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Preface

This section describes the objectives, audience, organization, and conventions of the Cisco RAN Management System (RMS) SNMP/MIB Guide, Release 4.x.

Document Revision History

The Document Revision History table below records technical changes to this guide. The table shows the document revision number for the change, the date of the change, and a brief summary of the change.

<table>
<thead>
<tr>
<th>Document Number</th>
<th>Date</th>
<th>Change Summary</th>
</tr>
</thead>
<tbody>
<tr>
<td>OL-32400-01</td>
<td>June 23, 2014</td>
<td>Initial version of the document.</td>
</tr>
</tbody>
</table>

Objectives

This guide provides the SNMP alarms and MIB information of the Cisco RAN Management System (RMS).
Audience

The primary audience for this guide includes network operations personnel and system administrators. This guide assumes that you are familiar with the following products and topics:

- Basic internetworking terminology and concepts
- Network topology and protocols
- Linux administration
- RedHat Enterprise Linux 6.1
- VMWare vSphere 5.1.0

Conventions

This document uses the following conventions:

<table>
<thead>
<tr>
<th>Convention</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>bold</strong> font</td>
<td>Commands and keywords and user-entered text appear in <strong>bold</strong> font.</td>
</tr>
<tr>
<td><em>Italic</em> font</td>
<td>Document titles, new or emphasized terms, and arguments for which you supply values are in <em>italic</em> font.</td>
</tr>
<tr>
<td><strong>Courier</strong> font</td>
<td>Terminal sessions and information the system displays appear in <strong>courier</strong> font.</td>
</tr>
<tr>
<td><strong>Bold Courier</strong> font</td>
<td>Bold Courier font indicates text that the user must enter.</td>
</tr>
<tr>
<td>[x]</td>
<td>Elements in square brackets are optional.</td>
</tr>
<tr>
<td>string</td>
<td>A nonquoted set of characters. Do not use quotation marks around the string or the string will include the quotation marks.</td>
</tr>
<tr>
<td>&lt;&gt;</td>
<td>Nonprinting characters such as passwords are in angle brackets.</td>
</tr>
<tr>
<td>[ ]</td>
<td>Default responses to system prompts are in square brackets.</td>
</tr>
<tr>
<td>!, #</td>
<td>An exclamation point (!) or a pound sign (#) at the beginning of a line of code indicates a comment line.</td>
</tr>
</tbody>
</table>

Related Documentation

For additional information about the Cisco RAN Management Systems, refer to the following documents:
Obtaining Documentation and Submitting a Service Request


Subscribe to What's New in Cisco Product Documentation, which lists all new and revised Cisco technical documentation, as an RSS feed and deliver content directly to your desktop using a reader application. The RSS feeds are a free service.
RMS Alarms

• Upload Server Alarms, page 5
• PMG Alarms, page 7
• PAR Alarms, page 8
• PNR System Alarms, page 11
• BAC Alarms, page 12

Upload Server Alarms

The Upload Server includes the SNMP alarm support that uses the CMHS MIB in triggering the alarms to the Syslog.

The Upload Server includes the following SNMP configuration parameters in UploadServer.properties:

• Number of SNMP Trap destinations - alarms.snmp.nummanagers
• IP address, Port, and community String per SNMP destination:
  ◦ alarms.snmp.manager.address.1=127.0.0.1
  ◦ alarms.snmp.manager.port.1=162
  ◦ alarms.snmp.manager.community.1=public

This table includes some of the Upload Server alarms triggered during the monitoring of the Upload Server processes.

Table 1: Upload Server Alarms

<table>
<thead>
<tr>
<th>Upload Server Alarms</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>OS booting up</td>
<td>The alarm indicates that the Upload Server host OS is booting up.</td>
</tr>
<tr>
<td>OS shutting down</td>
<td>The alarm indicates that the Upload Server host OS is shutting down.</td>
</tr>
</tbody>
</table>
The alarm indicates that the Upload Server watchdog process "god" is not running on the Upload Node.

The alarm indicates that the Upload Server watchdog process "god" is running on the Upload Node.

The alarm indicates that one of the internal RAID disks has failed.

This table lists some of the Upload Server conditions and the corresponding syslog messages generated as output.

**Table 2: Upload Server Syslog Messages**

<table>
<thead>
<tr>
<th>Upload Server Conditions</th>
<th>Syslog Messages</th>
</tr>
</thead>
<tbody>
<tr>
<td>Upload Server process is started</td>
<td>&quot;UploadServer is starting&quot;</td>
</tr>
<tr>
<td>Upload Server process is stopped</td>
<td>&quot;UploadServer is shutting down&quot;</td>
</tr>
<tr>
<td>Upload Server process is terminated</td>
<td>&quot;UploadServer has stopped by request (watchdog may restart it)&quot;</td>
</tr>
<tr>
<td>Upload Server disk usage exceeds the INFO threshold</td>
<td>&quot;AlarmEvents Total disk utilization: exceeds INFO threshold&quot;</td>
</tr>
<tr>
<td>Upload Server disk usage exceeds the WARNING threshold</td>
<td>&quot;AlarmEvents Total disk utilization: exceeds WARNING threshold&quot;</td>
</tr>
<tr>
<td>Upload Server disk usage exceeds the CRITICAL threshold</td>
<td>&quot;AlarmEvents Total disk utilization: exceeds CRITICAL threshold&quot;</td>
</tr>
</tbody>
</table>

The Upload Server also includes Watchdog alarms that ensure proper functioning and monitoring of the processes. This table lists some of the watchdog commands used to monitor the status of an Upload Server:

**Table 3: Upload Server Watchdog Commands**

<table>
<thead>
<tr>
<th>Watchdog Command</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>sudo god start UploadServer</td>
<td>To start the Upload Server.</td>
</tr>
<tr>
<td>sudo god stop UploadServer</td>
<td>To stop the Upload Server.</td>
</tr>
<tr>
<td>sudo god restart UploadServer</td>
<td>To restart the Upload Server.</td>
</tr>
<tr>
<td>sudo god status UploadServer</td>
<td>To check the status of the Upload Server.</td>
</tr>
</tbody>
</table>

This table lists the Upload Server watchdog alarm events triggered during the monitoring of the processes, along with the respective Syslog messages.
### Table 4: Upload Server Watchdog Alarms

<table>
<thead>
<tr>
<th>Event Trigger</th>
<th>Alarm Message</th>
<th>Event Destination</th>
<th>MIB</th>
</tr>
</thead>
<tbody>
<tr>
<td>Process started successfully</td>
<td>&quot;UploadServer has started&quot;</td>
<td>Syslog, SNMP</td>
<td>CISCO-MHS-MIB</td>
</tr>
<tr>
<td>Processes exited unexpectedly</td>
<td>&quot;UploadServer exited unexpectedly&quot;</td>
<td>Syslog, SNMP</td>
<td>CISCO-MHS-MIB</td>
</tr>
<tr>
<td>Processes restart attempted</td>
<td>&quot;UploadServer will attempt to restart&quot;</td>
<td>Syslog, SNMP</td>
<td>CISCO-MHS-MIB</td>
</tr>
<tr>
<td>Port going from up or down state too quickly</td>
<td>&quot;UploadServer is restarting too quickly&quot;</td>
<td>Syslog, SNMP</td>
<td>CISCO-MHS-MIB</td>
</tr>
</tbody>
</table>

### PMG Alarms

The PMG triggers alarms for the following conditions and these logs are logged to the file "pmg-alarm.log". PMG raise ciscoMhsServerAlarm and ciscoMhsServerAlarmClear Alarms those are defined in CISCO-MHS-MIB.

This table lists the alarm conditions and the alarm messages logged for PMG.

### Table 5: PMG Alarms

<table>
<thead>
<tr>
<th>Alarm Condition</th>
<th>Alarm Trigger</th>
<th>Alarm Level</th>
<th>Alarm Text</th>
</tr>
</thead>
<tbody>
<tr>
<td>Connection with the RDU lost</td>
<td>When BAC RDU process is down</td>
<td>Critical</td>
<td>Alarm raised: Type=RDU Connection</td>
</tr>
<tr>
<td>Connection with RDU established</td>
<td>When BAC RDU process is up</td>
<td>Clear</td>
<td>Alarm resolved: Type=RDU Connection</td>
</tr>
<tr>
<td>PMG process terminated</td>
<td>pmsgServer.sh stop or PMG server terminated abruptly.</td>
<td>Critical</td>
<td>PMG server is terminated</td>
</tr>
<tr>
<td>PMG process has started</td>
<td>pmsgServer.sh start</td>
<td>Clear</td>
<td>PMG Server has started</td>
</tr>
<tr>
<td>PMG North bound connection limit</td>
<td>When PMG NBI connections approaching the limit specified in pmsg.max.connections property in PMGServer.properties.</td>
<td>Warning</td>
<td>PMG Connection threshold limit approaching.</td>
</tr>
</tbody>
</table>
PMG Connection

threshold limit exceeded.

Critical

PMG Connection threshold limit exceeded.

Connection with the Radius server is lost.

Connection with Radius server is restored

Minor

Alarm raised: Type = RADIUS Connection

Clear

Alarm raised: Type = RADIUS Connection

The following are the SNMP trap destination configuration in the PMGServer.properties file.

- Number of SNMP Trap destinations - pmg.alarms.snmp.nummanagers
- IP address, Port, and community String per SNMP destination - Multiple SNMP trap destination are configured as below:

```ini
#Alarm
pmg.alarms.snmp.nummanagers=2
pmg.alarms.snmp.manager.address.1=127.0.0.1
pmg.alarms.snmp.manager.port.1=162
pmg.alarms.snmp.manager.community.1=public
pmg.alarms.snmp.manager.address.2=10.30.34.22
```

**PAR Alarms**

This table lists the CAR system alarms that are triggered during the monitoring of the processes, along with the respective Syslog messages.

**Table 6: PAR System Alarms**

<table>
<thead>
<tr>
<th>Alarm Message</th>
<th>Description</th>
<th>Event Destination</th>
<th>MIB</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;Process watchdog is not running (CAR)&quot;</td>
<td>Indicates that the CAR watchdog process &quot;arservagt&quot; is not running.</td>
<td>Syslog</td>
<td>n/a</td>
</tr>
<tr>
<td>&quot;Process watchdog is running (CAR)&quot;</td>
<td>Indicates that the CAR watchdog process &quot;arservagt&quot; is running on the host.</td>
<td>Syslog</td>
<td>n/a</td>
</tr>
<tr>
<td>Description</td>
<td>Description</td>
<td>Source</td>
<td>Notes</td>
</tr>
<tr>
<td>-------------------------------------------------</td>
<td>------------------------------------------------------------------------------</td>
<td>---------</td>
<td>---------</td>
</tr>
<tr>
<td>&quot;CAR process &quot;radius&quot; is not running&quot;</td>
<td>Indicates that the CAR process &quot;radius&quot; is not running.</td>
<td>Syslog</td>
<td>n/a</td>
</tr>
<tr>
<td>&quot;CAR process &quot;radius&quot; is running&quot;</td>
<td>Indicates that the CAR watchdog process &quot;radius&quot; is running on the host.</td>
<td>Syslog</td>
<td>n/a</td>
</tr>
<tr>
<td>&quot;CAR process &quot;arlockmgr&quot; is not running&quot;</td>
<td>Indicates that the CAR process &quot;arlockmgr&quot; is not running.</td>
<td>Syslog</td>
<td>n/a</td>
</tr>
<tr>
<td>&quot;CAR process &quot;arlockmgr&quot; is running&quot;</td>
<td>Indicates that the CAR watchdog process &quot;arlockmgr&quot; is running on the host.</td>
<td>Syslog</td>
<td>n/a</td>
</tr>
<tr>
<td>&quot;CAR process &quot;armcdsvr&quot; is not running&quot;</td>
<td>Indicates that the CAR process &quot;armcdsvr&quot; is not running.</td>
<td>Syslog</td>
<td>n/a</td>
</tr>
<tr>
<td>&quot;CAR process &quot;armcdsvr&quot; is running&quot;</td>
<td>Indicates that the CAR watchdog process &quot;armcdsvr&quot; is running on the host.</td>
<td>Syslog</td>
<td>n/a</td>
</tr>
<tr>
<td>&quot;CAR server stop&quot;</td>
<td>Indicates that the server has stopped normally on the host from which this</td>
<td>SNMP</td>
<td>CISCOACCESSREGISTRARMB</td>
</tr>
<tr>
<td></td>
<td>notification is sent.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&quot;CAR input queue full&quot;</td>
<td>Indicates that the percentage of usage of the packet input queue has</td>
<td>SNMP</td>
<td>CISCOACCESSREGISTRARMB</td>
</tr>
<tr>
<td></td>
<td>reached its high threshold of 90%.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>&quot;CAR input queue not very full&quot;</td>
<td>Indicates that the percentage usage of the packet input queue has dropped</td>
<td>SNMP</td>
<td>CISCOACCESSREGISTRARMB</td>
</tr>
<tr>
<td></td>
<td>below the low threshold of 60%.</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Alarm Description</td>
<td>Description</td>
<td>Log Type</td>
<td>Status</td>
</tr>
<tr>
<td>--------------------------------------------------------</td>
<td>-----------------------------------------------------------------------------</td>
<td>----------</td>
<td>--------</td>
</tr>
<tr>
<td>&quot;CAR license usage&quot;</td>
<td>Indicates the percentage of license usage. This trap is generated when CAR server reaches license usage thresholds for 80%, 90%, 100%, and 110%.</td>
<td>SNMP</td>
<td>CiscoAccessRegistrarMIB</td>
</tr>
<tr>
<td>&quot;Worker threads exhausted&quot;</td>
<td>Indicates that server exhausted the worker threads.</td>
<td>Syslog</td>
<td>n/a</td>
</tr>
<tr>
<td>&quot;Failed to initialize&quot;</td>
<td>Failed to initialize the BAC CAR extensions.</td>
<td>Syslog</td>
<td>n/a</td>
</tr>
<tr>
<td>&quot;Extension point service initialized&quot;</td>
<td>Indicates that the BAC CAR extensions have successfully initialized.</td>
<td>Syslog</td>
<td>n/a</td>
</tr>
<tr>
<td>&quot;Extension point shutdown&quot;</td>
<td>Indicates that the BAC CAR extensions have been shut down. Typically occurs when CAR is being stopped.</td>
<td>Syslog</td>
<td>n/a</td>
</tr>
<tr>
<td>&quot;Failed to load extension&quot;</td>
<td>Failed to load the BAC CAR extensions.</td>
<td>Syslog</td>
<td>n/a</td>
</tr>
<tr>
<td>&quot;Failed to process RADIUS request from HNB-GW&quot;</td>
<td>Indicates a processing error from the CAR extensions when communicating with a BAC DPE.</td>
<td>Syslog</td>
<td>n/a</td>
</tr>
<tr>
<td>&quot;Processed RADIUS request&quot;</td>
<td>Indicates that the CAR extensions successfully processed a RADIUS request.</td>
<td>Syslog</td>
<td>n/a</td>
</tr>
<tr>
<td>&quot;Failed to locate DPE&quot;</td>
<td>Indicates that the BAC CAR extensions are unable to communicate with the configured BAC DPE.</td>
<td>Syslog</td>
<td>n/a</td>
</tr>
<tr>
<td>&quot;Successfully posted request to DPE&quot;</td>
<td>Indicates that the BAC CAR extensions are able to communicate with the configured BAC DPE.</td>
<td>Syslog</td>
<td>n/a</td>
</tr>
</tbody>
</table>

**PNR System Alarms**

This table lists the PNR system alarms that are triggered during the monitoring of the processes, along with the respective Syslog messages.

*Table 7: PNR System Alarms*

<table>
<thead>
<tr>
<th>Alarm Notification</th>
<th>Description</th>
<th>Event Destination</th>
<th>MIB</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;cDhcpv4ServerStartTime&quot;</td>
<td>Signifies that the server of the specified type has started on the host from which this notification is sent.</td>
<td>SNMP</td>
<td>CISCO-IETF-DHCPSERVER-MIB</td>
</tr>
<tr>
<td>&quot;cDhcpv4ServerStopTime&quot;</td>
<td>Signifies that the server of the specified type has stopped normally on the host from which this notification is sent.</td>
<td>SNMP</td>
<td>CISCO-IETF-DHCPSERVER-MIB</td>
</tr>
<tr>
<td>&quot;cDhcpv4ServerFreeAddress High&quot;</td>
<td>Signifies that the number of available IPv4 addresses for a particular shared network is above the value of cDhcpv4ServerSharedNetFreeAddrHigh Threshold.</td>
<td>SNMP</td>
<td>CISCO-IETF-DHCPSERVER-MIB</td>
</tr>
<tr>
<td>&quot;cDhcpv4ServerFreeAddress Low&quot;</td>
<td>Signifies that the number of available IPv4 addresses for a particular shared network is below the value of cDhcpv4ServerSharedNetFreeAddrLow Threshold.</td>
<td>SNMP</td>
<td>CISCO-IETF-DHCPSERVER-MIB</td>
</tr>
<tr>
<td>&quot;Process watchdog is not running (CNR)&quot;</td>
<td>Indicates that the CNR watchdog process &quot;nwreglocal&quot; is not running.</td>
<td>Syslog</td>
<td>n/a</td>
</tr>
</tbody>
</table>
"Process watchdog is running (CNR)"

Indicates that the CNR watchdog process "bpr_agent" is running on the host.

Syslog

n/a


**BAC Alarms**

This table lists the BAC alarms that are triggered during the monitoring of the processes, along with the respective Syslog messages.

**Table 8: BAC Alarms**

<table>
<thead>
<tr>
<th>Alarm Message</th>
<th>Description</th>
<th>Event Destination</th>
<th>MIB</th>
</tr>
</thead>
<tbody>
<tr>
<td>&quot;DPE out of disk space&quot;</td>
<td>Notifies that the DPE hard drive is full.</td>
<td>Syslog</td>
<td>n/a</td>
</tr>
<tr>
<td>&quot;DPE out of memory&quot;</td>
<td>Indicates that the DPE process has run out of memory.</td>
<td>Syslog</td>
<td>n/a</td>
</tr>
<tr>
<td>&quot;Failed to connect to RDU&quot;</td>
<td>Indicates that the RDU cannot be contacted.</td>
<td>Syslog</td>
<td>n/a</td>
</tr>
<tr>
<td>&quot;Connected to RDU&quot;</td>
<td>Indicates that the DPE is connected to the RDU.</td>
<td>Syslog</td>
<td>n/a</td>
</tr>
<tr>
<td>&quot;Failed to start DPE process&quot;</td>
<td>Indicates that process watchdog failed to start the DPE process.</td>
<td>Syslog</td>
<td>n/a</td>
</tr>
<tr>
<td>&quot;DPE process terminated&quot;</td>
<td>Process watchdog detects that the DPE process unexpectedly terminated.</td>
<td>Syslog</td>
<td>n/a</td>
</tr>
<tr>
<td>&quot;DPE process has started&quot;</td>
<td>Indicates that process watchdog failed to start the DPE process.</td>
<td>Syslog</td>
<td>n/a</td>
</tr>
<tr>
<td>&quot;DPE process has stopped&quot;</td>
<td>Indicates that the DPE process is stopped.</td>
<td>Syslog</td>
<td>n/a</td>
</tr>
<tr>
<td>Alarm Description</td>
<td>Description</td>
<td>System Logging</td>
<td>Module</td>
</tr>
<tr>
<td>-----------------------------------</td>
<td>-----------------------------------------------------------------------------</td>
<td>----------------</td>
<td>--------</td>
</tr>
<tr>
<td>&quot;Process watchdog is not running (DPE)&quot;</td>
<td>Indicates that the DPE watchdog process &quot;bpr_agent&quot; is not running on the host.</td>
<td>Syslog</td>
<td>n/a</td>
</tr>
<tr>
<td>&quot;Process watchdog is running (DPE)&quot;</td>
<td>Indicates that the DPE watchdog process &quot;bpr_agent&quot; is running on the host.</td>
<td>Syslog</td>
<td>n/a</td>
</tr>
<tr>
<td>&quot;RDU out of disk space&quot;</td>
<td>Indicates that RDU is out of disk space.</td>
<td>Syslog</td>
<td>n/a</td>
</tr>
<tr>
<td>&quot;RDU out of memory&quot;</td>
<td>Indicates that RDU is out of memory.</td>
<td>Syslog</td>
<td>n/a</td>
</tr>
<tr>
<td>&quot;RDU is running out of licenses&quot;</td>
<td>Indicates that RDU is running out of licenses.</td>
<td>Syslog</td>
<td>n/a</td>
</tr>
<tr>
<td>&quot;Failed to start RDU process&quot;</td>
<td>Indicates that process watchdog failed to start the RDU process.</td>
<td>Syslog</td>
<td>n/a</td>
</tr>
<tr>
<td>&quot;RDU process terminated&quot;</td>
<td>Triggered when the process watchdog detects the RDU process unexpectedly terminated.</td>
<td>Syslog</td>
<td>n/a</td>
</tr>
<tr>
<td>&quot;RDU process has started&quot;</td>
<td>Indicates that process watchdog failed to start the RDU process.</td>
<td>Syslog</td>
<td>n/a</td>
</tr>
<tr>
<td>&quot;RDU process has stopped&quot;</td>
<td>Indicates that the RDU process is stopped.</td>
<td>Syslog</td>
<td>n/a</td>
</tr>
<tr>
<td>&quot;RDU process has stopped&quot;</td>
<td>Indicates that the RDU process is stopped.</td>
<td>Syslog</td>
<td>n/a</td>
</tr>
<tr>
<td>&quot;The tomcat unexpectedly terminated&quot;</td>
<td>This alarm is triggered when the process watchdog detects that the webserver which runs PMG and UI services has unexpectedly terminated.</td>
<td>Syslog</td>
<td>n/a</td>
</tr>
<tr>
<td>Alarm Description</td>
<td>Description</td>
<td>System</td>
<td>MIB Module</td>
</tr>
<tr>
<td>-----------------------------------</td>
<td>-----------------------------------------------------------------------------</td>
<td>--------</td>
<td>--------------------------</td>
</tr>
<tr>
<td>&quot;The tomcat has started&quot;</td>
<td>This alarm indicates that the process watchdog failed to start the web server which runs PMG and UI services.</td>
<td>Syslog</td>
<td>n/a</td>
</tr>
<tr>
<td>&quot;The tomcat has stopped&quot;</td>
<td>This alarm indicates that the web server which runs PMG and User Equipment (UE) is stopped.</td>
<td>Syslog</td>
<td>n/a</td>
</tr>
<tr>
<td>cDhcpv4ServerStartTime</td>
<td>This notification signifies that the server of the specified type has started on the host from which this notification is sent.</td>
<td>SNMP</td>
<td>CISCO-IETF-DHCP-SERVER-MIB</td>
</tr>
<tr>
<td>&quot;cDhcpv4ServerStopTime&quot;</td>
<td>This notification signifies that the server of the specified type has stopped normally on the host from which the notification is sent.</td>
<td>SNMP</td>
<td>CISCO-IETF-DHCP-SERVER-MIB</td>
</tr>
<tr>
<td>&quot;cDhcpv4ServerFreeAddressHigh&quot;</td>
<td>This notification signifies that the number of available IPv4 addresses for a particular shared network has risen above the value of ( cDhcpv4ServerFreeAddressHigh ) for that shared network.</td>
<td>SNMP</td>
<td>CISCO-IETF-DHCP-SERVER-MIB</td>
</tr>
<tr>
<td>&quot;cDhcpv4ServerFreeAddressLow&quot;</td>
<td>This notification signifies that the number of available IPv4 addresses for a particular shared network has fallen below the value of ( cDhcpv4ServerFreeAddressLow ) for that shared network.</td>
<td>SNMP</td>
<td>CISCO-IETF-DHCP-SERVER-MIB</td>
</tr>
<tr>
<td>&quot;srlStateSrlFull&quot;</td>
<td>This alarm indicates that the replication log disk has filled up.</td>
<td>SNMP</td>
<td>VRTS-VVR-UX.mib</td>
</tr>
<tr>
<td>&quot;repStatusRepStarted&quot;</td>
<td>This alarm indicates that the replication process has started.</td>
<td>SNMP</td>
<td>VRTS-VVR-UX.mib</td>
</tr>
</tbody>
</table>
"repStatusRepStopped" | This alarm indicates that the replication process has stopped. | SNMP | VRTS-VVR-UX.mib

**RMS MIBs**

- Supported MIBs, page 17

## Supported MIBs

The Cisco RMS supports the MIBs listed in the following table:

<table>
<thead>
<tr>
<th>MIB Name</th>
<th>MIB Locator or Reference</th>
</tr>
</thead>
<tbody>
<tr>
<td>CISCO-ACCESS-REGISTRAR-MIB</td>
<td>CISCO-ACCESS-REGISTRAR-MIB, on page 18</td>
</tr>
<tr>
<td>CISCO-BACC-DPE-MIB.my</td>
<td>CISCO-BACC-DPE-MIB.my, on page 62</td>
</tr>
<tr>
<td>CISCO-BACC-RDU-MIB.my</td>
<td>CISCO-BACC-RDU-MIB.my, on page 70</td>
</tr>
<tr>
<td>CISCO-BACC-SERVER-MIB.my</td>
<td>CISCO-BACC-SERVER-MIB.my, on page 81</td>
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<td>CISCO-MHS-MIB.my</td>
<td>CISCO-MHS-MIB.my, on page 85</td>
</tr>
<tr>
<td>CISCO-NETREG-DHCPV6-MIB.my</td>
<td>CISCO-NETREG-DHCPV6-MIB.my, on page 91</td>
</tr>
</tbody>
</table>
CISCO-ACCESS-REGISTRAR-MIB

-- *******************************************************************
-- CISCO Access Registrar MIB
--
-- Mar 2001, Bo Xie
--
-- Copyright (c) 2001, 2013 by Cisco Systems Inc.
-- All rights reserved.
--
-- *******************************************************************

CISCO-ACCESS-REGISTRAR-MIB DEFINITIONS ::= BEGIN
IMPORTS
   MODULE-IDENTITY,
   OBJECT-TYPE,
   NOTIFICATION-TYPE,
   Integer32,
   TimeTicks,
   Counter32,
   Gauge32
FROM SNMPv2-SMI

   MODULE-COMPLIANCE,
   OBJECT-GROUP,
   NOTIFICATION-GROUP
FROM SNMPv2-CONF

   TEXTUAL-CONVENTION,
   TruthValue,
   TimeInterval
FROM SNMPv2-TC

   SnmpAdminString
FROM SNMP-FRAMEWORK-MIB

   InetAddressType,
   InetAddress,
   InetPortNumber
FROM INET-ADDRESS-MIB

   cdbpPeerIpAddress
FROM CISCO-DIAMETER-BASE-PROTOCOL-MIB

   CarServerType
FROM CISCO-ACCESS-REGISTRAR-MIB

   ciscoExperiment
FROM CISCO-SMI;

ciscoAccessRegistrarMIB MODULE-IDENTITY
LAST-UPDATED "201311220000Z"
ORGANIZATION "Cisco Systems, Inc."
CONTACT-INFO
"Cisco Systems"
MIB for Cisco Prime Access Registrar (CPAR).

This MIB is an extension to RADIUS-AUTH-CLIENT-MIB [RFC2618], RADIUS-ACC-CLIENT-MIB [RFC2620].

This MIB also allows the NMS to receive updates (via traps) on the status of CPAR.

Cisco Access Registrar is a RADIUS (Remote Authentication Dial-In User Service) server that allows multiple Network Access Server devices to share a common authentication, authorization, and accounting platform.

Cisco Access Registrar handles the following tasks:

Authentication: determines the identity of users and whether they may be allowed to access the network.

Authorization: determines the level of network services available to authenticated users after they are connected.

Accounting: keeps track of each user's network activity.

Session and resource management: tracks user sessions and allocates dynamic resources.

Please refer to Cisco Access Registrar User Guide for further details.

```plaintext
::= { ciscoExperiment 70 }
```
can communicate with this server for user authentication, authorization info.

'odbc' The other server is an ODBC server. CPAR can communicate with this server for user authentication, authorization, accounting info.

'local' The other server is a local database server that CPAR is communicate with for authentication, authorization.

'Dns' The dynamic-dns RemoteServer is used with the Dynamic DNS feature.

'domainAuth' The other server is a domain Authentication server. Cisco Prime AR supports the Windows Domain Controller/Active Directory (WDC/AD) and enables you to authenticate users.

'dynamicAuth' This type is for dynamic Authentication server.

'notify' This type is for notification remote server.

'other' Other type of servers that CPAR may communicate with.

'sigtran' This type is for sigtran remote server.

'oci' The other server is an OCI server. CPAR can communicate with this server for user authentication and authorization.

'sigtranM3ua' This type is for sigtran-m3ua remote server.

'Diameter' This type is for Diameter remote server.

Note: Throughout this document, we use the term 'the other server' to represent the other server the CPAR server (referred as 'this server') is trying to communicate with. The type of 'the other server' can be one of the above. The CPAR server('this server') work with 'the other server' to perform one or more of the following functions: authentication, authorization and accounting. The CPAR server('this server') may send out notifications when it detects the communication state with 'the other server' has changed.

SYNTAX INTEGER {
  radius(1),
  ldap(2),
  odbc(3),
  local(4),
  Dns(5),
  domainAuth(6),
  dynamicAuth(7),
  notify(8),
  other(9),
  sigtran(10),
  oci(11),
  sigtranM3ua(12),
  Diameter(13)
}

ciscoAccessRegistrarMIBObjects OBJECT IDENTIFIER ::= { ciscoAccessRegistrarMIB 1 }
carRADIUS OBJECT IDENTIFIER ::= { ciscoAccessRegistrarMIBObjects 1 }

carAuthServerExtTable OBJECT-TYPE
SYNTAX SEQUENCE OF CarAuthServerExtEntry

This table lists the operational state of the other authentication servers this server is communicating with. It provides additional fields to the radiusAuthServerTable as defined by RADIUS-AUTH-CLIENT-MIB [RFC2618].

::= { carRADIUS 1 }

carAuthServerExtEntry OBJECT-TYPE
SYNTAX CarAuthServerExtEntry
MAX-ACCESS not-accessible
STATUS current
DESCRIPTION "An entry in the carAuthServerExtTable"
 ::= { carAuthServerExtTable 1 }

CarAuthServerExtEntry ::= SEQUENCE {
  carAuthServerRunningState CarServerState,
  carAuthServerType CarServerType
}

carAuthServerRunningState OBJECT-TYPE
SYNTAX CarServerState
MAX-ACCESS read-only
STATUS current
DESCRIPTION "The operating state of the other server this server is communicating with. 'up' indicates the other server is responding to the requests from this server. 'down' indicates that the other server is not responding to the requests from this server. 'unknown' indicates that we don't know the state of the other server, because this may have not communicate with this server yet.

Before this server communicates with the other server, it is in 'unknown' state. When the other server goes to 'down' state from either 'unknown' or 'up', a carOtherAuthServerNotResponding notification is sent. No additional carOtherAuthServerNotResponding notification will be sent if the other server remains in 'down' state. A carOtherAuthServerResponding notification will be sent when the other server goes from 'down' to 'up' state."
 ::= { carAuthServerExtEntry 1 }

carAuthServerType OBJECT-TYPE
SYNTAX CarServerType {
  radius(1),
  ldap(2),
  odbc(3),
  local(4),
  Dns(5),
  domainAuth(6),
  dynamicauth(7),
  notify(8),
  other(9),
  sigtran(10),
  oci(11),
  sigtranm3ua(12),
  Diameter(13)
}
MAX-ACCESS read-only
STATUS current
DESCRIPTION "The type of the other server this server is communicating with. See CarServerType for possible values."
 ::= { carAuthServerExtEntry 2 }

-- carAccServerExtTable for accounting servers.

carAccServerExtTable OBJECT-TYPE
SYNTAX SEQUENCE OF CarAccServerExtEntry
This table lists the running status of the other accounting servers this server is communicating with. It provides additional fields to the radiusAccServerTable as defined in RADIUS-ACC-CLIENT-MIB in RFC 2620.

::= { carRADIUS 2 }

**carAccServerExtEntry OBJECT-TYPE**

**SYNTAX** CarAccServerExtEntry

**MAX-ACCESS** not-accessible

**STATUS** current

**DESCRIPTION**

"An entry in the carAccServerExtTable"

::= { carAccServerExtTable 1 }

**CarAccServerExtEntry ::= SEQUENCE {**

| carAccServerRunningState CarServerState |
| carAccServerType CarServerType |

**carAccServerRunningState OBJECT-TYPE**

**SYNTAX** CarServerState

**MAX-ACCESS** read-only

**STATUS** current

**DESCRIPTION**

"The running state of the other server this server is communicating with. 'up' indicates the other server is responding to the request from this server. 'down' indicates that the other server is not responding to the request from this server. 'unknown' indicates that we don't know the state of the other server, because this may have not communicate with the other server yet. Before this server communicates with the other server, it is in 'unknown' state. When the other server goes to down state from either 'unknown' or 'up', a carOtherAccServerNotResponding notification is sent by this server. No additional carOtherAccServerNotResponding notification will be sent if the other server remains in the 'down' state. A carOtherAccServerResponding notification will be sent when the other server goes from 'down' to 'up' state."

::= { carAccServerExtEntry 1 }

**carAccServerType OBJECT-TYPE**

**SYNTAX** CarServerType { radius(1),
ldap(2),
odb(3),
local(4),
Dns(5),
domainAuth(6),
dynamicauth(7),
notify(8),
other(9),
sigtran(10),
oci(11),
sigtranM3ua(12),
Diameter(13) }

**MAX-ACCESS** read-only

**STATUS** current

**DESCRIPTION**

"The type of the other server this server is communicating with. See CarServerType for possible values."

::= { carAccServerExtEntry 2 }

**carServerInputQueueMaxSize OBJECT-TYPE**

**SYNTAX** Integer32 (0..2147483647)

**UNITS** "packets"

**MAX-ACCESS** read-only

**STATUS** current
DESCRIPTION
"The max number of packets this server can queue in its input queue."
::= { carRADIUS 3 }

carServerInputQueueSize OBJECT-TYPE
SYNTAX Integer32 (0..2147483647)
UNITS "packets"
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"The number of packets this server currently has in its input queue"
::= { carRADIUS 4 }

carServerAccLogInError OBJECT-TYPE
SYNTAX TruthValue
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"This indicates if this server is currently having problem in recording accounting records."
::= { carRADIUS 5 }

carServerLicenseUsage OBJECT-TYPE
SYNTAX Integer32
UNITS "TPS"
MAX-ACCESS accessible-for-notify
STATUS current
DESCRIPTION
"This represents the threshold limit of the Licensed TPS"
DEFVAL { 100 }
::= { carRADIUS 6 }

carRadRemSvrStatsTable OBJECT-TYPE
SYNTAX SEQUENCE OF CarRadRemSvrStatsStatsEntry
MAX-ACCESS not-accessible
STATUS current
DESCRIPTION
"The Remote server details that CPAR is communicating with."
::= { carRADIUS 7 }

carRadRemSvrStatsEntry OBJECT-TYPE
SYNTAX CarRadRemSvrStatsStatsEntry
MAX-ACCESS not-accessible
STATUS current
DESCRIPTION
"An entry in the carRadRemSvrTable"
INDEX { carRadRemSvrStatsIndex }
::= { carRadRemSvrStatsTable 1 }
CarRadRemSvrStatsStatsEntry ::= SEQUENCE { carRadRemSvrStatsIndex Integer32,
carRadRemSvrStatsServerName SnmpAdminString,
carRadRemSvrStatsType CarServerType,
carRadRemSvrStatsInetAddrType InetAddressType,
carRadRemSvrStatsInetAddress InetAddress,
carRadRemSvrStatsPortNumber InetPortNumber,
carRadRemSvrStatsActive TruthValue,
carRadRemSvrStatsMaxTries Counter32,
carRadRemSvrStatsRTTAverage TimeInterval,
carRadRemSvrStatsRTTDerivation TimeInterval,
carRadRemSvrStatsTimeoutPenalty TimeInterval,
carRadRemSvrStatsTotalReqPending Gauge32,
carRadRemSvrStatsTotalReqDent Counter32,
carRadRemSvrStatsTotalReqOutstanding Gauge32,
carRadRemSvrStatsTotalReqAcknowledged Counter32,
carRadRemSvrStatsTotalReqTimedOut Counter32,
carRadRemSvrStatsTotalRespDropForNotInCache Counter32,
carRadRemSvrStatsTotalRespDropForSignMismatch Counter32,
UNIT TruthValue,
carRadRemSvrStatsLastReqTime SnmpAdminString,
carRadRemSvrStatsLastAcceptTime SnmpAdminString}
carRadRemSvrStatsIndex OBJECT-TYPE
SYNTAX Integer32 (1..1000)
MAX-ACCESS not-accessible
STATUS current
DESCRIPTION "A number uniquely identifying each RADIUS REMOTE
SERVER with which this server communicates."
 ::= { carRadRemSvrStatsEntry 1 }

carRadRemSvrStatsServerName OBJECT-TYPE
SYNTAX SnmpAdminString
MAX-ACCESS read-only
STATUS current
DESCRIPTION "This object represents the remote server name"
 ::= { carRadRemSvrStatsEntry 2 }

carRadRemSvrStatsType OBJECT-TYPE
SYNTAX CarServerType {radius(1), ldap(2), odbc(3), local(4), Dns(5), domainAuth(6), dynamicauth(7), notify(8), other(9), sigtran(10), oci(11), sigtranm3ua(12), Diameter(13)}
MAX-ACCESS read-only
STATUS current
DESCRIPTION "Defines the server type of the Remote server"
 ::= { carRadRemSvrStatsEntry 3 }

carRadRemSvrStatsInetAddrType OBJECT-TYPE
SYNTAX InetAddressType
MAX-ACCESS read-only
STATUS current
DESCRIPTION "A value that represents a type of Internet address.
See InetAddressType for possible values ."
 ::= { carRadRemSvrStatsEntry 4 }

carRadRemSvrStatsInetAddress OBJECT-TYPE
SYNTAX InetAddress
MAX-ACCESS read-only
STATUS current
DESCRIPTION "Denotes a generic Internet address.
An InetAddress value is always interpreted within the context
of an InetAddressType value. Every usage of the InetAddress
textual convention is required to specify the InetAddressType
object which provides the context."
 ::= { carRadRemSvrStatsEntry 5 }

carRadRemSvrStatsPortNumber OBJECT-TYPE
SYNTAX InetPortNumber (0..65535)
MAX-ACCESS read-only
STATUS current
DESCRIPTION "Represents a 16 bit port number of an Internet transport layer
protocol ."
 ::= { carRadRemSvrStatsEntry 6 }

carRadRemSvrStatsActive OBJECT-TYPE
SYNTAX TruthValue
MAX-ACCESS read-only
STATUS current
DESCRIPTION "Represents the active status of the remote server."
 ::= { carRadRemSvrStatsEntry 7 }
"MAX-ACCESS read-only
STATUS current
DESCRIPTION
"Defines the operation state of the remote server that
CPAR server is currently communicating with.

'True' - The remote server is responding to
the requests from this server.
'False' - The other server is not responding to
the requests from this server.
This could be the case if this server
hasn't communicated with the remote server
(The remote server is not known).

'down' - The other server is not responding to
the requests from this server."

::= { carRadRemSvrStatsEntry 7 }
carRadRemSvrStatsMaxTries OBJECT-TYPE
SYNTAX Counter32
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"The number of times to send a proxy request to a remote server
before deciding the server is offline"

::= { carRadRemSvrStatsEntry 8 }
carRadRemSvrStatsRTTAverage OBJECT-TYPE
SYNTAX TimeInterval
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"Average round trip time since the last server restart"

::= { carRadRemSvrStatsEntry 9 }
carRadRemSvrStatsRTTDeviation OBJECT-TYPE
SYNTAX TimeInterval
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"Indicates a standard deviation of the RTTAverage"

::= { carRadRemSvrStatsEntry 10 }
carRadRemSvrStatsTimeoutPenalty OBJECT-TYPE
SYNTAX TimeInterval
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"Indicates any change made to the initial timeout default
value."

::= { carRadRemSvrStatsEntry 11 }
carRadRemSvrStatsTotalReqPending OBJECT-TYPE
SYNTAX Gauge32
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"It represents the Number of requests currently queued"

::= { carRadRemSvrStatsEntry 12 }
carRadRemSvrStatsTotalReqSent OBJECT-TYPE
SYNTAX Counter32
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"It represents the number of requests sent since the last server
restart. The totalRequestsSent should equal the sum of
totalRequestsOutstanding and totalRequestsAcknowledged."

::= { carRadRemSvrStatsEntry 13 }
carRadRemSvrStatsTotalReqOutstanding OBJECT-TYPE
SYNTAX Gauge32
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"It represents the Number of requests currently proxied that have not yet returned"
 ::= { carRadRemSvrStatsEntry 14 }

carRadRemSvrStatsTotalReqAcknowledged OBJECT-TYPE
SYNTAX Counter32
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"It represents the Number of responses received since last server restart"
 ::= { carRadRemSvrStatsEntry 15 }

carRadRemSvrStatsTotalReqTimedOut OBJECT-TYPE
SYNTAX Counter32
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"Number of requests that have timed out since last server restart or number requests not returned from proxy server within the [configured] initial timeout interval"
 ::= { carRadRemSvrStatsEntry 16 }

carRadRemSvrStatsTotalRespDropForNotInCache OBJECT-TYPE
SYNTAX Counter32
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"It is the number of responses dropped because their ID did not match the ID of any Pending requests"
 ::= { carRadRemSvrStatsEntry 17 }

carRadRemSvrStatsTotalRespDropForSignMismatch OBJECT-TYPE
SYNTAX Counter32
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"Number of responses dropped because their response authenticator did not decode to the correct shared secret"
 ::= { carRadRemSvrStatsEntry 18 }

carRadRemSvrStatsTotalReqDropAfterMaxTries OBJECT-TYPE
SYNTAX Counter32
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"Number of requests dropped because no response was received after retrying the configured number of times"
 ::= { carRadRemSvrStatsEntry 19 }

carRadRemSvrStatsLastReqTime OBJECT-TYPE
SYNTAX SnmpAdminString
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"Date and time of last proxy request"
 ::= { carRadRemSvrStatsEntry 20 }

carRadRemSvrStatsLastAcceptTime OBJECT-TYPE
SYNTAX SnmpAdminString
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"Date and time of last ACCEPT response to a client"
 ::= { carRadRemSvrStatsEntry 21 }
carDiaRemSvrStatsTable OBJECT-TYPE
SYNTAX SEQUENCE OF CarDiaRemSvrStatsEntry
MAX-ACCESS not-accessible
STATUS current
DESCRIPTION "This table contains information about the Diameter Remote Server Details"
::= { carRADIUS 8 }

carDiaRemSvrStatsEntry OBJECT-TYPE
SYNTAX CarDiaRemSvrStatsEntry
MAX-ACCESS not-accessible
STATUS current
DESCRIPTION "An entry in the carDiaRemSvrStatsTable"
INDEX { carDiaRemSvrStatsIndex }
::= { carDiaRemSvrStatsTable 1 }

CarDiaRemSvrStatsEntry ::= SEQUENCE {
carDiaRemSvrStatsIndex Integer32,
carDiaRemSvrStatsServerName SnmpAdminString,
carDiaRemSvrStatsServerType CarServerType,
carDiaRemSvrStatsInetAddrType InetAddressType,
carDiaRemSvrStatsInetAddress InetAddress,
carDiaRemSvrStatsPortNumber InetPortNumber,
carDiaRemSvrStatsActive TruthValue,
carDiaRemSvrStatsRTTAverage TimeInterval,
carDiaRemSvrStatsRTTDeviation TimeInterval,
carDiaRemSvrStatsTotalReqPending Gauge32,
carDiaRemSvrStatsTotalReqOutstanding Gauge32,
carDiaRemSvrStatsState INTEGER,
carDiaRemSvrStatsASRsIn Counter32,
carDiaRemSvrStatsASRsOut Counter32,
carDiaRemSvrStatsASAsIn Counter32,
carDiaRemSvrStatsASAsOut Counter32,
carDiaRemSvrStatsACRsIn Counter32,
carDiaRemSvrStatsACRsOut Counter32,
carDiaRemSvrStatsACAsIn Counter32,
carDiaRemSvrStatsACAsOut Counter32,
carDiaRemSvrStatsCERsIn Counter32,
carDiaRemSvrStatsCERsOut Counter32,
carDiaRemSvrStatsCEAsIn Counter32,
carDiaRemSvrStatsCEAsOut Counter32,
carDiaRemSvrStatsDWRsIn Counter32,
carDiaRemSvrStatsDWRsOut Counter32,
carDiaRemSvrStatsDWAsIn Counter32,
carDiaRemSvrStatsDWAsOut Counter32,
carDiaRemSvrStatsDPRsIn Counter32,
carDiaRemSvrStatsDPRsOut Counter32,
carDiaRemSvrStatsDPAsIn Counter32,
carDiaRemSvrStatsDPAsOut Counter32,
carDiaRemSvrStatsRARsIn Counter32,
carDiaRemSvrStatsRARsOut Counter32,
carDiaRemSvrStatsRAAsIn Counter32,
carDiaRemSvrStatsRAAsOut Counter32,
carDiaRemSvrStatsSTRsIn Counter32,
carDiaRemSvrStatsSTRsOut Counter32,
carDiaRemSvrStatsSTAsIn Counter32,
carDiaRemSvrStatsSTAsOut Counter32,
carDiaRemSvrStatsRedirectEvents Counter32,
carDiaRemSvrStatsAccDupReq Counter32,
carDiaRemSvrStatsMalformedReq Counter32,
carDiaRemSvrStatsAccsNotRecorded Counter32,
carDiaRemSvrStatsWhoInitDisconnect INTEGER,
carDiaRemSvrStatsAccRetrans Counter32,
carDiaRemSvrStatsTotalRetrans Counter32,
carDiaRemSvrStatsAccPendingOut Gauge32,
carDiaRemSvrStatsAccReqDropped Counter32,
carDiaRemSvrStatsHByHDropMessages Counter32,
carDiaRemSvrStatsETOEdupMessages Counter32,
carDiaRemSvrStatsUnknownTypes Counter32,
carDiaRemSvrStatsProtocolErrors Counter32,
carDiaRemSvrStatsTransientFailures Counter32,
carDiaRemSvrStatsPermanentFailures Counter32,
carDiaRemSvrStatsTransportDown Counter32,
carDiaRemSvrStatsDWCurrStatus INTEGER,
carDiaRemSvrStatsTimeoutConnAtmpts Counter32,
carDiaRemSvrStatsTotalReqAcknowledged Counter32

}  
carDiaRemSvrStatsIndex OBJECT-TYPE
SYNTAX Integer32 (1..1000)
MAX-ACCESS not-accessible
STATUS current
DESCRIPTION "A number uniquely identifying each DIAMETER REMOTE SERVER with which this server communicates."
 ::= { carDiaRemSvrStatsEntry 1 }  
carDiaRemSvrStatsServerName OBJECT-TYPE
SYNTAX SnmpAdminString
MAX-ACCESS read-only
STATUS current
DESCRIPTION "This object represents the Diameter Remote Server Name"
 ::= { carDiaRemSvrStatsEntry 2 }  
carDiaRemSvrStatsType OBJECT-TYPE
SYNTAX CarServerType {radius(1), ldap(2), odbc(3), local(4), Dns(5), domainAuth(6), dynamicAuth(7), notify(8), other(9), sigtran(10), oci(11), sigtran3ua(12), Diameter(13)}
MAX-ACCESS read-only
STATUS current
DESCRIPTION "Defines the server type of the Remote server"
 ::= { carDiaRemSvrStatsEntry 3 }  
carDiaRemSvrStatsInetAddrType OBJECT-TYPE
SYNTAX InetAddressType
MAX-ACCESS read-only
STATUS current
DESCRIPTION "A value that represents a type of Internet address. See InetAddressType for possible values."
 ::= { carDiaRemSvrStatsEntry 4 }  
carDiaRemSvrStatsInetAddress OBJECT-TYPE
SYNTAX InetAddress
MAX-ACCESS read-only
STATUS current
DESCRIPTION "Denotes a generic Internet address. An InetAddress value is always interpreted within the context of an InetAddressType value. Every usage of the InetAddress textual convention is required to specify the InetAddressType object which provides the context."
 ::= { carDiaRemSvrStatsEntry 5 }  
carDiaRemSvrStatsPortNumber OBJECT-TYPE
SYNTAX InetPortNumber (0..65535)
MAX-ACCESS read-only
STATUS current
DESCRIPTION "Represents a 16 bit port number of an Internet transport layer..."
carDiaRemSvrStatsActive OBJECT-TYPE
SYNTAX TruthValue
MAX-ACCESS read-only
STATUS current
DESCRIPTION "Defines the operation state of the remote server that CPAR server is currently communicating with. 'True' - The remote server is responding to the requests from this server. 'False' - The other server is not responding to the requests from this server. This could be the case if this server hasn't communicated with the remote server (The remote server is not known.)"

carDiaRemSvrStatsRTTAverage OBJECT-TYPE
SYNTAX TimeInterval
MAX-ACCESS read-only
STATUS current
DESCRIPTION "Average round trip time since the last server restart"

carDiaRemSvrStatsRTTDDeviation OBJECT-TYPE
SYNTAX TimeInterval
MAX-ACCESS read-only
STATUS current
DESCRIPTION "Indicates a standard deviation of the RTTAverage"

carDiaRemSvrStatsTotalReqPending OBJECT-TYPE
SYNTAX Gauge32
UNITS "messages"
MAX-ACCESS read-only
STATUS current
DESCRIPTION "It represents the Number of requests currently queued"

carDiaRemSvrStatsTotalReqOutstanding OBJECT-TYPE
SYNTAX Gauge32
UNITS "messages"
MAX-ACCESS read-only
STATUS current
DESCRIPTION "It represents the Number of requests currently proxied that have not yet returned"

carDiaRemSvrStatsState OBJECT-TYPE
SYNTAX INTEGER {
  closed(1),
  waitConnAck(2),
  waitICEA(3),
  elect(4),
  waitReturns(5),
  rOpen(6),
  iOpen(7),
  closing(8)
}
MAX-ACCESS read-only
STATUS current
DESCRIPTION "Connection state in the Remote Server State Machine of the remote server with which this Diameter server is communicating. closed(1) - Connection closed with this remote server."
waitConnAck(2) - Waiting for an acknowledgment from this remote server.
waitICEA(3) - Waiting for a Capabilities-Exchange-Answer from this remote server.
elect(4) - When the remote server and the server are both trying to bring up a connection with each other at the same time. An election process begins which determines which socket remains open.
waitReturns(5) - Waiting for election returns.
r-open(6) - Responder transport connection is used for communication.
i-open(7) - Initiator transport connection is used for communication.
closing(8) - Actively closing and doing cleanup.

::= { carDiaRemSvrStatsEntry 12 }
carDiaRemSvrStatsASRsIn OBJECT-TYPE
SYNTAX Counter32
UNITS "messages"
MAX-ACCESS read-only
STATUS current
DESCRIPTION "Abort-Session-Request messages received from the peer."
 ::= { carDiaRemSvrStatsEntry 13 }
carDiaRemSvrStatsASRsOut OBJECT-TYPE
SYNTAX Counter32
UNITS "messages"
MAX-ACCESS read-only
STATUS current
DESCRIPTION "Abort-Session-Request messages sent to the peer."
 ::= { carDiaRemSvrStatsEntry 14 }
carDiaRemSvrStatsASAsIn OBJECT-TYPE
SYNTAX Counter32
UNITS "messages"
MAX-ACCESS read-only
STATUS current
DESCRIPTION "Number of Abort-Session-Answer messages received from the peer."
 ::= { carDiaRemSvrStatsEntry 15 }
carDiaRemSvrStatsASAsOut OBJECT-TYPE
SYNTAX Counter32
UNITS "messages"
MAX-ACCESS read-only
STATUS current
DESCRIPTION "Number of Abort-Session-Answer messages sent to the peer."
 ::= { carDiaRemSvrStatsEntry 16 }
carDiaRemSvrStatsACRsIn OBJECT-TYPE
SYNTAX Counter32
UNITS "messages"
MAX-ACCESS read-only
STATUS current
DESCRIPTION "Number of Accounting-Request messages received from the remote server."
 ::= { carDiaRemSvrStatsEntry 17 }
carDiaRemSvrStatsACRsOut OBJECT-TYPE
SYNTAX Counter32
UNITS "messages"
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"Number of Accounting-Request messages
sent to the remote server.”

::= { carDiaRemSvrStatsEntry 18 }

carDiaRemSvrStatsACAsIn OBJECT-TYPE
SYNTAX Counter32
UNITS "messages"
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"Number of Accounting-Answer messages
received from the remote server.”

::= { carDiaRemSvrStatsEntry 19 }

carDiaRemSvrStatsACAsOut OBJECT-TYPE
SYNTAX Counter32
UNITS "messages"
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"Number of Accounting-Answer messages
sent to the remote server.”

::= { carDiaRemSvrStatsEntry 20 }

carDiaRemSvrStatsCERsIn OBJECT-TYPE
SYNTAX Counter32
UNITS "messages"
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"Number of Capabilities-Exchange-Request
messages received from the remote server.”

::= { carDiaRemSvrStatsEntry 21 }

carDiaRemSvrStatsCERsOut OBJECT-TYPE
SYNTAX Counter32
UNITS "messages"
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"Number of Capabilities-Exchange-Request
messages sent to the remote server”

::= { carDiaRemSvrStatsEntry 22 }

carDiaRemSvrStatsCEAsIn OBJECT-TYPE
SYNTAX Counter32
UNITS "messages"
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"Number of Capabilities-Exchange-Answer
messages received from the remote server.”

::= { carDiaRemSvrStatsEntry 23 }

carDiaRemSvrStatsCEAsOut OBJECT-TYPE
SYNTAX Counter32
UNITS "messages"
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"Number of Capabilities-Exchange-Answer
messages sent to the remote server.”

::= { carDiaRemSvrStatsEntry 24 }

carDiaRemSvrStatsDWRsIn OBJECT-TYPE
SYNTAX Counter32
UNITS "messages"
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"Number of Device-Watchdog-Request
messages received from the remote server.”

::= { carDiaRemSvrStatsEntry 25 }
carDiaRemSvrStatsDWRsOut OBJECT-TYPE
SYNTAX Counter32
UNITS "messages"
MAX-ACCESS read-only
STATUS current
DESCRIPTION "Number of Device-Watchdog-Request messages sent to the peer."
 ::= { carDiaRemSvrStatsEntry 26 }

carDiaRemSvrStatsDWAsIn OBJECT-TYPE
SYNTAX Counter32
UNITS "messages"
MAX-ACCESS read-only
STATUS current
DESCRIPTION "Number of Device-Watchdog-Answer messages received from the remote server."
 ::= { carDiaRemSvrStatsEntry 27 }

carDiaRemSvrStatsDWAsOut OBJECT-TYPE
SYNTAX Counter32
UNITS "messages"
MAX-ACCESS read-only
STATUS current
DESCRIPTION "Number of Device-Watchdog-Answer messages sent to the remote server."
 ::= { carDiaRemSvrStatsEntry 28 }

carDiaRemSvrStatsDPRsIn OBJECT-TYPE
SYNTAX Counter32
UNITS "messages"
MAX-ACCESS read-only
STATUS current
DESCRIPTION "Number of Disconnect-Peer-Request messages received."
 ::= { carDiaRemSvrStatsEntry 29 }

carDiaRemSvrStatsDPRsOut OBJECT-TYPE
SYNTAX Counter32
UNITS "messages"
MAX-ACCESS read-only
STATUS current
DESCRIPTION "Number of Disconnect-Peer-Request messages sent."
 ::= { carDiaRemSvrStatsEntry 30 }

carDiaRemSvrStatsDPAsIn OBJECT-TYPE
SYNTAX Counter32
UNITS "messages"
MAX-ACCESS read-only
STATUS current
DESCRIPTION "Number of Disconnect-Peer-Answer messages received."
 ::= { carDiaRemSvrStatsEntry 31 }

carDiaRemSvrStatsDPAsOut OBJECT-TYPE
SYNTAX Counter32
UNITS "messages"
MAX-ACCESS read-only
STATUS current
DESCRIPTION "Number of Disconnect-Peer-Answer messages sent."
 ::= { carDiaRemSvrStatsEntry 32 }

carDiaRemSvrStatsRARsIn OBJECT-TYPE
SYNTAX Counter32
UNITS "messages"
MAX-ACCESS read-only
STATUS current
DESCRIPTION "Number of Disconnect-Peer-Request messages received."
 ::= { carDiaRemSvrStatsEntry 33 }
UNITS "messages"
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"Number of Re-Auth-Request messages received."
::= { carDiaRemSvrStatsEntry 33 }

carDiaRemSvrStatsRARsOut OBJECT-TYPE
SYNTAX Counter32
UNITS "messages"
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"Number of Re-Auth-Request messages sent."
::= { carDiaRemSvrStatsEntry 34 }

carDiaRemSvrStatsRAAsIn OBJECT-TYPE
SYNTAX Counter32
UNITS "messages"
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"Number of Re-Auth-Answer messages received."
::= { carDiaRemSvrStatsEntry 35 }

carDiaRemSvrStatsRAAsOut OBJECT-TYPE
SYNTAX Counter32
UNITS "messages"
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"Number of Re-Auth-Answer messages sent."
::= { carDiaRemSvrStatsEntry 36 }

carDiaRemSvrStatsSTRsIn OBJECT-TYPE
SYNTAX Counter32
UNITS "messages"
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"Number of Session-Termination-Request messages received from the remote server."
::= { carDiaRemSvrStatsEntry 37 }

carDiaRemSvrStatsSTRsOut OBJECT-TYPE
SYNTAX Counter32
UNITS "messages"
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"Number of Session-Termination-Request messages sent to the remote server."
::= { carDiaRemSvrStatsEntry 38 }

carDiaRemSvrStatsSTAsIn OBJECT-TYPE
SYNTAX Counter32
UNITS "messages"
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"Number of Session-Termination-Answer messages received from the remote server."
::= { carDiaRemSvrStatsEntry 39 }

carDiaRemSvrStatsSTAsOut OBJECT-TYPE
SYNTAX Counter32
UNITS "messages"
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"Number of Session-Termination-Answer messages sent to the remote server."
::= { carDiaRemSvrStatsEntry 40 }
messages sent to the remote server."
 ::= { carDiaRemSvrStatsEntry 40 }

carDiaRemSvrStatsRedirectEvents OBJECT-TYPE
 SYNTAX Counter32
 MAX-ACCESS read-only
 STATUS current
 DESCRIPTION "Redirect Event count, which is the number of redirects sent from a remote server."
 ::= { carDiaRemSvrStatsEntry 41 }

carDiaRemSvrStatsAccDupReq OBJECT-TYPE
 SYNTAX Counter32
 MAX-ACCESS read-only
 STATUS current
 DESCRIPTION "The number of duplicate Diameter Accounting-Request packets received."
 ::= { carDiaRemSvrStatsEntry 42 }

carDiaRemSvrStatsMalformedReq OBJECT-TYPE
 SYNTAX Counter32
 MAX-ACCESS read-only
 STATUS current
 DESCRIPTION "The number of malformed Diameter packets received."
 ::= { carDiaRemSvrStatsEntry 43 }

carDiaRemSvrStatsAccsNotRecorded OBJECT-TYPE
 SYNTAX Counter32
 MAX-ACCESS read-only
 STATUS current
 DESCRIPTION "The number of Diameter Accounting-Request packets which were received and responded to but not recorded."
 ::= { carDiaRemSvrStatsEntry 44 }

carDiaRemSvrStatsWhoInitDisconnect OBJECT-TYPE
 SYNTAX INTEGER {
 host(1),
 remoteserver(2)
 }
 MAX-ACCESS read-only
 STATUS current
 DESCRIPTION "Did the host or peer initiate the disconnect?
 host(1) - If this server initiated the disconnect.
 peer(2) - If the peer with which this server was connected initiated the disconnect."
 ::= { carDiaRemSvrStatsEntry 45 }

carDiaRemSvrStatsAccRetrans OBJECT-TYPE
 SYNTAX Counter32
 MAX-ACCESS read-only
 STATUS current
 DESCRIPTION "The number of Diameter Accounting-Request packets retransmitted to this Diameter server."
 ::= { carDiaRemSvrStatsEntry 46 }

carDiaRemSvrStatsTotalRetrans OBJECT-TYPE
 SYNTAX Counter32
 MAX-ACCESS read-only
 STATUS current
 DESCRIPTION "The number of Diameter packets retransmitted to this Diameter server, not to include Diameter Accounting-Request packets retransmitted."
 ::= { carDiaRemSvrStatsEntry 47 }

carDiaRemSvrStatsAccPendReqOut OBJECT-TYPE
 SYNTAX Gauge32
 MAX-ACCESS read-only
 STATUS current
 DESCRIPTION "The number of pending Diameter Accounting-Request packets sent out by this Diameter server."
 ::= { carDiaRemSvrStatsEntry 48 }
MAX-ACCESS    read-only  
STATUS       current   
DESCRIPTION   
"The number of Diameter Accounting-Request packets sent to this peer that have not yet timed out or received a response. This variable is incremented when an Accounting-Request is sent to this server and decremented due to receipt of an Accounting-Response, a timeout or a retransmission."  
 ::=  {  carDiaRemSvrStatsEntry 48  }

carDiaRemSvrStatsAccReqDropped OBJECT-TYPE  
SYNTAX       Counter32  
MAX-ACCESS   read-only  
STATUS       current   
DESCRIPTION   
"The number of Accounting-Requests to this server that have been dropped."  
 ::=  {  carDiaRemSvrStatsEntry 49  }

carDiaRemSvrStatsHByHDropMessages OBJECT-TYPE  
SYNTAX       Counter32  
MAX-ACCESS   read-only  
STATUS       current   
DESCRIPTION   
"An answer message that is received with an unknown hop-by-hop identifier. Does not include accounting requests dropped."  
 ::=  {  carDiaRemSvrStatsEntry 50  }

carDiaRemSvrStatsEToEDupMessages OBJECT-TYPE  
SYNTAX       Counter32  
MAX-ACCESS   read-only  
STATUS       current   
DESCRIPTION   
"Duplicate answer messages that are to be locally consumed. Does not include duplicate accounting requests received."  
 ::=  {  carDiaRemSvrStatsEntry 51  }

carDiaRemSvrStatsUnknownTypes OBJECT-TYPE  
SYNTAX       Counter32  
MAX-ACCESS   read-only  
STATUS       current   
DESCRIPTION   
"The number of Diameter packets of unknown type which were received."  
 ::=  {  carDiaRemSvrStatsEntry 52  }

carDiaRemSvrStatsProtocolErrors OBJECT-TYPE  
SYNTAX       Counter32  
MAX-ACCESS   read-only  
STATUS       current   
DESCRIPTION   
"This object represents the Number of protocol errors returned to remote server, but not including redirects."  
 ::=  {  carDiaRemSvrStatsEntry 53  }

carDiaRemSvrStatsTransientFailures OBJECT-TYPE  
SYNTAX       Counter32  
MAX-ACCESS   read-only  
STATUS       current   
DESCRIPTION   
"This object represents the transient failure count."  
 ::=  {  carDiaRemSvrStatsEntry 54  }

carDiaRemSvrStatsPermanentFailures OBJECT-TYPE  
SYNTAX       Counter32  
MAX-ACCESS   read-only  
STATUS       current   
DESCRIPTION   
"This object represents the Number of permanent ...
failures returned to peer."
::= { carDiaRemSvrStatsEntry 55 }

carDiaRemSvrStatsTransportDown OBJECT-TYPE
SYNTAX Counter32
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"This object represents the Number of unexpected transport
failures."
::= { carDiaRemSvrStatsEntry 56 }

carDiaRemSvrStatsDWCurrStatus OBJECT-TYPE
SYNTAX INTEGER {
  okay(1),
  suspect(2),
  down(3),
  reopen(4)
}
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"This object indicates the connection status.
okay(1) - Indicates the connection is presumed working.
suspect(2) - Indicates the connection is possibly
congested or down.
down(3) - The remote server is no longer reachable, causing
the transport connection to be shutdown.
reopen(4) - Three watchdog messages are exchanged with
accepted round trip times, and the connection
to the remote server is considered stabilized."
::= { carDiaRemSvrStatsEntry 57 }

carDiaRemSvrStatsTimeoutConnAtmpts OBJECT-TYPE
SYNTAX Counter32
UNITS "attempts"
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"If there is no transport connection with a peer,
this is the number of times the server attempts
to connect to that peer. This is reset on
disconnection."
::= { carDiaRemSvrStatsEntry 58 }

carDiaRemSvrStatsTotalReqAcknowledged OBJECT-TYPE
SYNTAX Counter32
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"It represents the Number of requests Acknowledged"
::= { carDiaRemSvrStatsEntry 59 }

carRadSvrStats OBJECT IDENTIFIER
 ::= { carRADIUS 9 }

carRadSvrXMLStats OBJECT IDENTIFIER
 ::= { carRADIUS 10 }

carDiaSvrStats OBJECT IDENTIFIER
 ::= { carRADIUS 11 }

carRadSvrStatsServerStartTime OBJECT-TYPE
SYNTAX SnmpAdminString
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"Indicates the start time of the server"
::= { carRadSvrStats 1 }

carRadSvrStatsServerResetTime OBJECT-TYPE
SYNTAX          SnmpAdminString
MAX-ACCESS      read-only
STATUS          current
DESCRIPTION     "Indicates the time when the server was
                reloaded.''
 ::= { carRadSvrStats 2 }

carRadSvrStatsServerState OBJECT-TYPE
SYNTAX          INTEGER {
                stopped(1),
                running(2)
                }
MAX-ACCESS      read-only
STATUS          current
DESCRIPTION     "Indicates if the server is running or stopped.''
 ::= { carRadSvrStats 3 }

carRadSvrStatsTotalPacketsInPool OBJECT-TYPE
SYNTAX          Counter32
MAX-ACCESS      read-only
STATUS          current
DESCRIPTION     "Number of packets that can be accommodated
                in the pool.''
 ::= { carRadSvrStats 4 }

carRadSvrStatsTotalPacketsReceived OBJECT-TYPE
SYNTAX          Counter32
MAX-ACCESS      read-only
STATUS          current
DESCRIPTION     "Number of packets that are received by radius
                server.''
 ::= { carRadSvrStats 5 }

carRadSvrStatsTotalPacketsSent OBJECT-TYPE
SYNTAX          Counter32
MAX-ACCESS      read-only
STATUS          current
DESCRIPTION     "Number of packets that are sent by radius
                server.''
 ::= { carRadSvrStats 6 }

carRadSvrStatsTotalReq OBJECT-TYPE
SYNTAX          Counter32
MAX-ACCESS      read-only
STATUS          current
DESCRIPTION     "Number of requests received by radius server.
                This includes access requests and accounting
                requests.''
 ::= { carRadSvrStats 7 }

carRadSvrStatsTotalResp OBJECT-TYPE
SYNTAX          Counter32
MAX-ACCESS      read-only
STATUS          current
DESCRIPTION     "Number of responses sent by radius server.
                This includes access accepts/rejects and accounting
                responses.''
 ::= { carRadSvrStats 8 }

carRadSvrStatsTotalAccessReq OBJECT-TYPE
SYNTAX          Counter32
MAX-ACCESS      read-only
STATUS          current
DESCRIPTION     "Number of access requests received/processed
                by radius server.''
 ::= { carRadSvrStats 9 }

carRadSvrStatsTotalAccessAccepts OBJECT-TYPE
SYNTAX Counter32
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"Number of access accepts sent by radius server"
 ::= { carRadSvrStats 10 }

carRadSvrStatsTotalAccessChallenges OBJECT-TYPE
SYNTAX Counter32
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"Number of access challenges sent by radius server"
 ::= { carRadSvrStats 11 }

carRadSvrStatsTotalAccessRejects OBJECT-TYPE
SYNTAX Counter32
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"Number of access rejects sent by radius server"
 ::= { carRadSvrStats 12 }

carRadSvrStatsTotalAccessResp OBJECT-TYPE
SYNTAX Counter32
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"Number of access responses sent by radius server."
 ::= { carRadSvrStats 13 }

carRadSvrStatsTotalAccountingReq OBJECT-TYPE
SYNTAX Counter32
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"Number of accounting requests received by radius server."
 ::= { carRadSvrStats 14 }

carRadSvrStatsTotalAccountingResp OBJECT-TYPE
SYNTAX Counter32
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"Number of accounting responses sent by radius server."
 ::= { carRadSvrStats 15 }

carRadSvrStatsTotalStatusServerReq OBJECT-TYPE
SYNTAX Counter32
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"Number of status server request received by radius server."
 ::= { carRadSvrStats 16 }

carRadSvrStatsTotalAscendIPAAllocateReq OBJECT-TYPE
SYNTAX Counter32
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"Number of requests received related to Ascend IP address allocation."
 ::= { carRadSvrStats 17 }
carRadSvrStatsTotalAscendIPAAllocateResp OBJECT-TYPE
SYNTAX Counter32
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"Number of responses sent related to Ascend IP Address Allocation."
 ::= { carRadSvrStats 18 }
carRadSvrStatsTotalAscendIPAReleaseReq OBJECT-TYPE
SYNTAX Counter32
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"Number of requests received related to Ascend IP Address release."
 ::= { carRadSvrStats 19 }
carRadSvrStatsTotalAscendIPAReleaseResp OBJECT-TYPE
SYNTAX Counter32
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"Number of responses sent related to Ascend IP Address release."
 ::= { carRadSvrStats 20 }
carRadSvrStatsTotalUSRNASRebootReq OBJECT-TYPE
SYNTAX Counter32
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"Number of user NAS reboot request received by radius server."
 ::= { carRadSvrStats 21 }
carRadSvrStatsTotalUSRNASRebootResp OBJECT-TYPE
SYNTAX Counter32
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"Number of user NAS reboot response sent by radius server."
 ::= { carRadSvrStats 22 }
carRadSvrStatsTotalUSRResourceFreeReq OBJECT-TYPE
SYNTAX Counter32
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"Number of user resource free request received by radius server."
 ::= { carRadSvrStats 23 }
carRadSvrStatsTotalUSRResourceFreeResp OBJECT-TYPE
SYNTAX Counter32
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"Number of user resource free response sent by radius server."
 ::= { carRadSvrStats 24 }
carRadSvrStatsTotalUSRQueryResourceReq OBJECT-TYPE
SYNTAX Counter32
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"Number of user query resource request received by radius server."
 ::= { carRadSvrStats 25 }
carRadSvrStatsTotalUSRQueryResourceResp OBJECT-TYPE
SYNTAX Counter32
MAX-ACCESS read-only
STATUS current
DESCRIPTION "Number of user query resource response sent by radius server."
::= { carRadSvrStats 26 }

carRadSvrStatsTotalUSRQueryReclaimReq OBJECT-TYPE
SYNTAX Counter32
MAX-ACCESS read-only
STATUS current
DESCRIPTION "Number of user query reclaim request received by radius server"
::= { carRadSvrStats 27 }

carRadSvrStatsTotalUSRQueryReclaimResp OBJECT-TYPE
SYNTAX Counter32
MAX-ACCESS read-only
STATUS current
DESCRIPTION "Number of user query reclaim response sent by radius server."
::= { carRadSvrStats 28 }

carRadSvrStatsTotalPacketsInUse OBJECT-TYPE
SYNTAX Gauge32
UNITS "messages"
MAX-ACCESS read-only
STATUS current
DESCRIPTION "Number of packets that are being used."
::= { carRadSvrStats 29 }

carRadSvrStatsTotalPacketsDrained OBJECT-TYPE
SYNTAX Counter32
MAX-ACCESS read-only
STATUS current
DESCRIPTION "Number of packets that are drained."
::= { carRadSvrStats 30 }

carRadSvrStatsTotalPacketsDropped OBJECT-TYPE
SYNTAX Counter32
MAX-ACCESS read-only
STATUS current
DESCRIPTION "Number of packets that are dropped."
::= { carRadSvrStats 31 }

carRadSvrStatsTotalPayloadDecryptionFailures OBJECT-TYPE
SYNTAX Counter32
MAX-ACCESS read-only
STATUS current
DESCRIPTION "Number of failures due to payloads decryption."
::= { carRadSvrStats 32 }

carRadSvrXMLStatsTotalXMLPacketsInPool OBJECT-TYPE
SYNTAX Counter32
MAX-ACCESS read-only
STATUS current
DESCRIPTION "Number of XML packets that can be accommodated in the pool."
::= { carRadSvrXMLStats 1 }

carRadSvrXMLStatsTotalXMLPacketsReceived OBJECT-TYPE
SYNTAX Counter32
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"Number of XML packets that are received by radius server."
 ::= { carRadSvrXMLStats 2 }

carRadSvrXMLStatsTotalXMLReq OBJECT-TYPE
SYNTAX       Counter32
MAX-ACCESS   read-only
STATUS       current
DESCRIPTION  "Number of XML requests received by radius server. This includes access requests and accounting requests."
 ::= { carRadSvrXMLStats 3 }

carRadSvrXMLStatsTotalXMLResp OBJECT-TYPE
SYNTAX       Counter32
MAX-ACCESS   read-only
STATUS       current
DESCRIPTION  "Number of XML responses sent by radius server. This includes access accepts/rejects and accounting responses."
 ::= { carRadSvrXMLStats 4 }

carRadSvrXMLStatsTotalXMLPacketsInUse OBJECT-TYPE
SYNTAX       Gauge32
UNITS         "messages"
MAX-ACCESS   read-only
STATUS       current
DESCRIPTION  "Number of XML packets that are being used."
 ::= { carRadSvrXMLStats 5 }

carRadSvrXMLStatsTotalXMLPacketsDrained OBJECT-TYPE
SYNTAX       Counter32
MAX-ACCESS   read-only
STATUS       current
DESCRIPTION  "Number of XML packets that are drained."
 ::= { carRadSvrXMLStats 6 }

carRadSvrXMLStatsTotalXMLPacketsDropped OBJECT-TYPE
SYNTAX       Counter32
MAX-ACCESS   read-only
STATUS       current
DESCRIPTION  "Number of XML packets that are dropped."
 ::= { carRadSvrXMLStats 7 }

carRadSvrXMLStatsTotalXMLPacketParseFailures OBJECT-TYPE
SYNTAX       Counter32
MAX-ACCESS   read-only
STATUS       current
DESCRIPTION  "Number of XML Packet Parse Failures"
 ::= { carRadSvrXMLStats 8 }

carDiaSvrStatsServerStartTime OBJECT-TYPE
SYNTAX       SnmpAdminString
MAX-ACCESS   read-only
STATUS       current
DESCRIPTION  "The start time of the server."
 ::= { carDiaSvrStats 1 }

carDiaSvrStatsServerResetTime OBJECT-TYPE
SYNTAX       SnmpAdminString
MAX-ACCESS   read-only
STATUS       current
DESCRIPTION  "The reset time of the server."
 ::= { carDiaSvrStats 2 }

carDiaSvrStatsServerState OBJECT-TYPE
SYNTAX INTEGER {
   stopped(1),
   running(2),
   unknown(3)
}
MAX-ACCESS read-only
STATUS current
DESCRIPTION "The state of the server."
::= { carDiaSvrStats 3 }

carDiaSvrStatsTotalUpTime OBJECT-TYPE
SYNTAX TimeInterval
UNITS "secs"
MAX-ACCESS read-only
STATUS current
DESCRIPTION "The total time for which the Diameter server is up."
::= { carDiaSvrStats 4 }

carDiaSvrStatsElapsedResetTime OBJECT-TYPE
SYNTAX TimeInterval
UNITS "secs"
MAX-ACCESS read-only
STATUS current
DESCRIPTION "The time elapsed since a server was reset"
::= { carDiaSvrStats 5 }

carDiaSvrStatsTotalPacketsIn OBJECT-TYPE
SYNTAX Counter32
MAX-ACCESS read-only
STATUS current
DESCRIPTION "The total number of packets received by a Diameter Base protocol."
::= { carDiaSvrStats 6 }

carDiaSvrStatsTotalPacketsOut OBJECT-TYPE
SYNTAX Counter32
MAX-ACCESS read-only
STATUS current
DESCRIPTION "The total number of packets transmitted by a Diameter Base protocol."
::= { carDiaSvrStats 7 }

carDiaSvrStatsTotalPacketsInUse OBJECT-TYPE
SYNTAX Gauge32
UNITS "messages"
MAX-ACCESS read-only
STATUS current
DESCRIPTION "The total number of diameter packets in use currently."
::= { carDiaSvrStats 8 }
carNotifObjects OBJECT IDENTIFIER
::= { ciscoAccessRegistrarMIBObjects 2 }

-- carNotifObjects: Objects which are used in notifications

carNotifStartType OBJECT-TYPE
SYNTAX INTEGER {
   firstStart(1),
   reload(2)
}
MAX-ACCESS accessible-for-notify
STATUS current
DESCRIPTION "The start type.

'firstStart' indicates server process first starts."
Unscheduled 'firstStart' could indicate an abnormal condition this server may have experienced, such as this server process was cored and is restarted again.

'reload' indicates this server process has an internal reload, typically after reading some configuration changes, but this server process did not quit during the process."

::= { carNotifObjects 1 }
carNotifInputQueueHighThreshold OBJECT-TYPE
SYNTAX Integer32 (0..100)
MAX-ACCESS read-write
STATUS current
DESCRIPTION
"The percentage of the packet input queue that is full. When the input queue usage is above or equal to this threshold, an carInputQueueFull event may be sent. No carInputQueueFull can be sent until the usage percentage goes down below carNotifInputQueueLowThreshold."

The current input queue usage can be derived by carServerInputQueueSize/carServerInputQueueMaxSize *100.

The carNotifInputQueueHighThreshold must be greater than or equal to the carNotifInputQueueLowThreshold."

::= { carNotifObjects 2 }
carNotifInputQueueLowThreshold OBJECT-TYPE
SYNTAX Integer32 (0..100)
MAX-ACCESS read-write
STATUS current
DESCRIPTION
"The percentage of packet input queue that is full. When the input queue usage goes below this threshold after reaching carNotifInputQueueHighThreshold, an carInputQueueNotVeryFull event will be sent. No carInputQueueNotVeryFull can be sent if the usage remains below the carNotifInputQueueHighThreshold."

The current input queue usage can be derived by carServerInputQueueSize/carServerInputQueueMaxSize *100.

The carNotifInputQueueHighThreshold must be greater than or equal to the carNotifInputQueueLowThreshold."

::= { carNotifObjects 3 }
carNotifAcctLogErrorInterval OBJECT-TYPE
SYNTAX TimeTicks
MAX-ACCESS read-write
STATUS current
DESCRIPTION
"The time interval to check and report problems in logging accounting records. The problem could be caused by disk full etc. The first time there is problem recording accounting packets, a notification carAccountingLoggingFailure is sent. No more carAccountingLoggingFailure can be sent until either after the carNotifAcctLogErrorInterval expires or after the error condition is corrected. Value '0' indicates that only one carAccountingLoggingFailure can be sent for the error condition and no more carAccountingLoggingFailure can be sent until after the error condition is corrected. carServerAccLogInError can be used to determine if the error condition currently exists."

::= { carNotifObjects 4 }
carNotifAcctLogErrorReason OBJECT-TYPE
SYNTAX SnmpAdminString
MAX-ACCESS  read-only
STATUS    current
DESCRIPTION
"The reason that causes the current error in logging accounting packets.
carServerAccLogInError can be used to determine if the error condition exists"
::= { carNotifObjects 5 }
carNotifLicenseUsage OBJECT-TYPE
SYNTAX     Integer32 (-1..1000)
MAX-ACCESS accessible-for-notify
STATUS    current
DESCRIPTION
"When the TPS limit is above than this threshold, an carNotifExceedingLicense event may be sent."
::= { carNotifObjects 6 }
-- Notifications
carMIBNotificationPrefix OBJECT IDENTIFIER
::= { ciscoAccessRegistrarMIB 2 }
carMIBNotifications OBJECT IDENTIFIER
::= { carMIBNotificationPrefix 0 }
carServerStart NOTIFICATION-TYPE
OBJECTS    { carNotifStartType }
STATUS    current
DESCRIPTION
"This notification signifies that this server has started on the host from which this notification has been sent. The start type is indicated by carNotifStartType. 'firstStart' indicates this server process first starts. 'reload' indicates this server process has an internal reload, typically after reread some configuration changes, but this server process did not quit during the process."
::= { carMIBNotifications 1 }
carServerStop NOTIFICATION-TYPE
STATUS    current
DESCRIPTION
"This notification signifies that the server has stopped normally on the host from which this notification has been sent."
::= { carMIBNotifications 2 }
carInputQueueFull NOTIFICATION-TYPE
OBJECTS    { carNotifInputQueueHighThreshold, carNotifInputQueueLowThreshold }
STATUS    current
DESCRIPTION
"This notification indicates that the percentage usage of packet input queue has reached its high threshold as defined in carNotifInputQueueHighThreshold. If the percentage usage reaches 100%, successive request may be dropped, and the server may stop responding to client requests until the queue drops down again. After this notification is sent, this type of notification will not be sent again until the percentage usage of the input queue goes back down below the low threshold defined in carNotifInputQueueLowThreshold."
::= { carMIBNotifications 3 }
carInputQueueNotVeryFull NOTIFICATION-TYPE
OBJECTS    { carNotifInputQueueHighThreshold, carNotifInputQueueLowThreshold }
STATUS    current
DESCRIPTION
This notification indicates that the percentage usage of the packet input queue has dropped below the low threshold defined in carNotifInputQueueLowThreshold. This type of notification will not be sent again until the percentage usage goes back up above the high threshold defined in carNotifInputQueueHighThreshold.

 ::= { carMIBNotifications 4 }

carOtherAuthServerNotResponding NOTIFICATION-TYPE

OBJECTS {
carRadRemSvrStatsServerName,
carRadRemSvrStatsType,
carRadRemSvrStatsInetAddrType,
carRadRemSvrStatsInetAddress,
carRadRemSvrStatsPortNumber
}

STATUS current

DESCRIPTION

This notification signifies that an authentication server is not responding to the request sent from this server. The identity of the concerned server is given by the radiusAuthServerAddress object. The port number of that server is given by radiusAuthClientServerPortNumber. The type of the concerned server is given by carAuthServerType object. The index of the objects identify the entry in radiusAuthServerTable and carAccServerExtTable, which maintains the characteristics of the concerned server.

NOTE: One should not solely rely on this for server state. Several conditions, including restart of the CPAR server, could result in either multiple carOtherAuthServerNotResponding notifications being sent, or in a carOtherAuthServerResponding notification NOT being sent. NMS can query the carAuthServerRunningState in carAuthServerExtTable for current running state of this server.

 ::= { carMIBNotifications 5 }

carOtherAuthServerResponding NOTIFICATION-TYPE

OBJECTS {
carRadRemSvrStatsServerName,
carRadRemSvrStatsType,
carRadRemSvrStatsInetAddrType,
carRadRemSvrStatsInetAddress,
carRadRemSvrStatsPortNumber
}

STATUS current

DESCRIPTION

This notification signifies that an authentication server which had formerly been in a 'down' state is now responding to request from the CPAR server. The identity of the concerned server is given by the radiusAuthServerAddress object. The port number of that server is given in radiusAuthClientServerPortNumber. The type of the concerned server is given by carAuthServerType object. The index of the objects identify the entry in radiusAuthServerTable and carAccServerExtTable, which maintains the characteristics of the concerned server.

NOTE: One should not rely on receiving this notification as an indication that all is well with the network. Several conditions, including restart of the CPAR server, could result in either multiple carOtherAuthServerNotResponding notifications being sent, or in a carOtherAuthServerResponding notification NOT being sent. NMS can query the carAuthServerRunningState in carAuthServerExtTable for current running state of this server.

 ::= { carMIBNotifications 6 }

carOtherAccServerNotResponding NOTIFICATION-TYPE

OBJECTS {
carRadRemSvrStatsType,
carRadRemSvrStatsServerName,
carRadRemSvrStatsInetAddrType,
carRadRemSvrStatsInetAddress,  
carRadRemSvrStatsPortNumber
}

STATUS current
DESCRIPTION
"This notification signifies that an accounting server is not  
responding to the requests sent from this server. The  
identity of the concerned server is given by the  
radiusAccServerAddress object. The port number of that server  
is given by radiusAccClientServerPortNumber. The type of the  
concerned server is given by carAccServerType object. The  
index of the objects identify the entry in  
radiusAuthServerTable and carAccServerExtTable, which maintain  
the characteristics of the concerned server.

NOTE: One should not solely rely on this for server state.  
Several conditions, including restart of the CPAR server, could  
result in either multiple carOtherAccServerNotResponding  
notifications being sent, or in a carOtherAccServerResponding  
notification NOT being sent. NMS can query the  
carAccServerRunningState in carAccServerExtTable for current  
running state of this server."
::= { carMIBNotifications 7 }

carOtherAccServerResponding NOTIFICATION-TYPE
OBJECTS
{
  carRadRemSvrStatsServerName,  
carRadRemSvrStatsType,  
carRadRemSvrStatsInetAddrType,  
carRadRemSvrStatsInetAddress,  
carRadRemSvrStatsPortNumber
}

STATUS current
DESCRIPTION
"This notification signifies that an accounting server which  
had formerly been in a 'not responding' state is now  
responding to request from the CPAR server. The identity of  
the concerned server is given by the radiusAccServerAddress  
object. The port number of that server is given in  
radiusAccClientServerPortNumber. The type of the concerned  
server is given by carAccServerType object. The index of the  
objects identify the entry in radiusAuthServerTable and  
carAccServerExtTable, which maintain the characteristics of  
the concerned server.

NOTE: One should not rely on receiving this notification as an  
indication that all is well with the network. Several  
conditions, including restart of the CPAR server, could result  
in either multiple carOtherAccServerNotResponding  
notifications being sent, or in a carOtherAccServerResponding  
notification NOT being sent. NMS can query the  
carAccServerRunningState in carAccServerExtTable for current  
running state of this server."
::= { carMIBNotifications 8 }

carAccountingLoggingFailure NOTIFICATION-TYPE
OBJECTS
{
  carNotifAcctLogErrorReason,  
carNotifAcctLogErrorInterval
}

STATUS current
DESCRIPTION
"This notification signifies that this server can not record  
accounting packets locally. The reason should be specified in  
carNotifAcctLogErrorReason. No more such notification can be  
sent until either carNotifAcctLogErrorInterval expires or the  
error condition is corrected. The carNotifAcctLogErrorInterval  
of value '0' indicates no time interval checking, so new  
notification can only be sent after the error condition is  
corrected."  
::= { carMIBNotifications 9 }

carLicenseUsage NOTIFICATION-TYPE
OBJECTS { carServerLicenseUsage }
STATUS current
DESCRIPTION "Notify the percentage of License Usage"
::= { carMIBNotifications 10 }

carDiameterPeerDown NOTIFICATION-TYPE
OBJECTS { cdbpPeerIpAddress }
STATUS current
DESCRIPTION "This notification signifies that a diameter peer is down. The identity of the concerned server is given by the cdbpPeerIpAddress object."
::= { carMIBNotifications 11 }

carDiameterPeerUp NOTIFICATION-TYPE
OBJECTS { cdbpPeerIpAddress }
STATUS current
DESCRIPTION "This notification signifies that a diameter peer is up. The identity of the concerned server is given by the cdbpPeerIpAddress object."
::= { carMIBNotifications 12 }

carDiaRemSvrConnectionUp NOTIFICATION-TYPE
OBJECTS { carDiaRemSvrStatsServerName, carDiaRemSvrStatsType, carDiaRemSvrStatsInetAddrType, carDiaRemSvrStatsInetAddress, carDiaRemSvrStatsPortNumber }
STATUS current
DESCRIPTION "An carDiaRemSvrConnectionUp notification is sent when both the following conditions are true:
1) the value of carNotifDiaRemSvrConnectionUp is true(1)
2) the value of carDiaRemSvrStatsState changes to rOpen(6) or lOpen(7)."
::= { carMIBNotifications 13 }

carDiaRemSvrConnectionDown NOTIFICATION-TYPE
OBJECTS { carDiaRemSvrStatsServerName, carDiaRemSvrStatsType, carDiaRemSvrStatsInetAddrType, carDiaRemSvrStatsInetAddress, carDiaRemSvrStatsPortNumber }
STATUS current
DESCRIPTION "A carDiaRemSvrConnectionDown notification is sent when both the following conditions are true:
1) the value of carNotifDiaRemSvrConnectionDown is true(1)
2) carDiaRemSvrStatsState changes to closed(1)."
::= { carMIBNotifications 14 }

carDiaRemSvrTransientFailure NOTIFICATION-TYPE
OBJECTS { carRadRemSvrStatsServerName }
STATUS current
DESCRIPTION "An ciscoDiaBaseProtTransientFailureNotif notification is sent when both the following conditions are true:
1) the value of carNotifDiaRemSvrTransientFailure is true(1)
2) the value of carDiaRemSvrStatsTransientFailures changes."
::= { carMIBNotifications 15 }

carDiaRemSvrPermanentFailure NOTIFICATION-TYPE
OBJECTS { carDiaRemSvrStatsServerName }
carDiaRemSvrStatsPermanentFailures

| STATUS | current |
| DESCRIPTION |
"An carDiaRemSvrPermanentFailure notification is sent when both the following conditions are true:
1) the value of carDiaRemSvrPermanentFailure is true(1)
2) the value of carDiaRemSvrStatsPermanentFailures changes."

::= { carMIBNotifications 16 }

-- Conformance

ciscoAccessRegistrarMIBConformance OBJECT IDENTIFIER
::= { ciscoAccessRegistrarMIB 3 }
ciscoAccessRegistrarMIBCompliances OBJECT IDENTIFIER
::= { ciscoAccessRegistrarMIBConformance 1 }
ciscoAccessRegistrarMIBGroups OBJECT IDENTIFIER
::= { ciscoAccessRegistrarMIBConformance 2 }

-- Compliance
ciscoAccessRegistrarMIBCompliance MODULE-COMPLIANCE
STATUS current
DESCRIPTION "The compliance statement for entities which implement the Cisco Access Registrar MIB."
MODULE -- this module
MANDATORY-GROUPS {
ciscoAccessRegistrarNotifObjectsGroup,
ciscoAccessRegistrarNotificationsGroup,
ciscoAccessRegistrarMibObjectsGroup,
ciscoAccessRegistrarDiaRemSvrStatsGroup,
ciscoAccessRegistrarRadRemSvrStatsGroup,
ciscoAccessRegistrarDiaSvrStatsGroup,
ciscoAccessRegistrarDiaSvrXMLStatsGroup
}
::= { ciscoAccessRegistrarMIBCompliances 1 }

-- Units of Conformance
ciscoAccessRegistrarNotifObjectsGroup OBJECT-GROUP
OBJECTS {
carNotifStartType, carNotifAcctLogErrorInterval, carNotifAcctLogErrorReason, carNotifInputQueueHighThreshold, carNotifInputQueueLowThreshold, carNotIfLicenseUsage
}
STATUS current
DESCRIPTION "Access Registrar MIB objects used in notifications."
::= { ciscoAccessRegistrarMIBGroups 1 }
ciscoAccessRegistrarMibObjectsGroup OBJECT-GROUP
OBJECTS {
carAuthServerRunningState, carAuthServerType, carAccServerRunningState, carAccServerType, carServerInputQueueMaxSize, carServerInputQueueSize, carServerAccLogInError, carServerLicenseUsage
}
STATUS current
DESCRIPTION "Access Registrar MIB objects that extend radiusAuthServerTable and radiusAccServerTable."
ciscoAccessRegistrarMIBGroups 2

ciscoAccessRegistrarNotificationsGroup NOTIFICATION-GROUP
NOTIFICATIONS {
  carServerStart,
carServerStop,
carInputQueueFull,
carInputQueueNotVeryFull,
carOtherAuthServerNotResponding,
carOtherAuthServerResponding,
carOtherAccServerNotResponding,
carOtherAccServerResponding,
carAccountingLoggingFailure,
carLicenseUsage,
carDiameterPeerDown,
carDiameterPeerUp,
carDiaRemSvrConnectionUp,
carDiaRemSvrConnectionDown,
carDiaRemSvrTransientFailure,
carDiaRemSvrPermanentFailure
}

STATUS current
DESCRIPTION
"Notifications which are implemented by the Cisco Access Registrar agent."

ciscoAccessRegistrarDiaRemSvrStatsGroup OBJECT-GROUP
OBJECTS {
carDiaRemSvrStatsServerName,
carDiaRemSvrStatsType,
carDiaRemSvrStatsInetAddrType,
carDiaRemSvrStatsInetAddress,
carDiaRemSvrStatsPortNumber,
carDiaRemSvrStatsActive,
carDiaRemSvrStatsRTTAverage,
carDiaRemSvrStatsRTTDeviation,
carDiaRemSvrStatsTotalReqPending,
carDiaRemSvrStatsTotalReqOutstanding,
carDiaRemSvrStatsState,
carDiaRemSvrStatsASRsIn,
carDiaRemSvrStatsASRsOut,
carDiaRemSvrStatsASAsIn,
carDiaRemSvrStatsASAsOut,
carDiaRemSvrStatsACRsIn,
carDiaRemSvrStatsACRsOut,
carDiaRemSvrStatsACAsIn,
carDiaRemSvrStatsACAsOut,
carDiaRemSvrStatsCERsIn,
carDiaRemSvrStatsCERsOut,
carDiaRemSvrStatsCEAsIn,
carDiaRemSvrStatsCEAsOut,
carDiaRemSvrStatsDWRsIn,
carDiaRemSvrStatsDWRsOut,
carDiaRemSvrStatsDWArsIn,
carDiaRemSvrStatsDWArsOut,
carDiaRemSvrStatsDRAsIn,
carDiaRemSvrStatsDRAsOut,
carDiaRemSvrStatsRARsIn,
carDiaRemSvrStatsRARsOut,
carDiaRemSvrStatsSTAsIn,
carDiaRemSvrStatsSTAsOut,
carDiaRemSvrStatsRedirectEvents,
carDiaRemSvrStatsAccDupReq,
carDiaRemSvrStatsMalformedReq,
carDiaRemSvrStatsAccsNotRecorded,
carDiaRemSvrStatsWhoInitDisconnect,
carDiaRemSvrStatsAccRetrans,  
carDiaRemSvrStatsTotalRetrans,  
carDiaRemSvrStatsAccPendReqOut,  
carDiaRemSvrStatsAccReqDropped,  
carDiaRemSvrStatsHByHDropMessages,  
carDiaRemSvrStatsEToEDupMessages,  
carDiaRemSvrStatsUnknownTypes,  
carDiaRemSvrStatsProtocolErrors,  
carDiaRemSvrStatsTransientFailures,  
carDiaRemSvrStatsPermanentFailures,  
carDiaRemSvrStatsTransportDown,  
carDiaRemSvrStatsDWCurrStatus,  
carDiaRemSvrStatsTimeoutConnAtmpts,  
carDiaRemSvrStatsTotalReqAcknowledged

}  
STATUS  current  
DESCRIPTION  "This Group contains the Diameter Remote Server Stats"  
::= { ciscoAccessRegistrarMIBGroups 4 }

ciscoAccessRegistrarRadRemSvrStatsGroup OBJECT-GROUP  
OBJECTS {  
carRadRemSvrStatsServerName,  
carRadRemSvrStatsType,  
carRadRemSvrStatsNetAddrType,  
carRadRemSvrStatsNetAddress,  
carRadRemSvrStatsPortNumber,  
carRadRemSvrStatsActive,  
carRadRemSvrStatsMaxTries,  
carRadRemSvrStatsRTTAverage,  
carRadRemSvrStatsRTTDeviation,  
carRadRemSvrStatsTimeoutPenalty,  
carRadRemSvrStatsTotalReqPending,  
carRadRemSvrStatsTotalReqSent,  
carRadRemSvrStatsTotalReqOutstanding,  
carRadRemSvrStatsTotalReqAcknowledged,  
carRadRemSvrStatsTotalReqTimedOut,  
carRadRemSvrStatsTotalRespDropForNotInCache,  
carRadRemSvrStatsTotalRespDropForSignMismatch,  
carRadRemSvrStatsTotalReqDropAfterMaxTries,  
carRadRemSvrStatsLastReqTime,  
carRadRemSvrStatsLastAcceptTime
}

STATUS  current  
DESCRIPTION  "This group is for Radius Remote Server Stats"  
::= { ciscoAccessRegistrarMIBGroups 5 }

ciscoAccessRegistrarRadSvrStatsGroup OBJECT-GROUP  
OBJECTS {  
carRadSvrStatsServerStartTime,  
carRadSvrStatsServerResetTime,  
carRadSvrStatsServerState,  
carRadSvrStatsTotalPacketsInPool,  
carRadSvrStatsTotalPacketsReceived,  
carRadSvrStatsTotalPacketsSent,  
carRadSvrStatsTotalReq,  
carRadSvrStatsTotalResp,  
carRadSvrStatsTotalAccessReq,  
carRadSvrStatsTotalAccessAccepts,  
carRadSvrStatsTotalAccessChallenges,  
carRadSvrStatsTotalAccessRejects,  
carRadSvrStatsTotalAccessResp,  
carRadSvrStatsTotalAccountingReq,  
carRadSvrStatsTotalAccountingResp,  
carRadSvrStatsTotalStatusServerReq,  
carRadSvrStatsTotalStatusServerResp,  
carRadSvrStatsTotalAscendIPAAllocateReq,  
carRadSvrStatsTotalAscendIPAAllocateResp,  
carRadSvrStatsTotalAscendIPAReleaseReq,  
carRadSvrStatsTotalAscendIPAReleaseResp,  
carRadSvrStatsTotalUSRNASRebootReq,  
carRadSvrStatsTotalUSRNASRebootResp,  
carRadSvrStatsTotalUSRResourceFreeReq,
ciscoAccessRegistrarDiaSvrStatsGroup OBJECT-GROUP
OBJECTS {
  carDiaSvrStatsServerStartTime,
  carDiaSvrStatsServerResetTime,
  carDiaSvrStatsServerState,
  carDiaSvrStatsTotalUpTime,
  carDiaSvrStatsElapsedResetTime,
  carDiaSvrStatsTotalPacketsIn,
  carDiaSvrStatsTotalPacketsOut,
  carDiaSvrStatsTotalPacketsInUse
}

STATUS current
DESCRIPTION "This group is for Diameter Consolidated Server Stats"
::= { ciscoAccessRegistrarMIBGroups 7 }

ciscoAccessRegistrarRadSvrXMLStatsGroup OBJECT-GROUP
OBJECTS {
  carRadSvrXMLStatsTotalXMLPacketsInPool,
  carRadSvrXMLStatsTotalXMLPacketsReceived,
  carRadSvrXMLStatsTotalXMLReq,
  carRadSvrXMLStatsTotalXMLResp,
  carRadSvrXMLStatsTotalXMLPacketsInUse,
  carRadSvrXMLStatsTotalXMLPacketsDrained,
  carRadSvrXMLStatsTotalXMLPacketsDropped,
  carRadSvrXMLStatsTotalXMLPacketParseFailures
}

STATUS current
DESCRIPTION "This group is for Radius Consolidated Server XML Stats"
::= { ciscoAccessRegistrarMIBGroups 8 }

END
-- %DNP% MOS -carAccServerRunningState MOS
-- %DNP% MOS -carAccServerType MOS
-- %DNP% MOS -carServerInputQueueMaxSize MOS
-- %DNP% MOS -carServerInputQueueSize MOS
-- %DNP% MOS -carServerAccLogInError MOS
-- %DNP% MOS -carServerLicenseUsage MOS
-- %DNP% MOS -carRadRemSvrStatsTable MOS
-- %DNP% MOS -carRadRemSvrStatsEntry MOS
-- %DNP% MOS -carRadRemSvrStatsIndex MOS
-- %DNP% MOS -carRadRemSvrStatsServerName MOS
-- %DNP% MOS -carRadRemSvrStatsType MOS
-- %DNP% MOS -carRadRemSvrStatsInetAddrType MOS
-- %DNP% MOS -carRadRemSvrStatsInetAddress MOS
-- %DNP% MOS -carRadRemSvrStatsPortNumber MOS
-- %DNP% MOS -carRadRemSvrStatsActive MOS
-- %DNP% MOS -carRadRemSvrStatsMaxTries MOS
-- %DNP% MOS -carRadRemSvrStatsRTTAverage MOS
-- %DNP% MOS -carRadRemSvrStatsRTTDeviation MOS
-- %DNP% MOS -carRadRemSvrStatsTimeoutPenalty MOS
-- %DNP% MOS -carRadRemSvrStatsTotalReqPending MOS
-- %DNP% MOS -carRadRemSvrStatsTotalReqSent MOS
-- %DNP% MOS -carRadRemSvrStatsTotalReqOutstanding MOS
-- %DNP% MOS -carRadRemSvrStatsTotalReqAcknowledged MOS
-- %DNP% MOS -carRadRemSvrStatsTotalReqTimedOut MOS
-- %DNP% MOS -carRadRemSvrStatsTotalRespDropForNotInCache MOS
-- %DNP% MOS -carRadRemSvrStatsTotalRespDropForSignMismatch MOS
-- %DNP% MOS -carRadRemSvrStatsTotalReqDropAfterMaxTries MOS
-- %DNP% MOS -carRadRemSvrStatsLastReqTime MOS
-- %DNP% MOS -carRadRemSvrStatsLastAcceptTime MOS
-- %DNP% MOS -carDiaRemSvrStatsTable MOS
-- %DNP% MOS -carDiaRemSvrStatsEntry MOS
-- %DNP% MOS -carDiaRemSvrStatsIndex MOS
-- %DNP% MOS -carDiaRemSvrStatsServerName MOS
-- %DNP% MOS -carDiaRemSvrStatsType MOS
-- %DNP% MOS -carDiaRemSvrStatsInetAddrType MOS
-- %DNP% MOS -carDiaRemSvrStatsInetAddress MOS
-- %DNP% MOS -carDiaRemSvrStatsPortNumber MOS
-- %DNP% MOS -carDiaRemSvrStatsActive MOS
-- %DNP% MOS -carDiaRemSvrStatsRTTAverage MOS
-- %DNP% MOS -carDiaRemSvrStatsRTTDeviation MOS
-- %DNP% MOS -carDiaRemSvrStatsTotalReqPending MOS
-- %DNP% MOS -carDiaRemSvrStatsTotalReqOutstanding MOS
-- %DNP% MOS -carDiaRemSvrStatsState MOS
-- %DNP% MOS -carDiaRemSvrStatsASRsOut MOS
-- %DNP% MOS -carDiaRemSvrStatsASAsIn MOS
-- %DNP% MOS -carDiaRemSvrStatsASAsOut MOS
-- %DNP% MOS -carDiaRemSvrStatsACRsIn MOS
-- %DNP% MOS -carDiaRemSvrStatsACRsOut MOS
-- %DNP% MOS -carDiaRemSvrStatsACAsIn MOS
-- %DNP% MOS -carDiaRemSvrStatsACAsOut MOS
-- %DNP% MOS -carDiaRemSvrStatsCERsIn MOS
-- %DNP% MOS -carDiaRemSvrStatsCERsOut MOS
-- %DNP% MOS -carDiaRemSvrStatsCEAsIn MOS
-- %DNP% MOS -carDiaRemSvrStatsCEAsOut MOS
-- %DNP% MOS -carDiaRemSvrStatsDWRsIn MOS
-- %DNP% MOS -carDiaRemSvrStatsDWRsOut MOS
-- %DNP% MOS -carDiaRemSvrStatsDWAsIn MOS
-- %DNP% MOS -carDiaRemSvrStatsDWAsOut MOS
-- %DNP% MOS -carDiaRemSvrStatsDPRsIn MOS
-- %DNP% MOS -carDiaRemSvrStatsDPRsOut MOS
-- %DNP% MOS -carDiaRemSvrStatsDPAsIn MOS
-- %DNP% MOS -carDiaRemSvrStatsDPAsOut MOS
-- %DNP% MOS -carDiaRemSvrStatsRARsIn MOS
-- %DNP% MOS -carDiaRemSvrStatsRARsOut MOS
-- %DNP% MOS -carDiaRemSvrStatsRAAsIn MOS
-- %DNP% MOS -carDiaRemSvrStatsRAAsOut MOS
-- %DNP% MOS -carDiaRemSvrStatsSTRsIn MOS
-- %DNP% MOS -carDiaRemSvrStatsSTRsOut MOS
-- %DNP% MOS -carDiaRemSvrStatsSTAsIn MOS
-- %DNP% MOS -carDiaRemSvrStatsSTAsOut MOS
-- %DNP% MOS -carDiaRemSvrStatsRedirectEvents MOS
-- %DNP% MOS -carDiaRemSvrStatsAccDupReq MOS
-- %DNP% MOS -carDiaRemSvrStatsMalformedReq MOS
-- %DNP% MOS -carRadSvrStatsTotalAscendIPAAlocateResp MOS
-- %DNP% MOS -carRadSvrStatsTotalAscendIPARelaseReq MOS
-- %DNP% MOS -carRadSvrStatsTotalAscendIPARelaseResp MOS
-- %DNP% MOS -carRadSvrStatsTotalUSRNASRebootReq MOS
-- %DNP% MOS -carRadSvrStatsTotalUSRNASRebootResp MOS
-- %DNP% MOS -carRadSvrStatsTotalUSRResourceFreeReq MOS
-- %DNP% MOS -carRadSvrStatsTotalUSRResourceFreeResp MOS
-- %DNP% MOS -carRadSvrStatsTotalUSRQueryResourceReq MOS
-- %DNP% MOS -carRadSvrStatsTotalUSRQueryResourceResp MOS
-- %DNP% MOS -carRadSvrStatsTotalUSRQueryReclaimReq MOS
-- %DNP% MOS -carRadSvrStatsTotalUSRQueryReclaimResp MOS
-- %DNP% MOS -carRadSvrStatsTotalPacketsInUse MOS
-- %DNP% MOS -carRadSvrStatsTotalPacketsDrained MOS
-- %DNP% MOS -carRadSvrStatsTotalPacketsDropped MOS
-- %DNP% MOS -carRadSvrStatsTotalPayloadDecryptionFailures MOS
-- %DNP% MOS -carRadSvrXMLStatsTotalXMLPacketsInPool MOS
-- %DNP% MOS -carRadSvrXMLStatsTotalXMLPacketsReceived MOS
-- %DNP% MOS -carRadSvrXMLStatsTotalXMLResp MOS
-- %DNP% MOS -carRadSvrXMLStatsTotalXMLResponse MOS
-- %DNP% MOS -carRadSvrXMLStatsTotalXMLPacketsInUse MOS
-- %DNP% MOS -carRadSvrXMLStatsTotalXMLPacketsDrained MOS
-- %DNP% MOS -carRadSvrXMLStatsTotalXMLPacketsDropped MOS
-- %DNP% MOS -carRadSvrXMLStatsTotalXMLPacketParseFailures MOS
-- %DNP% MOS -carDiaSvrStatsServerStartTime MOS
-- %DNP% MOS -carDiaSvrStatsServerResetTime MOS
-- %DNP% MOS -carDiaSvrStatsServerState MOS
-- %DNP% MOS -carDiaSvrStatsTotalUpTime MOS
-- %DNP% MOS -carDiaSvrStatsElapsedResetTime MOS
-- %DNP% MOS -carDiaSvrStatsTotalPacketsIn MOS
-- %DNP% MOS -carDiaSvrStatsTotalPacketsOut MOS
-- %DNP% MOS -carDiaSvrStatsTotalPacketsInUse MOS
-- %DNP% MOS -carNotifObjects MOS
-- %DNP% MOS -carNotifStartTime MOS
-- %DNP% MOS -carNotifInputQueueHighThreshold MOS
-- %DNP% MOS -carNotifInputQueueLowThreshold MOS
-- %DNP% MOS -carNotifAcctLogErrorInterval MOS
-- %DNP% MOS -carNotifAcctLogErrorReason MOS
-- %DNP% MOS -carNotifLicenseUsage MOS
-- %DNP% MOS -carMIBNotifcationPrefix MOS
-- %DNP% MOS -carMIBNotifications MOS
-- %DNP% MOS -carServerStart MOS
-- %DNP% MOS -carServerStop MOS
-- %DNP% MOS -carInputQueueFull MOS
-- %DNP% MOS -carInputQueueNotVeryFull MOS
-- %DNP% MOS -carOtherAuthServerNotResponding MOS
-- %DNP% MOS -carOtherAuthServerResponding MOS
-- %DNP% MOS -carOtherAccServerNotResponding MOS
-- %DNP% MOS -carOtherAccServerResponding MOS
-- %DNP% MOS -carAccoutingLoggingFailure MOS
-- %DNP% MOS -carLicenseUsage MOS
-- %DNP% MOS -carDiameterPeerDown MOS
-- %DNP% MOS -carDiameterPeerUp MOS
-- %DNP% MOS -carDiaRemSvrConnectionUp MOS
-- %DNP% MOS -carDiaRemSvrConnectionDown MOS
-- %DNP% MOS -carDiaRemSvrTransientFailure MOS
-- %DNP% MOS -carDiaRemSvrPermanentFailure MOS
-- %DNP% MOS -ciscoAccessRegistrarMIBConformance MOS
-- %DNP% MOS -ciscoAccessRegistrarMIBCompliances MOS
-- %DNP% MOS -ciscoAccessRegistrarMIBGroups MOS
-- %DNP% MOS -ciscoAccessRegistrarMIBCompliance MOS
-- %DNP% MOS -ciscoAccessRegistrarNotifObjectsGroup MOS
-- %DNP% MOS -ciscoAccessRegistrarMibObjectsGroup MOS
-- %DNP% MOS -ciscoAccessRegistrarNotificationsGroup MOS
-- %DNP% MOS -ciscoAccessRegistrarDiaRemSvrStatsGroup MOS
-- %DNP% MOS -ciscoAccessRegistrarRadRemSvrStatsGroup MOS
-- %DNP% MOS -ciscoAccessRegistrarDiaSvrStatsGroup MOS
-- %DNP% MOS -ciscoAccessRegistrarRadSvrStatsGroup MOS
-- %DNP% MOS -ciscoAccessRegistrarDiaRemSvrXMLStatsGroup MOS
-- %DNP% MOS -ciscoAccessRegistrarMIB MOS
-- %DNP% MOS -carServerState MOS
-- %DNP% MOS -carServerType MOS
-- %DNP% MOS -ciscoAccessRegistrarMIBObjects MOS
-- %DNP% MOS -carRADIUS MOS
-- %DNP% MOS -carAuthServerExtTable MOS
-- %DNP% MOS -carAuthServerExtEntry MOS
-- %DNP% MOS -carAuthServerRunningState MOS
-- %DNP% MOS -carAuthServerType MOS
-- %DNP% MOS -carAccServerExtTable MOS
-- %DNP% MOS -carAccServerExtEntry MOS
-- %DNP% MOS -carAccServerRunningState MOS
-- %DNP% MOS -carAccServerType MOS
-- %DNP% MOS -carServerInputQueueMaxSize MOS
-- %DNP% MOS -carServerInputQueueSize MOS
-- %DNP% MOS -carServerAccLogInError MOS
-- %DNP% MOS -carServerLicenseUsage MOS
-- %DNP% MOS -carRadRemSvrStatsTable MOS
-- %DNP% MOS -carRadRemSvrStatsEntry MOS
-- %DNP% MOS -carRadRemSvrStatsIndex MOS
-- %DNP% MOS -carRadRemSvrStatsServerName MOS
-- %DNP% MOS -carRadRemSvrStatsType MOS
-- %DNP% MOS -carRadRemSvrStatsInetAddrType MOS
-- %DNP% MOS -carRadRemSvrStatsInetAddress MOS
-- %DNP% MOS -carRadRemSvrStatsPortNumber MOS
-- %DNP% MOS -carRadRemSvrStatsActive MOS
-- %DNP% MOS -carRadRemSvrStatsMaxTries MOS
-- %DNP% MOS -carRadRemSvrStatsRTTAverage MOS
-- %DNP% MOS -carRadRemSvrStatsRTTDeviation MOS
-- %DNP% MOS -carRadRemSvrStatsTimeoutPenalty MOS
-- %DNP% MOS -carRadRemSvrStatsTotalReqPending MOS
-- %DNP% MOS -carRadRemSvrStatsTotalReqSent MOS
-- %DNP% MOS -carRadRemSvrStatsTotalReqOutstanding MOS
-- %DNP% MOS -carRadRemSvrStatsTotalReqAcknowledged MOS
-- %DNP% MOS -carRadRemSvrStatsTotalReqTimedOut MOS
-- %DNP% MOS -carRadRemSvrStatsTotalRespDropForNotInCache MOS
-- %DNP% MOS -carRadRemSvrStatsTotalRespDropForSignMismatch MOS
-- %DNP% MOS -carRadRemSvrStatsTotalReqDropAfterMaxTries MOS
-- %DNP% MOS -carRadRemSvrStatsLastReqTime MOS
-- %DNP% MOS -carRadRemSvrStatsLastAcceptTime MOS
-- %DNP% MOS -carDiaRemSvrStatsTable MOS
-- %DNP% MOS -carDiaRemSvrStatsEntry MOS
-- %DNP% MOS -carDiaRemSvrStatsIndex MOS
-- %DNP% MOS -carDiaRemSvrStatsServerName MOS
-- %DNP% MOS -carDiaRemSvrStatsType MOS
-- %DNP% MOS -carDiaRemSvrStatsInetAddrType MOS
-- %DNP% MOS -carDiaRemSvrStatsInetAddress MOS
-- %DNP% MOS -carDiaRemSvrStatsPortNumber MOS
-- %DNP% MOS -carDiaRemSvrStatsActive MOS
-- %DNP% MOS -carDiaRemSvrStatsRTTAverage MOS
-- %DNP% MOS -carDiaRemSvrStatsRTTDeviation MOS
-- %DNP% MOS -carDiaRemSvrStatsTotalReqPending MOS
-- %DNP% MOS -carDiaRemSvrStatsTotalReqOutstanding MOS
-- %DNP% MOS -carDiaRemSvrStatsState MOS
-- %DNP% MOS -carDiaRemSvrStatsASRsOut MOS
-- %DNP% MOS -carDiaRemSvrStatsASAsIn MOS
-- %DNP% MOS -carDiaRemSvrStatsASAsOut MOS
-- %DNP% MOS -carDiaRemSvrStatsACRsIn MOS
-- %DNP% MOS -carDiaRemSvrStatsACRsOut MOS
-- %DNP% MOS -carDiaRemSvrStatsACAsIn MOS
-- %DNP% MOS -carDiaRemSvrStatsACAsOut MOS
-- %DNP% MOS -carDiaRemSvrStatsCERsIn MOS
-- %DNP% MOS -carDiaRemSvrStatsCERsOut MOS
-- %DNP% MOS -carDiaRemSvrStatsCEAsIn MOS
-- %DNP% MOS -carDiaRemSvrStatsCEAsOut MOS
-- %DNP% MOS -carDiaRemSvrStatsDWRsIn MOS
-- %DNP% MOS -carDiaRemSvrStatsDWRsOut MOS
-- %DNP% MOS -carDiaRemSvrStatsDWAsIn MOS
-- %DNP% MOS -carDiaRemSvrStatsDWAsOut MOS
-- %DNP% MOS -carDiaRemSvrStatsDPRsIn MOS
-- %DNP% MOS -carDiaRemSvrStatsDPRsOut MOS
-- %DNP% MOS -carDiaRemSvrStatsDPAsIn MOS
-- %DNP% MOS -carDiaRemSvrStatsDPAsOut MOS
-- %DNP% MOS -carDiaRemSvrStatsRARsIn MOS
-- %DNP% MOS -carDiaRemSvrStatsRARsOut MOS
-- %DNP% MOS -carDiaRemSvrStatsRAAsIn MOS
-- %DNP% MOS -carDiaRemSvrStatsRAAsOut MOS
-- %DNP% MOS -carDiaRemSvrStatsSTRsIn MOS
-- %DNP% MOS -carRadSvrStatsTotalAccountingResp MOS
-- %DNP% MOS -carRadSvrStatsTotalStatusServerReq MOS
-- %DNP% MOS -carRadSvrStatsTotalAscendIPAAllocateReq MOS
-- %DNP% MOS -carRadSvrStatsTotalAscendIPAAllocateResp MOS
-- %DNP% MOS -carRadSvrStatsTotalAscendIPAReleaseReq MOS
-- %DNP% MOS -carRadSvrStatsTotalAscendIPAReleaseResp MOS
-- %DNP% MOS -carRadSvrStatsTotalUSRNASRebootReq MOS
-- %DNP% MOS -carRadSvrStatsTotalUSRNASRebootResp MOS
-- %DNP% MOS -carRadSvrStatsTotalUSRResourceFreeReq MOS
-- %DNP% MOS -carRadSvrStatsTotalUSRResourceFreeResp MOS
-- %DNP% MOS -carRadSvrStatsTotalUSRQueryResourceReq MOS
-- %DNP% MOS -carRadSvrStatsTotalUSRQueryResourceResp MOS
-- %DNP% MOS -carRadSvrStatsTotalUSRQueryReclaimReq MOS
-- %DNP% MOS -carRadSvrStatsTotalUSRQueryReclaimResp MOS
-- %DNP% MOS -carRadSvrStatsTotalPacketsInUse MOS
-- %DNP% MOS -carRadSvrStatsTotalPacketsDrained MOS
-- %DNP% MOS -carRadSvrStatsTotalPacketsDropped MOS
-- %DNP% MOS -carRadSvrStatsTotalPayloadDecryptionFailures MOS
-- %DNP% MOS -carRadSvrXMLStats MOS
-- %DNP% MOS -carRadSvrXMLStatsTotalXMLPacketsInPool MOS
-- %DNP% MOS -carRadSvrXMLStatsTotalXMLPacketsReceived MOS
-- %DNP% MOS -carRadSvrXMLStatsTotalXMLReq MOS
-- %DNP% MOS -carRadSvrXMLStatsTotalXMLResp MOS
-- %DNP% MOS -carRadSvrXMLStatsTotalXMLPacketsInUse MOS
-- %DNP% MOS -carRadSvrXMLStatsTotalXMLPacketsDrained MOS
-- %DNP% MOS -carRadSvrXMLStatsTotalXMLPacketsDropped MOS
-- %DNP% MOS -carRadSvrXMLStatsTotalXMLPacketParseFailures MOS
-- %DNP% MOS -carDiaSvrStats MOS
-- %DNP% MOS -carDiaSvrStatsServerStartTime MOS
-- %DNP% MOS -carDiaSvrStatsServerResetTime MOS
-- %DNP% MOS -carDiaSvrStatsServerState MOS
-- %DNP% MOS -carDiaSvrStatsTotalUpTime MOS
-- %DNP% MOS -carDiaSvrStatsElapsedTime MOS
-- %DNP% MOS -carDiaSvrStatsTotalPacketsIn MOS
-- %DNP% MOS -carDiaSvrStatsTotalPacketsOut MOS
-- %DNP% MOS -carDiaSvrStatsTotalPacketsInUse MOS
CISCO-BACC-DPE-MIB.my

-- %DNP% MOS -ciscoAccessRegistrarRadSvrXMLStatsGroup MOS

CISCO-BACC-DPE-MIB.my

-- ********************************************************************
-- CISCO-BACC-DPE-MIB.my: Defines the managed objects for Cisco
-- Broadband Access Center (BAC) Device Provisioning
-- Aug 2003, Sunil Melepatt Palliyal
-- Copyright (c) 2003-2005 by Cisco Systems, Inc.
-- All rights reserved.
-- ********************************************************************

CISCO-BACC-DPE-MIB DEFINITIONS ::= BEGIN

IMPORTS

TEXTUAL-CONVENTION, TruthValue
FROM SNMPv2-TC

MODULE-COMPLIANCE, OBJECT-GROUP
FROM SNMPv2-CONF

SnmpAdminString
FROM SNMP-FRAMEWORK-MIB

MODULE-IDENTITY, OBJECT-TYPE,
Unsigned32, Gauge32, Counter32
FROM SNMPv2-SMI

InetPortNumber
FROM INET-ADDRESS-MIB

ciscoMgmt
FROM CISCO-SMI;

ciscoBaccDpeMib MODULE-IDENTITY
LAST-UPDATED "200509020000Z"
ORGANIZATION "Cisco Systems, Inc."
CONTACT-INFO
"Cisco Systems
Customer Service
Postal: 170 W Tasman Drive
San Jose, CA 95134
USA
Tel: +1 800 553-NETS
E-mail: cs-bac@cisco.com"

DESCRIPTION
"This MIB module defines the managed objects for Cisco
Broadband Access Center (BAC) Device Provisioning Engine (DPE). The DPE component manages
local caching of device configurations and configuration files pulled by supported devices.

Each DPE contains the following components.

1. An instance of the BAC client API supporting communication back to the Regional Distribution
Unit (RDU).
2. A highly optimized TFTP Service that supports several DOCSIS security enhancements.
4. A Device Configuration Cache which locally stores the device configurations for all devices within the
provisioning scope of the DPE.
5. A Registration Service that handles Kerberos authentication of PacketCable devices.
6. An SNMP Entity that implements secure
SNMPv3 communication with PacketCable devices.

REVISION "200509020000Z"
DESCRIPTION "Change product name from Broadband Access Center for Cable (BACC) to Broadband Access Center (BAC) in the comments and DESCRIPTION."
REVISION "200404130000Z"
DESCRIPTION "Initial version of this MIB module."
::= { ciscoMgmt 345 }
ciscoBaccDpeMIBObjects OBJECT IDENTIFIER ::= { ciscoBaccDpeMIB 1 }
ciscoBaccDpeMIBConformance OBJECT IDENTIFIER ::= { ciscoBaccDpeMIB 2 }
ciscoBaccDpeSystem OBJECT IDENTIFIER ::= { ciscoBaccDpeMIBObjects 1 }
ciscoBaccDpeResource OBJECT IDENTIFIER ::= { ciscoBaccDpeMIBObjects 2 }
ciscoBaccDpeStatistics OBJECT IDENTIFIER ::= { ciscoBaccDpeMIBObjects 3 }
ciscoBaccDpeCfgCache OBJECT IDENTIFIER ::= { ciscoBaccDpeStatistics 1 }
ciscoBaccDpePacketCable OBJECT IDENTIFIER ::= { ciscoBaccDpeStatistics 2 }
ciscoBaccDpeRdu OBJECT IDENTIFIER ::= { ciscoBaccDpeStatistics 3 }

-- Textual Conventions
CiscoBaccProvGroupType ::= TEXTUAL-CONVENTION
DISPLAY-HINT ""
STATUS current
DESCRIPTION "States of the Server.
primary - Indicates a primary provisioning group.
secondary - Indicates a secondary provisioning group."
SYNTAX INTEGER { primary ( 1 ), secondary ( 2 ) }

-- System
cbdRduName OBJECT-TYPE
SYNTAX SnmpAdminString
MAX-ACCESS read-only
STATUS current
DESCRIPTION "Fully qualified domain name (FQDN) of the corresponding Regional Distribution Unit (RDU)."
 ::= { ciscoBaccDpeSystem 1 }
cbdRduPort OBJECT-TYPE
SYNTAX InetPortNumber
MAX-ACCESS read-only
STATUS current
DESCRIPTION "Port (TCP/UDP) number of the corresponding Regional Distribution Unit (RDU)."
 ::= { ciscoBaccDpeSystem 2 }
cbdPacketCableEnabled OBJECT-TYPE
SYNTAX TruthValue
MAX-ACCESS read-only
STATUS current
"Indicates whether packet cable provisioning is enabled on this DPE. This object will be 'true' if the packet cable provisioning is enabled."
::= { ciscoBaccDpeSystem 3 }

-- Resources

cbdProvGroupTable OBJECT-TYPE
SYNTAX SEQUENCE OF CbdProvGroupEntry
MAX-ACCESS not-accessible
STATUS current
DESCRIPTION
"This table lists all the provisioning groups served by this DPE. A provisioning group in BAC is a logical grouping of devices (for example a head-end or a city). It is a standalone provisioning unit, if connection to the RDU is lost (existing known devices continue to receive the same service)."
::= { ciscoBaccDpeResource 1 }

cbdProvGroupEntry OBJECT-TYPE
SYNTAX CbdProvGroupEntry
MAX-ACCESS not-accessible
STATUS current
DESCRIPTION
"Each entry containing information for one provisioning group."
INDEX { cbdProvGroupIndex }
::= { cbdProvGroupTable 1 }

CbdProvGroupEntry ::= SEQUENCE {
  cbdProvGroupIndex Unsigned32,
  cbdProvGroupType CiscoBaccProvGroupType,
  cbdProvGroupName SnmpAdminString,
  cbdProvGroupNumDeviceConfig Gauge32
}

cbdProvGroupIndex OBJECT-TYPE
SYNTAX Unsigned32
MAX-ACCESS not-accessible
STATUS current
DESCRIPTION
"A unique index for the provisioning group table."
::= { cbdProvGroupEntry 1 }

cbdProvGroupType OBJECT-TYPE
SYNTAX CiscoBaccProvGroupType
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"Indicates whether this is a primary provisioning group or a secondary provisioning group for this DPE."
::= { cbdProvGroupEntry 2 }

cbdProvGroupName OBJECT-TYPE
SYNTAX SnmpAdminString
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"Name of the provisioning group."
::= { cbdProvGroupEntry 3 }

cbdProvGroupNumDeviceConfig OBJECT-TYPE
SYNTAX Gauge32
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"Total number of device configurations in the provisioning group cached by this DPE."
::= { cbdProvGroupEntry 4 }

cbdProtocolServerTable OBJECT-TYPE
SYNTAX SEQUENCE OF CbdProtocolServerEntry
MAX-ACCESS not-accessible
STATUS current
DESCRIPTION
"The DPE may contain many protocol server [TFTP, ToD etc] implementations. This table contains the information on each such protocol server component."
 ::= { ciscoBaccDpeResource 2 }

cbdProtocolServerEntry OBJECT-TYPE
SYNTAX CbdProtocolServerEntry
MAX-ACCESS not-accessible
STATUS current
DESCRIPTION
"Each entry containing information for one protocol server."
INDEX { cbdProtocolServerIndex }
 ::= { cbdProtocolServerTable 1 }

CbdProtocolServerEntry ::= SEQUENCE {
  cbdProtocolServerIndex Unsigned32,
  cbdProtocolServerEnabled TruthValue,
  cbdProtocolServerProtocol SnmpAdminString,
  cbdProtocolServerPktsReceived Counter32,
  cbdProtocolServerPktsDropped Counter32,
  cbdProtocolServerSucesses Counter32,
  cbdProtocolServerFailures Counter32
}

cbdProtocolServerIndex OBJECT-TYPE
SYNTAX Unsigned32
MAX-ACCESS not-accessible
STATUS current
DESCRIPTION
"Unique index identifying the protocol server in this table."
 ::= { cbdProtocolServerEntry 1 }

cbdProtocolServerEnabled OBJECT-TYPE
SYNTAX TruthValue
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"Indicates whether this protocol server is enabled. This object will have the value 'true' only if the server is enabled."
 ::= { cbdProtocolServerEntry 2 }

cbdProtocolServerProtocol OBJECT-TYPE
SYNTAX SnmpAdminString
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"Name of the protocol [TFTP, ToD etc.] supported by this server."
 ::= { cbdProtocolServerEntry 3 }

cbdProtocolServerPktsReceived OBJECT-TYPE
SYNTAX Counter32
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"Total number of Packets received by this protocol server since start up."
 ::= { cbdProtocolServerEntry 4 }

cbdProtocolServerPktsDropped OBJECT-TYPE
SYNTAX Counter32
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"Total number of Packets dropped by this protocol server since start up."
 ::= { cbdProtocolServerEntry 5 }
cbdProtocolServerSuccesses OBJECT-TYPE
SYNTAX Counter32
MAX-ACCESS read-only
STATUS current
DESCRIPTION "Total number of Requests successfully handled by this protocol server since start up."
::= { cbdProtocolServerEntry 6 }

cbdProtocolServerFailures OBJECT-TYPE
SYNTAX Counter32
MAX-ACCESS read-only
STATUS current
DESCRIPTION "Total number of Requests that have failed by this protocol server since start up."
::= { cbdProtocolServerEntry 7 }

-- Statistics

cbdConfigs OBJECT-TYPE
SYNTAX Gauge32
MAX-ACCESS read-only
STATUS current
DESCRIPTION "Total number of device configurations in the cache. This is the sum of the total number of device configurations (cbdProvGroupNumDeviceConfig) in all the provisioning groups served by this DPE."
::= { ciscoBaccDpeCfgCache 1 }

cbdCacheHits OBJECT-TYPE
SYNTAX Counter32
MAX-ACCESS read-only
STATUS current
DESCRIPTION "Total number of cache hits for device configurations since DPE start up."
::= { ciscoBaccDpeCfgCache 2 }

cbdCacheMisses OBJECT-TYPE
SYNTAX Counter32
MAX-ACCESS read-only
STATUS current
DESCRIPTION "Total number of cache misses for device configurations since DPE start up."
::= { ciscoBaccDpeCfgCache 3 }

cbdFiles OBJECT-TYPE
SYNTAX Unsigned32
MAX-ACCESS read-only
STATUS current
DESCRIPTION "Total number of files cached in this DPE."
::= { ciscoBaccDpeCfgCache 4 }

cbdInformSuccesses OBJECT-TYPE
SYNTAX Counter32
MAX-ACCESS read-only
STATUS current
DESCRIPTION "Total number of initial SNMP informs received from packet cable devices since start up."
::= { ciscoBaccDpePacketCable 1 }

cbdSNMPSetSuccesses OBJECT-TYPE
SYNTAX Counter32
MAX-ACCESS read-only
STATUS current
DESCRIPTION "Total number of PacketCable SNMP sets that have been
successful since start up.”
 ::= { ciscoBaccDpePacketCable 2 }

cbdCfgInformSuccesses OBJECT-TYPE
SYNTAX Counter32
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"Total number of PacketCable successful configuration
informs received since start up. This also indicates
the total number packet cable devices configured
successfully.”
 ::= { ciscoBaccDpePacketCable 3 }

cbdCfgInformFailures OBJECT-TYPE
SYNTAX Counter32
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"The number of PacketCable failed configuration
informs received since start up.”
 ::= { ciscoBaccDpePacketCable 4 }

cbdCfgApReqMessages OBJECT-TYPE
SYNTAX Counter32
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"This variable maintains a count of the AP-REQ
(Application Request) messages received by the
Provisioning Server from the packet cable MTA.”
 ::= { ciscoBaccDpePacketCable 5 }

cbdCfgApRepMessages OBJECT-TYPE
SYNTAX Counter32
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"This variable maintains a count of the AP-REP
(Application Reply) messages sent by the
Provisioning Server to the packet cable MTA.”
 ::= { ciscoBaccDpePacketCable 6 }

cbdCfgFqdnReqMessages OBJECT-TYPE
SYNTAX Counter32
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"This variable maintains a count of the FQDN-REQ
messages received by Provisioning Server from
the Key Distribution Center.”
 ::= { ciscoBaccDpePacketCable 7 }

cbdCfgFqdnRepMessages OBJECT-TYPE
SYNTAX Counter32
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"This variable maintains a count of the FQDN-REP
messages sent by Provisioning Server to the Key
Distribution Center.”
 ::= { ciscoBaccDpePacketCable 8 }

cbdRduInMessages OBJECT-TYPE
SYNTAX Counter32
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"Total number of in bound messages received from
RDU since the DPE start up.”
 ::= { ciscoBaccDpeRdu 1 }

cbdRduOutMessages OBJECT-TYPE
SYNTAX Counter32
MAX-ACCESS read-only
STATUS current
DESCRIPTION "Total number of out bound messages sent to RDU since the DPE start up."
::= { ciscoBaccDpeRdu 2 }

cbdRduInMsgAvgSize OBJECT-TYPE
SYNTAX Gauge32
UNITS "bytes"
MAX-ACCESS read-only
STATUS current
DESCRIPTION "Average size of the in bound messages received from this DPE since the RDU start up."
::= { ciscoBaccDpeRdu 3 }

cbdRduOutMsgAvgSize OBJECT-TYPE
SYNTAX Gauge32
UNITS "bytes"
MAX-ACCESS read-only
STATUS current
DESCRIPTION "Average size of the out bound messages sent to RDU since the DPE start up."
::= { ciscoBaccDpeRdu 4 }

cbdRduInMsgMaxSize OBJECT-TYPE
SYNTAX Unsigned32
UNITS "bytes"
MAX-ACCESS read-only
STATUS current
DESCRIPTION "Size of the largest in bound message received from RDU since the DPE start up."
::= { ciscoBaccDpeRdu 5 }

cbdRduInMsgMinSize OBJECT-TYPE
SYNTAX Unsigned32
UNITS "bytes"
MAX-ACCESS read-only
STATUS current
DESCRIPTION "Size of the smallest in bound message received from RDU since the DPE start up."
::= { ciscoBaccDpeRdu 6 }

cbdRduOutMsgMaxSize OBJECT-TYPE
SYNTAX Unsigned32
UNITS "bytes"
MAX-ACCESS read-only
STATUS current
DESCRIPTION "Size of the largest out bound message sent to RDU since the DPE start up."
::= { ciscoBaccDpeRdu 7 }

cbdRduOutMsgMinSize OBJECT-TYPE
SYNTAX Unsigned32
UNITS "bytes"
MAX-ACCESS read-only
STATUS current
DESCRIPTION "Size of the smallest out bound message sent to RDU since the DPE start up."
::= { ciscoBaccDpeRdu 8 }

cbdRduAvgTimeToRecv OBJECT-TYPE
SYNTAX Gauge32
UNITS "milli-seconds"
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"Average time to receive a message from RDU."
::= { ciscoBaccDpeRdu 9 }

cbdRduAvgTimeToSend OBJECT-TYPE
SYNTAX Gauge32
UNITS "milli-seconds"
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"Average time to send a message to RDU."
::= { ciscoBaccDpeRdu 10 }

-- Notifications

-- Conformance

ciscoBaccDpeMIBCompliances OBJECT IDENTIFIER
::= { ciscoBaccDpeMIBConformance 1 }
ciscoBaccDpeMIBGroups OBJECT IDENTIFIER
::= { ciscoBaccDpeMIBConformance 2 }

-- Compliance

ciscoBaccDpeMIBCompliance MODULE-COMPLIANCE
STATUS current
DESCRIPTION
"The compliance statement for entities
which implement the CISCO-BACC-DPE-MIB."

MODULE -- This module
MANDATORY-GROUPS {
ciscoBaccDpeBasicGroup,
ciscoBaccDpeStatisticsGroup
}
GROUP ciscoBaccDpeProvGroupGroup
DESCRIPTION
"This group needs to be implemented only if
the provisioning group information is available
and required."
GROUP ciscoBaccDpeRduStatisticsGroup
DESCRIPTION
"This group needs to be implemented only if the
RDU connection statistics is available."
::= { ciscoBaccDpeMIBCompliances 1 }

-- Units of Conformance

ciscoBaccDpeBasicGroup OBJECT-GROUP
OBJECTS {
cbdPacketCableEnabled,
cbdRduName,
cbdRduPort
}
STATUS current
DESCRIPTION
"A collection of objects that enable the management of
the system services."
::= { ciscoBaccDpeMIBGroups 1 }
ciscoBaccDpeProvGroupGroup OBJECT-GROUP
OBJECTS {
cbdProvGroupName,
cbdProvGroupType,
cbdProvGroupNumDeviceConfig
}
STATUS current
DESCRIPTION
"A collection of objects representing provisioning
group information."
::= { ciscoBaccDpeMIBGroups 2 }
CISCO-BACC-RDU-MIB.my

-- ********************************************************************
-- CISCO-BACC-RDU-MIB.my : Defines the managed objects for Cisco
-- Broadband Access Center (BAC) Regional Distribution Unit (RDU)
-- March 2004, Sunil Melepatt Palliyal
-- Copyright (c) 2004-2005 by Cisco Systems, Inc.
-- All rights reserved.
-- ********************************************************************

CISCO-BACC-RDU-MIB DEFINITIONS ::= BEGIN

IMPORTS
  MODULE-COMPLIANCE, NOTIFICATION-GROUP, OBJECT-GROUP
  FROM SNMPv2-CONF

  TruthValue
  FROM SNMPv2-TC

ciscoBaccDpeStatisticsGroup OBJECT-GROUP
  OBJECTS {
    cbdCfgInformFailures,
    cbdCfgInformSuccesses,
    cbdConfigs,
    cbdFiles,
    cbdCacheHits,
    cbdInformSuccesses,
    cbdCacheMisses,
    cbdSNMPSetSuccesses,
    cbdCfgApReqMessages,
    cbdCfgApRepMessages,
    cbdCfgFqdnReqMessages,
    cbdCfgFqdnRepMessages,
    cbdProtocolServerEnabled,
    cbdProtocolServerProtocol,
    cbdProtocolServerPktsReceived,
    cbdProtocolServerPktsDropped,
    cbdProtocolServerSuccesses,
    cbdProtocolServerFailures
  }

  STATUS current
  DESCRIPTION
    "A collection of objects representing statistics
     information."
  ::= { ciscoBaccDpeMIBGroups 3 }

ciscoBaccDpeRduStatisticsGroup OBJECT-GROUP
  OBJECTS {
    cbdRduInMessages,
    cbdRduOutMessages,
    cbdRduInMsgAvgSize,
    cbdRduOutMsgAvgSize,
    cbdRduInMsgMaxSize,
    cbdRduOutMsgMaxSize,
    cbdRduInMsgMinSize,
    cbdRduOutMsgMinSize,
    cbdRduAvgTimeToRecv,
    cbdRduAvgTimeToSend
  }

  STATUS current
  DESCRIPTION
    "A collection of objects representing
     statistics on connection to RDU."
  ::= { ciscoBaccDpeMIBGroups 4 }
END
SnmpAdminString
FROM SNMP-FRAMEWORK-MIB

MODULE-IDENTITY, NOTIFICATION-TYPE, OBJECT-TYPE,
Counter32, Gauge32, Unsigned32
FROM SNMPv2-SMI

InetAddressNumber
FROM INET-ADDRESS-MIB

ciscoMgmt
FROM CISCO-SMI;

ciscoBaccRduMIB MODULE-IDENTITY
LAST-UPDATED "200509020000Z"
ORGANIZATION "Cisco Systems, Inc."
CONTACT-INFO Cisco Systems
Customer Service
Postal: 170 W Tasman Drive
San Jose, CA 95134 USA
Tel: +1 800 553-NETS
E-mail: cs-bac@cisco.com"
DESCRIPTION
"This MIB module defines the managed objects for Cisco
Broadband Access Center (BAC) Regional
Distribution Unit (RDU). The RDU is the central
integration point for external applications/components.
It manages the generation of device configurations,
maintains the authoritative data store, and manages BAC
administration. All other distributed server components
in the BAC provisioning system registers with the RDU.
The Provisioning API Command Engine (PACE) in RDU is
responsible for processing all API calls in to BAC."

REVISION "200509020000Z"
DESCRIPTION
"Change product name from Broadband Access Center for
Cable (BACC) to Broadband Access Center (BAC) in the
comments and DESCRIPTION."

REVISION "200403010000Z"
DESCRIPTION
"Initial version of this MIB module."
::= { ciscoMgmt 353 }

ciscoBaccRduMIBNotifications OBJECT IDENTIFIER
::= { ciscoBaccRduMIB 0 }

ciscoBaccRduMIBObjects OBJECT IDENTIFIER
::= { ciscoBaccRduMIB 1 }

ciscoBaccRduMIBConformance OBJECT IDENTIFIER
::= { ciscoBaccRduMIB 2 }

ciscoBaccRduResource OBJECT IDENTIFIER
::= { ciscoBaccRduMIBObjects 1 }

ciscoBaccRduServers OBJECT IDENTIFIER
::= { ciscoBaccRduMIBObjects 2 }

ciscoBaccRduStatistics OBJECT IDENTIFIER
::= { ciscoBaccRduMIBObjects 3 }

-- Resources

cbrProvGroupTable OBJECT-TYPE
SYNTAX SEQUENCE OF CbrProvGroupEntry
MAX-ACCESS not-accessible
STATUS current
DESCRIPTION
"This table lists all the provisioning groups defined on this RDU. The provisioning groups in BAC is a logical grouping of devices (for example a head-end or a city). It is a standalone provisioning unit, if connection to the RDU is lost (existing known devices continue to receive the same service)."
::= { ciscoBaccRduResource 1 }
cbrProvGroupEntry OBJECT-TYPE
SYNTAX CbrProvGroupEntry
MAX-ACCESS not-accessible
STATUS current
DESCRIPTION
"Each entry containing information for one provisioning group."
INDEX { cbrProvGroupIndex }
::= { cbrProvGroupTable 1 }
cbrProvGroupEntry ::= SEQUENCE {
cbrProvGroupIndex Unsigned32,
cbrProvGroupName SnmpAdminString,
cbrProvGroupNumDevices Gauge32
}
cbrProvGroupIndex OBJECT-TYPE
SYNTAX Unsigned32
MAX-ACCESS not-accessible
STATUS current
DESCRIPTION
"A unique index for the provisioning group table."
::= { cbrProvGroupEntry 1 }
cbrProvGroupName OBJECT-TYPE
SYNTAX SnmpAdminString
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"A unique name for the provisioning group."
::= { cbrProvGroupEntry 2 }
cbrProvGroupNumDevices OBJECT-TYPE
SYNTAX Gauge32
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"Total number of devices in this provisioning group."
::= { cbrProvGroupEntry 3 }
cbrLicenseTable OBJECT-TYPE
SYNTAX SEQUENCE OF CbrLicenseEntry
MAX-ACCESS not-accessible
STATUS current
DESCRIPTION
"This table lists all the licenses installed on this RDU."
::= { ciscoBaccRduResource 2 }
cbrLicenseEntry OBJECT-TYPE
SYNTAX CbrLicenseEntry
MAX-ACCESS not-accessible
STATUS current
DESCRIPTION
"Each entry represents one license."
INDEX { cbrLicenseIndex }
::= { cbrLicenseTable 1 }
cbrLicenseEntry ::= SEQUENCE {
cbrLicenseIndex Unsigned32,
cbrLicenseName SnmpAdminString,
cbrLicenseMaxAllowed Unsigned32,
cbrLicenseUsage Gauge32
}
cbrLicenseIndex OBJECT-TYPE
SYNTAX          Unsigned32
MAX-ACCESS      not-accessible
STATUS          current
DESCRIPTION     "A unique index value identifying the license in entry
                the table."
 ::= { cbrLicenseEntry 1 }


cbrLicenseName OBJECT-TYPE
SYNTAX          SnmpAdminString
MAX-ACCESS      read-only
STATUS          current
DESCRIPTION     "Indicates the corresponding technology name. For example,
                DOCSIS, PacketCable etc. This is the type of
                the license."
 ::= { cbrLicenseEntry 2 }


cbrLicenseMaxAllowed OBJECT-TYPE
SYNTAX          Unsigned32
MAX-ACCESS      read-only
STATUS          current
DESCRIPTION     "Indicates the total number of devices [or server
                components] allowed for this technology [or type]."
 ::= { cbrLicenseEntry 3 }


cbrLicenseUsage OBJECT-TYPE
SYNTAX          Gauge32
MAX-ACCESS      read-only
STATUS          current
DESCRIPTION     "Indicates the total number of licenses of this type
                already in use."
 ::= { cbrLicenseEntry 4 }

-- Servers

cbrDpeTable OBJECT-TYPE
SYNTAX          SEQUENCE OF CbrDpeEntry
MAX-ACCESS      not-accessible
STATUS          current
DESCRIPTION     "A table listing all the Device Provisioning Engines (DPE)
registered with this RDU. The DPE component of BAC
manages local caching of device configurations and
configuration file distribution to supported devices.
All the DPEs in the distributed provisioning
system register themselves with the RDU."
 ::= { ciscoBaccRduServers 1 }


cbrDpeEntry OBJECT-TYPE
SYNTAX          CbrDpeEntry
MAX-ACCESS      not-accessible
STATUS          current
DESCRIPTION     "Each entry represents a Device Provisioning Engine (DPE)."
INDEX           { cbrDpeIndex }
 ::= { cbrDpeTable 1 }

CbrDpeEntry ::= SEQUENCE {
    cbrDpeIndex    Unsigned32,
    cbrDpeName     SnmpAdminString,
    cbrDpePort     InetPortNumber,
    cbrDpeVersion  SnmpAdminString,
    cbrDpeIsConnected TruthValue,
    cbrDpeInMessages Counter32,
    cbrDpeOutMessages Counter32,
    cbrDpeInMsgAvgSize Gauge32,
    cbrDpeOutMsgAvgSize Gauge32,
    ...}
<table>
<thead>
<tr>
<th>OBJECT-TYPE</th>
<th>SYNTAX</th>
<th>MAX-ACCESS</th>
<th>STATUS</th>
<th>DESCRIPTION</th>
</tr>
</thead>
<tbody>
<tr>
<td>cbrDpeIndex</td>
<td>Unsigned32</td>
<td>not-accessible</td>
<td>current</td>
<td>&quot;A unique index value identifying the DPE in this table&quot;</td>
</tr>
<tr>
<td>cbrDpeName</td>
<td>SnmpAdminString</td>
<td>read-only</td>
<td>current</td>
<td>&quot;Host name [Fully Qualified Domain Name] or IP Address of this DPE.&quot;</td>
</tr>
<tr>
<td>cbrDpePort</td>
<td>InetPortNumber</td>
<td>read-only</td>
<td>current</td>
<td>&quot;Port number to which this DPE server listens.&quot;</td>
</tr>
<tr>
<td>cbrDpeVersion</td>
<td>SnmpAdminString</td>
<td>read-only</td>
<td>current</td>
<td>&quot;Version of the software running on this DPE. A sample version string may look like BAC_2.5.1&quot;</td>
</tr>
<tr>
<td>cbrDpeIsConnected</td>
<td>TruthValue</td>
<td>read-only</td>
<td>current</td>
<td>&quot;Indicates whether this DPE is currently connected to RDU. A value of true indicates that the DPE is connected and reachable from RDU.&quot;</td>
</tr>
<tr>
<td>cbrDpeInMessages</td>
<td>Counter32</td>
<td>read-only</td>
<td>current</td>
<td>&quot;Total number of in bound messages received from this DPE since the RDU start up.&quot;</td>
</tr>
<tr>
<td>cbrDpeOutMessages</td>
<td>Counter32</td>
<td>read-only</td>
<td>current</td>
<td>&quot;Total number of out bound messages sent to this DPE since the RDU start up.&quot;</td>
</tr>
</tbody>
</table>
cbrDpeInMsgAvgSize OBJECT-TYPE
SYNTAX Gauge32
UNITS "bytes"
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"Average size of the in bound messages received from this DPE since the RDU start up."
 ::= { cbrDpeEntry 8 }

cbrDpeOutMsgAvgSize OBJECT-TYPE
SYNTAX Gauge32
UNITS "bytes"
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"Average size of the out bound messages sent to this DPE since the RDU start up."
 ::= { cbrDpeEntry 9 }

cbrDpeInMsgMaxSize OBJECT-TYPE
SYNTAX Unsigned32
UNITS "bytes"
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"Size of the largest in bound message received from this DPE since the RDU start up."
 ::= { cbrDpeEntry 10 }

cbrDpeInMsgMinSize OBJECT-TYPE
SYNTAX Unsigned32
UNITS "bytes"
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"Size of the smallest in bound message received from this DPE since the RDU start up."
 ::= { cbrDpeEntry 11 }

cbrDpeOutMsgMaxSize OBJECT-TYPE
SYNTAX Unsigned32
UNITS "bytes"
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"Size of the largest out bound message sent to this DPE since the RDU start up."
 ::= { cbrDpeEntry 12 }

cbrDpeOutMsgMinSize OBJECT-TYPE
SYNTAX Unsigned32
UNITS "bytes"
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"Size of the smallest out bound message sent to this DPE since the RDU start up."
 ::= { cbrDpeEntry 13 }

cbrDpeAvgTimeToRecv OBJECT-TYPE
SYNTAX Gauge32
UNITS "milli-seconds"
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"Average time to receive a message from this DPE"
 ::= { cbrDpeEntry 14 }

cbrDpeAvgTimeToSend OBJECT-TYPE
SYNTAX Gauge32
UNITS "milli-seconds"
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"Average time to send a message to
this DPE"
 ::= { cbrDpeEntry 15 }
cbrCnrTable OBJECT-TYPE
SYNTAX SEQUENCE OF CbrCnrEntry
MAX-ACCESS not-accessible
STATUS current
DESCRIPTION
"A table listing all the Cisco Network Registrars (CNR)
registered with this RDU. BAC relies heavily upon the
extension point capabilities of CNR to service DHCP
requests. The BAC extension point implements round robin
servicing of device configuration requests from a
collection of DPEs, thereby supporting DPE failover.
All the CNRs loaded with BAC extension points in the
distributed provisioning system register themselves with
the RDU."
 ::= { ciscoBaccRduServers 2 }
cbrCnrEntry OBJECT-TYPE
SYNTAX CbrCnrEntry
MAX-ACCESS not-accessible
STATUS current
DESCRIPTION
"Each entry represents a CNR Server."
INDEX { cbrCnrIndex }
 ::= { cbrCnrTable 1 }
CbrCnrEntry ::= SEQUENCE {
cbrCnrIndex Unsigned32,
cbrCnrName SnmpAdminString,
cbrCnrVersion SnmpAdminString,
cbrCnrIsConnected TruthValue,
cbrCnrInMessages Counter32,
cbrCnrOutMessages Counter32,
cbrCnrInMsgAvgSize Gauge32,
cbrCnrOutMsgAvgSize Gauge32,
cbrCnrInMsgMaxSize Unsigned32,
cbrCnrOutMsgMaxSize Unsigned32,
cbrCnrInMsgMinSize Unsigned32,
cbrCnrOutMsgMinSize Unsigned32,
cbrCnrAvgTimeToRecv Gauge32,
cbrCnrAvgTimeToSend Gauge32,
cbrCnrPacketsRecv Counter32,
cbrCnrPacketsIgnored Counter32,
cbrCnrPacketsDropped Counter32,
cbrCnrPacketsSuccess Counter32,
cbrCnrPacketsFailed Counter32
}
cbrCnrIndex OBJECT-TYPE
SYNTAX Unsigned32
MAX-ACCESS not-accessible
STATUS current
DESCRIPTION
"A unique index value identifying the CNR in
the table"
 ::= { cbrCnrEntry 1 }
cbrCnrName OBJECT-TYPE
SYNTAX SnmpAdminString
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"Host name [Fully Qualified Domain Name] or IP address
of this CNR server."
 ::= { cbrCnrEntry 2 }
cbrCnrVersion OBJECT-TYPE
SYNTAX SnmpAdminString
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"Version of the BAC extension point software running on
this CNR. A sample version string may look like BAC_2.5.1"
::= { cbrCnrEntry 3 }

cbrCnrIsConnected OBJECT-TYPE
SYNTAX TruthValue
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"Indicates whether this CNR is currently connected to RDU.
A value of true indicates that the CNR is connected and
reachable from RDU."
::= { cbrCnrEntry 4 }

cbrCnrInMessages OBJECT-TYPE
SYNTAX Counter32
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"Total number of in bound messages received from this CNR
since the RDU start up."
::= { cbrCnrEntry 5 }

cbrCnrOutMessages OBJECT-TYPE
SYNTAX Counter32
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"Total number of out bound messages sent to this CNR since
the RDU start up."
::= { cbrCnrEntry 6 }

cbrCnrInMsgAvgSize OBJECT-TYPE
SYNTAX Gauge32
UNITS "bytes"
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"Average size of the in bound messages received
from this CNR since the RDU start up."
::= { cbrCnrEntry 7 }

cbrCnrOutMsgAvgSize OBJECT-TYPE
SYNTAX Gauge32
UNITS "bytes"
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"Average size of the out bound messages sent to
this CNR since the RDU start up."
::= { cbrCnrEntry 8 }

Cisco RAN Management System SNMP/MIB Guide, Release 4.x
from this CNR since the RDU start up."

\[ := \{ \text{cbrCnrEntry} \ 10 \} \]

\text{cbrCnrOutMsgMaxSize} \quad \text{OBJECT-TYPE}
\text{SYNTAX} \quad \text{Unsigned32}
\text{UNITS} \quad \text{"bytes"}
\text{MAX-ACCESS} \quad \text{read-only}
\text{STATUS} \quad \text{current}
\text{DESCRIPTION}

"Size of the largest out bound message sent to this CNR since the RDU start up."

\[ := \{ \text{cbrCnrEntry} \ 11 \} \]

\text{cbrCnrOutMsgMinSize} \quad \text{OBJECT-TYPE}
\text{SYNTAX} \quad \text{Unsigned32}
\text{UNITS} \quad \text{"bytes"}
\text{MAX-ACCESS} \quad \text{read-only}
\text{STATUS} \quad \text{current}
\text{DESCRIPTION}

"Size of the smallest out bound message sent to this CNR since the RDU start up."

\[ := \{ \text{cbrCnrEntry} \ 12 \} \]

\text{cbrCnrAvgTimeToRecv} \quad \text{OBJECT-TYPE}
\text{SYNTAX} \quad \text{Gauge32}
\text{UNITS} \quad \text{"milli-seconds"}
\text{MAX-ACCESS} \quad \text{read-only}
\text{STATUS} \quad \text{current}
\text{DESCRIPTION}

"Average time to receive a message from this CNR."

\[ := \{ \text{cbrCnrEntry} \ 13 \} \]

\text{cbrCnrAvgTimeToSend} \quad \text{OBJECT-TYPE}
\text{SYNTAX} \quad \text{Gauge32}
\text{UNITS} \quad \text{"milli-seconds"}
\text{MAX-ACCESS} \quad \text{read-only}
\text{STATUS} \quad \text{current}
\text{DESCRIPTION}

"Average time to send a message to this CNR."

\[ := \{ \text{cbrCnrEntry} \ 14 \} \]

\text{cbrCnrPacketsRecv} \quad \text{OBJECT-TYPE}
\text{SYNTAX} \quad \text{Counter32}
\text{MAX-ACCESS} \quad \text{read-only}
\text{STATUS} \quad \text{current}
\text{DESCRIPTION}

"Total number of packets received by BAC-CNR extension on this CNR server."

\[ := \{ \text{cbrCnrEntry} \ 15 \} \]

\text{cbrCnrPacketsIgnored} \quad \text{OBJECT-TYPE}
\text{SYNTAX} \quad \text{Counter32}
\text{MAX-ACCESS} \quad \text{read-only}
\text{STATUS} \quad \text{current}
\text{DESCRIPTION}

"Total number of packets ignored by BAC-CNR extension on this CNR server. The BAC-CNR extension may optionally be configured to ignore packets meeting certain criteria. Please refer to the BAC product documentation for more details on how to do this. Please note that this is different from the packets ignored. Even when the BAC-CNR extension ignores a packet, the CNR will continue to process it."

\[ := \{ \text{cbrCnrEntry} \ 16 \} \]

\text{cbrCnrPacketsDropped} \quad \text{OBJECT-TYPE}
\text{SYNTAX} \quad \text{Counter32}
\text{MAX-ACCESS} \quad \text{read-only}
\text{STATUS} \quad \text{current}
\text{DESCRIPTION}

"Total number of packets dropped by BAC-CNR extension"
on this CNR server. Please note that this is different from the packets ignored. Even when the BAC-CNR extension ignores a packet, the CNR will continue to process it. The dropped packets are neither processed by BAC-CNR extension nor by the CNR." 

\[ \text{cbrCnrPacketsSuccess} \text{ OBJECT-TYPE}
\]
\[ \text{SYNTAX} \text{ Counter32} \]
\[ \text{MAX-ACCESS} \text{ read-only} \]
\[ \text{STATUS} \text{ current} \]
\[ \text{DESCRIPTION} \text{ "Total number of packets successfully served by the BAC-CNR extension on this CNR server."} \]

\[ \text{cbrCnrPacketsFailed} \text{ OBJECT-TYPE}
\]
\[ \text{SYNTAX} \text{ Counter32} \]
\[ \text{MAX-ACCESS} \text{ read-only} \]
\[ \text{STATUS} \text{ current} \]
\[ \text{DESCRIPTION} \text{ "Total number of packets for which the processing is failed by BAC-CNR extension on this CNR server."} \]

-- Statistics

\[ \text{cbrBatchesDropped} \text{ OBJECT-TYPE}
\]
\[ \text{SYNTAX} \text{ Counter32} \]
\[ \text{MAX-ACCESS} \text{ read-only} \]
\[ \text{STATUS} \text{ current} \]
\[ \text{DESCRIPTION} \text{ "Total number of API batches dropped by PACE since RDU start up."} \]

\[ \text{cbrBatchesSucceeded} \text{ OBJECT-TYPE}
\]
\[ \text{SYNTAX} \text{ Counter32} \]
\[ \text{MAX-ACCESS} \text{ read-only} \]
\[ \text{STATUS} \text{ current} \]
\[ \text{DESCRIPTION} \text{ "Total number of API batches succeeded in PACE since RDU start up."} \]

\[ \text{cbrBatchesFailed} \text{ OBJECT-TYPE}
\]
\[ \text{SYNTAX} \text{ Counter32} \]
\[ \text{MAX-ACCESS} \text{ read-only} \]
\[ \text{STATUS} \text{ current} \]
\[ \text{DESCRIPTION} \text{ "Total number of API batches failed in PACE since RDU start up."} \]

\[ \text{cbrBatchAvgProcessTime} \text{ OBJECT-TYPE}
\]
\[ \text{SYNTAX} \text{ Counter32} \]
\[ \text{UNITS} \text{ "milli-seconds"} \]
\[ \text{MAX-ACCESS} \text{ read-only} \]
\[ \text{STATUS} \text{ current} \]
\[ \text{DESCRIPTION} \text{ "The average PACE processing time since RDU start up."} \]

\[ \text{cbrCRSReqProcessed} \text{ OBJECT-TYPE}
\]
\[ \text{SYNTAX} \text{ Counter32} \]
\[ \text{MAX-ACCESS} \text{ read-only} \]
\[ \text{STATUS} \text{ current} \]
\[ \text{DESCRIPTION} \text{ "Total number of Configuration Regeneration Service (CRS) requests processed since RDU start up."} \]

-- Notifications
ciscoBaccRduLicenseLimit NOTIFICATION-TYPE
OBJECTS {
cbrLicenseName,
cbrLicenseMaxAllowed,
cbrLicenseUsage }
STATUS current
DESCRIPTION "The agent generates this notification when the license limit warning/error is encountered. This notification is fired when the % license usage hits 80, 82, 84, 86, 88, 90, 91, 92, 93, 94, 95, 96, 97, 98 and 100."
::= { ciscoBaccRduMIBNotifications 1 }

-- Conformance

ciscoBaccRduMIBCompliances OBJECT IDENTIFIER ::= { ciscoBaccRduMIBCompliance 1 }
ciscoBaccRduMIBGroups OBJECT IDENTIFIER ::= { ciscoBaccRduMIBCompliance 2 }

-- Compliance

ciscoBaccRduMIBCompliance MODULE-COMPLIANCE
STATUS current
DESCRIPTION "The compliance statement for entities which implement the CISCO-BACC-RDU-MIB."

MODULE -- This module
MANDATORY-GROUPS {
ciscoBaccRduBasicGroup
}
GROUP ciscoBaccRduResourceGroup
DESCRIPTION "This group is needed only if the prov group and license info are required."
GROUP ciscoBaccRduServersGroup
DESCRIPTION "This group is needed only if the server statistics is available."
::= { ciscoBaccRduMIBCompliances 1 }

-- Units of Conformance

ciscoBaccRduBasicGroup OBJECT-GROUP
OBJECTS {
cbrBatchAvgProcessTime,
cbrBatchesDropped,
cbrBatchesFailed,
cbrBatchesSucceeded,
cbrCRSReqProcessed,
cbrChrName,
cbrChrVersion,
cbrDpeName,
cbrDpePort,
cbrDpeVersion }
STATUS current
DESCRIPTION "A collection of objects that enable the management of the basic system services."
::= { ciscoBaccRduMIBGroups 1 }

ciscoBaccRduResourceGroup OBJECT-GROUP
OBJECTS {
cbrProvGroupName,
cbrProvGroupNumDevices,
cbrLicenseName,
cbrLicenseUsage,
cbrLicenseMaxAllowed }
STATUS current
DESCRIPTION "A collection of objects that enable the management of
the system resources."
::= { ciscoBaccRduMIBGroups 2 }
ciscoBaccRduServersGroup OBJECT-GROUP
OBJECTS { cbrCnrIsConnected,
cbrCnrAvgTimeToRecv,
cbrCnrAvgTimeToSend,
cbrCnrInMessages,
cbrCnrInMsgAvgSize,
cbrCnrInMsgMaxSize,
cbrCnrInMsgMinSize,
cbrCnrOutMessages,
cbrCnrOutMsgAvgSize,
cbrCnrOutMsgMaxSize,
cbrCnrOutMsgMinSize,
cbrCnrPacketsRecv,
cbrCnrPacketsIgnored,
cbrCnrPacketsDropped,
cbrCnrPacketsSuccess,
cbrCnrPacketsFailed,
cbrDpeIsConnected,
cbrDpeAvgTimeToRecv,
cbrDpeAvgTimeToSend,
cbrDpeInMessages,
cbrDpeInMsgAvgSize,
cbrDpeInMsgMaxSize,
cbrDpeInMsgMinSize,
cbrDpeOutMessages,
cbrDpeOutMsgAvgSize,
cbrDpeOutMsgMaxSize,
cbrDpeOutMsgMinSize} 
STATUS current
DESCRIPTION
"A collection of objects that enable the management of the
system interfaces and communication."
 ::= { ciscoBaccRduMIBGroups 3 }
ciscoBaccRduBasicEventGroup NOTIFICATION-GROUP
NOTIFICATIONS { ciscoBaccRduLicenseLimit}
STATUS current
DESCRIPTION
"A collection of basic exception events."
 ::= { ciscoBaccRduMIBGroups 4 }
END

CISCO-BACC-SERVER-MIB.my

-- ********************************************************************
-- CISCO-BACC-SERVER-MIB.my : Defines the managed objects common to
-- all servers in Cisco Broadband Access Center (BAC).
-- Aug 2003, Sunil Melepatt Palliyal
-- Copyright (c) 2003-2005 by Cisco Systems, Inc.
-- All rights reserved.
-- ********************************************************************
CISCO-BACC-SERVER-MIB DEFINITIONS ::= BEGIN
IMPORTS
   TEXTUAL-CONVENTION
   FROM SNMPv2-TC
   MODULE-COMPLIANCE, NOTIFICATION-GROUP, OBJECT-GROUP
   FROM SNMPv2-CONF
   sysName
   FROM SNMPv2-MIB
SnmpAdminString

FROM SNMP-FRAMEWORK-MIB

MODULE-IDENTITY, NOTIFICATION-TYPE, OBJECT-TYPE,
TimeTicks, Unsigned32
FROM SNMPv2-SMI
ciscoMgmt
FROM CISCO-SMI;
ciscoBaccServerMIB MODULE-IDENTITY
LAST-UPDATED "200509020000Z"
ORGANIZATION "Cisco Systems, Inc."
CONTACT-INFO
Cisco Systems
Customer Service
Postal: 170 W Tasman Drive
San Jose, CA 95134
USA
Tel: +1 800 553-NETS
E-mail: cs-bac@cisco.com"
DESCRIPTION
"This MIB module defines the managed objects common to
all servers in Cisco Broadband Access Center
(BAC). Some of the server components in BAC includes
Regional Distribution Unit (RDU) and Device
Provisioning Engine (DPE). The RDU is the central
integration point for external applications/components.
It manages the generation of device configurations,
maintains the authoritative data store, and manages BAC
administration. The DPE server component manages
local caching of device configurations and configuration
files pulled by supported devices."

REVISION "200509020000Z"
DESCRIPTION
"Change product name from Broadband Access Center for
Cable (BACC) to Broadband Access Center (BAC) in the
comments and DESCRIPTION."
REVISION "200308250000Z"
DESCRIPTION
"Initial version of this MIB module."
::= { ciscoMgmt 349 }
ciscoBaccServerMIBNotifs OBJECT IDENTIFIER
 ::= { ciscoBaccServerMIB 0 }
ciscoBaccServerMIBObjects OBJECT IDENTIFIER
 ::= { ciscoBaccServerMIB 1 }
ciscoBaccServerMIBConformance OBJECT IDENTIFIER
 ::= { ciscoBaccServerMIB 2 }
ciscoBaccServerSystem OBJECT IDENTIFIER
 ::= { ciscoBaccServerMIBObjects 1 }

-- Textual Conventions
CiscoBaccServerState ::= TEXTUAL-CONVENTION
DISPLAY-HINT ""
STATUS current
DESCRIPTION
"Defines the states of a BAC Server.
unknown - A state other than the below states.
initializing - The server is starting up.
disconnected - The Server component does not have a
connection to the central server(RDU).
shuttingDown - The Server component is in the process
of shutting down.
readyOverloaded - The Server component is overloaded yet
ready.
ready - The server component finished its start
up process and ready to provide services.

offline - The server component turned off its
services.

unlicensed - The server component turned off due to
the lack of valid license(s).

SYNTAX INTEGER {
  unknown (1),
  initializing (2),
  disconnected (3),
  shuttingDown(4),
  readyOverloaded (5),
  ready (6),
  offline (7),
  unlicensed (8) }

-- System

cbsServerTable OBJECT-TYPE
SYNTAX SEQUENCE OF CbsServerEntry
MAX-ACCESS not-accessible
STATUS current
DESCRIPTION
"Table containing settings for each server."
::= { ciscoBaccServerSystem 1 }

cbsServerEntry OBJECT-TYPE
SYNTAX CbsServerEntry
MAX-ACCESS not-accessible
STATUS current
DESCRIPTION
"Each entry corresponds to a server instance. For example RDU/DPE etc."
INDEX { cbsServerIndex }
::= { cbsServerTable 1 }

CbsServerEntry ::= SEQUENCE {
  cbsServerIndex Unsigned32,
  cbsUptime TimeTicks,
  cbsState CiscoBaccServerState,
  cbsVersion SnmpAdminString,
  cbsNotifEnableFlags BITS,
  cbsServerType SnmpAdminString
}

cbsServerIndex OBJECT-TYPE
SYNTAX Unsigned32 (1 .. 65536)
MAX-ACCESS not-accessible
STATUS current
DESCRIPTION
"A unique index value identifying the server in the table."
::= { cbsServerEntry 1 }

cbsUptime OBJECT-TYPE
SYNTAX TimeTicks
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"Uptime for this server component process. Please note that this is
different from sysUpTime (the up time of the machine) in MIB-II. It is the
time since this server is up."
::= { cbsServerEntry 2 }

cbsState OBJECT-TYPE
SYNTAX CiscoBaccServerState
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"Current state of the this server. The agent generates
ciscoBaccServerStateChanged notification when the server state changes."
::= { cbsServerEntry 3 }
cbsVersion OBJECT-TYPE
SYNTAX SnmpAdminString
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"Version of the software running on this server component. A sample version string may look like BAC_2.5.1"
::= { cbsServerEntry 4 }
cbsNotifEnableFlags OBJECT-TYPE
SYNTAX BITS { cbsStateNotifEnabled (0) }
MAX-ACCESS read-write
STATUS current
DESCRIPTION
"Flags controlling the notifications for this server.

Bit   Meaning
---   -------
0     cbsStateNotifEnabled - Indicates whether ciscoBaccServerStateChanged notification is enabled for this server. The notification will be generated only if this bit is set." DEFVAL
{} -- no notifs enabled
::= { cbsServerEntry 5 }
cbsServerType OBJECT-TYPE
SYNTAX SnmpAdminString
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"A unique name identifying the type of this server. For example: RDU,DPE."
::= { cbsServerEntry 6 }

-- Notifications
ciscoBaccServerStateChanged NOTIFICATION-TYPE
OBJECTS
{"cbsState, cbsServerType, sysName}
STATUS current
DESCRIPTION
"The agent generates this notification when the server state [cbsState] changes."
 ::= { ciscoBaccServerMIBNotifs 1 }

-- Conformance
ciscoBaccServerMIBCompliances OBJECT IDENTIFIER ::= { ciscoBaccServerMIBConformance 1 }
ciscoBaccServerMIBGroups OBJECT IDENTIFIER ::= { ciscoBaccServerMIBConformance 2 }

-- Compliance
ciscoBaccServerMIBCompliance MODULE-COMPLIANCE
STATUS current
DESCRIPTION
"The compliance statement for entities which implement the CISCO-BACC-SERVER-MIB."
MODULE -- This module
MANDATORY-GROUPS { ciscoBaccServerBasicGroup }
GROUP ciscoBaccServerNotifObjGroup
DESCRIPTION
"This group is needed only if the notifications are required."
GROUP ciscoBaccServerEventGroup
DESCRIPTION
"This group is needed only if the notifications are required."
 ::= { ciscoBaccServerMIBCompliances 1 }

-- Units of Conformance

ciscoBaccServerBasicGroup OBJECT-GROUP
OBJECTS { cbsState,
         cbsUptime,
         cbsVersion,
         cbsServerType
      }
STATUS current
DESCRIPTION
"A collection of objects that enable the management of the basic services."
 ::= { ciscoBaccServerMIBGroups 1 }

ciscoBaccServerNotifObjGroup OBJECT-GROUP
OBJECTS { cbsNotifEnableFlags }
STATUS current
DESCRIPTION
"A collection of objects that controls exception events."
 ::= { ciscoBaccServerMIBGroups 2 }

ciscoBaccServerEventGroup NOTIFICATION-GROUP
NOTIFICATIONS { ciscoBaccServerStateChanged }
STATUS current
DESCRIPTION
"A collection of the exception events on this MIB."
 ::= { ciscoBaccServerMIBGroups 3 }

END

CISCO-MHS-MIB.my

-- ******************************************************************
-- CISCO-MHS-MIB.txt
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-- ******************************************************************

CISCO-MHS-MIB DEFINITIONS ::= BEGIN

IMPORTS
   MODULE-IDENTITY,
   OBJECT-TYPE,
   NOTIFICATION-TYPE,
   Unsigned32
   FROM SNMPv2-SMI

   MODULE-COMPLIANCE,
   NOTIFICATION-GROUP,
   OBJECT-GROUP
   FROM SNMPv2-CONF

   InetAddress,
   InetAddressType
   FROM INET-ADDRESS-MIB

   TimeStamp
   FROM SNMPv2-TC

   ciscoMgmt
   FROM CISCO-SMI;

GROUP ciscoBaccServerEventGroup
DESCRIPTION
"This group is needed only if the notifications are required."
 ::= { ciscoBaccServerMIBCompliances 1 }

-- Units of Conformance

ciscoBaccServerBasicGroup OBJECT-GROUP
OBJECTS { cbsState,
         cbsUptime,
         cbsVersion,
         cbsServerType
      }
STATUS current
DESCRIPTION
"A collection of objects that enable the management of the basic services."
 ::= { ciscoBaccServerMIBGroups 1 }

ciscoBaccServerNotifObjGroup OBJECT-GROUP
OBJECTS { cbsNotifEnableFlags }
STATUS current
DESCRIPTION
"A collection of objects that controls exception events."
 ::= { ciscoBaccServerMIBGroups 2 }

ciscoBaccServerEventGroup NOTIFICATION-GROUP
NOTIFICATIONS { ciscoBaccServerStateChanged }
STATUS current
DESCRIPTION
"A collection of the exception events on this MIB."
 ::= { ciscoBaccServerMIBGroups 3 }

END

CISCO-MHS-MIB.my

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

CISCO-MHS-MIB DEFINITIONS ::= BEGIN

IMPORTS
   MODULE-IDENTITY,
   OBJECT-TYPE,
   NOTIFICATION-TYPE,
   Unsigned32
   FROM SNMPv2-SMI

   MODULE-COMPLIANCE,
   NOTIFICATION-GROUP,
   OBJECT-GROUP
   FROM SNMPv2-CONF

   InetAddress,
   InetAddressType
   FROM INET-ADDRESS-MIB

   TimeStamp
   FROM SNMPv2-TC

   ciscoMgmt
   FROM CISCO-SMI;
ciscoMhsMIB MODULE-IDENTITY
LAST-UPDATED "201111040000Z"
ORGANIZATION "Cisco Systems, Inc."
CONTACT-INFO
"Cisco Systems
Customer Service
Postal: 170 W Tasman Drive
San Jose, CA 95134
USA
Tel: +1 800 553-NETS
E-mail: cs-femto-chms-dlc-mib@cisco.com"
DESCRIPTION
"This MIB models alarms for the Cisco
Management Heartbeat Server (CMHS). The CMHS server
aggregates connection & status information from CPE devices
located in customer homes. The CMHS server provides an
API for retrieval of CPE connection & status data.

Acronyms:
CMHS - Cisco Management Heartbeat Server
MIB - Management Information Base
CPE - Customer Premise Equipment
UTC - Coordinated Universal Time"
 ::= { ciscoMgmt 9999 }

-- Textual Conventions

ciscoMhsMIBNotifs OBJECT IDENTIFIER
 ::= { ciscoMhsMIB 0 }

-- 1.3.6.1.4.1.9.9.9999.0.1
ciscoMhsHeartbeatLoss NOTIFICATION-TYPE
OBJECTS {
ciscoMhsDeviceID,
ciscoMhsInterfaceType,
ciscoMhsDeviceAddress,
ciscoMhsDeviceAddressType,
ciscoMhsServerAddress,
ciscoMhsServerAddressType,
ciscoMhsAlarmSeverity,
ciscoMhsTimeStamp
}
STATUS current
DESCRIPTION
"This alarm is sent when no heartbeat has been received from a
previously connected CPE for a X seconds, where X is
configurable on the server (default 15 minutes)"
 ::= { ciscoMhsMIBNotifs 1 }

-- 1.3.6.1.4.1.9.9.9999.0.2
ciscoMhsHeartbeatLossClear NOTIFICATION-TYPE
OBJECTS {
ciscoMhsDeviceID,
ciscoMhsInterfaceType,
ciscoMhsDeviceAddress,
ciscoMhsDeviceAddressType,
ciscoMhsServerAddress,
ciscoMhsServerAddressType,
ciscoMhsAlarmSeverity,
ciscoMhsOutageDuration,
ciscoMhsTimeStamp
}
STATUS current
DESCRIPTION
"This alarm clears the heartbeat loss alarm when heartbeat was
restored"
 ::= { ciscoMhsMIBNotifs 2 }
-- 1.3.6.1.4.1.9.9.9999.0.3
ciscoMhsStatusChange NOTIFICATION-TYPE
OBJECTS {
    ciscoMhsDeviceID,
    ciscoMhsStatusName,
    ciscoMhsStatusValue,
    ciscoMhsInterfaceType,
    ciscoMhsDeviceAddress,
    ciscoMhsDeviceAddressType,
    ciscoMhsServerAddress,
    ciscoMhsServerAddressType,
    ciscoMhsAlarmSeverity,
    ciscoMhsTimeStamp
}
STATUS current
DESCRIPTION
"This alarm is sent when one of the status parameters reported by client is outside the threshold, where low/high thresholds are configurable for each parameter on the server."
::= { ciscoMhsMIBNotifs 3 }

-- 1.3.6.1.4.1.9.9.9999.0.4
ciscoMhsStatusChangeClear NOTIFICATION-TYPE
OBJECTS {
    ciscoMhsDeviceID,
    ciscoMhsStatusName,
    ciscoMhsStatusValue,
    ciscoMhsInterfaceType,
    ciscoMhsDeviceAddress,
    ciscoMhsDeviceAddressType,
    ciscoMhsServerAddress,
    ciscoMhsServerAddressType,
    ciscoMhsAlarmSeverity,
    ciscoMhsTimeStamp
}
STATUS current
DESCRIPTION
"This alarm is sent when prior Status Change alarm has been cleared"
::= { ciscoMhsMIBNotifs 4 }

-- 1.3.6.1.4.1.9.9.9999.0.5
ciscoMhsServerAlarm NOTIFICATION-TYPE
OBJECTS {
    ciscoMhsServerType,
    ciscoMhsServerName,
    ciscoMhsAlarmDescription,
    ciscoMhsAlarmSeverity,
    ciscoMhsTimeStamp
}
STATUS current
DESCRIPTION
"Generic alarm to allow notifications for user-defined server alarms such as filesystem capacity, application errors, etc."
::= { ciscoMhsMIBNotifs 5 }

-- 1.3.6.1.4.1.9.9.9999.0.6
ciscoMhsServerAlarmClear NOTIFICATION-TYPE
OBJECTS {
    ciscoMhsServerType,
    ciscoMhsServerName,
    ciscoMhsAlarmDescription,
    ciscoMhsAlarmSeverity,
    ciscoMhsTimeStamp
}
STATUS current
DESCRIPTION
"This alarm is sent when prior Server Alarm has been cleared."
::= { ciscoMhsMIBNotifs 6 }

-- 1.3.6.1.4.1.9.9.9999.1
ciscoMhsMIBObjects OBJECT IDENTIFIER
::= { ciscoMhsMIB 1 }

-- 1.3.6.1.4.1.9.9.9999.2
ciscoMhsMIBConform OBJECT IDENTIFIER ::= { ciscoMhsMIB 2 }

-- 1.3.6.1.4.1.9.9.9999.2.1
ciscoMhsMIBCompliances OBJECT IDENTIFIER ::= { ciscoMhsMIBConform 1 }

-- 1.3.6.1.4.1.9.9.9999.1.1
ciscoMhsDeviceID OBJECT-TYPE
SYNTAX OCTET STRING
MAX-ACCESS read-only
STATUS current
DESCRIPTION "Device identifier that uniquely identifies the CPE"
 ::= { ciscoMhsMIBObjects 1 }

-- 1.3.6.1.4.1.9.9.9999.1.2
ciscoMhsStatusName OBJECT-TYPE
SYNTAX OCTET STRING
MAX-ACCESS read-only
STATUS current
DESCRIPTION "String that defines the status type."
 ::= { ciscoMhsMIBObjects 2 }

-- 1.3.6.1.4.1.9.9.9999.1.3
ciscoMhsStatusValue OBJECT-TYPE
SYNTAX OCTET STRING
MAX-ACCESS read-only
STATUS current
DESCRIPTION "A string that defines the actual reported value for the status change"
 ::= { ciscoMhsMIBObjects 3 }

-- 1.3.6.1.4.1.9.9.9999.1.4
ciscoMhsServerType OBJECT-TYPE
SYNTAX INTEGER
  
  wireline(1),
  other(2),
  upload(3),
  watchdog(4)

MAX-ACCESS read-only
STATUS current
DESCRIPTION "An enumeration that defines the type of the server (e.g. CMHS or other)"
 ::= { ciscoMhsMIBObjects 4 }

-- 1.3.6.1.4.1.9.9.9999.1.5
ciscoMhsServerName OBJECT-TYPE
SYNTAX OCTET STRING
MAX-ACCESS read-only
STATUS current
DESCRIPTION "A unique name of the CMHS server (e.g. FQDN or configured string)"
 ::= { ciscoMhsMIBObjects 5 }

-- 1.3.6.1.4.1.9.9.9999.1.6
ciscoMhsInterfaceType OBJECT-TYPE
SYNTAX INTEGER
  
  wireline(1),
  three-g(2),
  all(3)

MAX-ACCESS read-only
STATUS current
DESCRIPTION
"The interface type over which alarm was detected, e.g. (Wireline, 3G)."
::= { ciscoMhsMIBObjects 6 }

-- 1.3.6.1.4.1.9.9.9999.1.7
ciscoMhsDeviceAddressType OBJECT-TYPE
SYNTAX InetAddressType
MAX-ACCESS read-only
STATUS current
DESCRIPTION "Identifies the type of IP Address for the 'ciscoMhsDeviceAddress' object."
::= { ciscoMhsMIBObjects 7 }

-- 1.3.6.1.4.1.9.9.9999.1.8
ciscoMhsDeviceAddress OBJECT-TYPE
SYNTAX InetAddress
MAX-ACCESS read-only
STATUS current
DESCRIPTION "The IP address of the CPE"
::= { ciscoMhsMIBObjects 8 }

-- 1.3.6.1.4.1.9.9.9999.1.9
ciscoMhsServerAddressType OBJECT-TYPE
SYNTAX InetAddressType
MAX-ACCESS read-only
STATUS current
DESCRIPTION "Identifies the type of IP Address for the 'ciscoMhsServerAddress' object."
::= { ciscoMhsMIBObjects 9 }

-- 1.3.6.1.4.1.9.9.9999.1.10
ciscoMhsServerAddress OBJECT-TYPE
SYNTAX InetAddress
MAX-ACCESS read-only
STATUS current
DESCRIPTION "The IP address of the CMHS Server"
::= { ciscoMhsMIBObjects 10 }

-- 1.3.6.1.4.1.9.9.9999.1.11
ciscoMhsAlarmSeverity OBJECT-TYPE
SYNTAX INTEGER {
critical(1),
major(2),
minor(3),
warning(4),
status(5),
clear(6),
informational(7)
}
MAX-ACCESS read-only
STATUS current
DESCRIPTION "The alarm severity"
::= { ciscoMhsMIBObjects 11 }

-- 1.3.6.1.4.1.9.9.9999.1.12
ciscoMhsOutageDuration OBJECT-TYPE
SYNTAX Unsigned32
MAX-ACCESS read-only
STATUS current
DESCRIPTION "The duration of the outage in seconds."
::= { ciscoMhsMIBObjects 12 }

-- 1.3.6.1.4.1.9.9.9999.1.13
ciscoMhsAlarmDescription OBJECT-TYPE
SYNTAX OCTET STRING
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"A textual description of the exact server alarm. For example, '/var filesystem full'."
 ::= { ciscoMhsMIBObjects 13 }

-- 1.3.6.1.4.1.9.9.9999.1.14
ciscoMhsTimeStamp OBJECT-TYPE
SYNTAX TimeStamp
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"The value of the sysUptime object at which time an alarm has occurred."
 ::= { ciscoMhsMIBObjects 14 }

-- 1.3.6.1.4.1.9.9.9999.2.2
ciscoMhsMIBGroups OBJECT IDENTIFIER
 ::= { ciscoMhsMIBConform 2 }

-- 1.3.6.1.4.1.9.9.9999.2.1.1
ciscoMhsMIBCompliance MODULE-COMPLIANCE
STATUS current
DESCRIPTION
"This is a default module-compliance containing default object groups."
MODULE -- this module
MANDATORY-GROUPS 
  { ciscoMhsMIBMainObjectGroup, ciscoMhsMIBNotificationGroup }
 ::= { ciscoMhsMIBCompliances 1 }

-- Units of Conformance

-- 1.3.6.1.4.1.9.9.9999.2.2.1
ciscoMhsMIBMainObjectGroup OBJECT-GROUP
OBJECTS 
  { ciscoMhsDeviceID, ciscoMhsStatusName, ciscoMhsStatusValue, ciscoMhsServerType, ciscoMhsServerName, ciscoMhsInterfaceType, ciscoMhsDeviceAddress, ciscoMhsServerAddress, ciscoMhsAlarmSeverity, ciscoMhsOutageDuration, ciscoMhsDeviceAddressType, ciscoMhsServerAddressType, ciscoMhsAlarmDescription, ciscoMhsTimeStamp }
STATUS current
DESCRIPTION
"The is the main object group"
 ::= { ciscoMhsMIBGroups 1 }

-- 1.3.6.1.4.1.9.9.9999.2.2.2
ciscoMhsMIBNotificationGroup NOTIFICATION-GROUP
NOTIFICATIONS 
  { ciscoMhsHeartbeatLoss, ciscoMhsHeartbeatLossClear, ciscoMhsStatusChange, ciscoMhsStatusChangeClear, ciscoMhsServerAlarm, ciscoMhsServerAlarmClear }
STATUS current
DESCRIPTION
"This is the ciscoMhsMIB notification group"
 ::= { ciscoMhsMIBGroups 2 }

END
CISCO-NETREG-DHCPV6-MIB.my

-- *********************************************************************
-- CISCO-NETREG-DHCPV6-MIB.my :
-- In the future, this mib may be removed entirely, or re-implemented
-- on short notice. Application developers should not depend on
-- long-term access to this MIB.
--
-- This MIB implements a small subset of actual functions required to
-- manage Dynamic Host Configuration Protocol for IPv6 (DHCPv6).
-- This MIB is provided as a temporary fix to support those platforms
-- with a limited implementation of SNMP infrastructure.
-- %DNP Therefore, customer should understand that :
-- %DNP This MIB can not be ported to any platforms without first
-- %DNP contacting the mib-police to ensure that the target platform
-- %DNP meets the restrictions for using this MIB. Cisco Network
-- %DNP Registrar 7.0.x will be allowed to implement this MIBs.
--
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-- All rights reserved.
-- *********************************************************************

CISCO-NETREG-DHCPV6-MIB DEFINITIONS ::= BEGIN

IMPORTS
  MODULE-IDENTITY,
  OBJECT-TYPE,
  NOTIFICATION-TYPE,
  Counter32,
  Gauge32
FROM SNMPv2-SMI
  MODULE-COMPLIANCE,
  NOTIFICATION-GROUP,
  OBJECT-GROUP
FROM SNMPv2-CONF
  TimeStamp
FROM SNMPv2-TC
  SnmpAdminString
FROM SNMP-FRAMEWORK-MIB
  InetAddressIPv6,
  InetAddressPrefixLength
FROM INET-ADDRESS-MIB
  ciscoExperiment
FROM CISCO-SMI;

ciscoNetRegDhcpv6MIB MODULE-IDENTITY
LAST-UPDATED   "201005120000Z"
ORGANIZATION "Cisco Systems, Inc."
CONTACT-INFO
  "Cisco Systems
  Customer Service
  Postal: 170 W Tasman Drive
  San Jose, CA 95134
  USA
  Tel: +1 800 553-NETS
  E-mail: cs-cnrf-smnp@cisco.com"
DESCRIPTION
  "The CISCO-NETREG-DHCPV6-MIB contains the counters and
  notification structures which carry the identity and status
  information of the managed object as analyzed by an event
  processor. The DHCPv6 counters can be queried using the mib
  objects. The design of this MIB is limited to platforms that
  can not fully support structures normally supported by device
  as follows.
-- Platform can not support object within tables and are
  limited to scalar objects.

Cisco RAN Management System SNMP/MIB Guide, Release 4.x
-- Platform can not support setting or retrieval of configuration data. Therefore, data in notification must be provided by objects defined with MAX-ACCESS of accessible-for-notify.

Descriptions of acronyms and definitions:

**address**
An IP layer identifier for an interface or a set of interfaces.

**host**
Any node that is not a router.

**IP**
Internet Protocol Version 6 (IPv6). The terms IPv4 and IPv6 are used only in contexts where it is necessary to avoid ambiguity.

**interface**
A node’s attachment to a link.

**link**
A communication facility or medium over which nodes can communicate at the link layer, i.e., the layer immediately below IP. Examples are Ethernet (simple or bridged); Token Ring; PPP links, X.25, Frame Relay, or ATM networks; and Internet (or higher) layer tunnels, such as tunnels over IPv4 or IPv6 itself.

**link-layer identifier**
A link-layer identifier for an interface. Examples include IEEE 802 addresses for Ethernet or Token Ring network interfaces, and E.164 addresses for ISDN links.

**node**
A device that implements IP.

**packet**
An IP header plus payload.

**prefix**
The initial bits of an address, or a set of IP addresses that share the same initial bits.

**prefix length**
The number of bits in a prefix.

**router**
A node that forwards IP packets not explicitly addressed to itself.

**DHCP relay agent**
A node that acts as an intermediary to deliver DHCP messages between clients and servers, and is on the same link as the client.

**DHCP server (or server)**
A node that responds to requests from clients, and may or may not be on the same link as the client(s).

**DUID**
A DHCP Unique IDentifier for a DHCP participant; each DHCP client and server has exactly one DUID.

**Scope**
A DHCP Scope object. A scope defines a set of dynamic address pools on a subnet that share its configuration attributes. A scope can also contain reserved addresses on the specified subnet that should use the configuration.

**client-class**
A client-class defines the selection criteria and configuration for a group of clients.

**selection-tag**
A selection-tag refers to a named
entity that is used to control matching client and client-class entries with candidate scopes.

grouping A grouping defines the aggregation of the free address levels of scopes.

REVISION "201005120000Z"
DESCRIPTION "Clarified duplicate address trap descriptions."
REVISION "200711280000Z"
DESCRIPTION "Initial version of this MIB module."
::= { ciscoExperiment 139 }
ciscoNetRegDhcpv6MIBNotifs OBJECT IDENTIFIER ::= { ciscoNetRegDhcpv6MIB 0 }
ciscoNetRegDhcpv6MIBObjects OBJECT IDENTIFIER ::= { ciscoNetRegDhcpv6MIB 1 }
ciscoNetRegDhcpv6MIBConform OBJECT IDENTIFIER ::= { ciscoNetRegDhcpv6MIB 2 }
ciscoNetRegDhcpv6NotifObjects OBJECT IDENTIFIER ::= { ciscoNetRegDhcpv6MIBObjects 1 }
ciscoNetRegDhcpv6TotalCounters OBJECT IDENTIFIER ::= { ciscoNetRegDhcpv6MIBObjects 2 }
ciscoNetRegDhcpv6PeriodCounters OBJECT IDENTIFIER ::= { ciscoNetRegDhcpv6MIBObjects 3 }

-- ciscoNetRegDhcpv6MIBNotifs
ciscoNetRegDhcpv6AddressShortageStart NOTIFICATION-TYPE
OBJECTS {
cnr dhcpv6LinkName,
cnr dhcpv6FreeAddressValue,
cnr dhcpv6Threshold,
cnr dhcpv6PrefixAddress,
cnr dhcpv6PrefixLength,
cnr dhcpv6ThresholdType,
cnr dhcpv6TypeDesc
}

STATUS current

DESCRIPTION "This notification signifies that the number of available IPv6 addresses for a particular prefix or link has fallen below the value of cnr dhcpv6Threshold. This notification signals a shortage of addresses. The shortage will continue until the number of free addresses has reached or exceeded the threshold specified by cnr dhcpv6Threshold. This notification will only be generated when the shortages of IPv6 addresses is first encountered.

When ciscoNetRegDhcpv6AddressShortageStop is generated, it enables this notification to trigger again the next time the number of free addresses for that prefix or link falls below the value indicated by cnr dhcpv6Threshold.

At the time this event is triggered, cnr dhcpv6LinkName indicates the name of the link or prefix, cnr dhcpv6FreeAddressValue provides the count of the addresses, cnr dhcpv6Threshold indicates the configured percentage that was crossed. In case cnr dhcpv6ThresholdType is of type 'prefix' then cnr dhcpv6PrefixAddress and cnr dhcpv6PrefixLength indicate the address and length of the prefix and cnr dhcpv6TypeDesc indicates extra grouping information on the prefix or link that triggered this event."
ciscoNetRegDhcpv6AddressShortageStop NOTIFICATION-TYPE

OBJECTS {
    cnrdhcpv6LinkName,
    cnrdhcpv6FreeAddressValue,
    cnrdhcpv6Threshold,
    cnrdhcpv6PrefixAddress,
    cnrdhcpv6PrefixLength,
    cnrdhcpv6ThresholdType,
    cnrdhcpv6TypeDesc
}

STATUS current

DESCRIPTION "This notification signifies that the shortage of available IPv6 addresses for a particular prefix or link is over and is generated when the number of free addresses for that prefix or link reaches or exceed value specified by cnrdhcpv6Threshold.

This notification will only be generated when exceeding the threshold specified by cnrdhcpv6Threshold for the first time. When ciscoNetRegDhcpv6AddressShortageStart is generated, it enables this notification to trigger again the next time the number of free addresses for that prefix or link reaches or exceed value specified by cnrdhcpv6Threshold.

At the time this event is triggered, cnrdhcpv6LinkName indicates the name of the link or prefix, cnrdhcpv6FreeAddressValue provides the count of the addresses, cnrdhcpv6Threshold specifies the configured percentage that was crossed. In case cnrdhcpv6ThresholdType is of type 'prefix' then cnrdhcpv6PrefixAddress and cnrdhcpv6PrefixLength indicate the address and length of the prefix and cnrdhcpv6TypeDesc indicates extra grouping information on the prefix or link that triggered this event."

REFERENCE "RFC3315, Section 4.1."
This notification is triggered when a duplicate IPv6 prefix assignment is detected. This notification is generated if a client sends a Decline message. The DHCPv6 client is required to do Duplicate Address Detection (DAD) before using the prefix and therefore would send the Decline message if it found that the address was in use.

The DHCP server marks the prefix as unavailable for leasing to clients. cnrdhcpv6DupPrefix and cnrdhcpv6DupPrefixLength indicate the duplicate prefix and length that triggered this event, cnrdhcpv6ClientId and cnrdhcpv6ClientLookupKey indicate the client identifier option and lookup key for the client that triggered this event and cnrdhcpv6DupIpv6AddressDetectedBy object indicates whether the client or server detected this condition.

REFERENCE "RFC3315, Section 18.1.7, 18.2.7."
STATUS current
DESCRIPTION
"This object indicates the length of the IPv6 prefix that triggered the ciscoNetRegDhcpv6AddressShortageStart or ciscoNetRegDhcpv6AddressShortageStop event. This attribute is available only if the cnrdhcpv6ThresholdType object for the event has the value 'prefix'."
REFERENCE "RFC3315, Section 4.1."
::= { ciscoNetRegDhcpv6NotifObjects 5 }


cnrdhcpv6ThresholdType OBJECT-TYPE
SYNTAX INTEGER {
  prefix(1),
  link(2),
  selectionTags(3)
}
MAX-ACCESS accessible-for-notify
STATUS current
DESCRIPTION
"This object indicates whether the threshold that triggered the ciscoNetRegDhcpv6AddressShortageStart or ciscoNetRegDhcpv6AddressShortageStop event was configured at the level of a single prefix, an entire group of prefixes sharing the same link, or a group of prefixes sharing the same link and selection tag."
::= { ciscoNetRegDhcpv6NotifObjects 6 }

cnrdhcpv6TypeDesc OBJECT-TYPE
SYNTAX SnmpAdminString (SIZE (1..255))
MAX-ACCESS accessible-for-notify
STATUS current
DESCRIPTION
"This object indicates the grouping for the prefix that triggered the ciscoNetRegDhcpv6AddressShortageStart or ciscoNetRegDhcpv6AddressShortageStop event. For a single prefix, it is the prefix address. For a prefix that is part of a link grouping, it is the link name. For a prefix that is part of a selection-tag grouping, it is the prefix selection tag."
::= { ciscoNetRegDhcpv6NotifObjects 7 }

cnrdhcpv6DupIpv6Address OBJECT-TYPE
SYNTAX InetAddressIPv6
MAX-ACCESS accessible-for-notify
STATUS current
DESCRIPTION
"This object indicates the IPv6 address that triggered the ciscoNetRegDhcpv6DuplicateAddress event."
REFERENCE "RFC3315, Section 4.1."
::= { ciscoNetRegDhcpv6NotifObjects 8 }

cnrdhcpv6ClientId OBJECT-TYPE
SYNTAX SnmpAdminString (SIZE (2..128))
MAX-ACCESS accessible-for-notify
STATUS current
DESCRIPTION
"This object indicates the Client Identifier option (DUID) for the client, if specified, that triggered the ciscoNetRegDhcpv6DuplicateAddress event."
REFERENCE "RFC3315, Section 9."
::= { ciscoNetRegDhcpv6NotifObjects 9 }

cnrdhcpv6ClientLookupKey OBJECT-TYPE
SYNTAX SnmpAdminString
MAX-ACCESS accessible-for-notify
STATUS current
DESCRIPTION
"This object indicates the lookup key for the client that triggered the ciscoNetRegDhcpv6DuplicateAddress event."
::= { ciscoNetRegDhcpv6NotifObjects 10 }

cnrdhcpv6DupIpv6AddressDetectedBy OBJECT-TYPE
SYNTAX INTEGER {
dhcpServer(1),
dhcpClient(2)  
)
MAX-ACCESS accessible-for-notify
STATUS current
DESCRIPTION
"This object indicates how a duplicated IPv6 address is
detected.
dhcpClient: The duplicate address is detected by the DHCP
client and reported to the server via a Decline message."
::= { ciscoNetRegDhcpv6NotifObjects 11 }
cnr dhcpv6DupPrefix OBJECT-TYPE
SYNTAX InetAddressIPv6
MAX-ACCESS accessible-for-notify
STATUS current
DESCRIPTION
"This object indicates the IPv6 prefix that triggered the
ciscoNetRegDhcpv6DuplicatePrefix event."
REFERENCE "RFC3315, Section 4.1."
::= { ciscoNetRegDhcpv6NotifObjects 12 }
cnr dhcpv6DupPrefixLength OBJECT-TYPE
SYNTAX InetAddressPrefixLength
MAX-ACCESS accessible-for-notify
STATUS current
DESCRIPTION
"This object indicates the length of the IPv6 prefix that
triggered the ciscoNetRegDhcpv6DuplicatePrefix event."
REFERENCE "RFC3315, Section 4.1."
::= { ciscoNetRegDhcpv6NotifObjects 13 }
cnr dhcpv6DupPrefixDetectedBy OBJECT-TYPE
SYNTAX INTEGER {
    dhcpServer(1),
    dhcpClient(2)
}
MAX-ACCESS accessible-for-notify
STATUS current
DESCRIPTION
"This object indicates how a duplicated IPv6 prefix is
detected.
dhcpClient: The duplicate prefix is detected by the DHCP
client and reported to the server via a Decline message."
::= { ciscoNetRegDhcpv6NotifObjects 14 }
-- ciscoNetRegDhcpv6TotalCounters
cnr dhcpv6TotalPacketsRcvd OBJECT-TYPE
SYNTAX Counter32
UNITs "packets"
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"This object indicates the total number of DHCPv6 packets
received."
REFERENCE "RFC3315, Section 5.3."
::= { ciscoNetRegDhcpv6TotalCounters 1 }
cnr dhcpv6TotalPacketsRcvdRelay OBJECT-TYPE
SYNTAX Counter32
UNITs "packets"
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"This object indicates the total number of DHCPv6
Relay-Forw messages received."
REFERENCE "RFC3315, Section 15.13."
::= { ciscoNetRegDhcpv6TotalCounters 2 }
cnr dhcpv6TotalSolicits OBJECT-TYPE
SYNTAX Counter32
UNITs "messages"
MAX-ACCESS read-only
STATUS current
DESCRIPTION "This object indicates the total number of DHCPv6 Solicit messages received."
REFERENCE "RFC3315, Section 15.2." ::= { ciscoNetRegDhcpv6TotalCounters 3 }
cnrdhcpv6TotalRequests OBJECT-TYPE
SYNTAX Counter32
UNITS "messages"
MAX-ACCESS read-only
STATUS current
DESCRIPTION "This object indicates the total number of DHCPv6 Request messages received."
REFERENCE "RFC3315, Section 15.4." ::= { ciscoNetRegDhcpv6TotalCounters 4 }
cnrdhcpv6TotalConfirms OBJECT-TYPE
SYNTAX Counter32
UNITS "messages"
MAX-ACCESS read-only
STATUS current
DESCRIPTION "This object indicates the total number of DHCPv6 Confirm messages received."
REFERENCE "RFC3315, Section 15.5." ::= { ciscoNetRegDhcpv6TotalCounters 5 }
cnrdhcpv6TotalRenews OBJECT-TYPE
SYNTAX Counter32
UNITS "messages"
MAX-ACCESS read-only
STATUS current
DESCRIPTION "This object indicates the total number of DHCPv6 Renew messages received."
REFERENCE "RFC3315, Sec 15.6." ::= { ciscoNetRegDhcpv6TotalCounters 6 }
cnrdhcpv6TotalRebinds OBJECT-TYPE
SYNTAX Counter32
UNITS "messages"
MAX-ACCESS read-only
STATUS current
DESCRIPTION "This object indicates the total number of DHCPv6 Rebind messages received."
REFERENCE "RFC3315, Section 15.7." ::= { ciscoNetRegDhcpv6TotalCounters 7 }
cnrdhcpv6TotalReleases OBJECT-TYPE
SYNTAX Counter32
UNITS "messages"
MAX-ACCESS read-only
STATUS current
DESCRIPTION "This object indicates the total number of DHCPv6 Release messages received."
REFERENCE "RFC3315, Section 15.9." ::= { ciscoNetRegDhcpv6TotalCounters 8 }
cnrdhcpv6TotalDeclines OBJECT-TYPE
SYNTAX Counter32
UNITS "messages"
MAX-ACCESS read-only
STATUS current
DESCRIPTION "This object indicates the total number of DHCPv6 Decline messages received."
REFERENCE "RFC3315, Section 15.8." ::= { ciscoNetRegDhcpv6TotalCounters 9 }
cnrdhcpv6TotalInfoRequests OBJECT-TYPE
SYNTAX Counter32
UNITS "messages"
MAX-ACCESS read-only
STATUS current
DESCRIPTION "This object indicates the total number of DHCPv6 Information-Request messages received."
REFERENCE "RFC3315, Section 15.12."
::= { ciscoNetRegDhcpv6TotalCounters 10 }

cnrdhcpv6TotalInvalidPackets OBJECT-TYPE
SYNTAX Counter32
UNITS "packets"
MAX-ACCESS read-only
STATUS current
DESCRIPTION "This object indicates the total number of unparseable DHCPv6 packets received."
REFERENCE "RFC3315, Section 5.3."
::= { ciscoNetRegDhcpv6TotalCounters 11 }

cnrdhcpv6TotalPacketsSent OBJECT-TYPE
SYNTAX Counter32
UNITS "packets"
MAX-ACCESS read-only
STATUS current
DESCRIPTION "This object indicates the total number of DHCPv6 packets sent."
REFERENCE "RFC3315, Section 5.3."
::= { ciscoNetRegDhcpv6TotalCounters 12 }

cnrdhcpv6TotalPacketsSentRelay OBJECT-TYPE
SYNTAX Counter32
UNITS "messages"
MAX-ACCESS read-only
STATUS current
DESCRIPTION "This object indicates the total number of DHCPv6 Relay-Repl messages sent."
REFERENCE "RFC3315, Section 15.14."
::= { ciscoNetRegDhcpv6TotalCounters 13 }

cnrdhcpv6TotalAdvertises OBJECT-TYPE
SYNTAX Counter32
UNITS "messages"
MAX-ACCESS read-only
STATUS current
DESCRIPTION "This object indicates the total number of DHCPv6 Advertise messages sent."
REFERENCE "RFC3315, Section 15.3."
::= { ciscoNetRegDhcpv6TotalCounters 14 }

cnrdhcpv6TotalReplies OBJECT-TYPE
SYNTAX Counter32
UNITS "messages"
MAX-ACCESS read-only
STATUS current
DESCRIPTION "This object indicates the total number of DHCPv6 Reply messages sent."
REFERENCE "RFC3315, Section 15.10."
::= { ciscoNetRegDhcpv6TotalCounters 15 }

cnrdhcpv6TotalReconfigures OBJECT-TYPE
SYNTAX Counter32
UNITS "messages"
MAX-ACCESS read-only
STATUS current
DESCRIPTION
This object indicates the total number of DHCPv6 Reconfigure messages sent.
REFERENCE "RFC3315, Section 15.11."
 ::= { ciscoNetRegDhcpv6TotalCounters 16 }

cnrdhcpv6TotalAuthFails OBJECT-TYPE
SYNTAX Counter32
UNITS "packets"
MAX-ACCESS read-only
STATUS current
DESCRIPTION "This object indicates the total number of DHCPv6 packets dropped due to authentication failure."
REFERENCE "RFC3315, Section 21.4.2."
 ::= { ciscoNetRegDhcpv6TotalCounters 17 }

cnrdhcpv6TotalDiscards OBJECT-TYPE
SYNTAX Counter32
UNITS "packets"
MAX-ACCESS read-only
STATUS current
DESCRIPTION "This object indicates the total number of DHCPv6 packets discarded due to validation failures."
REFERENCE "RFC3315, Section 5.3, Section 21.4.2."
 ::= { ciscoNetRegDhcpv6TotalCounters 18 }

cnrdhcpv6TotalDuplicates OBJECT-TYPE
SYNTAX Counter32
UNITS "packets"
MAX-ACCESS read-only
STATUS current
DESCRIPTION "This object indicates the total number of DHCPv6 duplicate packets dropped."
REFERENCE "RFC3315, Section 5.3."
 ::= { ciscoNetRegDhcpv6TotalCounters 19 }

cnrdhcpv6TotalInvalidClients OBJECT-TYPE
SYNTAX Counter32
UNITS "packets"
MAX-ACCESS read-only
STATUS current
DESCRIPTION "This object indicates the total number of DHCPv6 packets dropped from invalid clients."
REFERENCE "RFC3315, Section 5.3."
 ::= { ciscoNetRegDhcpv6TotalCounters 20 }

cnrdhcpv6TotalUnknownLinks OBJECT-TYPE
SYNTAX Counter32
UNITS "packets"
MAX-ACCESS read-only
STATUS current
DESCRIPTION "This object indicates the total number of DHCPv6 packets dropped from unknown links."
REFERENCE "RFC3315, Section 5.3."
 ::= { ciscoNetRegDhcpv6TotalCounters 21 }

cnrdhcpv6TotalDroppedOthers OBJECT-TYPE
SYNTAX Counter32
UNITS "packets"
MAX-ACCESS read-only
STATUS current
DESCRIPTION "This object indicates the total number of DHCPv6 packets dropped during processing for reasons other than those captured by cnrdhcpv6TotalAuthFails, cnrdhcpv6TotalDiscards, cnrdhcpv6TotalDuplicates, cnrdhcpv6TotalInvalidClients and cnrdhcpv6TotalUnknownLinks."
REFERENCE "RFC3315, Section 5.3."
 ::= { ciscoNetRegDhcpv6TotalCounters 22 }
cnrdhcpv6TotalDroppedConfig OBJECT-TYPE
SYNTAX Counter32
UNITS "packets"
MAX-ACCESS read-only
STATUS current
DESCRIPTION "This object indicates the total number of DHCPv6 packets dropped due to server or client configuration."
REFERENCE "RFC3315, Section 5.3."
 ::= { ciscoNetRegDhcpv6TotalCounters 23 }

cnrdhcpv6TotalActiveLeases OBJECT-TYPE
SYNTAX Gauge32
UNITS "leases"
MAX-ACCESS read-only
STATUS current
DESCRIPTION "This object indicates the total number of DHCPv6 leases, reservations and delegated prefixes that are currently unavailable to new clients."
 ::= { ciscoNetRegDhcpv6TotalCounters 24 }

cnrdhcpv6TotalAllocatedLeases OBJECT-TYPE
SYNTAX Gauge32
UNITS "leases"
MAX-ACCESS read-only
STATUS current
DESCRIPTION "This object indicates the total number of DHCPv6 leases, reservations and delegated prefixes that are presently allocated."
 ::= { ciscoNetRegDhcpv6TotalCounters 25 }

cnrdhcpv6TotalReservedLeases OBJECT-TYPE
SYNTAX Gauge32
UNITS "leases"
MAX-ACCESS read-only
STATUS current
DESCRIPTION "This object indicates the total number of DHCPv6 reserved leases and reserved prefixes that are presently configured."
 ::= { ciscoNetRegDhcpv6TotalCounters 26 }

cnrdhcpv6TotalReservedActiveLeases OBJECT-TYPE
SYNTAX Gauge32
UNITS "leases"
MAX-ACCESS read-only
STATUS current
DESCRIPTION "This object indicates the total number of DHCPv6 reserved leases and reserved prefixes that are unavailable to new clients."
 ::= { ciscoNetRegDhcpv6TotalCounters 27 }

cnrdhcpv6TotalLeaseQueries OBJECT-TYPE
SYNTAX Counter32
UNITS "messages"
MAX-ACCESS read-only
STATUS current
DESCRIPTION "This object indicates the total number of LeaseQuery messages received by the server."
REFERENCE "RFC5007, Section 4.1."
 ::= { ciscoNetRegDhcpv6TotalCounters 28 }

cnrdhcpv6TotalLeaseQueryReplies OBJECT-TYPE
SYNTAX Counter32
UNITS "messages"
MAX-ACCESS read-only
STATUS current
DESCRIPTION "This object indicates the total number of LeaseQuery-Reply
messages sent by the server.
REFERENCE "RFC5007, Section 4.1."
::= { ciscoNetRegDhcpv6TotalCounters 29 }

-- ciscoNetRegDhcpv6PeriodCounters
-- All objects under ciscoNetRegDhcpv6PeriodCounters provide count of
-- occurrence from cnrdhcpv6PeriodStartTime to cnrdhcpv6PeriodEndTime.
-- The difference between cnrdhcpv6PeriodStartTime and
-- cnrdhcpv6PeriodEndTime is the length of the period. This value
-- can be configured using the CNR CLI or WebUI and defaults to
-- 5 minutes.

cnr dhcpv6PeriodPacketsRcvd OBJECT-TYPE
SYNTAX Counter32
UNITS "packets"
MAX-ACCESS read-only
STATUS current
DESCRIPTION "This object indicates the number of DHCPv6 packets received
during reporting period."
REFERENCE "RFC3315, Section 5.3."
::= { ciscoNetRegDhcpv6PeriodCounters 1 }

cnr dhcpv6PeriodPacketsRelay OBJECT-TYPE
SYNTAX Counter32
UNITS "packets"
MAX-ACCESS read-only
STATUS current
DESCRIPTION "This object indicates the number of DHCPv6 Relay-Forw
messages received during reporting period."
REFERENCE "RFC3315, Section 15.13."
::= { ciscoNetRegDhcpv6PeriodCounters 2 }

cnr dhcpv6PeriodSolicits OBJECT-TYPE
SYNTAX Counter32
UNITS "messages"
MAX-ACCESS read-only
STATUS current
DESCRIPTION "This object indicates the number of DHCPv6 Solicit messages
received during reporting period."
REFERENCE "RFC3315, Section 15.2."
::= { ciscoNetRegDhcpv6PeriodCounters 3 }

cnr dhcpv6PeriodRequests OBJECT-TYPE
SYNTAX Counter32
UNITS "messages"
MAX-ACCESS read-only
STATUS current
DESCRIPTION "This object indicates the number of DHCPv6 Request messages
received during reporting period."
REFERENCE "RFC3315, Section 15.4."
::= { ciscoNetRegDhcpv6PeriodCounters 4 }

cnr dhcpv6PeriodConfirms OBJECT-TYPE
SYNTAX Counter32
UNITS "messages"
MAX-ACCESS read-only
STATUS current
DESCRIPTION "This object indicates the number of DHCPv6 Confirm messages
received during reporting period."
REFERENCE "RFC3315, Section 15.5."
::= { ciscoNetRegDhcpv6PeriodCounters 5 }

cnr dhcpv6PeriodRenews OBJECT-TYPE
SYNTAX Counter32
UNITS "messages"
MAX-ACCESS read-only
STATUS current
cnrdhcpv6PeriodRebinds OBJECT-TYPE
SYNTAX Counter32
UNITS "messages"
MAX-ACCESS read-only
STATUS current
DESCRIPTION "This object indicates the number of DHCPv6 Rebind messages received during reporting period."
REFERENCE "RFC3315, Section 15.7."
::= { ciscoNetRegDhcpv6PeriodCounters 7 }

cnrdhcpv6PeriodReleases OBJECT-TYPE
SYNTAX Counter32
UNITS "messages"
MAX-ACCESS read-only
STATUS current
DESCRIPTION "This object indicates the number of DHCPv6 Release messages received during reporting period."
REFERENCE "RFC3315, Section 15.9."
::= { ciscoNetRegDhcpv6PeriodCounters 8 }

cnrdhcpv6PeriodDeclines OBJECT-TYPE
SYNTAX Counter32
UNITS "messages"
MAX-ACCESS read-only
STATUS current
DESCRIPTION "This object indicates the number of DHCPv6 Decline messages received during reporting period."
REFERENCE "RFC3315, Section 15.8."
::= { ciscoNetRegDhcpv6PeriodCounters 9 }

cnrdhcpv6PeriodInfoRequests OBJECT-TYPE
SYNTAX Counter32
UNITS "messages"
MAX-ACCESS read-only
STATUS current
DESCRIPTION "This object indicates the number of DHCPv6 Information-Request messages received during reporting period."
REFERENCE "RFC3315, Section 15.12."
::= { ciscoNetRegDhcpv6PeriodCounters 10 }

cnrdhcpv6PeriodInvalidPackets OBJECT-TYPE
SYNTAX Counter32
UNITS "packets"
MAX-ACCESS read-only
STATUS current
DESCRIPTION "This object indicates the number of unparseable DHCPv6 packets received during reporting period."
REFERENCE "RFC3315, Section 5.3."
::= { ciscoNetRegDhcpv6PeriodCounters 11 }

cnrdhcpv6PeriodPacketsSent OBJECT-TYPE
SYNTAX Counter32
UNITS "packets"
MAX-ACCESS read-only
STATUS current
DESCRIPTION "This object indicates the number of DHCPv6 packets sent during reporting period."
REFERENCE "RFC3315, Section 5.3."
::= { ciscoNetRegDhcpv6PeriodCounters 12 }

cnrdhcpv6PeriodPacketsSentRelay OBJECT-TYPE
SYNTAX Counter32
UNITS "messages"
MAX-ACCESS read-only
STATUS current
DESCRIPTION "This object indicates the number of DHCPv6 Relay-Repl messages sent during reporting period."
REFERENCE "RFC3315, Section 15.14."
 ::= { ciscoNetRegDhcpv6PeriodCounters 13 }

cnrdhcpv6PeriodAdvertises OBJECT-TYPE
SYNTAX Counter32
UNITS "packets"
MAX-ACCESS read-only
STATUS current
DESCRIPTION "This object indicates the number of DHCPv6 Advertise messages sent during reporting period."
REFERENCE "RFC3315, Section 15.3."
 ::= { ciscoNetRegDhcpv6PeriodCounters 14 }

cnrdhcpv6PeriodReplies OBJECT-TYPE
SYNTAX Counter32
UNITS "messages"
MAX-ACCESS read-only
STATUS current
DESCRIPTION "This object indicates the number of DHCPv6 Reply messages sent during reporting period."
REFERENCE "RFC3315, Section 15.10."
 ::= { ciscoNetRegDhcpv6PeriodCounters 15 }

cnrdhcpv6PeriodReconfigures OBJECT-TYPE
SYNTAX Counter32
UNITS "messages"
MAX-ACCESS read-only
STATUS current
DESCRIPTION "This object indicates the number of DHCPv6 Reconfigure messages sent during reporting period."
REFERENCE "RFC3315, Section 15.11."
 ::= { ciscoNetRegDhcpv6PeriodCounters 16 }

cnrdhcpv6PeriodAuthFails OBJECT-TYPE
SYNTAX Counter32
UNITS "packets"
MAX-ACCESS read-only
STATUS current
DESCRIPTION "This object indicates the number of DHCPv6 packets dropped due to authentication failures during reporting period."
REFERENCE "RFC3315, Section 21.4.2."
 ::= { ciscoNetRegDhcpv6PeriodCounters 17 }

cnrdhcpv6PeriodDiscards OBJECT-TYPE
SYNTAX Counter32
UNITS "packets"
MAX-ACCESS read-only
STATUS current
DESCRIPTION "This object indicates the number of DHCPv6 packets discarded due to RFC3315 validation failures during reporting period."
REFERENCE "RFC3315, Section 5.3, Section 21.4.2."
 ::= { ciscoNetRegDhcpv6PeriodCounters 18 }

cnrdhcpv6PeriodDuplicates OBJECT-TYPE
SYNTAX Counter32
UNITS "packets"
MAX-ACCESS read-only
STATUS current
DESCRIPTION "This object indicates the number of DHCPv6 duplicate packets dropped during reporting period."
cnrdhcpv6PeriodInvalidClients OBJECT-TYPE
SYNTAX Counter32
UNITS "packets"
MAX-ACCESS read-only
STATUS current
DESCRIPTION "This object indicates the number of DHCPv6 packets dropped from invalid clients during reporting period."
REFERENCE "RFC3315, Section 5.3."
::= { ciscoNetRegDhcpv6PeriodCounters 19 }

cnrdhcpv6PeriodUnknownLinks OBJECT-TYPE
SYNTAX Counter32
UNITS "packets"
MAX-ACCESS read-only
STATUS current
DESCRIPTION "This object indicates the number of DHCPv6 packets dropped from unknown links during reporting period."
REFERENCE "RFC3315, Section 5.3."
::= { ciscoNetRegDhcpv6PeriodCounters 20 }

cnrdhcpv6PeriodDroppedOthers OBJECT-TYPE
SYNTAX Counter32
UNITS "packets"
MAX-ACCESS read-only
STATUS current
DESCRIPTION "This object indicates the number of DHCPv6 packets dropped during processing for reasons other than those captured by cnrdhcpv6PeriodAuthFails, cnrdhcpv6PeriodDiscards, cnrdhcpv6PeriodDuplicates, cnrdhcpv6PeriodInvalidClients and cnrdhcpv6PeriodUnknownLinks during reporting period."
REFERENCE "RFC3315, Section 5.3."
::= { ciscoNetRegDhcpv6PeriodCounters 21 }

cnrdhcpv6PeriodDroppedConfig OBJECT-TYPE
SYNTAX Counter32
UNITS "packets"
MAX-ACCESS read-only
STATUS current
DESCRIPTION "This object indicates the number of DHCPv6 packets dropped due to server or client configuration during reporting period."
REFERENCE "RFC3315, Section 5.3."
::= { ciscoNetRegDhcpv6PeriodCounters 22 }

cnrdhcpv6PeriodLeaseQueries OBJECT-TYPE
SYNTAX Counter32
UNITS "messages"
MAX-ACCESS read-only
STATUS current
DESCRIPTION "This object indicates the number of LeaseQuery messages received during reporting period."
REFERENCE "RFC5007, Section 4.1."
::= { ciscoNetRegDhcpv6PeriodCounters 23 }

cnrdhcpv6PeriodLeaseQueryReplies OBJECT-TYPE
SYNTAX Counter32
UNITS "messages"
MAX-ACCESS read-only
STATUS current
DESCRIPTION "This object indicates the number of LeaseQuery messages sent during reporting period."
REFERENCE "RFC5007, Section 4.1."
::= { ciscoNetRegDhcpv6PeriodCounters 24 }

REFERENCE "RFC3315, Section 5.3."
cnrdhcpv6PeriodStartTime OBJECT-TYPE
SYNTAX     TimeStamp
MAX-ACCESS read-only
STATUS     current
DESCRIPTION "This object indicates the sysUpTime value when the reporting
period starts."
 ::= { ciscoNetRegDhcpv6PeriodCounters 26 }

cnrdhcpv6PeriodEndTime OBJECT-TYPE
SYNTAX     TimeStamp
MAX-ACCESS read-only
STATUS     current
DESCRIPTION "This object indicates the sysUpTime value when the reporting
period ends."
 ::= { ciscoNetRegDhcpv6PeriodCounters 27 }

-- Conformance

ciscoNetRegDhcpv6MIBCompliances OBJECT IDENTIFIER
 ::= { ciscoNetRegDhcpv6MIBConform 1 }

ciscoNetRegDhcpv6MIBGroups OBJECT IDENTIFIER
 ::= { ciscoNetRegDhcpv6MIBConform 2 }

-- Compliance

ciscoNetRegDhcpv6MIBCompliance MODULE-COMPLIANCE
STATUS     current
DESCRIPTION "The compliance statement for entities which implement the
CISCO-NETREG-DHCPV6-MIB."
MODULE     -- this module
MANDATORY-GROUPS { ciscoNetRegDhcpv6TotalCountersGroup }

GROUP      ciscoNetRegDhcpv6NotificationsGroup
DESCRIPTION "This group is mandatory only for platforms which support
notifications."

GROUP      ciscoNetRegDhcpv6NotificationObjectsGroup
DESCRIPTION "This group is mandatory only for platforms which support
notifications."

GROUP      ciscoNetRegDhcpv6PeriodCountersGroup
DESCRIPTION "This group is mandatory only for platforms which support
collection of period counters."
 ::= { ciscoNetRegDhcpv6MIBCompliances 1 }

-- Units of Conformance

ciscoNetRegDhcpv6TotalCountersGroup OBJECT-GROUP
OBJECTS
 { cnrdhcpv6TotalPacketsRcvd,
  cnrdhcpv6TotalPacketsRcvdRelay,
  cnrdhcpv6TotalSolicits,
  cnrdhcpv6TotalRequests,
  cnrdhcpv6TotalConfirms,
  cnrdhcpv6TotalRenews,
  cnrdhcpv6TotalRebinds,
  cnrdhcpv6TotalReleases,
  cnrdhcpv6TotalDeclines,
  cnrdhcpv6TotalInfoRequests,
  cnrdhcpv6TotalInvalidPackets,
  cnrdhcpv6TotalPacketsSent,
  cnrdhcpv6TotalPacketsSentRelay,
  cnrdhcpv6TotalAdvertises,
  cnrdhcpv6TotalReplies,
  cnrdhcpv6TotalReconfigures,
  cnrdhcpv6TotalAuthFails,
cnrdhcpv6TotalDiscards,
cnrdhcpv6TotalDuplicates,
cnrdhcpv6TotalInvalidClients,
cnrdhcpv6TotalUnknownLinks,
cnrdhcpv6TotalDroppedConfig,
cnrdhcpv6TotalDroppedOthers,
cnrdhcpv6TotalActiveLeases,
cnrdhcpv6TotalAllocatedLeases,
cnrdhcpv6TotalReservedLeases,
cnrdhcpv6TotalReservedActiveLeases,
cnrdhcpv6TotalLeaseQueries,
cnrdhcpv6TotalLeaseQueryReplies
}

STATUS current
DESCRIPTION
"A collection of objects providing counter values for DHCP V6 server."
::= { ciscoNetRegDhcpv6MIBGroups 1 }
ciscoNetRegDhcpv6NotificationsGroup NOTIFICATION-GROUP
NOTIFICATIONS {
ciscoNetRegDhcpv6AddressShortageStart,
ciscoNetRegDhcpv6AddressShortageStop,
ciscoNetRegDhcpv6DuplicateAddress,
ciscoNetRegDhcpv6DuplicatePrefix
}

STATUS current
DESCRIPTION
"A collection of objects providing support for DHCP V6 notifications."
::= { ciscoNetRegDhcpv6MIBGroups 2 }
ciscoNetRegDhcpv6NotificationObjectsGroup OBJECT-GROUP
OBJECTS {
cnrdhcpv6DupIpv6Address,
cnrdhcpv6ClientId,
cnrdhcpv6ClientLookupKey,
cnrdhcpv6DupIpv6AddressDetectedBy,
cnrdhcpv6LinkName,
cnrdhcpv6FreeAddressValue,
cnrdhcpv6Threshold,
cnrdhcpv6PrefixAddress,
cnrdhcpv6PrefixLength,
cnrdhcpv6ThresholdType,
cnrdhcpv6TypeDesc,
cnrdhcpv6DupPrefix,
cnrdhcpv6DupPrefixDetectedBy,
cnrdhcpv6DupPrefixLength
}

STATUS current
DESCRIPTION
"A collection of objects used by DHCP V6 notifications."
::= { ciscoNetRegDhcpv6MIBGroups 3 }
ciscoNetRegDhcpv6PeriodCountersGroup OBJECT-GROUP
OBJECTS {
cnrdhcpv6PeriodPacketsRcvd,
cnrdhcpv6PeriodPacketsRcvdRelay,
cnrdhcpv6PeriodSolicits,
cnrdhcpv6PeriodRequests,
cnrdhcpv6PeriodConfirms,
cnrdhcpv6PeriodRenews,
cnrdhcpv6PeriodRebinds,
cnrdhcpv6PeriodReleases,
cnrdhcpv6PeriodDeclines,
cnrdhcpv6PeriodInfoRequests,
cnrdhcpv6PeriodInvalidPackets,
cnrdhcpv6PeriodAdvertisements,
cnrdhcpv6PeriodReplies,
cnrdhcpv6PeriodReconfigures,
cnrdhcpv6PeriodAuthFails,
RADIUS-ACC-SERVER-MIB

-- Network Working Group D. Nelson
-- Request for Comments: 4671 Enterasys Networks
-- Obsoletes: 2621 August 2006
-- Category: Informational

RADIUS-ACC-SERVER-MIB DEFINITIONS ::= BEGIN

IMPORTS
MODULE-IDENTITY, OBJECT-TYPE, OBJECT-IDENTITY,
Counter32, Integer32,
IpAddress, TimeTicks, mib-2 FROM SNMPv2-SMI
SnmpAdminString FROM SNMP-FRAMEWORK-MIB
InetAddressType, InetAddress FROM INET-ADDRESS-MIB
MODULE-COMPLIANCE, OBJECT-GROUP FROM SNMPv2-CONF;

radiusAccServMIB MODULE-IDENTITY
LAST-UPDATED "200608210000Z" -- 21 August 2006
ORGANIZATION "IETF RADIUS Extensions Working Group."
CONTACT-INFO
  " Bernard Aboba
    Microsoft
    One Microsoft Way
    Redmond, WA  98052
    US
    Phone: +1 425 936 6605
    EMail: bernarda@microsoft.com"

DESCRIPTION
"The MIB module for entities implementing the server
side of the Remote Authentication Dial-In User
Service (RADIUS) accounting protocol. Copyright (C)
The Internet Society (2006). This version of this
MIB module is part of RFC 4671; see the RFC itself
for full legal notices."

REVISION "200608210000Z" -- 21 August 2006
DESCRIPTION
"Revised version as published in RFC 4671. This
version obsoletes that of RFC 2621 by deprecating
the MIB table containing IPv4-only address formats
and defining a new table to add support for version-neutral IP address formats. The remaining MIB objects
from RFC 2621 are carried forward into this version."

REVISION "199906110000Z" -- 11 Jun 1999
DESCRIPTION "Initial version as published in RFC 2621."
 ::= {radiusAccounting 1 }

radiusMIB OBJECT-IDENTITY
 STATUS current
 DESCRIPTION
 "The OID assigned to RADIUS MIB work by the IANA."
 ::= { mib-2 67 }

radiusAccounting OBJECT IDENTIFIER ::= {radiusMIB 2}

radiusAccServMIBObjects OBJECT IDENTIFIER
 ::= { radiusAccServMIB 1 }

radiusAccServ OBJECT IDENTIFIER
 ::= { radiusAccServMIBObjects 1 }

radiusAccServIdent OBJECT-TYPE
 SYNTAX SnmpAdminString
 MAX-ACCESS read-only
 STATUS current
 DESCRIPTION
 "The implementation identification string for the
 RADIUS accounting server software in use on the
 system, for example, 'FNS-2.1'."
 ::= {radiusAccServ 1}

radiusAccServUpTime OBJECT-TYPE
 SYNTAX TimeTicks
 MAX-ACCESS read-only
 STATUS current
 DESCRIPTION
 "If the server has a persistent state (e.g., a
 process), this value will be the time elapsed (in
 hundredths of a second) since the server process was
 started. For software without persistent state, this
 value will be zero."
 ::= {radiusAccServ 2}

radiusAccServResetTime OBJECT-TYPE
 SYNTAX TimeTicks
 MAX-ACCESS read-only
 STATUS current
 DESCRIPTION
 "If the server has a persistent state (e.g., a process)
 and supports a 'reset' operation (e.g., can be told to
 re-read configuration files), this value will be the
 time elapsed (in hundredths of a second) since the
 server was 'reset.' For software that does not
 have persistence or does not support a 'reset'
 operation, this value will be zero."
 ::= {radiusAccServ 3}

radiusAccServConfigReset OBJECT-TYPE
 SYNTAX INTEGER { other(1),
 reset(2),
 initializing(3),
 running(4) }
 MAX-ACCESS read-write
 STATUS current
 DESCRIPTION
 "Status/action object to reinitialize any persistent
 server state. When set to reset(2), any persistent
 server state (such as a process) is reinitialized as
 if the server had just been started. This value will
 never be returned by a read operation. When read,
 one of the following values will be returned:
 other(1) - server in some unknown state;
 initializing(3) - server (re)initializing;
 running(4) - server currently running."
 ::= {radiusAccServ 4}

radiusAccServTotalRequests OBJECT-TYPE
SYNTAX Counter32
UNITS "packets"
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"The number of packets received on the accounting port."
REFERENCE "RFC 2866 section 4.1"
 ::= { radiusAccServ 5 }

radiusAccServTotalInvalidRequests OBJECT-TYPE
SYNTAX Counter32
UNITS "packets"
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"The number of RADIUS Accounting-Request packets received from unknown addresses."
REFERENCE "RFC 2866 sections 2, 4.1"
 ::= { radiusAccServ 6 }

radiusAccServTotalDupRequests OBJECT-TYPE
SYNTAX Counter32
UNITS "packets"
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"The number of duplicate RADIUS Accounting-Request packets received."
REFERENCE "RFC 2866 section 4.1"
 ::= { radiusAccServ 7 }

radiusAccServTotalResponses OBJECT-TYPE
SYNTAX Counter32
UNITS "packets"
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"The number of RADIUS Accounting-Response packets sent."
REFERENCE "RFC 2866 section 4.2"
 ::= { radiusAccServ 8 }

radiusAccServTotalMalformedRequests OBJECT-TYPE
SYNTAX Counter32
UNITS "packets"
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"The number of malformed RADIUS Accounting-Request packets received. Bad authenticators or unknown types are not included as malformed Access-Requests."
REFERENCE "RFC 2866 section 3"
 ::= { radiusAccServ 9 }

radiusAccServTotalBadAuthenticators OBJECT-TYPE
SYNTAX Counter32
UNITS "packets"
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"The number of RADIUS Accounting-Request packets that contained an invalid authenticator."
REFERENCE "RFC 2866 section 3"
 ::= { radiusAccServ 10 }

radiusAccServTotalPacketsDropped OBJECT-TYPE
SYNTAX Counter32
UNITS "packets"
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"The number of incoming packets silently discarded
for a reason other than malformed, bad authenticators,
or unknown types."
REFERENCE "RFC 2866 section 3"
::= { radiusAccServ 11 }

radiusAccServTotalNoRecords OBJECT-TYPE
SYNTAX Counter32
UNITS "packets"
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"The number of RADIUS Accounting-Request packets that were received and responded to but not recorded."
::= { radiusAccServ 12 }

radiusAccServTotalUnknownTypes OBJECT-TYPE
SYNTAX Counter32
UNITS "packets"
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"The number of RADIUS packets of unknown type that were received."
REFERENCE "RFC 2866 section 4"
::= { radiusAccServ 13 }

radiusAccClientTable OBJECT-TYPE
SYNTAX SEQUENCE OF RadiusAccClientEntry
MAX-ACCESS not-accessible
STATUS deprecated
DESCRIPTION
"The (conceptual) table listing the RADIUS accounting clients with which the server shares a secret."
::= { radiusAccServ 14 }

radiusAccClientEntry OBJECT-TYPE
SYNTAX RadiusAccClientEntry
MAX-ACCESS not-accessible
STATUS deprecated
DESCRIPTION
"An entry (conceptual row) representing a RADIUS accounting client with which the server shares a secret."
INDEX { radiusAccClientIndex }
::= { radiusAccClientTable 1 }

RadiusAccClientEntry ::= SEQUENCE {
    radiusAccClientIndex Integer32,
    radiusAccClientAddress IpAddress,
    radiusAccClientID SnmpAdminString,
    radiusAccServPacketsDropped Counter32,
    radiusAccServRequests Counter32,
    radiusAccServDupRequests Counter32,
    radiusAccServBadAuthenticators Counter32,
    radiusAccServMalformedRequests Counter32,
    radiusAccServNoRecords Counter32,
    radiusAccServUnknownTypes Counter32
}

radiusAccClientIndex OBJECT-TYPE
SYNTAX Integer32 (1..2147483647)
MAX-ACCESS not-accessible
STATUS deprecated
DESCRIPTION
"A number uniquely identifying each RADIUS accounting client with which this server communicates."
::= { radiusAccClientEntry 1 }

radiusAccClientAddress OBJECT-TYPE
SYNTAX IpAddress
MAX-ACCESS read-only
radiusAccClientEntry 2

radiusAccClientID OBJECT-TYPE
SYNTAX SnmpAdminString
MAX-ACCESS read-only
STATUS deprecated
DESCRIPTION
"The NAS-Identifier of the RADIUS accounting client referred to in this table entry. This is not necessarily the same as sysName in MIB II."
REFERENCE "RFC 2865 section 5.32"
 ::= { radiusAccClientEntry 3 }

-- Server Counters
--
-- Requests - DupRequests - BadAuthenticators - MalformedRequests -
-- UnknownTypes - PacketsDropped - Responses - Pending
--
-- Requests - DupRequests - BadAuthenticators - MalformedRequests -
-- UnknownTypes - PacketsDropped - NoRecords = entries logged

radiusAccServPacketsDropped OBJECT-TYPE
SYNTAX Counter32
UNITS "packets"
MAX-ACCESS read-only
STATUS deprecated
DESCRIPTION
"The number of incoming packets received from this client and silently discarded for a reason other than malformed, bad authenticators, or unknown types."
REFERENCE "RFC 2866 section 3"
 ::= { radiusAccClientEntry 4 }

radiusAccServRequests OBJECT-TYPE
SYNTAX Counter32
UNITS "packets"
MAX-ACCESS read-only
STATUS deprecated
DESCRIPTION
"The number of packets received from this client on the accounting port."
REFERENCE "RFC 2866 section 4.1"
 ::= { radiusAccClientEntry 5 }

radiusAccServDupRequests OBJECT-TYPE
SYNTAX Counter32
UNITS "packets"
MAX-ACCESS read-only
STATUS deprecated
DESCRIPTION
"The number of duplicate RADIUS Accounting-Request packets received from this client."
REFERENCE "RFC 2866 section 4.1"
 ::= { radiusAccClientEntry 6 }

radiusAccServResponses OBJECT-TYPE
SYNTAX Counter32
UNITS "packets"
MAX-ACCESS read-only
STATUS deprecated
DESCRIPTION
"The number of RADIUS Accounting-Response packets sent to this client."
REFERENCE "RFC 2866 section 4.2"
 ::= { radiusAccClientEntry 7 }

radiusAccServBadAuthenticators OBJECT-TYPE
SYNTAX Counter32
UNITS "packets"
MAX-ACCESS read-only
STATUS deprecated
DESCRIPTION
"The number of RADIUS Accounting-Request packets that contained invalid authenticators received from this client."
REFERENCE "RFC 2866 section 3"
::= { radiusAccClientEntry 8 }

radiusAccServMalformedRequests OBJECT-TYPE
SYNTAX Counter32
UNITS "packets"
MAX-ACCESS read-only
STATUS deprecated
DESCRIPTION
"The number of malformed RADIUS Accounting-Request packets that were received from this client. Bad authenticators and unknown types are not included as malformed Accounting-Requests."
REFERENCE "RFC 2866 section 3"
::= { radiusAccClientEntry 9 }

radiusAccServNoRecords OBJECT-TYPE
SYNTAX Counter32
UNITS "packets"
MAX-ACCESS read-only
STATUS deprecated
DESCRIPTION
"The number of RADIUS Accounting-Request packets that were received and responded to but not recorded."
::= { radiusAccClientEntry 10 }

radiusAccServUnknownTypes OBJECT-TYPE
SYNTAX Counter32
UNITS "packets"
MAX-ACCESS read-only
STATUS deprecated
DESCRIPTION
"The number of RADIUS packets of unknown type that were received from this client."
REFERENCE "RFC 2866 section 4"
::= { radiusAccClientEntry 11 }

-- New MIB objects added in this revision

radiusAccClientExtTable OBJECT-TYPE
SYNTAX SEQUENCE OF RadiusAccClientExtEntry
MAX-ACCESS not-accessible
STATUS current
DESCRIPTION
"The (conceptual) table listing the RADIUS accounting clients with which the server shares a secret."
::= { radiusAccServ 15 }

RadiusAccClientExtEntry OBJECT-TYPE
SYNTAX RadiusAccClientExtEntry
MAX-ACCESS not-accessible
STATUS current
DESCRIPTION
"An entry (conceptual row) representing a RADIUS accounting client with which the server shares a secret."
INDEX { radiusAccClientExtIndex }
::= { radiusAccClientExtTable 1 }

RadiusAccClientExtEntry ::= SEQUENCE {
radiusAccClientExtIndex Integer32,
radiusAccClientInetAddressType InetAddressType,
radiusAccClientInetAddress InetAddress,
radiusAccClientExtID SnmpAdminString,
radiusAccServExtPacketsDropped Counter32,
radiusAccServExtRequests Counter32,
radiusAccServExtDupRequests Counter32,
radiusAccServExtResponses Counter32,
radiusAccServExtBadAuthenticators Counter32,
radiusAccServExtMalformedRequests Counter32,
radiusAccServExtNoRecords Counter32,
radiusAccServExtUnknownTypes Counter32,
radiusAccServerCounterDiscontinuity TimeTicks
)

radiusAccClientExtIndex OBJECT-TYPE
SYNTAX Integer32 (1..2147483647)
MAX-ACCESS not-accessible
STATUS current
DESCRIPTION
"A number uniquely identifying each RADIUS accounting
client with which this server communicates."
::= { radiusAccClientExtEntry 1 }

radiusAccClientInetAddressType OBJECT-TYPE
SYNTAX InetAddressType
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"The type of address format used for the
radiusAccClientInetAddress object."
::= { radiusAccClientExtEntry 2 }

radiusAccClientInetAddress OBJECT-TYPE
SYNTAX InetAddress
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"The IP address of the RADIUS accounting
client referred to in this table entry, using
the IPv6 address format."
::= { radiusAccClientExtEntry 3 }

radiusAccClientExtID OBJECT-TYPE
SYNTAX SnmpAdminString
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"The NAS-Identifier of the RADIUS accounting client
referred to in this table entry. This is not
necessarily the same as sysName in MIB II."
REFERENCE "RFC 2865 section 5.32"
::= { radiusAccClientExtEntry 4 }

-- Server Counters
--
-- Requests - DupRequests - BadAuthenticators - MalformedRequests -
-- UnknownTypes - PacketsDropped - Responses = Pending
--
-- Requests - DupRequests - BadAuthenticators - MalformedRequests -
-- UnknownTypes - PacketsDropped - NoRecords = entries logged

radiusAccServExtPacketsDropped OBJECT-TYPE
SYNTAX Counter32
UNITS "packets"
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"The number of incoming packets received from this
client and silently discarded for a reason other
than malformed, bad authenticators, or unknown types.
This counter may experience a discontinuity when the
RADIUS Accounting Server module within the managed
entity is reinitialized, as indicated by the current
value of radiusAccServerCounterDiscontinuity."
REFERENCE "RFC 2866 section 3"
::= { radiusAccClientExtEntry 5 }

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radiusAccServExtRequests OBJECT-TYPE
SYNTAX Counter32
UNITS "packets"
MAX-ACCESS read-only
STATUS current
DESCRIPTION "The number of packets received from this client on the accounting port. This counter may experience a discontinuity when the RADIUS Accounting Server module within the managed entity is reinitialized, as indicated by the current value of radiusAccServerCounterDiscontinuity." 
REFERENCE "RFC 2866 section 4.1" ::= { radiusAccClientExtEntry 6 }

radiusAccServExtDupRequests OBJECT-TYPE
SYNTAX Counter32
UNITS "packets"
MAX-ACCESS read-only
STATUS current
DESCRIPTION "The number of duplicate RADIUS Accounting-Request packets received from this client. This counter may experience a discontinuity when the RADIUS Accounting Server module within the managed entity is reinitialized, as indicated by the current value of radiusAccServerCounterDiscontinuity." 
REFERENCE "RFC 2866 section 4.1" ::= { radiusAccClientExtEntry 7 }

radiusAccServExtResponses OBJECT-TYPE
SYNTAX Counter32
UNITS "packets"
MAX-ACCESS read-only
STATUS current
DESCRIPTION "The number of RADIUS Accounting-Response packets sent to this client. This counter may experience a discontinuity when the RADIUS Accounting Server module within the managed entity is reinitialized, as indicated by the current value of radiusAccServerCounterDiscontinuity." 
REFERENCE "RFC 2866 section 4.2" ::= { radiusAccClientExtEntry 8 }

radiusAccServExtBadAuthenticators OBJECT-TYPE
SYNTAX Counter32
UNITS "packets"
MAX-ACCESS read-only
STATUS current
DESCRIPTION "The number of RADIUS Accounting-Request packets that contained invalid authenticators received from this client. This counter may experience a discontinuity when the RADIUS Accounting Server module within the managed entity is reinitialized, as indicated by the current value of radiusAccServerCounterDiscontinuity." 
REFERENCE "RFC 2866 section 3" ::= { radiusAccClientExtEntry 9 }

radiusAccServExtMalformedRequests OBJECT-TYPE
SYNTAX Counter32
UNITS "packets"
MAX-ACCESS read-only
STATUS current
DESCRIPTION "The number of malformed RADIUS Accounting-Request packets that were received from this client. Bad authenticators and unknown types are not
included as malformed Accounting-Requests. This
counter may experience a discontinuity when the
RADIUS Accounting Server module within the managed
entity is reinitialized, as indicated by the current
value of radiusAccServerCounterDiscontinuity.

REFERENCE "RFC 2866 section 3"
::= { radiusAccClientExtEntry 10 }

radiusAccServExtNoRecords OBJECT-TYPE
SYNTAX Counter32
UNITS "packets"
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"The number of RADIUS Accounting-Request packets
that were received and responded to but not
recorded. This counter may experience a
discontinuity when the RADIUS Accounting Server
module within the managed entity is reinitialized,
as indicated by the current value of
radiusAccServerCounterDiscontinuity."
::= { radiusAccClientExtEntry 11 }

radiusAccServExtUnknownTypes OBJECT-TYPE
SYNTAX Counter32
UNITS "packets"
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"The number of RADIUS packets of unknown type that
were received from this client. This counter may
experience a discontinuity when the RADIUS Accounting
Server module within the managed entity is
reinitialized, as indicated by the current value of
radiusAccServerCounterDiscontinuity."
REFERENCE "RFC 2866 section 4"
::= { radiusAccClientExtEntry 12 }

radiusAccServerCounterDiscontinuity OBJECT-TYPE
SYNTAX TimeTicks
UNITS "centiseconds"
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"The number of centiseconds since the last
discontinuity in the RADIUS Accounting Server
counters. A discontinuity may be the result of
a reinitialization of the RADIUS Accounting Server
module within the managed entity."
::= { radiusAccClientExtEntry 13 }

-- conformance information

radiusAccServMIBConformance OBJECT IDENTIFIER
::= { radiusAccServMIB 2 }

radiusAccServMIBCompliances OBJECT IDENTIFIER
::= { radiusAccServMIBConformance 1 }

radiusAccServMIBGroups OBJECT IDENTIFIER
::= { radiusAccServMIBConformance 2 }

-- compliance statements

radiusAccServMIBCompliance MODULE-COMPLIANCE
STATUS deprecated
DESCRIPTION
"The compliance statement for accounting servers
implementing the RADIUS Accounting Server MIB.
Implementation of this module is for IPv4-only
entities, or for backwards compatibility use with
entities that support both IPv4 and IPv6.

MODULE -- this module
MANDATORY-GROUPS { radiusAccServMIBGroup }

OBJECT radiusAccServConfigReset
WRITE-SYNTAX INTEGER { reset(2) }
DESCRIPTION "The only SETable value is 'reset' (2)."

::= { radiusAccServMIBCompliances 1 }

radiusAccServExtMIBCompliance MODULE-COMPLIANCE
STATUS current
DESCRIPTION "The compliance statement for accounting servers implementing the RADIUS Accounting Server IPv6 Extensions MIB. Implementation of this module is for entities that support IPv6, or support IPv4 and IPv6."

MODULE -- this module
MANDATORY-GROUPS { radiusAccServExtMIBGroup }

OBJECT radiusAccServConfigReset
WRITE-SYNTAX INTEGER { reset(2) }
DESCRIPTION "The only SETable value is 'reset' (2)."

OBJECT radiusAccClientInetAddressType
SYNTAX InetAddressType { ipv4(1), ipv6(2) }
DESCRIPTION "An implementation is only required to support IPv4 and globally unique IPv6 addresses."

OBJECT radiusAccClientInetAddress
SYNTAX InetAddress ( SIZE (4|16) )
DESCRIPTION "An implementation is only required to support IPv4 and globally unique IPv6 addresses."

::= { radiusAccServMIBCompliances 2 }

-- units of conformance

radiusAccServMIBGroup OBJECT-GROUP
OBJECTS {radiusAccServIdent, radiusAccServUptime, radiusAccServResetTime, radiusAccServConfigReset, radiusAccServTotalRequests, radiusAccServTotalInvalidRequests, radiusAccServTotalDupRequests, radiusAccServTotalResponses, radiusAccServTotalMalformedRequests, radiusAccServTotalBadAuthenticators, radiusAccServTotalPacketsDropped, radiusAccServTotalNoRecords, radiusAccServTotalUnknownTypes, radiusAccClientAddress, radiusAccClientID, radiusAccServPacketsDropped, radiusAccServRequests, radiusAccServDupRequests, radiusAccServResponses, radiusAccServBadAuthenticators, radiusAccServMalformedRequests, radiusAccServNoRecords, radiusAccServUnknownTypes }

STATUS deprecated
DESCRIPTION "The collection of objects providing management of a RADIUS Accounting Server."

::= { radiusAccServMIBGroups 1 }
radiusAccServExtMIBGroup OBJECT-GROUP
   OBJECTS {radiusAccServIdent,
     radiusAccServUpTime,
     radiusAccServResetTime,
     radiusAccServTotalRequests,
     radiusAccServTotalInvalidRequests,
     radiusAccServTotalDupRequests,
     radiusAccServTotalResponses,
     radiusAccServTotalMalformedRequests,
     radiusAccServTotalBadAuthenticators,
     radiusAccServTotalPacketsDropped,
     radiusAccServTotalNoRecords,
     radiusAccServTotalUnknownTypes,
     radiusAccClientInetAddressType,
     radiusAccClientInetAddress,
     radiusAccClientExtID,
     radiusAccServExtPacketsDropped,
     radiusAccServExtRequests,
     radiusAccServExtDupRequests,
     radiusAccServExtResponses,
     radiusAccServExtBadAuthenticators,
     radiusAccServExtMalformedRequests,
     radiusAccServExtNoRecords,
     radiusAccServExtUnknownTypes,
     radiusAccServerCounterDiscontinuity
   }

STATUS current
DESCRIPTION
"The collection of objects providing management of
a RADIUS Accounting Server."
::= { radiusAccServMIBGroups 2 }

END

RADIUS-AUTH-SERVER-MIB

-- Network Working Group
-- Request for Comments: 4669
-- Obsoletes: 2619
-- Category: Standards Track

-- RADIUS Authentication Server MIB for IPv6

RADIUS-AUTH-SERVER-MIB DEFINITIONS ::= BEGIN

IMPORTS
   MODULE-IDENTITY, OBJECT-TYPE, OBJECT-IDENTITY,
   Counter32, Integer32,
   IpAddress, TimeTicks, mib-2 FROM SNMPv2-SMI
   SnmpAdminString FROM SNMP-FRAMEWORK-MIB
   InetAddressType, InetAddress FROM INET-ADDRESS-MIB
   MODULE-COMPLIANCE, OBJECT-GROUP FROM SNMPv2-CONF;

radiusAuthServMIB MODULE-IDENTITY
LAST-UPDATED "200608210000Z" -- 21 August 2006
ORGANIZATION "IETF RADIUS Extensions Working Group."
CONTACT-INFO
 " Bernard Aboba
   Microsoft
   One Microsoft Way
   Redmond, WA 98052
   US
   Phone: +1 425 936 6605
   Email: bernarda@microsoft.com"
DESCRIPTION
"The MIB module for entities implementing the server
side of the Remote Authentication Dial-In User
Service (RADIUS) authentication protocol. Copyright
radiusMIB OBJECT-IDENTITY
  STATUS current
  DESCRIPTION "The OID assigned to RADIUS MIB work by the IANA."
::= { mib-2 67 }

radiusAuthentication OBJECT IDENTIFIER ::= {radiusMIB 1}

radiusAuthServMIBObjects OBJECT IDENTIFIER ::= { radiusAuthServMIB 1 }

radiusAuthServ OBJECT IDENTIFIER ::= { radiusAuthServMIBObjects 1 }

radiusAuthServIdent OBJECT-TYPE
  SYNTAX SnmpAdminString
  MAX-ACCESS read-only
  STATUS current
  DESCRIPTION "The implementation identification string for the RADIUS authentication server software in use on the system, for example, 'RH-S2.1'."
::= {radiusAuthServ 1}

radiusAuthServUpTime OBJECT-TYPE
  SYNTAX TimeTicks
  MAX-ACCESS read-only
  STATUS current
  DESCRIPTION "If the server has a persistent state (e.g., a process), this value will be the time elapsed (in hundredths of a second) since the server process was started. For software without persistent state, this value will be zero."
::= {radiusAuthServ 2}

radiusAuthServResetTime OBJECT-TYPE
  SYNTAX TimeTicks
  MAX-ACCESS read-only
  STATUS current
  DESCRIPTION "If the server has a persistent state (e.g., a process) and supports a 'reset' operation (e.g., can be told to re-read configuration files), this value will be the time elapsed (in hundredths of a second) since the server was 'reset.' For software that does not have persistence or does not support a 'reset' operation, this value will be zero."
::= {radiusAuthServ 3}

radiusAuthServConfigReset OBJECT-TYPE
  SYNTAX INTEGER { other(1), reset(2), initializing(3), running(4) }
  MAX-ACCESS read-write
  STATUS current
  DESCRIPTION
"Status/action object to reinitialize any persistent server state. When set to reset(2), any persistent server state (such as a process) is reinitialized as if the server had just been started. This value will never be returned by a read operation. When read, one of the following values will be returned:
other(1) - server in some unknown state;
initializing(3) - server (re)initializing;
running(4) - server currently running."

::= {radiusAuthServ 4}

radiusAuthServTotalAccessRequests OBJECT-TYPE
SYNTAX Counter32
UNITS "packets"
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"The number of packets received on the authentication port."
REFERENCE "RFC 2865 section 4.1"
::= { radiusAuthServ 5 }

radiusAuthServTotalInvalidRequests OBJECT-TYPE
SYNTAX Counter32
UNITS "packets"
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"The number of RADIUS Access-Request packets received from unknown addresses."
REFERENCE "RFC 2865 section 4.1"
::= { radiusAuthServ 6 }

radiusAuthServTotalDupAccessRequests OBJECT-TYPE
SYNTAX Counter32
UNITS "packets"
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"The number of duplicate RADIUS Access-Request packets received."
REFERENCE "RFC 2865 section 4.1"
::= { radiusAuthServ 7 }

radiusAuthServTotalAccessAccepts OBJECT-TYPE
SYNTAX Counter32
UNITS "packets"
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"The number of RADIUS Access-Accept packets sent."
REFERENCE "RFC 2865 section 4.2"
::= { radiusAuthServ 8 }

radiusAuthServTotalAccessRejects OBJECT-TYPE
SYNTAX Counter32
UNITS "packets"
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"The number of RADIUS Access-Reject packets sent."
REFERENCE "RFC 2865 section 4.3"
::= { radiusAuthServ 9 }

radiusAuthServTotalAccessChallenges OBJECT-TYPE
SYNTAX Counter32
UNITS "packets"
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"The number of RADIUS Access-Challenge packets sent."
REFERENCE "RFC 2865 section 4.4"
::= { radiusAuthServ 10 }
radiusAuthServTotalMalformedAccessRequests OBJECT-TYPE
SYNTAX Counter32
UNITS "packets"
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"The number of malformed RADIUS Access-Request packets received. Bad authenticators and unknown types are not included as malformed Access-Requests."
REFERENCE "RFC 2865 section 4.1"
::= { radiusAuthServ 11 }

radiusAuthServTotalBadAuthenticators OBJECT-TYPE
SYNTAX Counter32
UNITS "packets"
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"The number of RADIUS Authentication-Request packets that contained invalid Message Authenticator attributes received."
REFERENCE "RFC 2865 section 3"
::= { radiusAuthServ 12 }

radiusAuthServTotalPacketsDropped OBJECT-TYPE
SYNTAX Counter32
UNITS "packets"
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"The number of incoming packets silently discarded for some reason other than malformed, bad authenticators or unknown types."
REFERENCE "RFC 2865 section 3"
::= { radiusAuthServ 13 }

radiusAuthServTotalUnknownTypes OBJECT-TYPE
SYNTAX Counter32
UNITS "packets"
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"The number of RADIUS packets of unknown type that were received."
REFERENCE "RFC 2865 section 4"
::= { radiusAuthServ 14 }

radiusAuthClientTable OBJECT-TYPE
SYNTAX SEQUENCE OF RadiusAuthClientEntry
MAX-ACCESS not-accessible
STATUS deprecated
DESCRIPTION
"The (conceptual) table listing the RADIUS authentication clients with which the server shares a secret."
::= { radiusAuthServ 15 }

radiusAuthClientEntry OBJECT-TYPE
SYNTAX RadiusAuthClientEntry
MAX-ACCESS not-accessible
STATUS deprecated
DESCRIPTION
"An entry (conceptual row) representing a RADIUS authentication client with which the server shares a secret."
INDEX { radiusAuthClientIndex }
::= { radiusAuthClientTable 1 }
RadiusAuthClientEntry ::= SEQUENCE {
    radiusAuthClientIndex Integer32,
    radiusAuthClientAddress IpAddress,
    radiusAuthClientID SnmpAdminString,
    radiusAuthServAccessRequests Counter32,
    radiusAuthServDupAccessRequests Counter32,
    radiusAuthServAccessAccepts Counter32,
    radiusAuthServAccessRejects Counter32,
    radiusAuthServAccessChallenges Counter32,
    radiusAuthServMalformedAccessRequests Counter32,
    radiusAuthServBadAuthenticators Counter32,
    radiusAuthServPacketsDropped Counter32,
    radiusAuthServUnknownTypes Counter32
}

radiusAuthClientIndex OBJECT-TYPE
SYNTAX Integer32 (1..2147483647)
MAX-ACCESS not-accessible
STATUS deprecated
DESCRIPTION
"A number uniquely identifying each RADIUS authentication client with which this server communicates."
::= { radiusAuthClientEntry 1 }

radiusAuthClientAddress OBJECT-TYPE
SYNTAX IpAddress
MAX-ACCESS read-only
STATUS deprecated
DESCRIPTION
"The NAS-IP-Address of the RADIUS authentication client referred to in this table entry."
REFERENCE "RFC 2865 section 2"
::= { radiusAuthClientEntry 2 }

radiusAuthClientID OBJECT-TYPE
SYNTAX SnmpAdminString
MAX-ACCESS read-only
STATUS deprecated
DESCRIPTION
"The NAS-Identifier of the RADIUS authentication client referred to in this table entry. This is not necessarily the same as sysName in MIB II."
REFERENCE "RFC 2865 section 5.32"
::= { radiusAuthClientEntry 3 }

-- Server Counters

-- Responses = AccessAccepts + AccessRejects + AccessChallenges
-- Requests = DupRequests - BadAuthenticators - MalformedRequests -
-- UnknownTypes - PacketsDropped - Responses - Pending
--
-- Requests - DupRequests = BadAuthenticators - MalformedRequests -
-- UnknownTypes = PacketsDropped = entries logged

radiusAuthServAccessRequests OBJECT-TYPE
SYNTAX Counter32
UNITS "packets"
MAX-ACCESS read-only
STATUS deprecated
DESCRIPTION
"The number of packets received on the authentication port from this client."
REFERENCE "RFC 2865 section 4.1"
::= { radiusAuthClientEntry 4 }

radiusAuthServDupAccessRequests OBJECT-TYPE
SYNTAX Counter32
UNITS "packets"
MAX-ACCESS read-only
STATUS deprecated
DESCRIPTION
"The number of duplicate RADIUS Access-Request packets received from this client."
REFERENCE "RFC 2865 section 4.1"
 ::= { radiusAuthClientEntry 5 }

radiusAuthServAccessAccepts OBJECT-TYPE
SYNTAX Counter32
UNITS "packets"
MAX-ACCESS read-only
STATUS deprecated
DESCRIPTION
"The number of RADIUS Access-Accept packets sent to this client."
REFERENCE "RFC 2865 section 4.2"
 ::= { radiusAuthClientEntry 6 }

radiusAuthServAccessRejects OBJECT-TYPE
SYNTAX Counter32
UNITS "packets"
MAX-ACCESS read-only
STATUS deprecated
DESCRIPTION
"The number of RADIUS Access-Reject packets sent to this client."
REFERENCE "RFC 2865 section 4.3"
 ::= { radiusAuthClientEntry 7 }

radiusAuthServAccessChallenges OBJECT-TYPE
SYNTAX Counter32
UNITS "packets"
MAX-ACCESS read-only
STATUS deprecated
DESCRIPTION
"The number of RADIUS Access-Challenge packets sent to this client."
REFERENCE "RFC 2865 section 4.4"
 ::= { radiusAuthClientEntry 8 }

radiusAuthServMalformedAccessRequests OBJECT-TYPE
SYNTAX Counter32
UNITS "packets"
MAX-ACCESS read-only
STATUS deprecated
DESCRIPTION
"The number of malformed RADIUS Access-Request packets received from this client.
Bad authenticators and unknown types are not included as malformed Access-Requests."
REFERENCE "RFC 2865 section 3"
 ::= { radiusAuthClientEntry 9 }

radiusAuthServBadAuthenticators OBJECT-TYPE
SYNTAX Counter32
UNITS "packets"
MAX-ACCESS read-only
STATUS deprecated
DESCRIPTION
"The number of RADIUS Authentication-Request packets that contained invalid Message Authenticator attributes received from this client."
REFERENCE "RFC 2865 section 3"
 ::= { radiusAuthClientEntry 10 }

radiusAuthServPacketsDropped OBJECT-TYPE
SYNTAX Counter32
UNITS "packets"
MAX-ACCESS read-only
STATUS deprecated
DESCRIPTION
"The number of incoming packets from this client silently discarded for some reason other than malformed, bad authenticators or
unknown types.
REFERENCE "RFC 2865 section 3"
::= { radiusAuthClientEntry 11 }

radiusAuthServUnknownTypes OBJECT-TYPE
SYNTAX Counter32
UNITS "packets"
MAX-ACCESS read-only
STATUS deprecated
DESCRIPTION
"The number of RADIUS packets of unknown type that were received from this client."
REFERENCE "RFC 2865 section 4"
::= { radiusAuthClientEntry 12 }

-- New MIB objects added in this revision

radiusAuthClientExtTable OBJECT-TYPE
SYNTAX SEQUENCE OF RadiusAuthClientExtEntry
MAX-ACCESS not-accessible
STATUS current
DESCRIPTION
"The (conceptual) table listing the RADIUS authentication clients with which the server shares a secret."
::= { radiusAuthServ 16 }

radiusAuthClientExtEntry OBJECT-TYPE
SYNTAX RadiusAuthClientExtEntry
MAX-ACCESS not-accessible
STATUS current
DESCRIPTION
"An entry (conceptual row) representing a RADIUS authentication client with which the server shares a secret."
INDEX { radiusAuthClientExtIndex }
::= { radiusAuthClientExtTable 1 }

RadiusAuthClientExtEntry ::= SEQUENCE {
  radiusAuthClientExtIndex Integer32,
radiusAuthClientInetAddressType InetAddressType,
radiusAuthClientInetAddress InetAddress,
radiusAuthClientExtID SnmpAdminString,
radiusAuthServExtAccessRequests Counter32,
radiusAuthServExtDupAccessRequests Counter32,
radiusAuthServExtAccessAccepts Counter32,
radiusAuthServExtAccessRejects Counter32,
radiusAuthServExtAccessChallenges Counter32,
radiusAuthServExtMalformedAccessRequests Counter32,
radiusAuthServExtBadAuthenticators Counter32,
radiusAuthServExtPacketsDropped Counter32,
radiusAuthServExtUnknownTypes Counter32,
radiusAuthServCounterDiscontinuity TimeTicks
}

radiusAuthClientExtIndex OBJECT-TYPE
SYNTAX Integer32 (1..2147483647)
MAX-ACCESS not-accessible
STATUS current
DESCRIPTION
"A number uniquely identifying each RADIUS authentication client with which this server communicates."
::= { radiusAuthClientExtEntry 1 }

radiusAuthClientInetAddressType OBJECT-TYPE
SYNTAX InetAddressType
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"The type of address format used for the radiusAuthClientInetAddress object."
::= { radiusAuthClientExtEntry 2 }

Cisco RAN Management System SNMP/MIB Guide, Release 4.x
radiusAuthClientInetAddress OBJECT-TYPE
SYNTAX InetAddress
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"The IP address of the RADIUS authentication client referred to in this table entry, using the version-neutral IP address format."
::= { radiusAuthClientExtEntry 3 }

radiusAuthClientExtID OBJECT-TYPE
SYNTAX SnmpAdminString
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"The NAS-Identifier of the RADIUS authentication client referred to in this table entry. This is not necessarily the same as sysName in MIB II."
REFERENCE "RFC 2865 section 5.32"
::= { radiusAuthClientExtEntry 4 }

-- Server Counters

-- Responses = AccessAccepts + AccessRejects + AccessChallenges
--
-- Requests - DupRequests - BadAuthenticators - MalformedRequests -
-- UnknownTypes - PacketsDropped - Responses - Pending
--
-- Requests - DupRequests - BadAuthenticators - MalformedRequests -
-- UnknownTypes - PacketsDropped = entries logged

radiusAuthServExtAccessRequests OBJECT-TYPE
SYNTAX Counter32
UNITS "packets"
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"The number of packets received on the authentication port from this client. This counter may experience a discontinuity when the RADIUS Server module within the managed entity is reinitialized, as indicated by the current value of radiusAuthServCounterDiscontinuity."
REFERENCE "RFC 2865 section 4.1"
::= { radiusAuthClientExtEntry 5 }

radiusAuthServExtDupAccessRequests OBJECT-TYPE
SYNTAX Counter32
UNITS "packets"
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"The number of duplicate RADIUS Access-Request packets received from this client. This counter may experience a discontinuity when the RADIUS Server module within the managed entity is reinitialized, as indicated by the current value of radiusAuthServCounterDiscontinuity."
REFERENCE "RFC 2865 section 4.1"
::= { radiusAuthClientExtEntry 6 }

radiusAuthServExtAccessAccepts OBJECT-TYPE
SYNTAX Counter32
UNITS "packets"
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"The number of RADIUS Access-Accept packets sent to this client. This counter may experience a discontinuity when the RADIUS Server module within the managed entity is reinitialized, as indicated by the..."
radiusAuthServExtAccessRejects OBJECT-TYPE
SYNTAX Counter32
UNITS "packets"
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"The number of RADIUS Access-Reject packets sent to this client. This counter may experience a discontinuity when the RADIUS Server module within the managed entity is reinitialized, as indicated by the current value of radiusAuthServCounterDiscontinuity."
REFERENCE "RFC 2865 section 4.3"
 ::= { radiusAuthClientExtEntry 8 }

radiusAuthServExtAccessChallenges OBJECT-TYPE
SYNTAX Counter32
UNITS "packets"
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"The number of RADIUS Access-Challenge packets sent to this client. This counter may experience a discontinuity when the RADIUS Server module within the managed entity is reinitialized, as indicated by the current value of radiusAuthServCounterDiscontinuity."
REFERENCE "RFC 2865 section 4.4"
 ::= { radiusAuthClientExtEntry 9 }

radiusAuthServExtMalformedAccessRequests OBJECT-TYPE
SYNTAX Counter32
UNITS "packets"
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"The number of malformed RADIUS Access-Request packets received from this client. Bad authenticators and unknown types are not included as malformed Access-Requests. This counter may experience a discontinuity when the RADIUS Server module within the managed entity is reinitialized, as indicated by the current value of radiusAuthServCounterDiscontinuity."
REFERENCE "RFC 2865 sections 3, 4.1"
 ::= { radiusAuthClientExtEntry 10 }

radiusAuthServExtBadAuthenticators OBJECT-TYPE
SYNTAX Counter32
UNITS "packets"
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"The number of RADIUS Authentication-Request packets that contained invalid Message Authenticator attributes received from this client. This counter may experience a discontinuity when the RADIUS Server module within the managed entity is reinitialized, as indicated by the current value of radiusAuthServCounterDiscontinuity."
REFERENCE "RFC 2865 section 3"
 ::= { radiusAuthClientExtEntry 11 }

radiusAuthServExtPacketsDropped OBJECT-TYPE
SYNTAX Counter32
UNITS "packets"
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"The number of incoming packets from this client silently discarded for some reason other than malformed, bad authenticators or unknown types.
This counter may experience a discontinuity when the RADIUS Server module within the managed entity is reinitialized, as indicated by the current value of radiusAuthServCounterDiscontinuity.”

REFERENCE “RFC 2865 section 3”
::= { radiusAuthClientExtEntry 12 }

radiusAuthServExtUnknownTypes OBJECT-TYPE
SYNTAX Counter32
UNITS "packets"
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"The number of RADIUS packets of unknown type that were received from this client. This counter may experience a discontinuity when the RADIUS Server module within the managed entity is reinitialized, as indicated by the current value of radiusAuthServCounterDiscontinuity.”

REFERENCE “RFC 2865 section 4”
::= { radiusAuthClientExtEntry 13 }

radiusAuthServCounterDiscontinuity OBJECT-TYPE
SYNTAX TimeTicks
UNITS "centiseconds"
MAX-ACCESS read-only
STATUS current
DESCRIPTION
"The number of centiseconds since the last discontinuity in the RADIUS Server counters. A discontinuity may be the result of a reinitialization of the RADIUS Server module within the managed entity.”

::= { radiusAuthClientExtEntry 14 }

-- conformance information
radiusAuthServMIBConformance OBJECT IDENTIFIER
::= { radiusAuthServMIB 2 }

radiusAuthServMIBCompliances OBJECT IDENTIFIER
::= { radiusAuthServMIBConformance 1 }

radiusAuthServMIBGroups OBJECT IDENTIFIER
::= { radiusAuthServMIBConformance 2 }

-- compliance statements
radiusAuthServMIBCompliance MODULE-COMPLIANCE
STATUS deprecated
DESCRIPTION
"The compliance statement for authentication servers implementing the RADIUS Authentication Server MIB. Implementation of this module is for IPv4-only entities, or for backwards compatibility use with entities that support both IPv4 and IPv6.”

MODULE -- this module
MANDATORY-GROUPS { radiusAuthServMIBGroup }

OBJECT radiusAuthServConfigReset
WRITE-SYNTAX INTEGER { reset(2) }
DESCRIPTION "The only SETable value is 'reset' (2).”

::= { radiusAuthServMIBCompliances 1 }

radiusAuthServMIBExtCompliance MODULE-COMPLIANCE
STATUS current
DESCRIPTION
"The compliance statement for authentication servers implementing the RADIUS Authentication Server IPv6 Extensions MIB. Implementation of
this module is for entities that support IPv6, or support IPv4 and IPv6.

MODULE -- this module
MANDATORY-GROUPS { radiusAuthServExtMIBGroup }

OBJECT radiusAuthServConfigReset
WRITE-SYNTAX INTEGER { reset(2) }
DESCRIPTION "The only SETable value is 'reset' (2)."

OBJECT radiusAuthClientInetAddressType
SYNTAX InetAddressType { ipv4(1), ipv6(2) }
DESCRIPTION "An implementation is only required to support IPv4 and globally unique IPv6 addresses."

OBJECT radiusAuthClientInetAddress
SYNTAX InetAddress ( SIZE (4|16) )
DESCRIPTION "An implementation is only required to support IPv4 and globally unique IPv6 addresses."

::= { radiusAuthServMIBCompliances 2 }

-- units of conformance
radiusAuthServMIBGroup OBJECT-GROUP
OBJECTS {radiusAuthServIdent, radiusAuthServUpTime, radiusAuthServResetTime, radiusAuthServConfigReset, radiusAuthServTotalAccessRequests, radiusAuthServTotalInvalidRequests, radiusAuthServTotalDupAccessRequests, radiusAuthServTotalAccessAccepts, radiusAuthServTotalAccessRejects, radiusAuthServTotalAccessChallenges, radiusAuthServTotalMalformedAccessRequests, radiusAuthServTotalBadAuthenticators, radiusAuthServTotalPacketsDropped, radiusAuthServTotalUnknownTypes, radiusAuthClientAddress, radiusAuthClientID, radiusAuthServAccessRequests, radiusAuthServDupAccessRequests, radiusAuthServAccessAccepts, radiusAuthServAccessRejects, radiusAuthServAccessChallenges, radiusAuthServMalformedAccessRequests, radiusAuthServBadAuthenticators, radiusAuthServPacketsDropped, radiusAuthServUnknownTypes }

STATUS deprecated
DESCRIPTION "The collection of objects providing management of a RADIUS Authentication Server."
::= { radiusAuthServMIBGroups 1 }

radiusAuthServExtMIBGroup OBJECT-GROUP
OBJECTS {radiusAuthServIdent, radiusAuthServUpTime, radiusAuthServResetTime, radiusAuthServConfigReset, radiusAuthServTotalAccessRequests, radiusAuthServTotalInvalidRequests, radiusAuthServTotalDupAccessRequests, radiusAuthServTotalAccessAccepts, radiusAuthServTotalAccessRejects, radiusAuthServTotalAccessChallenges, radiusAuthServTotalMalformedAccessRequests, radiusAuthServTotalBadAuthenticators, radiusAuthServTotalPacketsDropped,
radiusAuthServTotalUnknownTypes,
radiusAuthClientInetAddressType,
radiusAuthClientInetAddress,
radiusAuthClientExtID,
radiusAuthServExtAccessRequests,
radiusAuthServExtDupAccessRequests,
radiusAuthServExtAccessAccepts,
radiusAuthServExtAccessRejects,
radiusAuthServExtAccessChallenges,
radiusAuthServExtMalformedAccessRequests,
radiusAuthServExtBadAuthenticators,
radiusAuthServExtPacketsDropped,
radiusAuthServExtUnknownTypes,
radiusAuthServCounterDiscontinuity
}
STATUS  current
DESCRIPTION
"The collection of objects providing management of
a RADIUS Authentication Server."
::= { radiusAuthServMIBGroups 2 }
END