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Dynamic Authorization Client MIB
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Abstract

This memo defines a portion of the Management Information Base (MIB) for use with network management protocols in the Internet community. In particular, it describes the RADIUS Dynamic Authorization Client (DAC) functions that support the dynamic authorization extensions as defined in [RFC3576](#).

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1. Introduction

This memo defines a portion of the Management Information Base (MIB) for use with network management protocols in the Internet community. It is becoming increasingly important to support Dynamic Authorization extensions on the network access server (NAS) devices to handle the Disconnect and Change-of-Authorization (CoA) messages as described in [\[RFC3576\]](#). As a result, the effective management of RADIUS Dynamic Authorization entities is of considerable importance. This RADIUS Dynamic Authorization Client MIB complements the managed objects used for managing RADIUS authentication and accounting servers as described in [\[RFC2619\]](#) and [\[RFC2621\]](#), respectively. The corresponding version neutral IP address MIBs [\[RFC2619bis\]](#) and [\[RFC2621bis\]](#) will obsolete (if approved) [\[RFC2619\]](#) and [\[RFC2621\]](#).

1.1. Requirements notation

The key words "MUST", "MUST NOT", "REQUIRED", "SHALL", "SHALL NOT", "SHOULD", "SHOULD NOT", "RECOMMENDED", "MAY", and "OPTIONAL" in this document are to be interpreted as described in [\[RFC2119\]](#).

1.2. Terminology

Dynamic Authorization Server (DAS)

The component that resides on the NAS which processes the Disconnect and Change-of-Authorization (CoA) Request packets [\[RFC3576\]](#) sent by the Dynamic Authorization Client.

Dynamic Authorization Client (DAC)

The component which sends Disconnect and CoA-Request packets to the Dynamic Authorization Server. While often residing on the RADIUS server, it is also possible for this component to be located on a separate host, such as a Rating Engine.

Dynamic Authorization Server Port

The UDP port on which the Dynamic Authorization Server listens for the Disconnect and CoA requests sent by the Dynamic Authorization Client.

2. The Internet-Standard Management Framework

For a detailed overview of the documents that describe the current Internet-Standard Management Framework, please refer to [section 7 of \[RFC3410\]](#).

Managed objects are accessed via a virtual information store, termed the Management Information Base or MIB. MIB objects are generally accessed through the Simple Network Management Protocol (SNMP). Objects in the MIB are defined using the mechanisms defined in the Structure of Management Information (SMI). This memo specifies a MIB module that is compliant to the SMIV2, which is described in STD 58, [RFC2578 \[RFC2578\]](#), STD 58, [RFC2579 \[RFC2579\]](#) and STD 58, [RFC2580 \[RFC2580\]](#).

3. Overview

"Dynamic Authorization Extensions to RADIUS" [[RFC3576](#)] defines the operation of Disconnect-Request, Disconnect-ACK, Disconnect-NAK, CoA-Request, CoA-ACK and CoA-NAK packets. [[DYNSEV](#)] defines the Dynamic Authorization Server MIB and the relationship with other MIB modules. This MIB module for the Dynamic Authorization Client contains the following: This MIB module for the Dynamic Authorization Client contains the following:

1. Two scalar objects.
2. One Dynamic Authorization Server table. This table contains one row for each DAS that the DAC shares a secret with.

[4.](#) RADIUS Dynamic Authorization Client MIB Definitions

```
RADIUS-DYNAUTH-CLIENT-MIB DEFINITIONS ::= BEGIN
```

```
IMPORTS
```

```
    MODULE-IDENTITY, OBJECT-TYPE,  
    Counter32, Gauge32, Integer32,  
    mib-2, TimeTicks      FROM SNMPv2-SMI          -- [RFC2578]  
    SnmpAdminString      FROM SNMP-FRAMEWORK-MIB -- [RFC3411]  
    InetAddressType, InetAddress,  
    InetPortNumber      FROM INET-ADDRESS-MIB    -- [RFC4001]  
    MODULE-COMPLIANCE,  
    OBJECT-GROUP FROM SNMPv2-CONF;              -- [RFC2580]
```

```
radiusDynAuthClientMIB MODULE-IDENTITY
```

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DESCRIPTION

"The MIB module for entities implementing the client side of the Dynamic Authorization extensions Remote Authentication Dial In User Service (RADIUS) protocol.

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Copyright (C) The Internet Society (2005). This initial version of this MIB module was published in RFC yyyy; for full legal notices see the RFC itself. Supplementary information may be available on

<http://www.ietf.org/copyrights/ianamib.html>."

-- RFC Ed.: replace yyyy with actual RFC number & remove this note

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```

        DESCRIPTION "Initial version as published in RFC yyyy"
-- RFC Ed.: replace yyyy with actual RFC number & remove this note
        ::= { mib-2 xxx }
-- The value xxx to be assigned by IANA.

radiusDynAuthClientMIBObjects OBJECT IDENTIFIER ::=
        { radiusDynAuthClientMIB 1 }

radiusDynAuthClient          OBJECT IDENTIFIER ::=
        { radiusDynAuthClientMIBObjects 1 }

radiusDynAuthClientDisconInvalidServerAddresses OBJECT-TYPE
    SYNTAX Counter32
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "The number of Disconnect messages received from unknown
        addresses."
    ::= { radiusDynAuthClient 1 }

radiusDynAuthClientCoAInvalidServerAddresses OBJECT-TYPE
    SYNTAX Counter32
    MAX-ACCESS read-only
    STATUS current
    DESCRIPTION
        "The number of CoA messages received from unknown
        addresses."
    ::= { radiusDynAuthClient 2 }

radiusDynAuthServerTable OBJECT-TYPE
    SYNTAX SEQUENCE OF RadiusDynAuthServerEntry
    MAX-ACCESS not-accessible
    STATUS current
    DESCRIPTION
        "The (conceptual) table listing the RADIUS Dynamic
        Authorization Servers with which the client shares a
        secret."
    ::= { radiusDynAuthClient 3 }

radiusDynAuthServerEntry OBJECT-TYPE

```



```

MAX-ACCESS not-accessible
STATUS current
DESCRIPTION
    "An entry (conceptual row) representing one Dynamic
    Authorization Server with which the client shares a
    secret."
INDEX { radiusDynAuthServerIndex }
 ::= { radiusDynAuthServerTable 1 }

```

```

RadiusDynAuthServerEntry ::= SEQUENCE {
    radiusDynAuthServerIndex Integer32,
    radiusDynAuthServerAddressType InetAddressType,
    radiusDynAuthServerAddress InetAddress,
    radiusDynAuthServerClientPortNumber InetPortNumber,
    radiusDynAuthServerID SnmpAdminString,
    radiusDynAuthClientRoundTripTime TimeTicks,
    radiusDynAuthClientDisconRequests Counter32,
    radiusDynAuthClientDisconAuthOnlyRequests Counter32,
    radiusDynAuthClientDisconRetransmissions Counter32,
    radiusDynAuthClientDisconAcks Counter32,
    radiusDynAuthClientDisconNaks Counter32,
    radiusDynAuthClientDisconNakAuthOnlyRequest Counter32,
    radiusDynAuthClientDisconNakSessNoContext Counter32,
    radiusDynAuthClientMalformedDisconResponses Counter32,
    radiusDynAuthClientDisconBadAuthenticators Counter32,
    radiusDynAuthClientDisconPendingRequests Gauge32,
    radiusDynAuthClientDisconTimeouts Counter32,
    radiusDynAuthClientDisconPacketsDropped Counter32,
    radiusDynAuthClientCoARequests Counter32,
    radiusDynAuthClientCoAAuthOnlyRequest Counter32,
    radiusDynAuthClientCoARetranmissions Counter32,
    radiusDynAuthClientCoAAcks Counter32,
    radiusDynAuthClientCoANaks Counter32,
    radiusDynAuthClientCoANakAuthOnlyRequest Counter32,
    radiusDynAuthClientCoANakSessNoContext Counter32,
    radiusDynAuthClientMalformedCoAResponses Counter32,
    radiusDynAuthClientCoABadAuthenticators Counter32,
    radiusDynAuthClientCoAPendingRequests Gauge32,
    radiusDynAuthClientCoATimeouts Counter32,
    radiusDynAuthClientCoAPacketsDropped Counter32,
    radiusDynAuthClientUnknownTypes Counter32
}

```

```

radiusDynAuthServerIndex OBJECT-TYPE
    SYNTAX Integer32 (1..2147483647)
    MAX-ACCESS not-accessible

```

```
STATUS      current
DESCRIPTION
    "A number uniquely identifying each RADIUS Dynamic
    Authorization Server with which this Dynamic
    Authorization Client communicates. This number is
    allocated by the agent implementing this MIB module,
    and is unique in this context."
 ::= { radiusDynAuthServerEntry 1 }
```

```
radiusDynAuthServerAddressType OBJECT-TYPE
SYNTAX      InetAddressType
MAX-ACCESS  read-only
STATUS      current
DESCRIPTION
    "The type of IP-Address of the RADIUS Dynamic
    Authorization Server referred to in this table entry."
 ::= { radiusDynAuthServerEntry 2 }
```

```
radiusDynAuthServerAddress OBJECT-TYPE
SYNTAX      InetAddress
MAX-ACCESS  read-only
STATUS      current
DESCRIPTION
    "The IP-Address value of the RADIUS Dynamic
    Authorization Server referred to in this table entry."
 ::= { radiusDynAuthServerEntry 3 }
```

```
radiusDynAuthServerClientPortNumber OBJECT-TYPE
SYNTAX      InetPortNumber
MAX-ACCESS  read-only
STATUS      current
DESCRIPTION
    "The UDP destination port that the RADIUS Dynamic
    Authorization Client is using to send requests to this
    server."
 ::= { radiusDynAuthServerEntry 4 }
```

```
radiusDynAuthServerID OBJECT-TYPE
SYNTAX      SnmpAdminString
MAX-ACCESS  read-only
STATUS      current
DESCRIPTION
    "The NAS-Identifier of the RADIUS Dynamic
    Authorization Server referred to in this table
    entry."
```

REFERENCE

["RFC 2865, Section 5.32](#), NAS-Identifier."

::= { radiusDynAuthServerEntry 5 }

radiusDynAuthClientRoundTripTime OBJECT-TYPE

SYNTAX TimeTicks

UNITS "hundredths of a second"

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The time interval (in hundredths of a second) between the most recent Disconnect or CoA request and the reception of the corresponding Disconnect or CoA reply. A value of zero is returned in case no reply has been received yet from this server."

::= { radiusDynAuthServerEntry 6 }

radiusDynAuthClientDisconRequests OBJECT-TYPE

SYNTAX Counter32

UNITS "requests"

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The number of RADIUS Disconnect-Requests sent to this Dynamic Authorization Server. This includes the RADIUS Disconnect-Requests that have a Service-Type attribute with value 'Authorize Only'."

REFERENCE

["RFC 3576, Section 2.1](#), Disconnect Messages (DM)."

::= { radiusDynAuthServerEntry 7 }

radiusDynAuthClientDisconAuthOnlyRequests OBJECT-TYPE

SYNTAX Counter32

UNITS "requests"

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The number of RADIUS Disconnect-Requests including a Service-Type attribute with value 'Authorize Only' sent to this Dynamic Authorization Server."

REFERENCE

"[RFC 3576, Section 2.1](#), Disconnect Messages (DM)."
 ::= { radiusDynAuthServerEntry 8 }

radiusDynAuthClientDisconRetransmissions OBJECT-TYPE

SYNTAX Counter32
UNITS "retransmissions"
MAX-ACCESS read-only
STATUS current
DESCRIPTION

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"The number of RADIUS Disconnect-request packets retransmitted to this RADIUS Dynamic Authorization Server."

REFERENCE

"[RFC 3576, Section 2.1](#), Disconnect Messages (DM)."
 ::= { radiusDynAuthServerEntry 9 }

radiusDynAuthClientDisconAcks OBJECT-TYPE

SYNTAX Counter32
UNITS "replies"
MAX-ACCESS read-only
STATUS current
DESCRIPTION

"The number of RADIUS Disconnect-ACK packets received from this Dynamic Authorization Server"

REFERENCE

"[RFC 3576, Section 2.1](#), Disconnect Messages (DM)."
 ::= { radiusDynAuthServerEntry 10 }

radiusDynAuthClientDisconNaks OBJECT-TYPE

SYNTAX Counter32
UNITS "replies"
MAX-ACCESS read-only
STATUS current
DESCRIPTION

"The number of RADIUS Disconnect-NAK packets received from this Dynamic Authorization Server. This includes the RADIUS Disconnect-NAK packets received with a Service-Type attribute with value 'Authorize Only' and the RADIUS Disconnect-NAK packets received no session context was found."

REFERENCE

["RFC 3576, Section 2.1, Disconnect Messages \(DM\)."](#)
 ::= { radiusDynAuthServerEntry 11 }

radiusDynAuthClientDisconNakAuthOnlyRequest OBJECT-TYPE

SYNTAX Counter32

UNITS "replies"

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The number of RADIUS Disconnect-NAK packets including an Service-Type attribute with value 'Authorize Only' received from this Dynamic Authorization Server."

REFERENCE

["RFC 3576, Section 2.1, Disconnect Messages \(DM\)."](#)

::= { radiusDynAuthServerEntry 12 }

radiusDynAuthClientDisconNakSessNoContext OBJECT-TYPE

SYNTAX Counter32

UNITS "replies"

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The number of RADIUS Disconnect-NAK packets received from this Dynamic Authorization Server because no session context was found, i.e. it includes an Error-Cause attribute with value 503 ('Session Context Not Found')."

REFERENCE

["RFC 3576, Section 2.1, Disconnect Messages \(DM\)."](#)

::= { radiusDynAuthServerEntry 13 }

radiusDynAuthClientMalformedDisconResponses OBJECT-TYPE

SYNTAX Counter32

UNITS "replies"

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The number of malformed RADIUS Disconnect-Response packets received from this Dynamic Authorization Server. Bad authenticators and unknown types are not included as malformed Disconnect-Responses."

REFERENCE

"[RFC 3576, Section 2.1](#), Disconnect Messages (DM), and
[Section 2.3](#), Packet Format."

::= { radiusDynAuthServerEntry 14 }

radiusDynAuthClientDisconBadAuthenticators OBJECT-TYPE

SYNTAX Counter32

UNITS "replies"

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The number of RADIUS Disconnect-Response packets
which contained invalid Authenticator field
received from this Dynamic Authorization Server."

REFERENCE

"[RFC 3576, Section 2.1](#), Disconnect Messages (DM), and
[Section 2.3](#), Packet Format."

::= { radiusDynAuthServerEntry 15 }

radiusDynAuthClientDisconPendingRequests OBJECT-TYPE

SYNTAX Gauge32

UNITS "requests"

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The number of RADIUS Disconnect-request packets
destined for this server that have not yet timed out
or received a response. This variable is incremented
when an Disconnect-Request is sent and decremented
due to receipt of an Disconnect-Ack, Disconnect-NAK
or a timeout or a retransmission."

REFERENCE

"[RFC 3576, Section 2.1](#), Disconnect Messages (DM)."

::= { radiusDynAuthServerEntry 16 }

radiusDynAuthClientDisconTimeouts OBJECT-TYPE

SYNTAX Counter32

UNITS "timeouts"

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The number of Disconnect request timeouts to this server. After a timeout the client may retry to the same server or give up. A retry to the same server is counted as a retransmit as well as a timeout. A send to a different server is counted as a Disconnect-Request as well as a timeout."

REFERENCE

"[RFC 3576, Section 2.1](#), Disconnect Messages (DM)."

::= { radiusDynAuthServerEntry 17 }

radiusDynAuthClientDisconPacketsDropped OBJECT-TYPE

SYNTAX Counter32

UNITS "replies"

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The number of incoming Disconnect-Responses from this Dynamic Authorization Server silently discarded by the client application for some reason other than malformed, bad authenticators or unknown types."

REFERENCE

"[RFC 3576, Section 2.1](#), Disconnect Messages (DM), and [Section 2.3](#), Packet Format."

::= { radiusDynAuthServerEntry 18 }

radiusDynAuthClientCoARequests OBJECT-TYPE

SYNTAX Counter32

UNITS "requests"

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"The number of RADIUS CoA-Requests sent to this Dynamic Authorization Server. This includes the CoA requests that have a Service-Type attribute with value 'Authorize Only'."

REFERENCE

"[RFC 3576, Section 2.2](#), Change-of-Authorization Messages (CoA)."

::= { radiusDynAuthServerEntry 19 }

```
radiusDynAuthClientCoAAuthOnlyRequest OBJECT-TYPE
    SYNTAX      Counter32
    UNITS       "requests"
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
        "The number of RADIUS CoA-requests including a
         Service-Type attribute with value 'Authorize Only'
         sent to this Dynamic Authorization Client."
    REFERENCE
        "RFC 3576, Section 2.2, Change-of-Authorization
         Messages (CoA)."
    ::= { radiusDynAuthServerEntry 20 }
```

```
radiusDynAuthClientCoARetransmissions OBJECT-TYPE
    SYNTAX      Counter32
    UNITS       "retransmissions"
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
        "The number of RADIUS CoA-request packets
         retransmitted to this RADIUS Dynamic Authorization
         Server."
    REFERENCE
        "RFC 3576, Section 2.2, Change-of-Authorization
         Messages (CoA)."
    ::= { radiusDynAuthServerEntry 21 }
```

```
radiusDynAuthClientCoAAcks OBJECT-TYPE
    SYNTAX      Counter32
    UNITS       "replies"
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
        "The number of RADIUS CoA-ACK packets
         received from this Dynamic Authorization Server"
    REFERENCE
```

```
        "RFC 3576, Section 2.2, Change-of-Authorization
         Messages (CoA)."
    ::= { radiusDynAuthServerEntry 22 }
```


radiusDynAuthClientCoANaks OBJECT-TYPE

SYNTAX Counter32
UNITS "replies"
MAX-ACCESS read-only
STATUS current

DESCRIPTION

"The number of RADIUS CoA-NAK packets received from this Dynamic Authorization Server. This includes the RADIUS CoA-NAK packets received with a Service-Type attribute with value 'Authorize Only' and the RADIUS CoA-NAK packets received because no session context was found."

REFERENCE

"[RFC 3576, Section 2.2](#), Change-of-Authorization Messages (CoA)."

::= { radiusDynAuthServerEntry 23 }

radiusDynAuthClientCoANakAuthOnlyRequest OBJECT-TYPE

SYNTAX Counter32
UNITS "replies"
MAX-ACCESS read-only
STATUS current

DESCRIPTION

"The number of RADIUS CoA-NAK packets including a Service-Type attribute with value 'Authorize Only' received from this Dynamic Authorization Server."

REFERENCE

"[RFC 3576, Section 2.2](#), Change-of-Authorization Messages (CoA)."

::= { radiusDynAuthServerEntry 24 }

radiusDynAuthClientCoANakSessNoContext OBJECT-TYPE

SYNTAX Counter32
UNITS "replies"
MAX-ACCESS read-only
STATUS current

DESCRIPTION

"The number of RADIUS CoA-NAK packets received from this Dynamic Authorization Server because no session context was found, i.e. it includes an Error-Cause attribute with value 503 ('Session Context Not Found')."

REFERENCE

"[RFC 3576, Section 2.2](#), Change-of-Authorization

```

        Messages (CoA)."  

 ::= { radiusDynAuthServerEntry 25 }  
  

radiusDynAuthClientMalformedCoAResponses OBJECT-TYPE  

    SYNTAX      Counter32  

    UNITS       "replies"  

    MAX-ACCESS  read-only  

    STATUS      current  

    DESCRIPTION  

        "The number of malformed RADIUS CoA-Response  

        packets received from this Dynamic Authorization  

        Server. Bad authenticators and unknown types are  

        not included as malformed CoA-Responses."  

    REFERENCE  

        "RFC 3576, Section 2.2, Change-of-Authorization  

        Messages (CoA), and Section 2.3, Packet Format."  

 ::= { radiusDynAuthServerEntry 26 }  
  

radiusDynAuthClientCoABadAuthenticators OBJECT-TYPE  

    SYNTAX      Counter32  

    UNITS       "replies"  

    MAX-ACCESS  read-only  

    STATUS      current  

    DESCRIPTION  

        "The number of RADIUS CoA-Response packets  

        which contained invalid Authenticator field  

        received from this Dynamic Authorization Server."  

    REFERENCE  

        "RFC 3576, Section 2.2, Change-of-Authorization  

        Messages (CoA), and Section 2.3, Packet Format."  

 ::= { radiusDynAuthServerEntry 27 }  
  

radiusDynAuthClientCoAPendingRequests OBJECT-TYPE  

    SYNTAX      Gauge32  

    UNITS       "requests"  

    MAX-ACCESS  read-only  

    STATUS      current  

    DESCRIPTION  

        "The number of RADIUS CoA-request packets destined for  

        this server that have not yet timed out or received a  

        response. This variable is incremented when an  

        CoA-Request is sent and decremented due to receipt of  

        a CoA-Ack, CoA -NAK or a timeout or a retransmission."  

    REFERENCE  

        "RFC 3576, Section 2.2, Change-of-Authorization  

        Messages (CoA)."  

 ::= { radiusDynAuthServerEntry 28 }
```

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radiusDynAuthClientCoATimeouts OBJECT-TYPE

SYNTAX Counter32
UNITS "timeouts"
MAX-ACCESS read-only
STATUS current
DESCRIPTION

"The number of CoA request timeouts to this server. After a timeout the client may retry to the same server or give up. A retry to the same server is counted as a retransmit as well as a timeout. A send to a different server is counted as a CoA-Request as well as a timeout."

REFERENCE

"[RFC 3576, Section 2.2](#), Change-of-Authorization Messages (CoA)."

::= { radiusDynAuthServerEntry 29 }

radiusDynAuthClientCoAPacketsDropped OBJECT-TYPE

SYNTAX Counter32
UNITS "replies"
MAX-ACCESS read-only
STATUS current
DESCRIPTION

"The number of incoming CoA-Responses from this Dynamic Authorization Server silently discarded by the client application for some reason other than malformed, bad authenticators or unknown types."

REFERENCE

"[RFC 3576, Section 2.2](#), Change-of-Authorization Messages (CoA), and [Section 2.3](#), Packet Format."

::= { radiusDynAuthServerEntry 30 }

radiusDynAuthClientUnknownTypes OBJECT-TYPE

SYNTAX Counter32
UNITS "replies"
MAX-ACCESS read-only
STATUS current
DESCRIPTION

"The number of incoming packets of unknown types which were received on the Dynamic Authorization port."

REFERENCE

"[RFC 3576, Section 2.3](#), Packet Format."
 ::= { radiusDynAuthServerEntry 31 }

-- conformance information

radiusDynAuthClientMIBConformance
 OBJECT IDENTIFIER ::= { radiusDynAuthClientMIB 2 }

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radiusDynAuthClientMIBCompliances
 OBJECT IDENTIFIER ::= { radiusDynAuthClientMIBConformance 1 }
radiusDynAuthClientMIBGroups
 OBJECT IDENTIFIER ::= { radiusDynAuthClientMIBConformance 2 }

-- compliance statements

radiusDynAuthClientMIBCompliance MODULE-COMPLIANCE
 STATUS current
 DESCRIPTION

"The compliance statement for entities implementing
 the RADIUS Dynamic Authorization Client."

MODULE -- this module

MANDATORY-GROUPS { radiusDynAuthClientMIBGroup }

GROUP radiusDynAuthClientAuthOnlyGroup

DESCRIPTION

"Only required for Dynamic Authorization Clients that
 are supporting Service-Type attributes with value
 'Authorize-Only'."

GROUP radiusDynAuthClientNoSessGroup

DESCRIPTION

"This group is not required in case the Dynamic
 Authorization Server can not easily determine whether
 a session exists or not (e.g., in case of a RADIUS
 proxy)."

::= { radiusDynAuthClientMIBCompliances 1 }

-- units of conformance

```
radiusDynAuthClientMIBGroup OBJECT-GROUP
    OBJECTS { radiusDynAuthClientDisconInvalidServerAddresses,
              radiusDynAuthClientCoAInvalidServerAddresses,
              radiusDynAuthServerAddressType,
              radiusDynAuthServerAddress,
              radiusDynAuthServerClientPortNumber,
              radiusDynAuthServerID,
              radiusDynAuthClientRoundTripTime,
              radiusDynAuthClientDisconRequests,
              radiusDynAuthClientDisconRetransmissions,
              radiusDynAuthClientDisconAcks,
              radiusDynAuthClientDisconNaks,
              radiusDynAuthClientMalformedDisconResponses,
              radiusDynAuthClientDisconBadAuthenticators,
              radiusDynAuthClientDisconPendingRequests,
```

```
radiusDynAuthClientDisconTimeouts,
radiusDynAuthClientDisconPacketsDropped,
radiusDynAuthClientCoARequests,
radiusDynAuthClientCoARetransmissions,
radiusDynAuthClientCoAAcks,
radiusDynAuthClientCoANaks,
radiusDynAuthClientMalformedCoAResponses,
radiusDynAuthClientCoABadAuthenticators,
radiusDynAuthClientCoAPendingRequests,
radiusDynAuthClientCoATimeouts,
radiusDynAuthClientCoAPacketsDropped,
radiusDynAuthClientUnknownTypes
```

```
}
```

```
STATUS current
```

```
DESCRIPTION
```

```
"The collection of objects providing management of
a RADIUS Dynamic Authorization Client."
```

```
::= { radiusDynAuthClientMIBGroups 1 }
```

```
radiusDynAuthClientAuthOnlyGroup OBJECT-GROUP
```

```
OBJECTS { radiusDynAuthClientDisconAuthOnlyRequests,
          radiusDynAuthClientDisconNakAuthOnlyRequest,
          radiusDynAuthClientCoAAuthOnlyRequest,
          radiusDynAuthClientCoANakAuthOnlyRequest
```

```
}
```

```
STATUS current
```

DESCRIPTION

"The collection of objects supporting the RADIUS messages including Service-Type attribute with value 'Authorize Only'."

::= { radiusDynAuthClientMIBGroups 2 }

radiusDynAuthClientNoSessGroup OBJECT-GROUP

OBJECTS { radiusDynAuthClientDisconNakSessNoContext,
radiusDynAuthClientCoANakSessNoContext
}

STATUS current

DESCRIPTION

"The collection of objects supporting the RADIUS messages that are referring to non existing sessions."

::= { radiusDynAuthClientMIBGroups 3 }

END

5. Security Considerations

There are no management objects defined in this MIB module that have a MAX-ACCESS clause of read-write and/or read-create. So, if this MIB module is implemented correctly, then there is no risk that an intruder can alter or create any management objects of this MIB module via direct SNMP SET operations

Some of the readable objects in this MIB module (i.e., objects with a MAX-ACCESS other than not-accessible) may be considered sensitive or vulnerable in some network environments. It is thus important to control even GET and/or NOTIFY access to these objects and possibly to even encrypt the values of these objects when sending them over the network via SNMP. These are the tables and objects and their sensitivity/vulnerability:

radiusDynAuthServerAddress and radiusDynAuthServerAddressType

These can be used to determine the address of the DAS with which the

DAC is communicating. This information could be useful in mounting an attack on the DAS.

radiusDynAuthServerID

This can be used to determine the Identifier of the DAS. This information could be useful in impersonating the DAS.

radiusDynAuthServerClientPortNumber

This can be used to determine the destination port number to which the DAC is sending. This information could be useful in mounting an attack on the DAS.

The other readable objects are not really considered as being sensitive or vulnerable. These objects are:

radiusDynAuthClientDisconInvalidServerAddresses,
radiusDynAuthClientCoAInvalidServerAddresses,
radiusDynAuthClientRoundTripTime,
radiusDynAuthClientDisconRequests,
radiusDynAuthClientDisconAuthOnlyRequests,
radiusDynAuthClientDisconRetransmissions,
radiusDynAuthClientDisconAcks,
radiusDynAuthClientDisconNaks,
radiusDynAuthClientDisconNakAuthOnlyRequest,
radiusDynAuthClientDisconNakSessNoContext,
radiusDynAuthClientMalformedDisconResponses,
radiusDynAuthClientDisconBadAuthenticators,

radiusDynAuthClientDisconPendingRequests,
radiusDynAuthClientDisconTimeouts,
radiusDynAuthClientDisconPacketsDropped,
radiusDynAuthClientCoARequests,
radiusDynAuthClientCoAAuthOnlyRequest,
radiusDynAuthClientCoARe transmissions,
radiusDynAuthClientCoAAcks,
radiusDynAuthClientCoANaks,
radiusDynAuthClientCoANakAuthOnlyRequest,
radiusDynAuthClientCoANakSessNoContext,
radiusDynAuthClientMalformedCoAResponses,
radiusDynAuthClientCoABadAuthenticators,
radiusDynAuthClientCoAPendingRequests,
radiusDynAuthClientCoATimeouts,
radiusDynAuthClientCoAPacketsDropped, and
radiusDynAuthClientUnknownTypes.

SNMP versions prior to SNMPv3 did not include adequate security. Even if the network itself is secure (for example by using IPSec), even then, there is no control as to who on the secure network is allowed to access and GET/SET (read/change/create/delete) the objects in this MIB module.

It is RECOMMENDED that implementers consider the security features as provided by the SNMPv3 framework (see [\[RFC3410\], section 8](#)), including full support for the SNMPv3 cryptographic mechanisms (for authentication and privacy).

Further, deployment of SNMP versions prior to SNMPv3 is NOT RECOMMENDED. Instead, it is RECOMMENDED to deploy SNMPv3 and to enable cryptographic security. It is then a customer/operator responsibility to ensure that the SNMP entity giving access to an instance of this MIB module is properly configured to give access to the objects only to those principals (users) that have legitimate rights to indeed GET or SET (change/create/delete) them.

[6.](#) IANA considerations

IANA is requested to assign an OID under mib-2.

7. Acknowledgements

This document reuses some of the work done in earlier RADIUS MIB specifications [[RFC2619](#)] and [[RFC2621](#)].

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