*****************************************************************************
-- Products Section
--   This section defines the Object Identifiers for all managed EDACS
-- network elements. New products will be added to the end of this list.
--*****************************************************************************

   networkManager OBJECT IDENTIFIER ::= { product 1 }

-- EDACS Node Level products equipment components.

   node-equip     OBJECT IDENTIFIER ::= { product 2 }

   systemManager  OBJECT IDENTIFIER ::= { node-equip 1 }
   imcManager     OBJECT IDENTIFIER ::= { node-equip 2 }
   jessica        OBJECT IDENTIFIER ::= { node-equip 3 }
   pi             OBJECT IDENTIFIER ::= { jessica 1 }
   datagateway    OBJECT IDENTIFIER ::= { node-equip 4 }
   edgCentralActivityProcessor      OBJECT IDENTIFIER ::= { datagateway 1 }
   edgTrunkingSystemInterface       OBJECT IDENTIFIER ::= { datagateway 2 }
   edgHostDataInterface             OBJECT IDENTIFIER ::= { datagateway 3 }
   bcu-cal        OBJECT IDENTIFIER ::= { node-equip 5 }
   cec-imc        OBJECT IDENTIFIER ::= { node-equip 6 }

-- EDACS Site Level products equipment components.

   site-equip     OBJECT IDENTIFIER ::= { product 3 }

   base-station   OBJECT IDENTIFIER ::= { site-equip 1 }
   master         OBJECT IDENTIFIER ::= { base-station 1 }
   master-II3     OBJECT IDENTIFIER ::= { master 1 }
   master-III     OBJECT IDENTIFIER ::= { master 2 }
   prism          OBJECT IDENTIFIER ::= { base-station 2 }

   siteController OBJECT IDENTIFIER ::= { site-equip 2 }
   getc           OBJECT IDENTIFIER ::= { site-equip 3 }
   getcProgrammer OBJECT IDENTIFIER ::= { site-equip 4 }
   eli            OBJECT IDENTIFIER ::= { site-equip 5 }

-- EDACS Terminal equipment products group.

   terminal       OBJECT IDENTIFIER ::= { product 4 }

   radio          OBJECT IDENTIFIER ::= { terminal 1 }

   portable       OBJECT IDENTIFIER ::= { radio 1 }
   mp-pa          OBJECT IDENTIFIER ::= { portable 1 }
   mp-rk          OBJECT IDENTIFIER ::= { portable 2 }
   mtl-sx         OBJECT IDENTIFIER ::= { portable 3 }
   tpx            OBJECT IDENTIFIER ::= { portable 4 }
   pcs            OBJECT IDENTIFIER ::= { portable 5 }
   mpi            OBJECT IDENTIFIER ::= { portable 6 }
   mpi-I          OBJECT IDENTIFIER ::= { mpi 1 }
   mpi-II         OBJECT IDENTIFIER ::= { mpi 2 }
```

```
   jane           OBJECT IDENTIFIER ::= { portable 7 }

   mobile         OBJECT IDENTIFIER ::= { radio 2 }
   fmd            OBJECT IDENTIFIER ::= { mobile 1 }
   mtd            OBJECT IDENTIFIER ::= { mobile 2 }
   mls            OBJECT IDENTIFIER ::= { mobile 3 }
   mls-I          OBJECT IDENTIFIER ::= { mls 1 }
   mls-II         OBJECT IDENTIFIER ::= { mls 2 }

   mvs            OBJECT IDENTIFIER ::= { mobile 4 }
   mds            OBJECT IDENTIFIER ::= { mobile 5 }
   mdr            OBJECT IDENTIFIER ::= { mobile 6 }
   tmx-8825       OBJECT IDENTIFIER ::= { mobile 7 }
   rangr          OBJECT IDENTIFIER ::= { mobile 8 }
   delta          OBJECT IDENTIFIER ::= { mobile 9 }
   delta-s        OBJECT IDENTIFIER ::= { delta 1 }
   delta-sx       OBJECT IDENTIFIER ::= { delta 2 }
   orion          OBJECT IDENTIFIER ::= { mobile 10 }

   pager          OBJECT IDENTIFIER ::= { radio 3 }
   beacon         OBJECT IDENTIFIER ::= { pager 1 }
   beacon-I       OBJECT IDENTIFIER ::= { beacon 1 }
   beacon-II      OBJECT IDENTIFIER ::= { beacon 2 }

   dispatch       OBJECT IDENTIFIER ::= { terminal 2 }
   console        OBJECT IDENTIFIER ::= { dispatch 1 }

   maestro-C3     OBJECT IDENTIFIER ::= { console 1 }

   programmer     OBJECT IDENTIFIER ::= { radio 4 }

--*****************************************************************************
-- Protocols Group
--   This section defines the Object Identifiers for EDACS proprietary
-- protocols. The protocols node is analogous to the transmission group of
-- MIB-II (RFC-1213). The management information associated with each
-- protocol is embodied in that protocol's specific MIB.
-- New protocols will be added to the end of this list.
--*****************************************************************************

   -- EDACS Radio Data Interface (RDI) Protocol
   radioDataInterface   OBJECT IDENTIFIER ::= { protocol 1 }
            -- RDI Version 1.92 Protocol Version
            rdi1x92     OBJECT IDENTIFIER ::= { radioDataInterface 1 }

   -- EDACS CEC-IMC Console Interconnect Sliding Window Protocol
   cimSlidingWindow     OBJECT IDENTIFIER ::= { protocol 2 }

   -- EDACS Over-The-Air-Programming Protocol
   otap                 OBJECT IDENTIFIER ::= { protocol 3 }

   END
```

A.2. edacs101.mib

```
--*****************************************************************************
-- File:    edacs101.mib
-- Title:   EDACS Common Managed Element Information
--          Management Information Base
--
--          Copyright (C) 1995, Ericsson, Inc.
--          Private Radio Systems (PRS) Division.
--          All Rights Reserved.
--
-- PRS MIB STATUS:      PRELIMINARY
--
-- Description:
--   This Management Information Base (MIB) module provides instrumentation
-- of identification, software configuration, asset utilization, and
-- remote operations common to all EDACS managed element (ME) resources.
-- Implementation of this MIB is mandatory for all managed elements which
-- will communicate directly with an EDACS Network Management Station (NMS).
--
-- NOTICE:
-- (1) The information in this document is subject to change without notice.
--     Ericsson Inc. assumes no responsibility for any errors that may
--     appear in this document.
--*****************************************************************************

   EDACS-ME-COMMON-MIB DEFINITIONS ::= BEGIN

   IMPORTS
      enterprises       FROM RFC1155-SMI
      Counter           FROM RFC1155-SMI
      Gauge             FROM RFC1155-SMI
      TimeTicks         FROM RFC1155-SMI
      IpAddress         FROM RFC1155-SMI
      OBJECT-TYPE       FROM RFC-1212
      DisplayString     FROM RFC1213-MIB
      TRAP-TYPE         FROM RFC-1215;

   -- Object Identifiers

   ericsson             OBJECT IDENTIFIER ::= { enterprises 193 }
   edacs                OBJECT IDENTIFIER ::= { ericsson 10 }

   system               OBJECT IDENTIFIER ::= { edacs 1 }

   general              OBJECT IDENTIFIER ::= { system 1 }
   identity             OBJECT IDENTIFIER ::= { general 1 }
   operation            OBJECT IDENTIFIER ::= { general 2 }
   software             OBJECT IDENTIFIER ::= { general 3 }
   fileSystem           OBJECT IDENTIFIER ::= { general 4 }

   snmp                 OBJECT IDENTIFIER ::= { system 2 }
   trap                 OBJECT IDENTIFIER ::= { snmp 1 }
   trapDestination      OBJECT IDENTIFIER ::= { trap 2 }
   trapHistory          OBJECT IDENTIFIER ::= { trap 3 }
   authentication       OBJECT IDENTIFIER ::= { snmp 2 }
```

```
   -- Textual conversions.

   -- Conversions local to this MIB module.
   SoftwareIndexType    ::= INTEGER (1..65535)
   DiskIndexType        ::= INTEGER (1..65535)
   PercentDiskUsed      ::= INTEGER (0..100)

   -- Generic expression of an EDACS object identification instance.
   EdacsProductID       ::= OBJECT IDENTIFIER

   -- Positive context for (signed) 32-bit integers.
   PositiveInteger32T   ::= INTEGER (0..2147483647)

   -- A truth value.
   Boolean              ::= INTEGER { true(1), false(2) }

   -- A common method of presenting date and time
   -- Ref.: operDateAndTime and `host resource' RFC-1514.
   DateAndTime          ::= OCTET STRING (SIZE (8 | 11))

--*****************************************************************************
-- EDACS Network Element (NE) Identification Group.
--   The NE identification group is mandatory for all managed
-- EDACS network elements.
--*****************************************************************************

   identSysObjectID  OBJECT-TYPE
      SYNTAX  EdacsProductID
      ACCESS  read-only
      STATUS  mandatory
      DESCRIPTION
            "The EDACS System Object Identification object instance
            provides authoritative identification of this managed
            EDACS network element. This value is assigned under the
            edacs(10).product(2) subtree of the ericsson(193) enterprise.
            This object provides an easy and unambiguous identification
            of what type of EDACS `box' this entity is associated with.

            This value will, typically, be identical to the sysObjectID
            object instance in the MIB-II system group.  Note, however,
            that some EDACS entity's may be managed using a third
            party agent which `hardcodes' the sysObjectID to a value
            assigned under that vendor's private enterprise naming
            authority.  As such, the identSysObjectID is the
            preferred means by which to identify this EDACS entity."
      ::= { identity 1 }

   identServiceNodeNumber  OBJECT-TYPE
      SYNTAX  PositiveInteger32T
      ACCESS  read-only
      STATUS  mandatory
      DESCRIPTION
            "The administratively assigned number of the EDACS
            service node for which this entity is providing service."
      ::= { identity 2 }

--*****************************************************************************
-- EDACS Remote Operations Group.
--   The remote operations group is mandatory for all managed
-- EDACS network elements.
--*****************************************************************************

   operDateAndTime  OBJECT-TYPE
```

```
      SYNTAX  DateAndTime
      ACCESS  read-write
      STATUS  mandatory
      DESCRIPTION
            "The local date and time, as perceived by this managed
            network element.  Note that this date-time specification
            is identical to the `DateAndTime' textual conversion as
            presented in the host resources sub-group of MIB-II.

            This data type is intended to provide a consistent
            method of reporting date and time information.

                  field  octets  contents                  range
                  _____  ______  ________                  _____
                  1      1-2     year                     0..65535
                                 (in network byte order)
                  2       3      month                    1..12
                  3       4      day                      1..31
                  4       5      hour                     0..23
                  5       6      minutes                  0..59
                  6       7      seconds                  0..60
                                 (use 60 for leap-second)
                  7       8      deci-seconds             0..9
                  8       9      direction from UTC       `+' or `-'
                                 (in ASCII notation)
                  9      10      hours from UTC           0..11
                 10      11      minutes from UTC         0..59

               Note that if only local time is known, then
               timezone information (fields 8-10) is not present.

               If this information is not known, then this
               variable shall have the value corresponding to
               January 1, year 0000, 00:00:00.0, which is encoded
               as (hex)`00 00 01 01 00 00 00 00'."
      ::= { operation 1 }

   operRemoteReset  OBJECT-TYPE
      SYNTAX  INTEGER {
            supported(1),
            notSupported(2),
            inProgress(3),
            finalNotice(4),
            reset(5)
      }
      ACCESS  read-write
      STATUS  mandatory
      DESCRIPTION
            "This object provides a common method to remotely reset any
            managed EDACS network element.

            The only value a management station may attempt to set is
            reset(5), which requests a full system reset of this
            entity.  If the request is accepted by the agent, this object
            instance will transition to inProgress(3).  The value
            inProgress(3) indicates that this entity is performing
            any housekeeping duties (disk synchronization, active call
            tear-down, etc.) associated with a graceful system
            shutdown.  Note that the amount of time an entity remains in
            the inProgress(3) state is an implementation specific
            issue; a duration of several minutes is not uncommon.

            It is highly recommended that upon entering the
```

```
            inProgress(3) state, the agent return a `genErr' value
            for ANY further write operations attempted by a management
            station.

            After completion of any housekeeping duties, this value
            shall transition from inProgress(3) to finalNotice(4),
            which indicates that system reset is immediately
            imminent.  At this point, no further network communications
            with the entity will be possible.  This condition will
            exist until the entity completes re-initialization, which
            is typically announced via a coldStart(0) trap to the
            network management station(s)."
      ::= { operation 2 }

   operAnnounceReset  OBJECT-TYPE
      SYNTAX  Boolean
      ACCESS  read-write
      STATUS  mandatory
      DESCRIPTION
            "This object controls the generation of traps
            for significant changes in state of the operRemoteReset
            object instance. A true(1) value indicates that traps will be
            generated. A false(2) value suppresses the generation of
            traps.  It is recommended that this value be maintained in
            non-volatile storage, for consistency across system
            reboots."
      DEFVAL { 2 } -- false(2)
      ::= { operation 3 }

   operRemoteStatus  OBJECT-TYPE
      SYNTAX  INTEGER {
            unknown(1),
            other(2),
            systemActive(3),
            systemShutdown(4),
            shutdownInProgress(5),
            shutdownComplete(6),
            activationInProgress(7),
            activationComplete(8)
      }
      ACCESS  read-write
      STATUS  mandatory
      DESCRIPTION
            "This object provides a common mechanism to inspect and
            alter the operational state of this managed entity.  This
            mechanism is useful for taking an entity in and out of
            normal, mission oriented, service (typically for trouble
            shooting purposes).

            systemActive(3) indicates that this entity is completely
            `on-line', with all mission operational parameters
            functioning within nominal parameters.

            systemShutdown(4) indicates that this entity is completely
            `off-line' (e.g. dormant, with regard to it's normal mission
            requirements within an EDACS network infrastructure).

            shutdownInProgress(5) indicates that this entity is in
            transition towards a state of shutdownComplete(6), either
            at the request of a management station, or due to behavioral
            aspects of said entity.  If an entity can not
            achieve shutdownComplete(6), it shall remain in the
            shutdownInProgress(5) state.
```

```
            shutdownComplete(6) indicates that this entity has performed
            any pre-shutdown processing, and is intending to immediately
            enter a (mission critical) dormant state.
            Note that this state is potentially transient in nature (e.g.
            an entity may, choose to transition directly from a
            shutdownInProgress(5) to that of systemShutdown(4)).

            activationInProgress(7) indicates that this entity is performing
            any processing required for an orderly transition from a
            systemShutdown(4) state to that of systemActive(3).

            activationComplete(8) indicates that this entity has
            completed any processing required for an attempt to
            transition to a state of systemActive(3).
            Note that this state is potentially transient in nature (e.g.
            an entity may, choose to transition
            from activationInProgress(7) directly to systemActive(3)).

            The only values a management station may attempt to set are
            systemActive(3) and systemShutdown(4).  Note that placing
            an EDACS entity in the systemShutdown(4) shall not impact
            network communication services between the entity and
            network management stations."
      ::= { operation 4 }

   operAnnounceStatus  OBJECT-TYPE
      SYNTAX  Boolean
      ACCESS  read-write
      STATUS  mandatory
      DESCRIPTION
            "This object controls the generation of traps
            for significant changes in state of the operRemoteStatus
            object instance. A true(1) value indicates that traps will be
            generated. A false(2) value suppresses the generation of
            traps.  It is recommended that this value be maintained in
            non-volatile storage, for consistency across system
            reboots."
      DEFVAL { 2 } -- false(2)
      ::= { operation 5 }

--*****************************************************************************
-- EDACS Software Configuration Group.
--   The EDACS Software Configuration Group provides a common mechanism
-- for identifying the software components and features installed on this
-- entity. This information is useful for identifying and inventorying
-- software installed on an entity, and for diagnosing incompatibility
-- and version mismatch problems between various pieces of software.
--   Implementation of the software configuration group is mandatory
-- for all managed EDACS network elements.
--*****************************************************************************

   softwareTable  OBJECT-TYPE
      SYNTAX  SEQUENCE OF SoftwareEntry
      ACCESS  not-accessible
      STATUS  mandatory
      DESCRIPTION
            "A (conceptual) table of the software components installed
            on this managed element."
      ::= { software 1 }

   softwareEntry  OBJECT-TYPE
      SYNTAX  SoftwareEntry
```

```
      ACCESS  not-accessible
      STATUS  mandatory
      DESCRIPTION
            "A (conceptual) entry for a specific software component
            installed on this managed element."
      INDEX { softwareIndex }
      ::= { softwareTable 1 }

   SoftwareEntry ::= SEQUENCE {
          softwareIndex             SoftwareIndexType,
          softwareType              INTEGER,
          softwarePartNumber        DisplayString (SIZE (0..128)),
          softwareRevMajorID        INTEGER       (0..65535),
          softwareRevMinorID        INTEGER       (0..65535),
          softwareTargetDevice      EdacsProductID,
          softwareDescription       DisplayString (SIZE (0..255)),
          softwareExtraInfo         DisplayString (SIZE (0..255)),
          softwarePath              DisplayString (SIZE (0..128)),
          softwareStatus            INTEGER,
          softwareInstallDate       DateAndTime
      }

   softwareIndex  OBJECT-TYPE
      SYNTAX  SoftwareIndexType
      ACCESS  read-only
      STATUS  mandatory
      DESCRIPTION
            "A unique value for each software component installed on
            this managed element.  This value serves as an index to a
            particular entry in the softwareTable."
      ::= { softwareEntry 1 }

   softwareType  OBJECT-TYPE
      SYNTAX  INTEGER {
            other(1),
            bootstrap(2),
            operatingSystem(3),
            application(4),
            thirdParty(5)
      }
      ACCESS  read-only
      STATUS  mandatory
      DESCRIPTION
            "The functional type of this software component."
      ::= { softwareEntry 2 }

   softwarePartNumber  OBJECT-TYPE
      SYNTAX  DisplayString (SIZE (0..128))
      ACCESS  read-only
      STATUS  mandatory
        DESCRIPTION
            "A textual string which provides the part number of this
            software component.

            By convention, this is the Software Media Kit part
            number, including the group number postfix (e.g. an
            identifier used by the customer to reference and/or
            order this specific software component).  For example,
            ``350A1103G2''.

            If this software component is a member of a
            Software Media Kit containing multiple part numbers,
            the part number postfix shall be appended in the form of
```

```
          ``-Px''; where `x' designates the specific part number.
          For example, ``350A1103G2-P2'' would indicate that this
          software component is identified as Part Number two (2)
          of the software media kit 350A1103G2."
   ::= { softwareEntry 3 }

softwareRevMajorID  OBJECT-TYPE
   SYNTAX  INTEGER (0..65535)
   ACCESS  read-only
   STATUS  mandatory
   DESCRIPTION
          "The major revision number of this software component."
   ::= { softwareEntry 4 }

softwareRevMinorID  OBJECT-TYPE
   SYNTAX  INTEGER (0..65535)
   ACCESS  read-only
   STATUS  mandatory
   DESCRIPTION
          "The minor revision number of this software component."
   ::= { softwareEntry 5 }

softwareTargetDevice  OBJECT-TYPE
   SYNTAX  EdacsProductID
   ACCESS  read-only
   STATUS  mandatory
   DESCRIPTION
          "The product identification of the EDACS (sub)component(s)
          which execute this software component. This value will,
          typically, be the same as the identSysObjectID object
          instance.  If this entity is acting as a load host, or
          proxy agent, for some other (sub)component, then this object
          instance may be used to identify that specific target device."
   ::= { softwareEntry 6 }

softwareDescription  OBJECT-TYPE
   SYNTAX  DisplayString (SIZE (0..255))
   ACCESS  read-only
   STATUS  mandatory
   DESCRIPTION
          "A textual string describing this software component.
          For example, ``First incremental load segment of the
          Billing Correlation Unit/Centralized Activity Logger''.
          This description should also include any applicable
          copyright or patent notice, as well as any (re)distribution
          restrictions or liabilities."
   ::= { softwareEntry 7 }

softwareExtraInfo  OBJECT-TYPE
   SYNTAX  DisplayString (SIZE (0..255))
   ACCESS  read-only
   STATUS  mandatory
   DESCRIPTION
          "A textual string providing any additional information
          describing this software component.  For example, ``Provided on
          exception release to customer ABC, for reasons XYZ.''

          If the softwareType value for this component is thirdParty(5),
          then this variable shall provide the manufacturer, revision,
          and module name of this third party software component.

          This object instance will be a null (size 0) string if
          the agent does not have any additional information of
```

```
            interest regarding this software component."
      ::= { softwareEntry 8 }

   softwarePath  OBJECT-TYPE
      SYNTAX  DisplayString (SIZE(0..128))
      ACCESS  read-only
      STATUS  mandatory
      DESCRIPTION
            "A fully qualified path specification identifying the
            location in long-term storage (e.g. a disk drive) where
            this software component is stored.  For example,
            ``1.2/loads/BCU.SX''.

            This object instance shall contain a specification of
            ``ROM'' (or similarly designated identification) for
            a software component which is not stored on this
            entity's file system."
      ::= { softwareEntry 9 }

   softwareStatus  OBJECT-TYPE
      SYNTAX      INTEGER {
            other(1),
            unknown(2),
            running(3),
            runnable(4),
            notRunnable(5),
            notLoaded(6),
            targetProxied(7)
      }
      ACCESS  read-only
      STATUS  mandatory
      DESCRIPTION
            "The execution status of this software component."
      ::= { softwareEntry 10 }

   softwareInstallDate  OBJECT-TYPE
      SYNTAX  DateAndTime
      ACCESS  read-only
      STATUS  mandatory
      DESCRIPTION
                  "The last-modification date of this software component as
                  it would appear in a directory listing.

                  If this information is not known, or not applicable
                  (e.g. ROM resident), then this object instance
                  shall have the value corresponding to
                  January 1, year 0000, 00:00:00.0, which is encoded
                  as (hex)'00 00 01 01 00 00 00 00'."
      ::= { softwareEntry 11 }

   softwareFeatureCode  OBJECT-TYPE
      SYNTAX  OCTET STRING
      ACCESS  read-write
      STATUS  mandatory
      DESCRIPTION
            "An (encrypted) code which identifies any additional
            software features licensed for operation on this entity.
            Interpretation of the feature code requires examination of
            the relevant identSysObjectID object instance.

            Two disparate methods of encryption are enforced, both of
            which are solely proprietary to Ericsson, Inc., Private
            Radio Systems (PRS) division.  For read operations, EDACS
```

```
            network management software is required to decrypt the
            code and provide identification of the installed feature set.
            Write operations are supported for remote upgrades in
            feature capability, under the restricted authority of
            Ericsson PRS software services.

            A prudent agent will recognize that repeated write
            attempts that fail decryption validation may indicate
            an unauthorized attempt to adjust this entity's software
            feature licensing.

            Customers should note that attempts to modify the feature
            code may result in this entity performing a `self-destruct'
            of any additional features provided by this entity.  This
            self-destruct will not render the entity in-operable.
            It will, however, result in the entity assuming its
            baseline (minimal) operational configuration.  Restoration
            of additional services will require consultation with
            Ericsson PRS software services personnel."
      ::= { software 2 }

--*****************************************************************************
-- EDACS File System Group.
--   The EDACS mass storage group provides a common mechanism for
-- managing long-term data storage devices (e.g. disk drives, CD-ROM, etc.).
--   Implementation of the mass storage group is mandatory for all managed
-- EDACS network elements which contain mass storage devices.
--*****************************************************************************

   fsDiskTable  OBJECT-TYPE
      SYNTAX  SEQUENCE OF DiskEntry
      ACCESS  not-accessible
      STATUS  mandatory
      DESCRIPTION
            "A (conceptual) table of disk oriented storage devices
            resident on this managed network element.

            Note that this table does not include disks which are
            accessed remotely over a network (e.g. NFS mounted)."
      ::= { fileSystem 1 }

   fsDiskEntry  OBJECT-TYPE
      SYNTAX  DiskEntry
      ACCESS  not-accessible
      STATUS  mandatory
      DESCRIPTION
            "A (conceptual) entry for each disk oriented storage
            device resident on this managed network element."
            INDEX { fsDiskIndex }
      ::= { fsDiskTable 1 }

   DiskEntry ::= SEQUENCE {
          fsDiskIndex               DiskIndexType,
          fsDiskVolumeName          DisplayString (SIZE (0..255)),
          fsDiskVolumeDescr         DisplayString (SIZE (0..255)),
          fsDiskMediaType           INTEGER,
          fsDiskAccess              INTEGER,
          fsDiskRemovable           INTEGER,
          fsDiskBlockSize           PositiveInteger32T,
          fsDiskTotalBlocks         PositiveInteger32T,
          fsDiskBlocksFree          PositiveInteger32T,
          fsDiskPercentBlocksUsed   PercentDiskUsed,
          fsDiskTotalInodes         PositiveInteger32T,
```

```
        fsDiskInodesFree          PositiveInteger32T,
        fsDiskPercentInodesUsed   PercentDiskUsed
}

fsDiskIndex  OBJECT-TYPE
   SYNTAX  DiskIndexType
   ACCESS  read-only
   STATUS  mandatory
   DESCRIPTION
         "A unique value for each disk oriented storage device.
         This value serves as an index to a particular
         entry in the fsDiskTable."
   ::= { fsDiskEntry 1 }

fsDiskVolumeName  OBJECT-TYPE
   SYNTAX  DisplayString (SIZE (0..255))
   ACCESS  read-only
   STATUS  mandatory
   DESCRIPTION
         "A textual string describing this disk device.
         By convention, this value is the same as the
         volume name used to identify this disk (e.g. file system
         component)."
   ::= { fsDiskEntry 2 }

fsDiskVolumeDescr  OBJECT-TYPE
   SYNTAX  DisplayString (SIZE (0..255))
   ACCESS  read-only
   STATUS  mandatory
   DESCRIPTION
         "A textual string providing any available additional
         information regarding this disk.
         This value should provide information such as
         the vendor, model name and/or part number, and
         firmware version of this file system component.

         This value will be a null (size zero) string if
         the agent does not have any additional information
         available regarding this disk."
   ::= { fsDiskEntry 3 }

fsDiskMediaType  OBJECT-TYPE
   SYNTAX  INTEGER {
         other(1),
         unknown(2),
         hardDisk(3),
         floppyDisk(4),
         ramDisk(5),
         opticalDiskCDROM(6),
         opticalDiskWORM(7),
         opticalDiskRW(8)
   }
   ACCESS  read-only
   STATUS  mandatory
   DESCRIPTION
               "An indication of the type of media used by this disk."
   ::= { fsDiskEntry 4 }

fsDiskAccess  OBJECT-TYPE
   SYNTAX INTEGER {
         readWrite(1),
         readOnly(2),
         writeOnly(3)
```

```
    }
    ACCESS  read-only
    STATUS  mandatory
    DESCRIPTION
          "An indication of the access mode currently in force for
          this disk.

          This should reflect the media type, any write-protect
          mechanism, and any device configuration that
           affects the entire disk device accessibility."
    ::= { fsDiskEntry 5 }

fsDiskRemovable  OBJECT-TYPE
    SYNTAX  INTEGER {
          removable(1),
          notRemovable(2)
    }
    ACCESS  read-only
    STATUS  mandatory
    DESCRIPTION
                "Denotes whether or not the disk media may be
                removed from the drive."
    ::= { fsDiskEntry 6 }

fsDiskBlockSize  OBJECT-TYPE
    SYNTAX  PositiveInteger32T
    ACCESS  read-only
    STATUS  mandatory
    DESCRIPTION
          "The fundamental block size, in bytes (octets), of this disk."
    ::= { fsDiskEntry 7 }

fsDiskTotalBlocks  OBJECT-TYPE
    SYNTAX  PositiveInteger32T
    ACCESS  read-only
    STATUS  mandatory
    DESCRIPTION
          "The total number of blocks which this disk provides for
          long-term storage.  Note that the fundamental size of
          each block is specified by the fsDiskBlockSize
          object instance."
    ::= { fsDiskEntry 8 }

fsDiskBlocksFree  OBJECT-TYPE
    SYNTAX  PositiveInteger32T
    ACCESS  read-only
    STATUS  mandatory
    DESCRIPTION
          "The total number of blocks on this disk which are currently
          available.  Note that the fundamental size of
          each block is specified by the fsDiskBlockSize
          object instance."
    ::= { fsDiskEntry 9 }

fsDiskPercentBlocksUsed  OBJECT-TYPE
    SYNTAX  PercentDiskUsed
    ACCESS  read-only
    STATUS  mandatory
    DESCRIPTION
          "The (coarse) percentage of disk storage capacity,
          with regard to blocks, which has been consumed.

          Note that this value may be more accurately calculated
```

```
            from the fsDiskTotalBlocks and fsDiskBlocksFree
            object instances.  This value is intended to provide
            network management stations with a convenient object instance
            for monitoring disk utilization."
      ::= { fsDiskEntry 10 }

   fsDiskTotalInodes  OBJECT-TYPE
      SYNTAX  PositiveInteger32T
      ACCESS  read-only
      STATUS  mandatory
      DESCRIPTION
            "The total number of file descriptors/inodes
            (e.g. ordinary files, directories, links, etc.) which this
            disk provides for long-term storage.

            This value will always be zero for disks which are part
            of a file system that does not implement the concept
            of an inode."
      ::= { fsDiskEntry 11 }

   fsDiskInodesFree  OBJECT-TYPE
      SYNTAX  PositiveInteger32T
      ACCESS  read-only
      STATUS  mandatory
      DESCRIPTION
            "The total number of file descriptors/inodes
            (e.g. ordinary files, directories, links, etc.)
            which are currently available.

            This value will always be zero for disks which are part
            of a file system that does not implement the concept
            of an inode."
      ::= { fsDiskEntry 12 }

   fsDiskPercentInodesUsed  OBJECT-TYPE
      SYNTAX  PercentDiskUsed
      ACCESS  read-only
      STATUS  mandatory
      DESCRIPTION
            "The (coarse) percentage of disk storage capacity,
            with regard to file descriptors/inodes, which has been consumed.

            Note that this value may be more accurately calculated
            from the fsDiskTotalInodes and fsDiskInodesFree
            object instances.  This value is intended to provide
            network management stations with a convenient object
            instance for monitoring disk utilization.

            This value will always be zero for disks which are part
            of a file system that does not implement the concept
            of an inode."
      ::= { fsDiskEntry 13 }


--**************************************************************************
-- SNMP Trap Destination Group.
--   The trap destination group is mandatory for all managed EDACS network
--  elements.
--**************************************************************************

   trapSequenceNumber  OBJECT-TYPE
      SYNTAX  Counter
      ACCESS  read-only
```

```
      STATUS  mandatory
      DESCRIPTION
            "The sequence number used in the most recent trap packet(s)
            which this entity has sent. This counter is incremented each
            time a particular trap type is sent to one, or more, network
            management stations."
      ::= { trap 1 }

   trapDestinationNumber  OBJECT-TYPE
      SYNTAX  Gauge
      ACCESS  read-only
      STATUS  mandatory
      DESCRIPTION
            "The number of trap destinations in affect for this agent.
            Note that this variable corresponds to the number of
            `valid' entries in the trapDestinationTable, and
            may not directly reflect the actual size of said table."
      ::= { trapDestination 1 }

   trapDestinationTable  OBJECT-TYPE
      SYNTAX  SEQUENCE OF TrapDestinationEntry
      ACCESS  not-accessible
      STATUS  mandatory
      DESCRIPTION
            "A (conceptual) table which lists the (NMS) network
            addresses to which this agent will send traps.

            Note that most agents will implement this table with
            a fixed maximum number of entries, as opposed to
            employing dynamic row create and delete operations.
            Accordingly, management stations must be prepared to
            receive tabular entries not associated with a valid
            network address.  By convention, an IP address of either
            0.0.0.0 or 255.225.255.255 is used to delineated such
            an address."
      ::= { trapDestination 2 }

   trapDestinationEntry  OBJECT-TYPE
      SYNTAX  TrapDestinationEntry
      ACCESS  not-accessible
      STATUS  mandatory
      DESCRIPTION
            "Each (conceptual) entry contains the network address of a
            management station to which traps will be sent."
      INDEX { trapDestinationAddr }
      ::= { trapDestinationTable 1 }

   TrapDestinationEntry ::= SEQUENCE {
            trapDestinationAddr     IpAddress
   }

   trapDestinationAddr  OBJECT-TYPE
      SYNTAX  IpAddress
      ACCESS  read-write
      STATUS  mandatory
      DESCRIPTION
            "A network address to which this agent will send traps.

            Setting this value to an IP address of either 0.0.0.0
            or 255.225.255.255 effectively invalidates this entry (e.g.
            the agent shall never attempt to send a trap to either of
            these two addresses).  It is an implementation-specific matter
            as to whether the agent removes an invalidated entry from the
```

```
            table, or simply replaces said entry with the invalid address.

            A prudent agent should return a `badValue' if an attempt is
            made to set the destination to the same value as the
            agents network address.  It is further recommended that the
            agent reject any destination to which no network route is
            currently known."
      ::= { trapDestinationEntry 1 }

--*****************************************************************************
-- Trap History Group.
--   Implementation of the trap history group is optional, but strongly
-- recommended.
--*****************************************************************************

   trapSentTable  OBJECT-TYPE
      SYNTAX  SEQUENCE OF TrapSentEntry
      ACCESS  not-accessible
      STATUS  mandatory
      DESCRIPTION
            "A (conceptual) table which provides a list of the traps
            most recently sent to some network management station(s)."
      ::= { trapHistory 1 }

   trapSentEntry  OBJECT-TYPE
      SYNTAX  TrapSentEntry
      ACCESS  not-accessible
      STATUS  mandatory
      DESCRIPTION
            "A (conceptual) entry in the trapSentTable.  Each
            conceptual row describes the last trap packet sent to a
            specific network management station."
      INDEX { trapSentIpAddress }
      ::= { trapSentTable 1 }

   TrapSentEntry ::= SEQUENCE {
            trapSentIpAddress  IpAddress,
            trapSentSeqNumber  Counter,
            trapSentTime       TimeTicks,
            trapSentGeneric    INTEGER,
            trapSentSpecific   INTEGER,
            trapSentVblItems   INTEGER
   }

   trapSentIpAddress  OBJECT-TYPE
      SYNTAX  IpAddress
      ACCESS  read-only
      STATUS  mandatory
      DESCRIPTION
            "The network (IP) address of a network management station
            to which this entity has last sent a trap."
      ::= { trapSentEntry 1 }

   trapSentSeqNumber  OBJECT-TYPE
      SYNTAX  Counter
      ACCESS  read-only
      STATUS  mandatory
      DESCRIPTION
            "The sequence number of the trap packet used when this
            entity sent the trap to this network management station."
      ::= { trapSentEntry 2 }

   trapSentTime  OBJECT-TYPE
```

```
      SYNTAX  TimeTicks
      ACCESS  read-only
      STATUS  mandatory
      DESCRIPTION
            "The value of sysUpTime when the trap was sent to this
            network management station."
      ::= { trapSentEntry 3 }

   trapSentGeneric  OBJECT-TYPE
      SYNTAX  INTEGER {
                other(1), -- None of the following, which is an error.
                coldStart(2),
                warmStart(3),
                linkUp(4),
                linkDown(5),
                authenticationFailure(6),
                egpNeighborLoss(7),
                enterpriseSpecific(8)
      }
      ACCESS  read-only
      STATUS   mandatory
      DESCRIPTION
            "The `generic-trap' code value of the trap sent to this
            network management station."
      ::= { trapSentEntry 4 }

   trapSentSpecific  OBJECT-TYPE
      SYNTAX  INTEGER
      ACCESS  read-only
      STATUS  mandatory
      DESCRIPTION
            "The `specific-trap' code value of the trap sent to this
            network management station."
      ::= { trapSentEntry 5 }

   trapSentVblItems  OBJECT-TYPE
      SYNTAX  INTEGER
      ACCESS   read-only
      STATUS  mandatory
      DESCRIPTION
            "The number of Variable Binding List (VBL) items contained
            in the trap sent to this network management station."
      ::= { trapSentEntry 6 }

--*****************************************************************************
-- SNMPv1 Authentication Failure History.
--    Implementation of the authFailTable is optional, although strongly
-- recommended.
--*****************************************************************************

   authFailTable  OBJECT-TYPE
      SYNTAX      SEQUENCE OF AuthFailEntry
      ACCESS      not-accessible
      STATUS      mandatory
      DESCRIPTION
            "A (conceptual) table which provides a list of network
            management stations that have caused an SNMPv1 authentication
            failure in an attempt to access this entity."
      ::= { authentication 1 }

   authFailEntry  OBJECT-TYPE
      SYNTAX      AuthFailEntry
      ACCESS      not-accessible
```

```
      STATUS      mandatory
      DESCRIPTION
            "A (conceptual) entry in the authentication failure table.
            Each entry contains, and is indexed by,  the IP address of
            the management station which caused the authentication
            failure."
      INDEX { authFailIpAddress }
      ::= { authFailTable 1 }

   AuthFailEntry ::= SEQUENCE {
          authFailIpAddress         IpAddress,
          authFailTime              TimeTicks,
          authFailCommunityName     OCTET STRING
   }

   authFailIpAddress  OBJECT-TYPE
      SYNTAX      IpAddress
      ACCESS      read-only
      STATUS      mandatory
      DESCRIPTION
            "The IP address of the management station that sent a
            request to this agent with an incorrect community name."
      ::= { authFailEntry 1 }

   authFailTime  OBJECT-TYPE
      SYNTAX      TimeTicks
      ACCESS      read-only
      STATUS      mandatory
      DESCRIPTION
            "The value of sysUpTime when this entity received the
            un-authenticated request."
      ::= { authFailEntry 2 }

   authFailCommunityName  OBJECT-TYPE
      SYNTAX      OCTET STRING
      ACCESS      read-only
      STATUS      mandatory
      DESCRIPTION
            "The community name used in the failed request."
      ::= { authFailEntry 3 }

--**************************************************************************
-- SNMP Trap Definitions:
--**************************************************************************

   operResetEventTrap  TRAP-TYPE
      ENTERPRISE edacs
      VARIABLES  { trapSequenceNumber,
                   operRemoteReset }
      DESCRIPTION
            "An indication that the sending entity is in the process
            of performing a complete system reset. The operRemoteReset
            object instance contains the current state of the reset
            process, which will (typically) be either inProgress(3)
            or finalNotice(4)."
      ::= 10000

   operStatusEventTrap  TRAP-TYPE
      ENTERPRISE edacs
      VARIABLES  { trapSequenceNumber,
                   operRemoteStatus }
      DESCRIPTION
            "An indication that the sending entity has detected a
```

```
            significant change in it's operational status.  The
            operRemoteStatus object instance contains the
            the current operational state."
      ::= 10001


   END
```

A.3. edacs102.mib

```
--*****************************************************************************
-- File:    edacs102.mib
-- Title:   EDACS Alarm-Threshold Management Information Base
--
--          Copyright (C) 1995, Ericsson, Inc.
--          Private Radio Systems (PRS) Division.
--          All Rights Reserved.
--
-- PRS MIB STATUS:      PRELIMINARY
--
-- Description:
--
-- (1)
--   The EDACS Alarm-Threshold MIB provides a flexible method for Network
-- Management Station(s) (NMS) to control the sampling of any integer SNMP
-- object on an EDACS server-agent.  The periodic samples are compared to
-- a user configurable set of threshold values.  If a sample crosses a
-- threshold, an event will be generated.  This event may be configured
-- to result in the generation of an SNMP TRAP to one or more NMS.
-- The variables contained in the TRAP PDU are manifested at the end of
-- this document.  Only variables that resolve to an ASN.1 primitive type
-- of INTEGER (INTEGER, Counter, Gauge, or TimeTicks) may be monitored
-- with this MIB.
--
--   Two methods of sampling a selected variable are supported, which control
-- calculating the value to be compared against the thresholds (see
-- alarmThreshSampleType).  absoluteValue(1) specifies that the value of
-- the selected variable will be compared directly with the thresholds at
-- the end of the sampling interval.  deltaValue(2) specifies that the value
-- of the selected variable at the last sample will be subtracted from the
-- current value, and the difference compared with the thresholds.
--
--   It should be noted that deltaValue(2) sampling has the potential to
-- generate a large number of rising and falling threshold crossings in a
-- a short period of time.  The sample time and threshold values should
-- be chosen to avoid this problem.  Also this simple threshold method may
-- not catch changes that occur across sample boundaries.  This effect
-- can be minimized by reducing the sample interval.
--
--   The Alarm-Threshold function has a hysteresis mechanism to limit
-- the generation of events.  This mechanism generates one event as a
-- threshold is crossed in the appropriate direction.  No more events are
-- generated for that threshold until the opposite threshold is crossed.
--
--   The Alarm-Threshold MIB employs two disparate notions of alarm entry
-- `ownership', which govern NMS abilities to SET certain aspects of
-- said alarm entries (see alarmThreshOwner).  Specifically, one set of
-- alarm entries are owned by the server-agent resident on this entity,
-- which are responsible for monitoring certain mission critical variables.
-- A second set of alarm variable(s) may be imposed upon the target
-- entity, on behalf of an NMS, for monitoring variables deemed of
-- significance to the end user.
--
-- (2)
--   All EDACS network elements which provide alarming of threshold
```

```
-- oriented conditions shall adhere their implementation to this MIB.
--
-- NOTICE:
-- (1) The information in this document is subject to change without notice.
--     Ericsson Inc. assumes no responsibility for any errors that may
--     appear in this document.
--*****************************************************************************

   EDACS-ALARM-THRESHOLD-MIB DEFINITIONS ::= BEGIN

   IMPORTS
      enterprises        FROM RFC1155-SMI
      TimeTicks          FROM RFC1155-SMI
      IpAddress          FROM RFC1155-SMI
      OBJECT-TYPE        FROM RFC-1212
      DisplayString      FROM RFC1213-MIB
      TRAP-TYPE          FROM RFC-1215
      trapSequenceNumber FROM EDACS-ME-COMMON-MIB;

   -- Object identifiers

   ericsson             OBJECT IDENTIFIER ::= { enterprises 193 }
   edacs                OBJECT IDENTIFIER ::= { ericsson 10 }

   system               OBJECT IDENTIFIER ::= { edacs 1 }
   alarm                OBJECT IDENTIFIER ::= { system 3 }
   alarmThreshold       OBJECT IDENTIFIER ::= { alarm 1 }

--*****************************************************************************

   alarmThreshNextIndex OBJECT-TYPE
      SYNTAX  INTEGER (1..65535)
      ACCESS  read-only
      STATUS  mandatory
      DESCRIPTION
            "The index of the next available entry in the alarm threshold
            table.  If the maximum number of entries to the alarm
            table has been reached, this index will contain -1."
      ::= { alarmThreshold 1 }

   alarmThreshMinInterval OBJECT-TYPE
      SYNTAX  TimeTicks
      ACCESS  read-only
      STATUS  mandatory
      DESCRIPTION
            "The minimum sampling interval that this agent can support.
            Any attempt to set alarmThreshInterval to a shorter
            interval will result in a `badValue' response."
      ::= { alarmThreshold 2 }

   alarmThreshDefaultInterval OBJECT-TYPE
      SYNTAX  TimeTicks
      ACCESS  read-write
      STATUS  mandatory
      DESCRIPTION
            "The default sampling interval.  This value will be used
            as the default value for alarmThreshInterval when a new
            alarmThreshEntry is created.  This value may not be set
            lower than alarmThreshMinInterval."
      ::= { alarmThreshold 3 }

   alarmThreshTable OBJECT-TYPE
      SYNTAX  SEQUENCE OF AlarmThreshEntry
```

```
      ACCESS  not-accessible
      STATUS  mandatory
      DESCRIPTION
            "A (conceptual) table which contains a list of alarm threshold
            entries maintained on this entity."
      ::= { alarmThreshold 4 }

   alarmThreshEntry OBJECT-TYPE
      SYNTAX  AlarmThreshEntry
      ACCESS  not-accessible
      STATUS  mandatory
      DESCRIPTION
            "A (conceptual) entry in the alarmThreshTable.
            Each entry contains a list of parameters that set up a periodic
            checking for alarm threshold conditions."
      INDEX   { alarmThreshIndex }
      ::= { alarmThreshTable 1 }

   AlarmThreshEntry ::= SEQUENCE {
          alarmThreshIndex                INTEGER (1..65535),
          alarmThreshStatus               INTEGER,
          alarmThreshOwner                DisplayString (SIZE(0..127)),
          alarmThreshVariable             OBJECT IDENTIFIER,
          alarmThreshSampleType           INTEGER,
          alarmThreshValue                INTEGER,
          alarmThreshLastTimeSampled      TimeTicks,
          alarmThreshInterval             TimeTicks,
          alarmThreshPermanence           INTEGER,
          alarmThreshStartupAlarm         INTEGER,
          alarmThreshRisingThreshold      INTEGER,
          alarmThreshFallingThreshold     INTEGER,
          alarmThreshRisingDescription    DisplayString (SIZE(0..255)),
          alarmThreshFallingDescription   DisplayString (SIZE(0..255)),
          alarmThreshNotifyThisNMS        IpAddress,
          alarmThreshLastRisingSent       TimeTicks,
          alarmThreshLastFallingSent      TimeTicks
        }

   alarmThreshIndex OBJECT-TYPE
      SYNTAX  INTEGER (1..65535)
      ACCESS  read-only
      STATUS  mandatory
      DESCRIPTION
              "An index that uniquely identifies an entry in the
              alarm table.  Each such entry defines a diagnostic sample at a
              particular interval for an object on the device."
      ::= { alarmThreshEntry 1 }

   alarmThreshStatus OBJECT-TYPE
      SYNTAX INTEGER {
            enabled(1),
            disabled(2),
            createRequest(3),
            underCreation(4),
            deleteRequest(5),
            tempUnavailable(6)
      }
      ACCESS  read-write
      STATUS  mandatory
      DESCRIPTION
          "The status of this alarm entry.

           Setting this object to the value enabled(1) has the
```

```
            effect of initiating monitoring according to the value
            of alarmThreshSampleType.  It also enables the generation
            of rising and falling traps as specified by
            alarmThreshRisingThreshold and alarmThreshFallingThreshold.
            While this object has a status of enabled(1) none of the
            object's monitoring parameters may be changed.  Any attempt
            to change one of these parameters will return badValue.

            Setting this object to the value disable(2) disables all
            variable monitoring and trap generation.  It is used to
            temporarily disable an alarm, or to make changes in the
            monitoring parameters that cannot be done while the object
            is enabled(1).

            An existing instance of this object cannot be set to
            createRequest(3).  A new object can be created using an
            index obtained from alarmThreshNextIndex and setting
            the object to the value createRequest(3).  When
            this object is created, the agent may wish to create
            supplemental object instances to complete a conceptual
            row in this table.  Immediately after completing the
            create operation, the agent must set this object to
            underCreation(4).

            Entries shall exist in the underCreation(4) state until
            the management station is finished configuring the
            entry and sets this object to enabled(1), disabled(2),
            or aborts the entry by setting this object to deleteRequest(5).
            The agent will deny a request to modify an underCreation(4)
            entry to be that of createRequest(3) in order to lessen
            problems arising when multiple management stations may be
            trying to add an entry with the same index.  If the agent
            determines that an entry has been in the underCreation(4)
            state for an abnormally long time, it may decide that the
            management station has crashed.  If the agent makes this
            decision, it may delete the object to reclaim the
            entry.  A prudent agent will understand that the
            management station may need to wait for human input
            and will allow for that possibility in its
            determination of this abnormally long period.

            Setting this object to the value deleteRequest(5) will
            remove the entry from the table.

            If the agent has an entry which is enabled(1) and it
            is unable to query the particular ASN.1 object specified,
            the agent should set the status to tempUnavailable(6).
            The agent should continue to query that ASN.1 object,
            and upon a successful query, the agent should set the
            status back to enabled(1).  If the sample type is
            deltaValue(2), the value of alarmThreshValue will be set
            to 0 (No trap will be generated.) and delta sampling will
            begin again at the end of the next sample interval."
      ::= { alarmThreshEntry 2 }

   alarmThreshOwner OBJECT-TYPE
      SYNTAX  DisplayString (SIZE (0..127))
      ACCESS  read-write
      STATUS  mandatory
      DESCRIPTION
            "The entity that configured this entry and is
            therefore using the resources assigned to it.
```

```
            This string is used to model an administratively
            assigned name of the owner of a resource. This
            information is taken from the NVT ASCII character set.
            It is suggested that this name contain one or more
            of the following:
            IP address, management station name, network manager's
            name, location, or phone number.

            In some cases the agent itself will be the owner of
            an entry.  In these cases, this string shall be set
            to a string starting with `monitor'.

            SNMP access control is articulated entirely in terms of
            the contents of MIB views; access to a particular SNMP
            object instance depends only upon its presence or
            absence in a particular MIB view and never upon its
            value or the value of related object instances. Thus,
            objects of this type afford resolution of resource
            contention only among cooperating managers; they
            realize no access control function with respect
            to uncooperative parties."
    ::= { alarmThreshEntry 3 }

alarmThreshVariable OBJECT-TYPE
    SYNTAX  OBJECT IDENTIFIER
    ACCESS  read-write
    STATUS  mandatory
    DESCRIPTION
                "The object identifier of the particular variable to
                be sampled.  Only variables that resolve to an ASN.1
                primitive type of INTEGER (INTEGER, Counter, Gauge,
                or TimeTicks) may be sampled.

                Because SNMP access control is articulated entirely
                in terms of the contents of MIB views, no access
                control mechanism exists that can restrict the value of
                this object to identify only those objects that exist
                in a particular MIB view.  Because there is thus no
                acceptable means of restricting the read access that
                could be obtained through the alarm mechanism, the
                agent must only grant write access to this object in
                those views that have read access to all objects on
                the agent.

                During a set operation, if the supplied variable
                name is not available in the selected MIB view, a
                badValue error must be returned.  If at any time
                the variable name of an established alarmThreshEntry is
                no longer available in the selected MIB view, the
                agent must change the status of this alarmThreshEntry
                to tempUnavailable(6).

                This object may not be modified if the associated
                alarmThreshStatus object is equal to enabled(1)."
      ::= { alarmThreshEntry 4 }

alarmThreshSampleType OBJECT-TYPE
    SYNTAX INTEGER {
           absoluteValue(1),
           deltaValue(2)
    }
    ACCESS  read-write
    STATUS  mandatory
```

```
      DESCRIPTION
                  "The method of sampling the selected variable and
                  calculating the value to be compared against the
                  thresholds.  If the value of this object is
                  absoluteValue(1), the value of the selected variable
                  will be compared directly with the thresholds at the
                  end of the sampling interval.  If the value of this
                  object is deltaValue(2), the value of the selected
                  variable at the last sample will be subtracted from
                  the current value, and the difference compared with
                  the thresholds.

                  This object may not be modified if the associated
                  alarmThreshStatus object is equal to enabled(1)."
      ::= { alarmThreshEntry 5 }

   alarmThreshValue OBJECT-TYPE
      SYNTAX  INTEGER
      ACCESS  read-only
      STATUS  mandatory
      DESCRIPTION
            "The value of the object identifier (alarmThreshVariable)
             during the last sampling period.  The value during the
             current sampling period is not made available until
             the period is completed.

             If the sample type (alarmThreshSampleType) is
             absoluteValue(1), the value (alarmThreshValue) should
             become the actual value obtained during this sampling
             period.

             If the sample type (alarmThreshSampleType) is
             deltaValue(2), the value (alarmThreshValue) will be
             0 when the entry's status is first set to enabled(1).
             However, this will NOT generate any traps (even if the
             falling threshold is greater than 0.)
             The value (alarmThreshValue) should become the most
             recently sampled value minus the previous sample."
      ::= { alarmThreshEntry 6 }

   alarmThreshLastTimeSampled OBJECT-TYPE
      SYNTAX  TimeTicks
      ACCESS  read-only
      STATUS  mandatory
      DESCRIPTION
            "The value of sysUpTime at which the current value of
            alarmThreshValue was sampled."
      ::= { alarmThreshEntry 7 }

   alarmThreshInterval OBJECT-TYPE
      SYNTAX  TimeTicks
      ACCESS  read-write
      STATUS  mandatory
      DESCRIPTION
              "The interval in TimeTicks over which the data is
              sampled and compared with the rising and falling
              thresholds.  When setting this variable, care
              should be given to ensure that the variable being
              monitored will not exceed 2^31 - 1 and roll
              over the alarmThreshValue object during the interval.
              This value may not be set less than the value of
              alarmThreshMinInterval.
```

```
            The first sample will be taken immediately upon the
            alarmThreshStatus being set to enabled(1).

            This object may not be modified if the associated
            alarmThreshStatus object is equal to enabled(1)."
      ::= { alarmThreshEntry 8 }

   alarmThreshPermanence OBJECT-TYPE
      SYNTAX INTEGER {
             temporary(1),
             permanent(2)
      }
      ACCESS  read-write
      STATUS  mandatory
      DESCRIPTION
             "The storage method for this entry.

             If set to temporary(1) this entry will be stored only in
             volatile memory and may be deleted if the network
             management system is re-initialized.

             If set to permanent(2) this entry will be stored in some
             form of non-volatile storage and will be maintained
             between re-initializations of the network management
             system.  NOTE: A re-initialization may have the same
             effect as setting enabled(1) entries to disabled(2) and
             then setting them back to enabled(1).  In particular the
             values of alarmThreshLastTimeSampled,
             alarmThreshLastRisingSent, and alarmThreshLastFallingSent
             will be reset."
      ::= { alarmThreshEntry 9 }

   alarmThreshStartupAlarm OBJECT-TYPE
      SYNTAX INTEGER {
             risingAlarm(1),
             fallingAlarm(2),
             risingOrFallingAlarm(3)
      }
      ACCESS  read-write
      STATUS  mandatory
      DESCRIPTION
               "The alarm that may be sent when this entry is first
               set to enabled(1).

               If the sample type (alarmThreshSampleType) is
               absoluteValue(1), then the following comparison is used
               to generate an event.  If alarmThreshStartupAlarm is equal
               to risingAlarm(1) or risingOrFallingAlarm(3), then a
               single event will be generated if the first sample after
               this entry becomes enabled is greater than or equal to this
               threshold.  If alarmThreshStartupAlarm is equal to
               fallingAlarm(2) or risingOrFallingAlarm(3), then a
               single event will be generated if the first sample
               after this entry becomes enabled is less than or equal to
               this threshold.

               If the first sample after this entry
               becomes enabled is greater than or equal to the
               rising threshold and alarmThreshStartupAlarm is equal to
               risingAlarm(1) or risingOrFallingAlarm(3), then a
               single rising alarm will be generated.  If the first
               sample after this entry becomes enabled is less than
               or equal to the falling threshold and
```

```
              alarmThreshStartupAlarm is equal to fallingAlarm(2) or
              risingOrFallingAlarm(3), then a single falling
              alarm will be generated.

              This object may not be modified if the associated
              alarmThreshStatus object is equal to enabled(1)."
      ::= { alarmThreshEntry 10 }

alarmThreshRisingThreshold OBJECT-TYPE
   SYNTAX  INTEGER
   ACCESS  read-write
   STATUS  mandatory
   DESCRIPTION
           "A threshold for the sampled object identifier
           (alarmThreshVariable).

            If the sample type (alarmThreshSampleType) is
            absoluteValue(1), then the following describes the
            comparison.  When the current sampled value is greater
            than or equal to this threshold, and the value
            (alarmThreshValue) at the last sampling interval was
            less than this threshold, a single event will be generated.

            If alarmThreshStartupAlarm is equal to risingAlarm(1) or
            risingOrFallingAlarm(3), then a single event will be
            generated if the first sample after this entry becomes
            enabled is greater than or equal to this threshold.

            After a rising event is generated, another such event
            will not be generated until the sampled value
            falls below this threshold and reaches the falling
            threshold (alarmThreshFallingThreshold).

            If the sample type (alarmThreshSampleType) is
            deltaValue(2), then the following describes the
            comparison.  When the most recently sampled value minus
            the previous sampled value is greater than or equal to
            the threshold (alarmThreshRisingThreshold), and the
            current alarm value (alarmThreshValue) is less than the
            threshold value (alarmThreshRisingThreshold) a single
            event will be generated.  After a rising event is
            generated, another such event will not be generated
            until the most recently sampled value minus the previous
            sampled value falls below this threshold
            (alarmThreshRisingThreshold) and reaches the falling
            threshold (alarmThreshFallingThreshold).

            This object may not be modified if the associated
            alarmThreshStatus object is equal to enabled(1)."
      ::= { alarmThreshEntry 11 }

alarmThreshFallingThreshold OBJECT-TYPE
   SYNTAX  INTEGER
   ACCESS  read-write
   STATUS  mandatory
   DESCRIPTION
            "A threshold for the sampled object identifier
            (alarmThreshVariable).

            If the sample type (alarmThreshSampleType) is
            absoluteValue(1), then the following describes the
            comparison.  When the current sampled value is less
            than or equal to this threshold, and the value
```

```
            (alarmThreshValue) at the last sampling interval was
            greater than this threshold, a single event will be
            generated.  If alarmThreshStartupAlarm is equal to
            fallingAlarm(2) or risingOrFallingAlarm(3), then a
            single event will be generated if the first sample after
            this entry becomes enabled is less than or equal to this
            threshold.  After a falling event is generated, another
            such event will not be generated until the sampled value
            rises above this threshold and reaches the rising
            threshold (alarmThreshRisingThreshold).

            If the sample type (alarmThreshSampleType) is
            deltaValue(2), then the following describes the
            comparison.  When the most recently sampled value minus
            the previous sampled value is less than or equal to
            the threshold (alarmThreshFallingThreshold), and the
            current alarm value (alarmThreshValue) is greater than the
            threshold value (alarmThreshFallingThreshold) a single
            event will be generated. After a falling event is
            generated, another such event will not be generated
            until the most recently sampled value minus the previous
            sampled value rises above this threshold
            (alarmThreshFallingThreshold) and reaches the rising
            threshold (alarmThreshRisingThreshold).

            This object may not be modified if the associated
            alarmThreshStatus object is equal to enabled(1)."
      ::= { alarmThreshEntry 12 }

alarmThreshRisingDescription OBJECT-TYPE
   SYNTAX  DisplayString (SIZE (0..255))
   ACCESS  read-write
   STATUS  mandatory
   DESCRIPTION
         "A description of the rising alarm."
   ::= { alarmThreshEntry 13 }

alarmThreshFallingDescription OBJECT-TYPE
   SYNTAX  DisplayString (SIZE (0..255))
   ACCESS  read-write
   STATUS  mandatory
   DESCRIPTION
         "A description of the falling alarm."
   ::= { alarmThreshEntry 14 }

alarmThreshNotifyThisNMS OBJECT-TYPE
   SYNTAX  IpAddress
   ACCESS  read-write
   STATUS  mandatory
   DESCRIPTION
           "The IP address of the network management station that
           desires notification of any threshold crossings.

           If set to 0.0.0.0, the agent will send threshold traps
           to all network management stations which have an entry
           in this entity's trapDestinationTable."
   ::= { alarmThreshEntry 15 }

alarmThreshLastRisingSent OBJECT-TYPE
   SYNTAX  TimeTicks
   ACCESS  read-only
   STATUS  mandatory
   DESCRIPTION
```

```
              "The value of sysUpTime at the time this alarm entry last
              generated a rising threshold event which resulting in the
              sending of an SNMP TRAP to one or more NMS.  If this entry
              has not generated any such events, this value will be zero."
      ::= { alarmThreshEntry 16 }

   alarmThreshLastFallingSent OBJECT-TYPE
      SYNTAX  TimeTicks
      ACCESS  read-only
      STATUS  mandatory
      DESCRIPTION
              "The value of sysUpTime at the time this alarm entry last
              generated a falling threshold event which resulting in the
              sending of an SNMP TRAP to one or more NMS.  If this entry
              has not generated any such events, this value will be zero."
      ::= { alarmThreshEntry 17 }

-- ****************************************************************************
-- Alarm Threshold Trap Definitions
-- ****************************************************************************

   alarmRisingThresholdTrap TRAP-TYPE
      ENTERPRISE edacs
      VARIABLES  { trapSequenceNumber,
                   alarmThreshVariable,
                   alarmThreshSampleType,
                   alarmThreshValue,
                   alarmThreshRisingThreshold,
                   alarmThreshOwner,
                   alarmThreshIndex }
      DESCRIPTION
            "Rising Threshold passed.

             An alarm entry has crossed its rising threshold.  The
             instances of those objects contained within the variable
             list are those of the alarm entry which generated this trap."
      ::= 10010

   alarmFallingThresholdTrap TRAP-TYPE
      ENTERPRISE edacs
      VARIABLES  { trapSequenceNumber,
                   alarmThreshVariable,
                   alarmThreshSampleType,
                   alarmThreshValue,
                   alarmThreshFallingThreshold,
                   alarmThreshOwner,
                   alarmThreshIndex }
      DESCRIPTION
            "Falling Threshold passed.

             An alarm entry has crossed its falling threshold.  The
             instances of those objects contained within the variable
             list are those of the alarm entry which generated this trap."
      ::= 10011


     END
```

A.4. edacs103.mib

```
--*****************************************************************************
-- File:    edacs103.mib
-- Title:       EDACS Site Level Performance
--          Management Information Base
--
--          Copyright (C) 1995, Ericsson, Inc.
--          Private Radio Systems (PRS) Division.
--          All Rights Reserved.
--
-- PRS MIB STATUS:      PRELIMINARY
--
-- Description:
--   This MIB specifies performance information available at the EDACS
-- Site level.
--
-- Notice:
-- (1) The information in this document is subject to change without notice.
--     Ericsson Inc. assumes no responsibility for any errors that may
--     appear in this document.
--*****************************************************************************

   EDACS-SITE-PERFORMANCE-MIB DEFINITIONS ::= BEGIN

   IMPORTS
      enterprises       FROM RFC1155-SMI
      Counter           FROM RFC1155-SMI
      TimeTicks         FROM RFC1155-SMI
      OBJECT-TYPE       FROM RFC-1212;

   -- Object Identifiers

   ericsson             OBJECT IDENTIFIER ::= { enterprises 193 }
   edacs                OBJECT IDENTIFIER ::= { ericsson 10 }

   system               OBJECT IDENTIFIER ::= { edacs 1 }
   site                 OBJECT IDENTIFIER ::= { system 4 }
   sitePerformance      OBJECT IDENTIFIER ::= { site 2 }

   -- Textual conversions

   SiteNumberType ::= INTEGER (1..64)
--   ChannelNumberType  ::= INTEGER (1..32)

--*****************************************************************************
-- Site level total statistics summary information.
--*****************************************************************************

   siteTotalTable OBJECT-TYPE
      SYNTAX  SEQUENCE OF SiteTotalEntry
      ACCESS  not-accessible
      STATUS  mandatory
      DESCRIPTION
            "A (conceptual) table which contains a summary of total
            statistics for EDACS sites."
      ::= { sitePerformance 1 }
```

```
siteTotalEntry OBJECT-TYPE
   SYNTAX  SiteTotalEntry
   ACCESS  not-accessible
   STATUS  mandatory
   DESCRIPTION
         "A (conceptual) entry in the siteTotalTable which contains
         statistics information for a particular EDACS site."
   INDEX { siteTotalNumber }
   ::= { siteTotalTable  1 }

SiteTotalEntry ::= SEQUENCE {
       siteTotalNumber                SiteNumberType,
       siteTotalEntityID              OBJECT IDENTIFIER,
       siteTotalMibExtension          OBJECT IDENTIFIER,
       siteTotalSampleInterval        TimeTicks,
       siteTotalAssigned              Counter,
       siteTotalAssignedEmergencies   Counter,
       siteTotalAssignedSecondary     Counter,
       siteTotalAssignedMsgTrunked    Counter,
       siteTotalDropped               Counter,
       siteTotalQueued                Counter,
       siteTotalDenied                Counter,
       siteTotalSysBusy               Counter,
       siteTotalChanKeys              Counter,
       siteTotalChanUnKeys            Counter,
       siteTotalCktTime               TimeTicks,
       siteTotalCktQTime              TimeTicks
   }

siteTotalNumber  OBJECT-TYPE
   SYNTAX  SiteNumberType
   ACCESS  read-only
   STATUS  mandatory
   DESCRIPTION
         "A unique value for each EDACS site, which serves as an index
         to a particular (conceptual) entry in the siteTotalTable.

         By convention, this value is identical to the `actual' number
         administratively assigned to this site.  For example, a
         value of five (5) literally identifies `site 5'.

         Note that the siteTotalNumber object instance is also used
         as an index to a specific entry in the siteTotalTable.
         Thus, management stations must be prepared to receive
         tabular information whose instance identification is not
         ordinately based with regard to it's (conceptual) position
         in the siteTotalTable."
   ::= { siteTotalEntry 1 }

siteTotalEntityID  OBJECT-TYPE
   SYNTAX  OBJECT IDENTIFIER
   ACCESS  read-only
   STATUS  mandatory
   DESCRIPTION
         "The authoritative identification of the EDACS product which
         is providing the accessibility information for this site
         (a `conceptual row' in the siteTotalTable)."
   ::= { siteTotalEntry 2 }

siteTotalMibExtension  OBJECT-TYPE
   SYNTAX  OBJECT IDENTIFIER
   ACCESS  read-only
   STATUS  mandatory
```

```
      DESCRIPTION
            "A reference to a MIB definition which this entity implements
            for extended information regarding sites.

            If this extension information is not present, then the
            siteTotalMibExtension object instance value shall be
            OBJECT IDENTIFIER { 0 0 }, which is a syntactically valid
            object identifier."
      ::= { siteTotalEntry 3 }

   siteTotalSampleInterval  OBJECT-TYPE
      SYNTAX  TimeTicks
      ACCESS  read-write
      STATUS  mandatory
      DESCRIPTION
            "The time interval, expressed in hundredths of a second,
            during which statistics have been collected for this site.

            The only value a management station may attempt to set is
            zero (0), which has the effect of resetting the
            accessibility statistics for this site to zero.  If this
            entity does not support resetting the statistics, or a value
            other than zero is attempted to be written, then a `badValue'
            should be returned."
      ::= { siteTotalEntry 4 }

   siteTotalAssigned  OBJECT-TYPE
      SYNTAX  Counter
      ACCESS  read-only
      STATUS  mandatory
      DESCRIPTION
            "The total number of successful resource (e.g. channel)
            allocations that this site has performed."
      ::= { siteTotalEntry 5 }

   siteTotalAssignedEmergencies  OBJECT-TYPE
      SYNTAX  Counter
      ACCESS  read-only
      STATUS  mandatory
      DESCRIPTION
            "The total number of successful resource (e.g. channel)
            allocations provided for emergency calls.
            Note that this counter is included in the siteTotalCallAssigned
            object instance."
      ::= { siteTotalEntry 6 }

   siteTotalAssignedSecondary  OBJECT-TYPE
      SYNTAX  Counter
      ACCESS  read-only
      STATUS  mandatory
      DESCRIPTION
            "The total number of successful resource (e.g. channel)
            allocations made by this site for which this site was not
            the originating entity for a multi-site call.
            Note that this counter is included in the siteTotalCallAssigned
            object instance."
      ::= { siteTotalEntry 7 }

   siteTotalAssignedMsgTrunked  OBJECT-TYPE
      SYNTAX  Counter
      ACCESS  read-only
      STATUS  mandatory
      DESCRIPTION
```

```
          "The total number of successful resource (e.g. channel)
          allocations provided for calls which where message trunked.
          Note that this counter is included in the siteTotalCallAssigned
          object instance.  This variable is useful for determining
          the relative percentages of transmission and message
          trunking being performed by this site. "
   ::= { siteTotalEntry 8 }

siteTotalDropped  OBJECT-TYPE
   SYNTAX  Counter
   ACCESS  read-only
   STATUS  mandatory
   DESCRIPTION
          "The total number of successful resource (e.g. channel)
              de-allocations that this site has performed."
   ::= { siteTotalEntry 9 }

siteTotalQueued  OBJECT-TYPE
   SYNTAX  Counter
   ACCESS  read-only
   STATUS  mandatory
   DESCRIPTION
          "The total number of times that an attempt to a allocate a
          resource (e.g. channel) on this site resulted in the
          requesting user being queued for access to this site's
          resources."
   ::= { siteTotalEntry 10 }

siteTotalDenied  OBJECT-TYPE
   SYNTAX  Counter
   ACCESS  read-only
   STATUS  mandatory
   DESCRIPTION
          "The total number of times that an attempt to a allocate a
          resource (e.g. channel) on this site resulted in the
          requesting user being denied access to this site's
          resources."
   ::= { siteTotalEntry 11 }

siteTotalSysBusy  OBJECT-TYPE
   SYNTAX  Counter
   ACCESS  read-only
   STATUS  mandatory
   DESCRIPTION
          "The total number of times that an attempt to a allocate a
          resource (e.g. channel) on this site could not be granted
              due to a lack of available system resources."
   ::= { siteTotalEntry 12 }

siteTotalChanKeys  OBJECT-TYPE
   SYNTAX  Counter
   ACCESS  read-only
   STATUS  mandatory
   DESCRIPTION
          "The total number of times that channel keying event was
          reported by this site.  A channel key event occurs during
          message trunked calls, and indicates that a channel
          hangtime limit has been re-initialized."
   ::= { siteTotalEntry 13 }

siteTotalChanUnKeys  OBJECT-TYPE
   SYNTAX  Counter
   ACCESS  read-only
```

```
      STATUS  mandatory
      DESCRIPTION
            "The total number of times that channel un-key event was
            reported by this site.  A channel un-key event occurs during
            message trunked calls, and indicates that a channel hangtime
            counter has begun decrementing.  If the hangtime counter
            expires prior to a subsequent channel keying event, the
            channel in use will be de-allocated (e.g. dropped)."
      ::= { siteTotalEntry 14 }

   siteTotalCktTime  OBJECT-TYPE
      SYNTAX  TimeTicks
      ACCESS  read-only
      STATUS  mandatory
      DESCRIPTION
            "The total amount of circuit connection time, in hundredths of a
            second, that this site has provided."
      ::= { siteTotalEntry 15 }

   siteTotalCktQTime  OBJECT-TYPE
      SYNTAX  TimeTicks
      ACCESS  read-only
      STATUS  mandatory
      DESCRIPTION
            "The total amount of time, in hundredths of a second, that
            requests to allocate a circuit have been queued, pending
            on access to resource allocation at this site.

            Note that this variable does not reflect any artifacts of the
            final outcome of the queuing (e.g. whether or not resources
            were eventually allocated)."
      ::= { siteTotalEntry 16 }

--*****************************************************************************
-- Site level system accessibility statistics.
--*****************************************************************************

   siteAccessTable  OBJECT-TYPE
      SYNTAX  SEQUENCE OF SiteAccessEntry
      ACCESS  not-accessible
      STATUS  mandatory
      DESCRIPTION
            "A (conceptual) table which contains system accessibility
            statistics for EDACS sites."
      ::= { sitePerformance 2 }

   siteAccessEntry  OBJECT-TYPE
      SYNTAX  SiteAccessEntry
      ACCESS  not-accessible
      STATUS  mandatory
      DESCRIPTION
            "A (conceptual) entry in the siteAccessTable which contains
            accessibility information for a particular EDACS site."
      INDEX { siteAccessNumber }
      ::= { siteAccessTable  1 }

   SiteAccessEntry ::= SEQUENCE {
          siteAccessNumber                    SiteNumberType,
          siteAccessEntityID                  OBJECT IDENTIFIER,
          siteAccessMibExtension              OBJECT IDENTIFIER,
          siteAccessSampleInterval            TimeTicks,

          siteAssignedIndivVoice              Counter,
```

```
        siteAssignedGroupVoice                Counter,
        siteAssignedIndivData                 Counter,
        siteAssignedGroupData                 Counter,
        siteAssignedIndivOutboundTelephony    Counter,
        siteAssignedIndivInboundTelephony     Counter,
        siteAssignedGroupInboundTelephony     Counter,
        siteAssignedOther                     Counter,

        siteQueuedIndivVoice                  Counter,
        siteQueuedGroupVoice                  Counter,
        siteQueuedIndivData                   Counter,
        siteQueuedGroupData                   Counter,
        siteQueuedIndivOutboundTelephony      Counter,
        siteQueuedIndivInboundTelephony       Counter,
        siteQueuedGroupInboundTelephony       Counter,
        siteQueuedOther                       Counter,

        siteDeniedIndivVoice                  Counter,
        siteDeniedGroupVoice                  Counter,
        siteDeniedIndivData                   Counter,
        siteDeniedGroupData                   Counter,
        siteDeniedIndivOutboundTelephony      Counter,
        siteDeniedIndivInboundTelephony       Counter,
        siteDeniedGroupInboundTelephony       Counter,
        siteDeniedOther                       Counter,

        siteSysBusyIndivVoice                 Counter,
        siteSysBusyGroupVoice                 Counter,
        siteSysBusyIndivData                  Counter,
        siteSysBusyGroupData                  Counter,
        siteSysBusyIndivOutboundTelephony     Counter,
        siteSysBusyIndivInboundTelephony      Counter,
        siteSysBusyGroupInboundTelephony      Counter,
        siteSysBusyOther                      Counter,

        siteConvertedCallerToCallee           Counter
    }

siteAccessNumber  OBJECT-TYPE
    SYNTAX  SiteNumberType
    ACCESS  read-only
    STATUS  mandatory
    DESCRIPTION
          "A unique value for each EDACS site, which serves as an index
          to a particular (conceptual) entry in the siteAccessTable.

          By convention, this value is identical to the `actual' number
          administratively assigned to this site.  For example, a
          value of five (5) literally identifies `site 5'.

          Note that the siteAccessNumber object instance is also used
          as an index to a specific entry in the siteAccessTable.
          Thus, management stations must be prepared to receive
          tabular information whose instance identification is not
          ordinately based with regard to it's (conceptual) position
          in the siteAccessTable.

          For example, assume that this entity is only collecting
          information about site five (5).  As such, this entity would
          have only one (conceptual) entry in the siteAccessTable.
          Next, assume that a management station wishes to inspect
          the siteAssignedIndivVoice object instance associated with
          said site.  This specific instance would thus be identified as
```

```
            siteAssignedIndivVoice.5, as opposed to
            siteAssignedIndivVoice.1."
      ::= { siteAccessEntry 1 }

   siteAccessEntityID  OBJECT-TYPE
      SYNTAX  OBJECT IDENTIFIER
      ACCESS  read-only
      STATUS  mandatory
      DESCRIPTION
            "The authoritative identification of the EDACS product which
            is providing the accessibility information for this site
            (a `conceptual row' in the siteAccessTable)."
      ::= { siteAccessEntry 2 }

   siteAccessMibExtension  OBJECT-TYPE
      SYNTAX  OBJECT IDENTIFIER
      ACCESS  read-only
      STATUS  mandatory
      DESCRIPTION
            "A reference to a MIB definition which this entity implements
            for extended information regarding site accessibility.

            If this extension information is not present, then the
            siteAccessMibExtension object instance value shall be
            OBJECT IDENTIFIER { 0 0 }, which is a syntactically valid
            object identifier."
      ::= { siteAccessEntry 3 }

   siteAccessSampleInterval  OBJECT-TYPE
      SYNTAX  TimeTicks
      ACCESS  read-write
      STATUS  mandatory
      DESCRIPTION
            "The time interval, expressed in hundredths of a
            second, during which accessibility statistics have
            been collected for this site.

            The only value a management station may attempt to set is
            zero (0), which has the effect of resetting the
            accessibility statistics for this site to zero.  If this
            entity does not support resetting the statistics, or a value
            other than zero is attempted to be written, then a `badValue'
            should be returned."
      ::= { siteAccessEntry 4 }

-- Site level successful resource assignments.

   siteAssignedIndivVoice  OBJECT-TYPE
      SYNTAX  Counter
      ACCESS  read-only
      STATUS  mandatory
      DESCRIPTION
            "The total number of successful resource (channel) assignments
             that this site has provided for individual voice calls."
      ::= { siteAccessEntry 5 }

   siteAssignedGroupVoice  OBJECT-TYPE
      SYNTAX  Counter
      ACCESS  read-only
      STATUS  mandatory
      DESCRIPTION
            "The total number of successful resource (channel) assignments
            that this site has provided for group voice calls."
```

```
      ::= { siteAccessEntry 6 }

   siteAssignedIndivData  OBJECT-TYPE
      SYNTAX  Counter
      ACCESS  read-only
      STATUS  mandatory
      DESCRIPTION
            "The total number of successful resource (channel) assignments
            that this site has provided for individual data calls."
      ::= { siteAccessEntry 7 }

   siteAssignedGroupData  OBJECT-TYPE
      SYNTAX  Counter
      ACCESS  read-only
      STATUS  mandatory
      DESCRIPTION
            "The total number of successful resource (channel) assignments
            that this site has provided for group data calls."
      ::= { siteAccessEntry 8 }

   siteAssignedIndivOutboundTelephony  OBJECT-TYPE
      SYNTAX  Counter
      ACCESS  read-only
      STATUS  mandatory
      DESCRIPTION
            "The total number of successful resource (channel) assignments
            that this site has provided for individual outbound
            interconnect calls (e.g. PRS terminal to a telephony terminal)."
      ::= { siteAccessEntry 9 }

   siteAssignedIndivInboundTelephony  OBJECT-TYPE
      SYNTAX  Counter
      ACCESS  read-only
      STATUS  mandatory
      DESCRIPTION
            "The total number of successful resource (channel) assignments
            that this site has provided for individual inbound interconnect
            calls (e.g. telephony terminal to a PRS terminal)."
      ::= { siteAccessEntry 10 }

   siteAssignedGroupInboundTelephony  OBJECT-TYPE
      SYNTAX  Counter
      ACCESS  read-only
      STATUS  mandatory
      DESCRIPTION
            "The total number of successful resource (channel) assignments
            that this site has provided for group inbound interconnect calls
            (e.g. telephony terminal to multiple PRS terminals)."
      ::= { siteAccessEntry 11 }

   siteAssignedOther  OBJECT-TYPE
      SYNTAX  Counter
      ACCESS  read-only
      STATUS  mandatory
      DESCRIPTION
            "The total number of successful resource (channel) assignments
            made by this site which were not counted by the proceeding
            siteAssigned``CallType'' object instances."
      ::= { siteAccessEntry 12 }

-- Site level queuing for access to system resources.

   siteQueuedIndivVoice  OBJECT-TYPE
```

```
      SYNTAX  Counter
      ACCESS  read-only
      STATUS  mandatory
      DESCRIPTION
            "The total number of times that an attempt to place an
            individual voice call resulted in the requesting user being
            queued for access to this site's resources."
      ::= { siteAccessEntry 13 }

   siteQueuedGroupVoice  OBJECT-TYPE
      SYNTAX  Counter
      ACCESS  read-only
      STATUS  mandatory
      DESCRIPTION
            "The total number of times that an attempt to place a group
            voice call resulted in the requesting user being queued for
            access to this site's resources."
      ::= { siteAccessEntry 14 }

   siteQueuedIndivData  OBJECT-TYPE
      SYNTAX  Counter
      ACCESS  read-only
      STATUS  mandatory
      DESCRIPTION
            "The total number of times that an attempt to place an
            individual data call resulted in the requesting user being
            queued for access to this site's resources."
      ::= { siteAccessEntry 15 }

   siteQueuedGroupData  OBJECT-TYPE
      SYNTAX  Counter
      ACCESS  read-only
      STATUS  mandatory
      DESCRIPTION
            "The total number of times that an attempt to place a group data
            call resulted in the requesting user being queued for access
            to this site's resources."
      ::= { siteAccessEntry 16 }

   siteQueuedIndivOutboundTelephony  OBJECT-TYPE
      SYNTAX  Counter
      ACCESS  read-only
      STATUS  mandatory
      DESCRIPTION
            "The total number of times that an attempt to place an
            individual outbound interconnect call  (e.g. PRS terminal to a
            telephony terminal) resulted in the requesting user being
            queued for access to this site's resources."
      ::= { siteAccessEntry 17 }

   siteQueuedIndivInboundTelephony  OBJECT-TYPE
      SYNTAX  Counter
      ACCESS  read-only
      STATUS  mandatory
      DESCRIPTION
            "The total number of times that an attempt to place an
            individual inbound interconnect call (e.g. telephony terminal
            to a PRS terminal) resulted in the requesting user being
            queued for access to this site's resources."
      ::= { siteAccessEntry 18 }

   siteQueuedGroupInboundTelephony  OBJECT-TYPE
      SYNTAX  Counter
```

```
      ACCESS  read-only
      STATUS  mandatory
      DESCRIPTION
            "The total number of times that an attempt to place a group
            inbound interconnect call (e.g. telephony terminal to multiple
            PRS terminals) resulted in the requesting user being queued for
            access to this site's resources."
      ::= { siteAccessEntry 19 }

   siteQueuedOther  OBJECT-TYPE
      SYNTAX  Counter
      ACCESS  read-only
      STATUS  mandatory
      DESCRIPTION
            "The total number of that an attempt to allocate resources
            (e.g. channel) resulted in queuing which were not counted
            by the proceeding siteQueued``CallType'' object instances."
      ::= { siteAccessEntry 20 }

-- Site level denial for access to system resources.

   siteDeniedIndivVoice  OBJECT-TYPE
      SYNTAX  Counter
      ACCESS  read-only
      STATUS  mandatory
      DESCRIPTION
            "The total number of times that an attempt to place an
            individual voice call resulted in the requesting user being
            denied access to this site's resources."
      ::= { siteAccessEntry 21 }

   siteDeniedGroupVoice  OBJECT-TYPE
      SYNTAX  Counter
      ACCESS  read-only
      STATUS  mandatory
      DESCRIPTION
            "The total number of times that an attempt to place a group
            voice call resulted in the requesting user being denied access
            to this site's resources."
      ::= { siteAccessEntry 22 }

   siteDeniedIndivData  OBJECT-TYPE
      SYNTAX  Counter
      ACCESS  read-only
      STATUS  mandatory
      DESCRIPTION
            "The total number of times that an attempt to place an
            individual data call resulted in the requesting user being
            denied access to this site's resources."
      ::= { siteAccessEntry 23 }

   siteDeniedGroupData  OBJECT-TYPE
      SYNTAX  Counter
      ACCESS  read-only
      STATUS  mandatory
      DESCRIPTION
            "The total number of times that an attempt to place a group data
            call resulted in the requesting user being denied access to
            this site's resources."
      ::= { siteAccessEntry 24 }

   siteDeniedIndivOutboundTelephony  OBJECT-TYPE
      SYNTAX  Counter
```

```
      ACCESS  read-only
      STATUS  mandatory
      DESCRIPTION
            "The total number of times that an attempt to place an
            individual outbound interconnect call  (e.g. PRS terminal to a
            telephony terminal) resulted in the requesting user being
            denied access to this site's resources."
      ::= { siteAccessEntry 25 }

   siteDeniedIndivInboundTelephony  OBJECT-TYPE
      SYNTAX  Counter
      ACCESS  read-only
      STATUS  mandatory
      DESCRIPTION
            "The total number of times that an attempt to place an
            individual inbound interconnect call (e.g. telephony terminal
            to a PRS terminal) resulted in the requesting user being
            denied access to this site's resources."
      ::= { siteAccessEntry 26 }

   siteDeniedGroupInboundTelephony  OBJECT-TYPE
      SYNTAX  Counter
      ACCESS  read-only
      STATUS  mandatory
      DESCRIPTION
            "The total number of times that an attempt to place a group
            inbound interconnect call (e.g. telephony terminal to multiple
            PRS terminals) resulted in the requesting user being denied
            access to this site's resources."
      ::= { siteAccessEntry 27 }

   siteDeniedOther  OBJECT-TYPE
      SYNTAX  Counter
      ACCESS  read-only
      STATUS  mandatory
      DESCRIPTION
            "The total number of that an attempt to allocate resources
            (e.g. channel) resulted in the user being denied access
            at this site, which were not counted
            by the proceeding siteDenied``CallType'' object instances."
      ::= { siteAccessEntry 28 }

-- Site level inability to satisfy requests due to lack of resources.

   siteSysBusyIndivVoice  OBJECT-TYPE
      SYNTAX  Counter
      ACCESS  read-only
      STATUS  mandatory
      DESCRIPTION
            "The total number of times that a request to place an
            individual voice call could not be granted due to a lack of
            system resources at this site."
      ::= { siteAccessEntry 29 }

   siteSysBusyGroupVoice  OBJECT-TYPE
      SYNTAX  Counter
      ACCESS  read-only
      STATUS  mandatory
      DESCRIPTION
            "The total number of times that a request to place a group voice
            call could not be granted due to a lack of system resources
            at this site."
      ::= { siteAccessEntry 30 }
```

```
siteSysBusyIndivData  OBJECT-TYPE
   SYNTAX  Counter
   ACCESS  read-only
   STATUS  mandatory
   DESCRIPTION
         "The total number of times that a request to place an individual
         data call could not be granted due to a lack of system resources
         at this site."
   ::= { siteAccessEntry 31 }

siteSysBusyGroupData  OBJECT-TYPE
   SYNTAX  Counter
   ACCESS  read-only
   STATUS  mandatory
   DESCRIPTION
         "The total number of times that a request to place a group data
         call could not be granted due to a lack of system resources
         at this site."
   ::= { siteAccessEntry 32 }

siteSysBusyIndivOutboundTelephony  OBJECT-TYPE
   SYNTAX  Counter
   ACCESS  read-only
   STATUS  mandatory
   DESCRIPTION
         "The total number of times that a request to place an individual
         outbound interconnect call (e.g. PRS terminal to a telephony
         terminal) could not be granted due to a lack of system
         resources at this site."
   ::= { siteAccessEntry 33 }

siteSysBusyIndivInboundTelephony  OBJECT-TYPE
   SYNTAX  Counter
   ACCESS  read-only
   STATUS  mandatory
   DESCRIPTION
         "The total number of times that a request to place an individual
         inbound interconnect call (e.g. telephony terminal to a PRS
         terminal) could not be granted due to a lack of
         system resources at this site."
   ::= { siteAccessEntry 34 }

siteSysBusyGroupInboundTelephony  OBJECT-TYPE
   SYNTAX  Counter
   ACCESS  read-only
   STATUS  mandatory
   DESCRIPTION
         "The total number of times that an attempt to place a group
         inbound interconnect call (e.g. telephony terminal to multiple
         PRS terminals) could not be granted due to a lack of
         system resources at this site."
   ::= { siteAccessEntry 35 }

siteSysBusyOther  OBJECT-TYPE
   SYNTAX  Counter
   ACCESS  read-only
   STATUS  mandatory
   DESCRIPTION
         "The total number of that an attempt to allocate resources
         (e.g. channel) could not be granted due to a lack of
         system resources at this site, which were not counted
         by the proceeding siteSysBusy``CallType'' object instances."
```

```
      ::= { siteAccessEntry 36 }

   siteConvertedCallerToCallee  OBJECT-TYPE
      SYNTAX  Counter
      ACCESS  read-only
      STATUS  mandatory
      DESCRIPTION
            "The total number of times that an originating party (caller)
            was allocated resources (e.g. a channel), but was re-assigned
            as the destination party (callee) for the call at this site.
            This object instance provides an indication of (normal) glare
            conditions, which may occur during call conversations,
            which were successfully resolved with regard to resource
            allocation."
      ::= { siteAccessEntry 37 }

--*****************************************************************************
-- Site level circuit connection time utilization statistics.
--*****************************************************************************

   siteCktTimeTable  OBJECT-TYPE
      SYNTAX  SEQUENCE OF SiteCktTimeEntry
      ACCESS  not-accessible
      STATUS  mandatory
      DESCRIPTION
            "A (conceptual) table which contains circuit connection
            time statistics for EDACS sites."
      ::= { sitePerformance 3 }

   siteCktTimeEntry  OBJECT-TYPE
      SYNTAX  SiteCktTimeEntry
      ACCESS  not-accessible
      STATUS  mandatory
      DESCRIPTION
            "A (conceptual) entry in the siteCktTimeTable which contains
            circuit connection time statistics for a particular EDACS site."
      INDEX { siteCktTimeNumber }
      ::= { siteCktTimeTable  1 }

   SiteCktTimeEntry ::= SEQUENCE {
          siteCktTimeNumber                     SiteNumberType,
          siteCktTimeEntityID                   OBJECT IDENTIFIER,
          siteCktTimeMibExtension               OBJECT IDENTIFIER,
          siteCktTimeSampleInterval             TimeTicks,

          siteCktTimeIndivVoice                 TimeTicks,
          siteCktTimeGroupVoice                 TimeTicks,
          siteCktTimeIndivData                  TimeTicks,
          siteCktTimeGroupData                  TimeTicks,
          siteCktTimeIndivOutboundTelephony     TimeTicks,
          siteCktTimeIndivInboundTelephony      TimeTicks,
          siteCktTimeGroupInboundTelephony      TimeTicks,
          siteCktTimeOther                      TimeTicks,

          siteCktQTimeIndivVoice                TimeTicks,
          siteCktQTimeGroupVoice                TimeTicks,
          siteCktQTimeIndivData                 TimeTicks,
          siteCktQTimeGroupData                 TimeTicks,
          siteCktQTimeIndivOutboundTelephony    TimeTicks,
          siteCktQTimeIndivInboundTelephony     TimeTicks,
          siteCktQTimeGroupInboundTelephony     TimeTicks,
          siteCktQTimeOther                     TimeTicks
      }
```

```
   siteCktTimeNumber  OBJECT-TYPE
      SYNTAX  SiteNumberType
      ACCESS  read-only
      STATUS  mandatory
      DESCRIPTION
            "A unique value for each EDACS site, which serves as an index
            to a particular (conceptual) entry in the siteCktTimeTable.

            By convention, this value is identical to the `actual' number
            administratively assigned to this site.  For example, a
            value of five (5) literally identifies `site 5'."
      ::= { siteCktTimeEntry 1 }

   siteCktTimeEntityID  OBJECT-TYPE
      SYNTAX  OBJECT IDENTIFIER
      ACCESS  read-only
      STATUS  mandatory
      DESCRIPTION
            "The authoritative identification of the EDACS product which
            is providing the accessibility information for this site
            (a `conceptual row' in the siteCktTimeTable)."
      ::= { siteCktTimeEntry 2 }

   siteCktTimeMibExtension  OBJECT-TYPE
      SYNTAX  OBJECT IDENTIFIER
      ACCESS  read-only
      STATUS  mandatory
      DESCRIPTION
            "A reference to a MIB definition which this entity implements
            for extended information regarding site circuit usage.

            If this extension information is not present, then the
            siteAccessMibExtension object instance value shall be
            OBJECT IDENTIFIER { 0 0 }, which is a syntactically valid
            object identifier."
      ::= { siteCktTimeEntry 3 }

   siteCktTimeSampleInterval  OBJECT-TYPE
      SYNTAX  TimeTicks
      ACCESS  read-write
      STATUS  mandatory
      DESCRIPTION
            "The time interval, expressed in hundredths of a
            second, during which circuit connection time usage
            statistics have been collected for this site.

            The only value a management station may attempt to set is
            zero (0), which has the effect of resetting the circuit
            statistics for this site to zero.  If this
            entity does not support resetting the statistics, or a value
            other than zero is attempted to be written, then a `badValue'
            should be returned."
      ::= { siteCktTimeEntry 4 }

-- Circuit Utilization Time

   siteCktTimeIndivVoice  OBJECT-TYPE
      SYNTAX  TimeTicks
      ACCESS  read-only
      STATUS  mandatory
      DESCRIPTION
            "The total amount of circuit connection time, in hundredths of a
```

```
            second, that this site has provided for individual voice calls."
      ::= { siteCktTimeEntry 5 }

   siteCktTimeGroupVoice  OBJECT-TYPE
      SYNTAX  TimeTicks
      ACCESS  read-only
      STATUS  mandatory
      DESCRIPTION
            "The total amount of circuit connection time, in hundredths of a
            second, that this site has provided for group voice calls."
      ::= { siteCktTimeEntry 6 }

   siteCktTimeIndivData  OBJECT-TYPE
      SYNTAX  TimeTicks
      ACCESS  read-only
      STATUS  mandatory
      DESCRIPTION
            "The total amount of circuit connection time, in hundredths of a
            second, that this site has provided for individual data calls."
      ::= { siteCktTimeEntry 7 }

   siteCktTimeGroupData  OBJECT-TYPE
      SYNTAX  TimeTicks
      ACCESS  read-only
      STATUS  mandatory
      DESCRIPTION
            "The total amount of circuit connection time, in hundredths of a
            second, that this site has provided for group data calls."
      ::= { siteCktTimeEntry 8 }

   siteCktTimeIndivOutboundTelephony  OBJECT-TYPE
      SYNTAX  TimeTicks
      ACCESS  read-only
      STATUS  mandatory
      DESCRIPTION
            "The total amount of circuit connection time, in hundredths of a
            second, that this site has provided for individual outbound
            interconnect calls (e.g. PRS terminal to a telephony terminal)."
      ::= { siteCktTimeEntry 9 }

   siteCktTimeIndivInboundTelephony  OBJECT-TYPE
      SYNTAX  TimeTicks
      ACCESS  read-only
      STATUS  mandatory
      DESCRIPTION
            "The total amount of circuit connection time, in hundredths of a
            second, that this site has provided for individual inbound
            interconnect calls (e.g. telephony terminal to a PRS terminal)."
      ::= { siteCktTimeEntry 10 }

   siteCktTimeGroupInboundTelephony  OBJECT-TYPE
      SYNTAX  TimeTicks
      ACCESS  read-only
      STATUS  mandatory
      DESCRIPTION
            "The total amount of circuit connection time, in hundredths of a
            second, that this site has provided for group inbound
            interconnect calls (e.g. telephony terminal to multiple PRS
            terminals)."
      ::= { siteCktTimeEntry 11 }

   siteCktTimeOther  OBJECT-TYPE
      SYNTAX  TimeTicks
```

```
      ACCESS  read-only
      STATUS  mandatory
      DESCRIPTION
            "The total amount of circuit connection time, in hundredths of a
            second, that this site has provided which has not been
            accumulated by the proceeding siteCktTime``CallType''
            object instances."
      ::= { siteCktTimeEntry 12 }

-- Circuit Queuing Time

   siteCktQTimeIndivVoice  OBJECT-TYPE
      SYNTAX  TimeTicks
      ACCESS  read-only
      STATUS  mandatory
      DESCRIPTION
            "The total amount of time, in hundredths of a second, that
            requests to place an individual voice call have been queued,
            pending on access to resource allocation at this site.

            Note that this variable does not reflect any artifacts of the
            final outcome of the queuing (e.g. whether or not resources
            were eventually allocated)."
      ::= { siteCktTimeEntry 13 }

   siteCktQTimeGroupVoice  OBJECT-TYPE
      SYNTAX  TimeTicks
      ACCESS  read-only
      STATUS  mandatory
      DESCRIPTION
            "The total amount of time, in hundredths of a second, that
            requests to place a group voice call have been queued, pending
            on access to resource allocation at this site.

            Note that this variable does not reflect any artifacts of the
            final outcome of the queuing (e.g. whether or not resources
            were eventually allocated)."
      ::= { siteCktTimeEntry 14 }

   siteCktQTimeIndivData  OBJECT-TYPE
      SYNTAX  TimeTicks
      ACCESS  read-only
      STATUS  mandatory
      DESCRIPTION
            "The total amount of time, in hundredths of a second, that
            requests to place an individual data call have been queued,
            pending on access to resource allocation at this site.

            Note that this variable does not reflect any artifacts of the
            final outcome of the queuing (e.g. whether or not resources
            were eventually allocated)."
      ::= { siteCktTimeEntry 15 }

   siteCktQTimeGroupData  OBJECT-TYPE
      SYNTAX  TimeTicks
      ACCESS  read-only
      STATUS  mandatory
      DESCRIPTION
            "The total amount of time, in hundredths of a second, that
            requests to place a group data call have been queued, pending
            on access to resource allocation at this site.

            Note that this variable does not reflect any artifacts of the
```

```
            final outcome of the queuing (e.g. whether or not resources
            were eventually allocated)."
      ::= { siteCktTimeEntry 16 }

   siteCktQTimeIndivOutboundTelephony  OBJECT-TYPE
      SYNTAX  TimeTicks
      ACCESS  read-only
      STATUS  mandatory
      DESCRIPTION
            "The total amount of time, in hundredths of a second, that
            requests to place an individual outbound  interconnect call
            (e.g. PRS terminal to a  telephony terminal) have been queued,
            pending on access to resource allocation at this site.

            Note that this variable does not reflect any artifacts of the
            final outcome of the queuing (e.g. whether or not resources
            were eventually allocated)."
      ::= { siteCktTimeEntry 17 }

   siteCktQTimeIndivInboundTelephony  OBJECT-TYPE
      SYNTAX  TimeTicks
      ACCESS  read-only
      STATUS  mandatory
      DESCRIPTION
            "The total amount of time, in hundredths of a second, that
            requests to place an individual inbound interconnect call
            (e.g. telephony terminal to a PRS terminal) have been queued,
            pending on access to resource allocation at this site.

            Note that this variable does not reflect any artifacts of the
            final outcome of the queuing (e.g. whether or not resources
            were eventually allocated)."
      ::= { siteCktTimeEntry 18 }

   siteCktQTimeGroupInboundTelephony  OBJECT-TYPE
      SYNTAX  TimeTicks
      ACCESS  read-only
      STATUS  mandatory
      DESCRIPTION
            "The total amount of time, in hundredths of a second, that
            requests to place a group inbound interconnect call
            (e.g. telephony terminal to multiple PRS terminals) have been
            queued, pending on access to resource allocation at this site.

            Note that this variable does not reflect any artifacts of the
            final outcome of the queuing (e.g. whether or not resources
            were eventually allocated)."
      ::= { siteCktTimeEntry 19 }

   siteCktQTimeOther  OBJECT-TYPE
      SYNTAX  TimeTicks
      ACCESS  read-only
      STATUS  mandatory
      DESCRIPTION
            "The total amount of time, in hundredths of a second,
            that requests to allocate resources (e.g. channel) have
            been queued, which were not accumulated
            by the proceeding  siteCktQTime``CallType'' object instances.

            Note that this variable does not reflect any artifacts of the
            final outcome of the queuing (e.g. whether or not resources
            were eventually allocated)."
      ::= { siteCktTimeEntry 20 }
```

```
END
```

A.5. edacs104.mib

```
--*****************************************************************************
-- File:    edacs104.mib
-- Title:       EDACS Node Level Management Information Base
--
--          Copyright (C) 1995, Ericsson, Inc.
--          Private Radio Systems (PRS) Division.
--          All Rights Reserved.
--
-- PRS MIB STATUS:      PRELIMINARY
--
-- Description:
--   This MIB specifies performance information available at the EDACS
-- Service Node (e.g. primary switching center) level.
--
-- NOTICE:
-- (1) The information in this document is subject to change without notice.
--     Ericsson Inc. assumes no responsibility for any errors that may
--     appear in this document.
--*****************************************************************************

   EDACS-NODE-PERFORMANCE-MIB DEFINITIONS ::= BEGIN

   IMPORTS
      enterprises       FROM RFC1155-SMI
      Counter           FROM RFC1155-SMI
      TimeTicks         FROM RFC1155-SMI
      OBJECT-TYPE       FROM RFC-1212;

   -- Object Identifiers

   ericsson             OBJECT IDENTIFIER ::= { enterprises 193 }
   edacs                OBJECT IDENTIFIER ::= { ericsson 10 }
   system               OBJECT IDENTIFIER ::= { edacs 1 }
   node                 OBJECT IDENTIFIER ::= { system 5 }

   nodePerformance      OBJECT IDENTIFIER ::= { node 2 }
   nodeInfo             OBJECT IDENTIFIER ::= { nodePerformance 1 }
   nodeTotal            OBJECT IDENTIFIER ::= { nodePerformance 2 }
   nodeAccess           OBJECT IDENTIFIER ::= { nodePerformance 3 }
   nodeCktTime          OBJECT IDENTIFIER ::= { nodePerformance 4 }

   -- Textual conversions

   PositiveInteger      ::= INTEGER (0..2147483647)

--*****************************************************************************
-- General information provided by the entity which is providing the
-- service node performance information.
--*****************************************************************************

   nodeInfoEntityID OBJECT-TYPE
      SYNTAX  OBJECT IDENTIFIER
      ACCESS  read-only
      STATUS  mandatory
      DESCRIPTION
```

```
            "The authoritative identification of the EDACS product which
            is providing performance information for this service node."
      ::= { nodeInfo 1 }

   nodeInfoNumber OBJECT-TYPE
      SYNTAX  PositiveInteger
      ACCESS  read-only
      STATUS  mandatory
      DESCRIPTION
            "The administratively assigned node number of this EDACS
            service node.

            This value will be zero (0) if the entity supporting
            the node is not knowledgeable of the administratively
            assigned number for this service node."
      ::= { nodeInfo 2 }

   nodeInfoMibExtension OBJECT-TYPE
      SYNTAX  OBJECT IDENTIFIER
      ACCESS  read-only
      STATUS  mandatory
      DESCRIPTION
            "A reference to a MIB definition which this entity implements
            for extended information regarding node level performance.

            If this extension information is not present, then the
            nodeInfoMibExtension object instance value shall be
            OBJECT IDENTIFIER { 0 0 }, which is a syntactically valid
            object identifier."
      ::= { nodeInfo 3 }

--*****************************************************************************
-- Node level total statistics information.
--*****************************************************************************

   nodeTotalSampleInterval  OBJECT-TYPE
      SYNTAX  TimeTicks
      ACCESS  read-write
      STATUS  mandatory
      DESCRIPTION
            "The time interval, expressed in hundredths of a second,
            during which total summary statistics have been collected
            for this service node.

            The only value a management station may attempt to set is
            zero (0), which has the effect of resetting the total
            summary statistics for this node to zero.  If this
            entity does not support resetting the statistics, or a value
            other than zero is attempted to be written, then a `badValue'
            should be returned."
      ::= { nodeTotal 1 }

   nodeTotalAssigned  OBJECT-TYPE
      SYNTAX  Counter
      ACCESS  read-only
      STATUS  mandatory
      DESCRIPTION
            "The total number of successful resource (e.g. channel)
            allocations provided by this service node's resources."
      ::= { nodeTotal 2 }

   nodeTotalAssignedEmergencies  OBJECT-TYPE
      SYNTAX  Counter
```

```
      ACCESS  read-only
      STATUS  mandatory
      DESCRIPTION
            "The total number of successful resource (e.g. channel)
            allocations provided for emergency calls on this service node.
            Note that this counter is included in the nodeTotalAssigned
            object instance."
      ::= { nodeTotal 3 }

   nodeTotalAssignedSecondary  OBJECT-TYPE
      SYNTAX  Counter
      ACCESS  read-only
      STATUS  mandatory
      DESCRIPTION
            "The total number of successful resource (e.g. channel)
            allocations that this service node has performed which
            were associated with multi-site calls.
            Note that this counter is included in the nodeTotalAssigned
            object instance."
      ::= { nodeTotal 4 }

   nodeTotalAssignedMsgTrunked  OBJECT-TYPE
      SYNTAX  Counter
      ACCESS  read-only
      STATUS  mandatory
      DESCRIPTION
            "The total number of successful resource (e.g. channel)
            allocations provided for calls which where message trunked.
            Note that this counter is included in the nodeTotalAssigned
            object instance.  This variable is useful for determining
            the relative percentages of transmission and message
            trunking being performed at this service node."
      ::= { nodeTotal 5 }

   nodeTotalDropped  OBJECT-TYPE
      SYNTAX  Counter
      ACCESS  read-only
      STATUS  mandatory
      DESCRIPTION
            "The total number of successful resource (e.g. channel)
            de-allocations that this service node has performed."
      ::= { nodeTotal 6 }

   nodeTotalQueued  OBJECT-TYPE
      SYNTAX  Counter
      ACCESS  read-only
      STATUS  mandatory
      DESCRIPTION
            "The total number of times that an attempt to a allocate a
            resource (e.g. channel) resulted in the requesting user being
            queued for access to this service node's resources."
      ::= { nodeTotal 7 }

   nodeTotalDenied  OBJECT-TYPE
      SYNTAX  Counter
      ACCESS  read-only
      STATUS  mandatory
      DESCRIPTION
            "The total number of times that an attempt to a allocate a
            resource (e.g. channel) resulted in the requesting user being
            denied access to this service node's resources."
      ::= { nodeTotal 8 }
```

```
   nodeTotalSystemBusy  OBJECT-TYPE
      SYNTAX  Counter
      ACCESS  read-only
      STATUS  mandatory
      DESCRIPTION
            "The total number of times that an attempt to a allocate a
            resource (e.g. channel) could not be granted due to a lack of
            resource availability at this service node."
      ::= { nodeTotal 9 }

   nodeTotalCktTime OBJECT-TYPE
      SYNTAX  TimeTicks
      ACCESS  read-only
      STATUS  mandatory
      DESCRIPTION
            "The total amount of circuit connection time, in hundredths of a
            second, that this service node's resources have provided."
      ::= { nodeTotal 10 }

   nodeTotalCktQTime OBJECT-TYPE
      SYNTAX  TimeTicks
      ACCESS  read-only
      STATUS  mandatory
      DESCRIPTION
            "The total amount of time, in hundredths of a second, that
            requests to allocate a circuit have been queued, pending
            on access allocation to this service node's resources.

            Note that this variable does not reflect any artifacts of the
            final outcome of the queuing (e.g. whether or not resources
            were eventually allocated)."
      ::= { nodeTotal 11 }

--*****************************************************************************
-- Node level system accessibility statistics.
--*****************************************************************************

    nodeAccessSampleInterval  OBJECT-TYPE
      SYNTAX  TimeTicks
      ACCESS  read-write
      STATUS  mandatory
      DESCRIPTION
            "The time interval, expressed in hundredths of a second, during
            which accessibility statistics have been collected for this
            service node.

            The only value a management station may attempt to set is
            zero (0), which has the effect of resetting the
            accessibility statistics for this node to zero.  If this
            entity does not support resetting the statistics, or a value
            other than zero is attempted to be written, then a `badValue'
            should be returned."
      ::= { nodeAccess 1 }

-- Node level successful resource assignments.

   nodeAssignedIndivVoice     OBJECT-TYPE
      SYNTAX  Counter
      ACCESS  read-only
      STATUS  mandatory
      DESCRIPTION
            "The total number of successful resource (channel) assignments
             that this node has provided for individual voice calls."
```

```
      ::= { nodeAccess 2 }

   nodeAssignedGroupVoice     OBJECT-TYPE
      SYNTAX  Counter
      ACCESS  read-only
      STATUS  mandatory
      DESCRIPTION
            "The total number of successful resource (channel) assignments
            that this node has provided for group voice calls."
      ::= { nodeAccess 3 }

   nodeAssignedIndivData      OBJECT-TYPE
      SYNTAX  Counter
      ACCESS  read-only
      STATUS  mandatory
      DESCRIPTION
            "The total number of successful resource (channel) assignments
            that this node has provided for individual data calls."
      ::= { nodeAccess 4 }

   nodeAssignedGroupData      OBJECT-TYPE
      SYNTAX  Counter
      ACCESS  read-only
      STATUS  mandatory
      DESCRIPTION
            "The total number of successful resource (channel) assignments
            that this node has provided for group data calls."
      ::= { nodeAccess 5 }

   nodeAssignedIndivOutboundTelephony     OBJECT-TYPE
      SYNTAX  Counter
      ACCESS  read-only
      STATUS  mandatory
      DESCRIPTION
            "The total number of successful resource (channel) assignments
            that this node has provided for individual outbound
            interconnect calls (e.g. PRS terminal to a telephony terminal)."
      ::= { nodeAccess 6 }

   nodeAssignedIndivInboundTelephony      OBJECT-TYPE
      SYNTAX  Counter
      ACCESS  read-only
      STATUS  mandatory
      DESCRIPTION
            "The total number of successful resource (channel) assignments
            that this node has provided for individual inbound interconnect
            calls (e.g. telephony terminal to a PRS terminal)."
      ::= { nodeAccess 7 }

   nodeAssignedGroupInboundTelephony      OBJECT-TYPE
      SYNTAX  Counter
      ACCESS  read-only
      STATUS  mandatory
      DESCRIPTION
            "The total number of successful resource (channel) assignments
            that this node has provided for group inbound interconnect calls
            (e.g. telephony terminal to multiple PRS terminals)."
      ::= { nodeAccess 8 }

   nodeAssignedOther    OBJECT-TYPE
      SYNTAX  Counter
      ACCESS  read-only
      STATUS  mandatory
```

```
      DESCRIPTION
            "The total number of successful resource (channel) assignments
            that this service node has provided which were not counted by
            the proceeding nodeAssigned``CallType'' object instances."
      ::= { nodeAccess 9 }

-- Node level queuing for access to system resources.

   nodeQueuedIndivVoice       OBJECT-TYPE
      SYNTAX  Counter
      ACCESS  read-only
      STATUS  mandatory
      DESCRIPTION
            "The total number of times that an attempt to place an
            individual voice call resulted in the requesting user being
            queued for access to this node's resources."
      ::= { nodeAccess 10 }

   nodeQueuedGroupVoice       OBJECT-TYPE
      SYNTAX  Counter
      ACCESS  read-only
      STATUS  mandatory
      DESCRIPTION
            "The total number of times that an attempt to place a group
            voice call resulted in the requesting user being queued for
            access to this node's resources."
      ::= { nodeAccess 11 }

   nodeQueuedIndivData  OBJECT-TYPE
      SYNTAX  Counter
      ACCESS  read-only
      STATUS  mandatory
      DESCRIPTION
            "The total number of times that an attempt to place an
            individual data call resulted in the requesting user being
            queued for access to this node's resources."
      ::= { nodeAccess 12 }

   nodeQueuedGroupData  OBJECT-TYPE
      SYNTAX  Counter
      ACCESS  read-only
      STATUS  mandatory
      DESCRIPTION
            "The total number of times that an attempt to place a group data
            call resulted in the requesting user being queued for access
            to this node's resources."
      ::= { nodeAccess 13 }

   nodeQueuedIndivOutboundTelephony OBJECT-TYPE
      SYNTAX  Counter
      ACCESS  read-only
      STATUS  mandatory
      DESCRIPTION
            "The total number of times that an attempt to place an
            individual outbound interconnect call  (e.g. PRS terminal to a
            telephony terminal) resulted in the requesting user being
            queued for access to this node's resources."
      ::= { nodeAccess 14 }

   nodeQueuedIndivInboundTelephony        OBJECT-TYPE
      SYNTAX  Counter
      ACCESS  read-only
      STATUS  mandatory
```

```
      DESCRIPTION
            "The total number of times that an attempt to place an
            individual inbound interconnect call (e.g. telephony terminal
            to a PRS terminal) resulted in the requesting user being
            queued for access to this node's resources."
      ::= { nodeAccess 15 }

   nodeQueuedGroupInboundTelephony        OBJECT-TYPE
      SYNTAX  Counter
      ACCESS  read-only
      STATUS  mandatory
      DESCRIPTION
            "The total number of times that an attempt to place a group
            inbound interconnect call (e.g. telephony terminal to multiple
            PRS terminals) resulted in the requesting user being queued for
            access to this node's resources."
      ::= { nodeAccess 16 }

   nodeQueuedOther            OBJECT-TYPE
      SYNTAX  Counter
      ACCESS  read-only
      STATUS  mandatory
      DESCRIPTION
            "The total number of that an attempt to allocate resources
            (e.g. channel) resulted in queuing which was not counted
            by the proceeding nodeQueued``CallType'' object instances."
      ::= { nodeAccess 17 }

-- Node level denial for access to system resources.

   nodeDeniedIndivVoice       OBJECT-TYPE
      SYNTAX  Counter
      ACCESS  read-only
      STATUS  mandatory
      DESCRIPTION
            "The total number of times that an attempt to place an
            individual voice call resulted in the requesting user being
            denied access to this node's resources."
      ::= { nodeAccess 18 }

   nodeDeniedGroupVoice       OBJECT-TYPE
      SYNTAX  Counter
      ACCESS  read-only
      STATUS  mandatory
      DESCRIPTION
            "The total number of times that an attempt to place a group
            voice call resulted in the requesting user being denied access
            to this node's resources."
      ::= { nodeAccess 19 }

   nodeDeniedIndivData  OBJECT-TYPE
      SYNTAX  Counter
      ACCESS  read-only
      STATUS  mandatory
      DESCRIPTION
            "The total number of times that an attempt to place an
            individual data call resulted in the requesting user being
            denied access to this node's resources."
      ::= { nodeAccess 20 }

   nodeDeniedGroupData  OBJECT-TYPE
      SYNTAX  Counter
      ACCESS  read-only
```

```
      STATUS  mandatory
      DESCRIPTION
            "The total number of times that an attempt to place a group data
            call resulted in the requesting user being denied access to
            this node's resources."
      ::= { nodeAccess 21 }

   nodeDeniedIndivOutboundTelephony OBJECT-TYPE
      SYNTAX  Counter
      ACCESS  read-only
      STATUS  mandatory
      DESCRIPTION
            "The total number of times that an attempt to place an
            individual outbound interconnect call  (e.g. PRS terminal to a
            telephony terminal) resulted in the requesting user being
            denied access to this node's resources."
      ::= { nodeAccess 22 }

   nodeDeniedIndivInboundTelephony        OBJECT-TYPE
      SYNTAX  Counter
      ACCESS  read-only
      STATUS  mandatory
      DESCRIPTION
            "The total number of times that an attempt to place an
            individual inbound interconnect call (e.g. telephony terminal
            to a PRS terminal) resulted in the requesting user being
            denied access to this node's resources."
      ::= { nodeAccess 23 }

   nodeDeniedGroupInboundTelephony        OBJECT-TYPE
      SYNTAX  Counter
      ACCESS  read-only
      STATUS  mandatory
      DESCRIPTION
            "The total number of times that an attempt to place a group
            inbound interconnect call (e.g. telephony terminal to multiple
            PRS terminals) resulted in the requesting user being denied
            access to this node's resources."
      ::= { nodeAccess 24 }

   nodeDeniedOther            OBJECT-TYPE
      SYNTAX  Counter
      ACCESS  read-only
      STATUS  mandatory
      DESCRIPTION
            "The total number of that an attempt to allocate resources
            (e.g. channel) resulted in the user being denied access
            at this node, which were not counted by the proceeding
            nodeDenied``CallType'' object instances."
      ::= { nodeAccess 25 }

-- Node level inability to satisfy requests due to lack of resources.

   nodeSysBusyIndivVoice      OBJECT-TYPE
      SYNTAX  Counter
      ACCESS  read-only
      STATUS  mandatory
      DESCRIPTION
            "The total number of times that a request to place an
            individual voice call could not be granted due to a lack of
            system resources at this service node."
      ::= { nodeAccess 26 }
```

```
nodeSysBusyGroupVoice      OBJECT-TYPE
   SYNTAX  Counter
   ACCESS  read-only
   STATUS  mandatory
   DESCRIPTION
         "The total number of times that a request to place a group voice
         call could not be granted due to a lack of system resources
         at this service node."
   ::= { nodeAccess 27 }

nodeSysBusyIndivData       OBJECT-TYPE
   SYNTAX  Counter
   ACCESS  read-only
   STATUS  mandatory
   DESCRIPTION
         "The total number of times that a request to place an individual
         data call could not be granted due to a lack of system resources
         at this service node."
   ::= { nodeAccess 28 }

nodeSysBusyGroupData       OBJECT-TYPE
   SYNTAX  Counter
   ACCESS  read-only
   STATUS  mandatory
   DESCRIPTION
         "The total number of times that a request to place a group data
         call could not be granted due to a lack of system resources
         at this service node."
   ::= { nodeAccess 29 }

nodeSysBusyIndivOutboundTelephony      OBJECT-TYPE
   SYNTAX  Counter
   ACCESS  read-only
   STATUS  mandatory
   DESCRIPTION
         "The total number of times that a request to place an individual
         outbound interconnect call (e.g. PRS terminal to a telephony
         terminal) could not be granted due to a lack of system
         resources at this service node."
   ::= { nodeAccess 30 }

nodeSysBusyIndivInboundTelephony OBJECT-TYPE
   SYNTAX  Counter
   ACCESS  read-only
   STATUS  mandatory
   DESCRIPTION
         "The total number of times that a request to place an individual
         inbound interconnect call (e.g. telephony terminal to a PRS
         terminal) could not be granted due to a lack of
         system resources at this service node."
   ::= { nodeAccess 31 }

nodeSysBusyGroupInboundTelephony OBJECT-TYPE
   SYNTAX  Counter
   ACCESS  read-only
   STATUS  mandatory
   DESCRIPTION
         "The total number of times that an attempt to place a group
         inbound interconnect call (e.g. telephony terminal to multiple
         PRS terminals) could not be granted due to a lack of
         system resources at this service node."
   ::= { nodeAccess 32 }
```

```
   nodeSysBusyOther     OBJECT-TYPE
      SYNTAX  Counter
      ACCESS  read-only
      STATUS  mandatory
      DESCRIPTION
            "The total number of times that an attempt to allocate resources
            (e.g. channel) could not be granted due to a lack of
            system resources at this node, which were not counted
            by the proceeding nodeSysBusy``CallType'' object instances."
      ::= { nodeAccess 33 }

--*****************************************************************************
-- Node level circuit utilization statistics.
--*****************************************************************************

   nodeCktTimeSampleInterval  OBJECT-TYPE
      SYNTAX  TimeTicks
      ACCESS  read-write
      STATUS  mandatory
      DESCRIPTION
            "The time interval, expressed in hundredths of a
            second, during which circuit connection time usage
            statistics have been collected for this service node.

            The only value a management station may attempt to set is
            zero (0), which has the effect of resetting the circuit
            statistics for this node to zero.  If this
            entity does not support resetting the statistics, or a value
            other than zero is attempted to be written, then a `badValue'
            should be returned."
      ::= { nodeCktTime 1 }

-- Circuit Utilization Time

   nodeCktTimeIndivVoice      OBJECT-TYPE
      SYNTAX  TimeTicks
      ACCESS  read-only
      STATUS  mandatory
      DESCRIPTION
            "The total amount of circuit connection time, in hundredths of a
            second, that this node has provided for individual voice calls."
      ::= { nodeCktTime 2 }

   nodeCktTimeGroupVoice      OBJECT-TYPE
      SYNTAX  TimeTicks
      ACCESS  read-only
      STATUS  mandatory
      DESCRIPTION
            "The total amount of circuit connection time, in hundredths of a
            second, that this node has provided for group voice calls."
      ::= { nodeCktTime 3 }

   nodeCktTimeIndivData       OBJECT-TYPE
      SYNTAX  TimeTicks
      ACCESS  read-only
      STATUS  mandatory
      DESCRIPTION
            "The total amount of circuit connection time, in hundredths of a
            second, that this node has provided for individual data calls."
      ::= { nodeCktTime 4 }

   nodeCktTimeGroupData       OBJECT-TYPE
      SYNTAX  TimeTicks
```

```
      ACCESS  read-only
      STATUS  mandatory
      DESCRIPTION
            "The total amount of circuit connection time, in hundredths of a
            second, that this node has provided for group data calls."
      ::= { nodeCktTime 5 }

   nodeCktTimeIndivOutboundTelephony      OBJECT-TYPE
      SYNTAX  TimeTicks
      ACCESS  read-only
      STATUS  mandatory
      DESCRIPTION
            "The total amount of circuit connection time, in hundredths of a
            second, that this node has provided for individual outbound
            interconnect calls (e.g.  individual PRS terminal to a
            telephony terminal)."
      ::= { nodeCktTime 6 }

   nodeCktTimeIndivInboundTelephony OBJECT-TYPE
      SYNTAX  TimeTicks
      ACCESS  read-only
      STATUS  mandatory
      DESCRIPTION
            "The total amount of circuit connection time, in hundredths of a
            second, that this node has provided for individual inbound
            interconnect calls (e.g. telephony terminal to a PRS terminal)."
      ::= { nodeCktTime 7 }

   nodeCktTimeGroupInboundTelephony OBJECT-TYPE
      SYNTAX  TimeTicks
      ACCESS  read-only
      STATUS  mandatory
      DESCRIPTION
            "The total amount of circuit connection time, in hundredths of a
            second, that this node has provided for group inbound
            interconnect calls (e.g. telephony terminal to multiple
            PRS terminals)."
      ::= { nodeCktTime 8 }

   nodeCktTimeOther     OBJECT-TYPE
      SYNTAX  TimeTicks
      ACCESS  read-only
      STATUS  mandatory
      DESCRIPTION
            "The total amount of circuit connection time, in hundredths of a
            second, that this node has provided which has not been
            accumulated by the proceeding nodeCktTime``CallType''
            object instances."
      ::= { nodeCktTime 9 }

-- Circuit Queuing Time

   nodeCktQTimeIndivVoice     OBJECT-TYPE
      SYNTAX  TimeTicks
      ACCESS  read-only
      STATUS  mandatory
      DESCRIPTION
            "The total amount of time, in hundredths of a second, that
            requests to place an individual voice call have been queued,
            pending on access to resource allocation at this node.

            Note that this variable does not reflect any artifacts of the
            final outcome of the queuing (e.g. whether or not resources
```

```
          were eventually allocated)."
   ::= { nodeCktTime 10 }

nodeCktQTimeGroupVoice     OBJECT-TYPE
   SYNTAX  TimeTicks
   ACCESS  read-only
   STATUS  mandatory
   DESCRIPTION
          "The total amount of time, in hundredths of a second, that
          requests to place a group voice call have been queued, pending
          on access to resource allocation at this node.

          Note that this variable does not reflect any artifacts of the
          final outcome of the queuing (e.g. whether or not resources
          were eventually allocated)."
   ::= { nodeCktTime 11 }

nodeCktQTimeIndivData      OBJECT-TYPE
   SYNTAX  TimeTicks
   ACCESS  read-only
   STATUS  mandatory
   DESCRIPTION
          "The total amount of time, in hundredths of a second, that
          requests to place an individual data call have been queued,
          pending on access to resource allocation at this node.

          Note that this variable does not reflect any artifacts of the
          final outcome of the queuing (e.g. whether or not resources
          were eventually allocated)."
   ::= { nodeCktTime 12 }

nodeCktQTimeGroupData      OBJECT-TYPE
   SYNTAX  TimeTicks
   ACCESS  read-only
   STATUS  mandatory
   DESCRIPTION
          "The total amount of time, in hundredths of a second, that
          requests to place a group data call have been queued, pending
          on access to resource allocation at this node.

          Note that this variable does not reflect any artifacts of the
          final outcome of the queuing (e.g. whether or not resources
          were eventually allocated)."
   ::= { nodeCktTime 13 }

nodeCktQTimeIndivOutboundTelephony     OBJECT-TYPE
   SYNTAX  TimeTicks
   ACCESS  read-only
   STATUS  mandatory
   DESCRIPTION
          "The total amount of time, in hundredths of a second, that
          requests to place an individual outbound  interconnect call
          (e.g. PRS terminal to a  telephony terminal) have been queued,
          pending on access to resource allocation at this node.

          Note that this variable does not reflect any artifacts of the
          final outcome of the queuing (e.g. whether or not resources
          were eventually allocated)."
   ::= { nodeCktTime 14 }

nodeCktQTimeIndivInboundTelephony      OBJECT-TYPE
   SYNTAX  TimeTicks
   ACCESS  read-only
```

```
      STATUS  mandatory
      DESCRIPTION
            "The total amount of time, in hundredths of a second, that
            requests to place an individual inbound interconnect call
            (e.g. telephony terminal to a PRS terminal) have been queued,
            pending on access to resource allocation at this node.

            Note that this variable does not reflect any artifacts of the
            final outcome of the queuing (e.g. whether or not resources
            were eventually allocated)."
      ::= { nodeCktTime 15 }

   nodeCktQTimeGroupInboundTelephony      OBJECT-TYPE
      SYNTAX  TimeTicks
      ACCESS  read-only
      STATUS  mandatory
      DESCRIPTION
            "The total amount of time, in hundredths of a second, that
            requests to place a group inbound interconnect call
            (e.g. telephony terminal to multiple PRS terminals) have been
            queued, pending on access to resource allocation at this node.

            Note that this variable does not reflect any artifacts of the
            final outcome of the queuing (e.g. whether or not resources
            were eventually allocated)."
      ::= { nodeCktTime 16 }

   nodeCktQTimeOther    OBJECT-TYPE
      SYNTAX  TimeTicks
      ACCESS  read-only
      STATUS  mandatory
      DESCRIPTION
            "The total amount of time, in hundredths of a second,
            that requests to allocate resources (e.g. channel) have
            been queued, which were not accumulated
            by the proceeding  nodeCktQTime``CallType'' object instances.

            Note that this variable does not reflect any artifacts of the
            final outcome of the queuing (e.g. whether or not resources
            were eventually allocated)."
      ::= { nodeCktTime 17 }

   END
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Printed in U.S.A.