

Network Working Group
Internet-Draft
Intended status: Standards Track
Expires: July 19, 2010

G. Zorn, Ed.
Network Zen
S. Comerica
Cisco Systems
January 15, 2010

Diameter Credit Control Application MIB
`draft-ietf-dime-diameter-cc-appl-mib-03.txt`

Abstract

Along with providing support for certain basic authentication, authorization and accounting functions, the Diameter base protocol is intended to provide a framework for AAA applications.

This document defines the Management Information Base (MIB) module which describes the minimum set of objects needed to manage an implementation of the Diameter Credit Control application.

Status of this Memo

This Internet-Draft is submitted to IETF in full conformance with the provisions of [BCP 78](#) and [BCP 79](#).

Internet-Drafts are working documents of the Internet Engineering Task Force (IETF), its areas, and its working groups. Note that other groups may also distribute working documents as Internet-Drafts.

Internet-Drafts are draft documents valid for a maximum of six months and may be updated, replaced, or obsoleted by other documents at any time. It is inappropriate to use Internet-Drafts as reference material or to cite them other than as "work in progress."

The list of current Internet-Drafts can be accessed at
<http://www.ietf.org/ietf/1id-abstracts.txt>.

The list of Internet-Draft Shadow Directories can be accessed at
<http://www.ietf.org/shadow.html>.

This Internet-Draft will expire on July 19, 2010.

Copyright Notice

Copyright (c) 2010 IETF Trust and the persons identified as the document authors. All rights reserved.

Internet-Draft

DCCA MIB

January 2010

This document is subject to [BCP 78](#) and the IETF Trust's Legal Provisions Relating to IETF Documents (<http://trustee.ietf.org/license-info>) in effect on the date of publication of this document. Please review these documents carefully, as they describe your rights and restrictions with respect to this document. Code Components extracted from this document must include Simplified BSD License text as described in Section 4.e of the Trust Legal Provisions and are provided without warranty as described in the BSD License.

This document may contain material from IETF Documents or IETF Contributions published or made publicly available before November 10, 2008. The person(s) controlling the copyright in some of this material may not have granted the IETF Trust the right to allow modifications of such material outside the IETF Standards Process. Without obtaining an adequate license from the person(s) controlling the copyright in such materials, this document may not be modified outside the IETF Standards Process, and derivative works of it may not be created outside the IETF Standards Process, except to format it for publication as an RFC or to translate it into languages other than English.

Internet-Draft

DCCA MIB

January 2010

Table of Contents

1.	The Internet-Standard Management Framework	3
2.	Requirements Language	3
3.	Overview	3
4.	Diameter Credit Control Application MIB Definitions	3
5.	IANA Considerations	18
6.	Security Considerations	18
7.	Acknowledgements	19
8.	References	19
 8.1.	Normative References	19
 8.2.	Informative References	20
	Authors' Addresses	20

Internet-Draft

DCCA MIB

January 2010

1. 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 RFC 3410](#) [[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](#)], [[RFC2579](#)], [[RFC2580](#)]). In particular, it describes managed objects used for managing the Diameter Credit Control Application [[RFC4006](#)].

Discussion of this draft may be directed to the dime Working Group of the IETF (dime@ietf.org)..

2. Requirements Language

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 [RFC 2119](#) [[RFC2119](#)].

3. Overview

The base Diameter protocol [[RFC3588](#)] is never used alone; it is always extended for a particular application.

This MIB defines objects supporting the management of the Diameter Credit Control Application protocol as described in [[RFC4006](#)]. The MIB specification for the Diameter base protocol [[I-D.ietf-dime-diameter-base-protocol-mib](#)] SHOULD be implemented prior to the implementation of this MIB.

[4.](#) Diameter Credit Control Application MIB Definitions

DIAMETER-CC-APPLICATION-MIB DEFINITIONS ::= BEGIN

IMPORTS
 MODULE-IDENTITY,
 OBJECT-TYPE,
 Unsigned32,

Zorn & Comerica

Expires July 19, 2010

[Page 4]

Internet-Draft

DCCA MIB

January 2010

Counter32,
mib-2
 FROM SNMPv2-SMI -- [[RFC2578](#)]

MODULE-COMPLIANCE,
OBJECT-GROUP
 FROM SNMPv2-CONF -- [[RFC2580](#)]
StorageType,
RowStatus
 FROM SNMPv2-TC -- [[RFC2579](#)]
InetAddressType,
InetAddress
 FROM INET-ADDRESS-MIB -- [[RFC4001](#)]
SnmpAdminString
 FROM SNMP-FRAMEWORK-MIB; -- [[RFC3411](#)]

diameterCCAMIB MODULE-IDENTITY
 LAST-UPDATED "201001150000Z" -- 15 January 2010
 ORGANIZATION "IETF dime Working Group."
 CONTACT-INFO
 "Subash Comerica
 Cisco Systems

Global Development Centre, Prestige Waterford
No. 9 Brunton Road
BGL3/MZ/
Bangalore, Karnataka 560025
India
Phone: +91 80 4103 6427
Email: subashtc@cisco.com"

DESCRIPTION

"The MIB module for entities implementing the Diameter Credit Control Application, [RFC 4006](#).

Copyright (C) The Internet Society (2010). 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 and remove this note

REVISION "201001150000Z" -- 15 January 2010

DESCRIPTION "Initial version as published in RFC yyyy"

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

::= { mib-2 XXX }

Zorn & Comerica

Expires July 19, 2010

[Page 5]

Internet-Draft

DCCA MIB

January 2010

-- RFC Ed.: replace XXX with value assigned by IANA
-- and remove this note

-- Top-Level Components of this MIB.

diameterCcAppMIB OBJECT IDENTIFIER ::= { diameterCCAMIB 2 }

diameterCcAppTraps OBJECT IDENTIFIER ::= { diameterCcAppMIB 0 }

diameterCcAppObjects OBJECT IDENTIFIER ::= { diameterCcAppMIB 1 }

diameterCcAppConform OBJECT IDENTIFIER ::= { diameterCcAppMIB 2 }

dccaHostCfgs OBJECT IDENTIFIER ::= { diameterCcAppObjects 1 }
dccaPeerCfgs OBJECT IDENTIFIER ::= { diameterCcAppObjects 2 }

```

dccaPeerStats          OBJECT IDENTIFIER ::= { diameterCcAppObjects 3 }

dccaHostID OBJECT-TYPE
    SYNTAX      SnmpAdminString
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
        "The implementation identification string for
         the Diameter software in use on the system,
         for example; 'diameterd'"
    ::= { dccaHostCfgs 1 }

dccaHostIpAddrTable OBJECT-TYPE
    SYNTAX      SEQUENCE OF DccaHostIpAddrEntry
    MAX-ACCESS  not-accessible
    STATUS      current
    DESCRIPTION
        "The table listing the Diameter
         Credit Control host's IP Addresses."
    ::= { dccaHostCfgs 2 }

dccaHostIpAddrEntry OBJECT-TYPE
    SYNTAX      DccaHostIpAddrEntry
    MAX-ACCESS  not-accessible
    STATUS      current
    DESCRIPTION
        "A row entry representing a Diameter
         Credit Control host IP Address."
    INDEX       { dccaHostIpAddrIndex }
    ::= { dccaHostIpAddrTable 1 }

DccaHostIpAddrEntry ::= SEQUENCE {
    dccaHostIpAddrIndex Unsigned32,

```

Zorn & Comerica Expires July 19, 2010

Internet-Draft DCCA MIB January 2010

```
        dccaHostIpAddrType    InetAddressType,
        dccaHostIpAddress      InetAddress
    }

dccaHostIpAddrIndex OBJECT-TYPE
    SYNTAX          Unsigned32 (1..4294967295 )
    MAX-ACCESS     not-accessible
    STATUS         current
```

```

DESCRIPTION
    "A number uniquely identifying the number
    of IP Addresses supported by this Diameter
    Credit Control host."
 ::= { dccaHostIpAddrEntry 1 }

dccaHostIpAddrType OBJECT-TYPE
    SYNTAX      InetAddressType
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
        "The type of internet address stored
        in dccaHostIpAddress."
 ::= { dccaHostIpAddrEntry 2 }

dccaHostIpAddress OBJECT-TYPE
    SYNTAX      InetAddress
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
        "The IP-Address of the host, which is of the
        type specified in dccaHostIpAddrType."
 ::= { dccaHostIpAddrEntry 3 }

dccaPeerTable OBJECT-TYPE
    SYNTAX      SEQUENCE OF DccaPeerEntry
    MAX-ACCESS  not-accessible
    STATUS      current
    DESCRIPTION
        "The table listing information regarding
        the discovered or configured Diameter
        Credit Control peers."
 ::= { dccaPeerCfgs 1 }

dccaPeerEntry OBJECT-TYPE
    SYNTAX      DccaPeerEntry
    MAX-ACCESS  not-accessible
    STATUS      current
    DESCRIPTION
        "A row entry representing a discovered

```

```

        peer."
INDEX      { dccaPeerIndex }
 ::= { dccaPeerTable 1 }

DccaPeerEntry ::= SEQUENCE {
    dccaPeerIndex          Unsigned32,
    dccaPeerId              SnmpAdminString,
    dccaPeerFirmwareRevision Unsigned32,
    dccaPeerStorageType       StorageType,
    dccaPeerRowStatus         RowStatus }

dccaPeerIndex OBJECT-TYPE
    SYNTAX      Unsigned32 (1..4294967295)
    MAX-ACCESS  not-accessible
    STATUS      current
    DESCRIPTION
        "A number uniquely identifying each Diameter
         Credit Control peer with which this host
         communicates."
 ::= { dccaPeerEntry 1 }

dccaPeerId OBJECT-TYPE
    SYNTAX      SnmpAdminString
    MAX-ACCESS  read-create
    STATUS      current
    DESCRIPTION
        "The server identifier for the Diameter
         Credit Control peer."
 ::= { dccaPeerEntry 2 }

dccaPeerFirmwareRevision OBJECT-TYPE
    SYNTAX      Unsigned32 (1..4294967295)
    MAX-ACCESS  read-create
    STATUS      current
    DESCRIPTION
        "Firmware revision of peer. If no firmware
         revision, the revision of the Diameter
         Credit Control software
         module may be reported instead."
 ::= { dccaPeerEntry 3 }

dccaPeerStorageType OBJECT-TYPE
    SYNTAX      StorageType
    MAX-ACCESS  read-create
    STATUS      current
    DESCRIPTION
        "The storage type for this conceptual row. None"

```

of the columnar objects is writable when the conceptual row is permanent."

REFERENCE

"Textual Conventions for SMIv2, [Section 2](#)."

DEFVAL { nonVolatile }
 ::= { dccaPeerEntry 4 }

dccaPeerRowStatus OBJECT-TYPE

SYNTAX RowStatus

MAX-ACCESS read-create

STATUS current

DESCRIPTION

"The status of this conceptual row.

To create a row in this table, a manager must set this object to either createAndGo(4) or createAndWait(5).

Until instances of all corresponding columns are appropriately configured, the value of the corresponding instance of the dccaPeerRowStatus column is 'notReady'.

In particular, a newly created row cannot be made active until the corresponding dccaPeerId has been set.

dccaPeerId may not be modified while the value of this object is active(1):

An attempt to set these objects while the value of dccaPeerRowStatus is active(1) will result in an inconsistentValue error.

Entries in this table with dccaPeerRowStatus equal to active(1) remain in the table until destroyed.

Entries in this table with dccaPeerRowStatus equal to values other than active(1) will be destroyed after timeout (5 minutes).

If a dccaPeerId being created via SNMP already exists in another active dccaPeerEntry, then a newly created row cannot be made active until the original row with the dccaPeerId value is destroyed.

Upon reload, dccaPeerIndex values may be changed."

Zorn & Comerica

Expires July 19, 2010

[Page 9]

Internet-Draft

DCCA MIB

January 2010

::= { dccaPeerEntry 5 }

dccaPeerVendorTable OBJECT-TYPE
SYNTAX SEQUENCE OF DccaPeerVendorEntry
MAX-ACCESS not-accessible
STATUS current
DESCRIPTION "The table listing the Vendor IDs supported by the peer."
 ::= { dccaPeerCfgs 2 }

dccaPeerVendorEntry OBJECT-TYPE
SYNTAX DccaPeerVendorEntry
MAX-ACCESS not-accessible
STATUS current
DESCRIPTION "A row entry representing a Vendor ID supported by the peer."
INDEX {
 dccaPeerIndex,
 dccaPeerVendorIndex
 }
 ::= { dccaPeerVendorTable 1 }

DccaPeerVendorEntry ::= SEQUENCE {
 dccaPeerVendorIndex Unsigned32,
 dccaPeerVendorId Unsigned32,
 dccaPeerVendorStorageType StorageType,
 dccaPeerVendorRowStatus RowStatus
}

dccaPeerVendorIndex OBJECT-TYPE
SYNTAX Unsigned32 (1..4294967295)
MAX-ACCESS not-accessible
STATUS current
DESCRIPTION "A number uniquely identifying the Vendor ID supported by the peer."
 ::= { dccaPeerVendorEntry 1 }

```

dccaPeerVendorId OBJECT-TYPE
  SYNTAX          Unsigned32
  MAX-ACCESS     read-create
  STATUS         current
  DESCRIPTION
    "The active Vendor IDs used for peer
     connections."
 ::= { dccaPeerVendorEntry 2 }

```

Zorn & Comerica

Expires July 19, 2010

[Page 10]

Internet-Draft

DCCA MIB

January 2010

```

dccaPeerVendorStorageType OBJECT-TYPE
  SYNTAX          StorageType
  MAX-ACCESS     read-create
  STATUS         current
  DESCRIPTION
    "The storage type for this conceptual row. An
     agent implementing the table must allow adding
     dccaPeerVendorId into the table. None of the
     columnar objects is writable
     when the conceptual row is permanent."

```

REFERENCE

"Textual Conventions for SMIv2, [Section 2](#)."

```

DEFVAL          { nonVolatile }
 ::= { dccaPeerVendorEntry 3 }

```

dccaPeerVendorRowStatus OBJECT-TYPE

```

  SYNTAX          RowStatus
  MAX-ACCESS     read-create
  STATUS         current

```

DESCRIPTION

"The status of this conceptual row.

To create a row in this table, a manager must set this object to either createAndGo(4) or createAndWait(5).

Until instances of all corresponding columns are appropriately configured, the value of the corresponding instance of the dccaPeerVendorRowStatus column is 'notReady'.

In particular, a newly created row cannot be

made active until the corresponding dccaPeerVendorId has been set.

dccaPeerVendorId may not be modified while the value of this object is active(1):

An attempt to set these objects while the value of dccaPeerVendorRowStatus is active(1) will result in an inconsistentValue error.

Entries in this table with dccaPeerVendorRowStatus equal to active(1) remain in the table until destroyed.

Entries in this table with dccaPeerVendorRowStatus equal to values other than active(1) will be destroyed

after timeout (5 minutes).

If the peer vendor id being created via SNMP already exists in another active dccaPeerVendorEntry, then a newly created row cannot be made active until the original row with the peer vendor id value is destroyed.

Upon reload, dccaPeerVendorIndex values may be changed."

`::= { dccaPeerVendorEntry 4 }`

-- per-peer statistics

dccaPerPeerStatsTable OBJECT-TYPE

SYNTAX SEQUENCE OF DccaPerPeerStatsEntry

MAX-ACCESS not-accessible

STATUS current

DESCRIPTION

"The table listing the Diameter Credit Control per-peer Statistics."

`::= { dccaPeerStats 1 }`

```

dccaPerPeerStatsEntry OBJECT-TYPE
  SYNTAX      DccaPerPeerStatsEntry
  MAX-ACCESS  not-accessible
  STATUS      current
  DESCRIPTION
    "A row entry representing a Diameter
     Credit Control Peer."
  INDEX      { dccaPeerIndex }
  ::= { dccaPerPeerStatsTable 1 }

```

DccaPerPeerStatsEntry ::= SEQUENCE {	
dccaPerPeerStatsCCRIn	Counter32,
dccaPerPeerStatsCCROut	Counter32,
dccaPerPeerStatsCCRDropped	Counter32,
dccaPerPeerStatsCCAIn	Counter32,
dccaPerPeerStatsCCAOut	Counter32,
dccaPerPeerStatsCCADropped	Counter32,
dccaPerPeerStatsRARIn	Counter32,
dccaPerPeerStatsRARDropped	Counter32,
dccaPerPeerStatsRAAOut	Counter32,
dccaPerPeerStatsRAADropped	Counter32,
dccaPerPeerStatsSTROut	Counter32,

dccaPerPeerStatsSTRDropped	Counter32,
dccaPerPeerStatsSTAIn	Counter32,
dccaPerPeerStatsSTADropped	Counter32,
dccaPerPeerStatsAAROut	Counter32,
dccaPerPeerStatsAARDropped	Counter32,
dccaPerPeerStatsAAAIn	Counter32,
dccaPerPeerStatsAAADropped	Counter32,
dccaPerPeerStatsASRIn	Counter32,
dccaPerPeerStatsASRDropped	Counter32,
dccaPerPeerStatsASAOut	Counter32,
dccaPerPeerStatsASADropped	Counter32 }

```

dccaPerPeerStatsCCRIn OBJECT-TYPE
  SYNTAX      Counter32
  MAX-ACCESS  read-only
  STATUS      current
  DESCRIPTION
    "Number of Diameter Credit-Control-Request

```

```

        (CCR) messages received, per peer."
::= { dccaPerPeerStatsEntry 2 }

dccaPerPeerStatsCCROut OBJECT-TYPE
    SYNTAX      Counter32
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
        "Number of Diameter Credit-Control-Request (CCR)
         messages sent, per peer."
::= { dccaPerPeerStatsEntry 3 }

dccaPerPeerStatsCCRDropped OBJECT-TYPE
    SYNTAX      Counter32
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
        "Number of Diameter Credit-Control-Request (CCR)
         messages dropped, per peer."
::= { dccaPerPeerStatsEntry 4 }

dccaPerPeerStatsCCAIN OBJECT-TYPE
    SYNTAX      Counter32
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
        "Number of Diameter Credit-Control-Answer (CCA)
         messages received, per peer."
::= { dccaPerPeerStatsEntry 5 }

```

```

dccaPerPeerStatsCCAOut OBJECT-TYPE
    SYNTAX      Counter32
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
        "Number of Diameter Credit-Control-Answer (CCA)
         messages sent, per peer."
::= { dccaPerPeerStatsEntry 6 }

```

```

dccaPerPeerStatsCCADropped OBJECT-TYPE
    SYNTAX      Counter32

```

```

MAX-ACCESS read-only
STATUS current
DESCRIPTION
    "Number of Diameter Credit-Control-Answer (CCA)
     messages dropped, per peer."
 ::= { dccaPerPeerStatsEntry 7 }

dccaPerPeerStatsRARIn OBJECT-TYPE
SYNTAX Counter32
MAX-ACCESS read-only
STATUS current
DESCRIPTION
    "Number of Diameter Re-Auth-Request (RAR)
     messages received, per peer."
 ::= { dccaPerPeerStatsEntry 8 }

dccaPerPeerStatsRARDropped OBJECT-TYPE
SYNTAX Counter32
MAX-ACCESS read-only
STATUS current
DESCRIPTION
    "Number of Diameter Re-Auth-Request (RAR)
     messages dropped, per peer."
 ::= { dccaPerPeerStatsEntry 9 }

dccaPerPeerStatsRAAOut OBJECT-TYPE
SYNTAX Counter32
MAX-ACCESS read-only
STATUS current
DESCRIPTION
    "Number of Diameter Re-Auth-Answer (RAA)
     messages transmitted, per peer."
 ::= { dccaPerPeerStatsEntry 10 }

dccaPerPeerStatsRAADropped OBJECT-TYPE
SYNTAX Counter32
MAX-ACCESS read-only

```

```

STATUS current
DESCRIPTION
    "Number of Diameter Re-Auth-Answer (RAA)
     messages dropped, per peer."

```

```
 ::= { dccaPerPeerStatsEntry 11 }

dccaPerPeerStatsSTROut OBJECT-TYPE
    SYNTAX      Counter32
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
        "Number of Diameter
         Session-Termination-Request (STR)
         messages transmitted, per peer."
 ::= { dccaPerPeerStatsEntry 12 }

dccaPerPeerStatsSTRDropped OBJECT-TYPE
    SYNTAX      Counter32
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
        "Number of Diameter
         Session-Termination-Request (STR)
         messages dropped, per peer."
 ::= { dccaPerPeerStatsEntry 13 }

dccaPerPeerStatsSTAIn OBJECT-TYPE
    SYNTAX      Counter32
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
        "Number of Diameter
         Session-Termination-Answer (STA)
         messages received, per peer."
 ::= { dccaPerPeerStatsEntry 14 }

dccaPerPeerStatsSTADropped OBJECT-TYPE
    SYNTAX      Counter32
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
        "Number of Diameter
         Session-Termination-Answer (STA)
         messages dropped, per peer."
 ::= { dccaPerPeerStatsEntry 15 }

dccaPerPeerStatsAAROut OBJECT-TYPE
    SYNTAX      Counter32
```

```
MAX-ACCESS  read-only
STATUS      current
DESCRIPTION
    "Number of Diameter AA-Request (AAR)
     messages transmitted, per peer."
 ::= { dccaPerPeerStatsEntry 16 }

dccaPerPeerStatsAARDropped OBJECT-TYPE
    SYNTAX      Counter32
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
        "Number of Diameter AA-Request (AAR)
         messages dropped, per peer."
 ::= { dccaPerPeerStatsEntry 17 }

dccaPerPeerStatsAAAIIn OBJECT-TYPE
    SYNTAX      Counter32
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
        "Number of Diameter AA-Answer (AAA)
         messages received, per peer."
 ::= { dccaPerPeerStatsEntry 18 }

dccaPerPeerStatsAAADropped OBJECT-TYPE
    SYNTAX      Counter32
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
        "Number of Diameter AA-Answer (AAA)
         messages dropped, per peer."
 ::= { dccaPerPeerStatsEntry 19 }

dccaPerPeerStatsASRIn OBJECT-TYPE
    SYNTAX      Counter32
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
        "Number of Diameter Abort-Session-Request
         (ASR) messages received, per peer."
 ::= { dccaPerPeerStatsEntry 20 }

dccaPerPeerStatsASRDropped OBJECT-TYPE
    SYNTAX      Counter32
    MAX-ACCESS  read-only
    STATUS      current
```

DESCRIPTION

Zorn & Comerica

Expires July 19, 2010

[Page 16]

Internet-Draft

DCCA MIB

January 2010

```
        "Number of Diameter Abort-Session-Request
         (ASR) messages dropped, per peer."
 ::= { dccaPerPeerStatsEntry 21 }
```

```
dccaPerPeerStatsASAOut OBJECT-TYPE
    SYNTAX      Counter32
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
        "Number of Diameter Abort-Session-Answer
         (ASA) messages transmitted, per peer."
 ::= { dccaPerPeerStatsEntry 22 }
```

```
dccaPerPeerStatsASADropped OBJECT-TYPE
    SYNTAX      Counter32
    MAX-ACCESS  read-only
    STATUS      current
    DESCRIPTION
        "Number of Diameter Abort-Session-Answer
         (ASA) messages dropped, per peer."
 ::= { dccaPerPeerStatsEntry 23 }
```

-- Conformance dccaMIBCompliances

```
dccaMIBCompliances
OBJECT IDENTIFIER ::= { diameterCcAppConform 1 } dccaMIBGroups
OBJECT IDENTIFIER ::= { diameterCcAppConform 2 }
```

-- Compliance Statements

```
dccaMIBCompliance MODULE-COMPLIANCE
    STATUS      current
    DESCRIPTION
        "The compliance statement for Diameter Credit
         Control application entities."
MODULE -- this module
MANDATORY-GROUPS { dccaPeerStatsGroup }

GROUP
```

```
dccaHostCfgGroup
DESCRIPTION
    "This group is only mandatory for a system that
     supports Local DCCA Host configuration."
GROUP
    dccaPeerCfgGroup
DESCRIPTION
```

Zorn & Comerica

Expires July 19, 2010

[Page 17]

Internet-Draft

DCCA MIB

January 2010

"This group is only mandatory for a system that
supports DCCA Peer configuration."

::= { dccaMIBCompliances 1 }

-- Units of Conformance

```
dccaHostCfgGroup OBJECT-GROUP
OBJECTS {
    dccaHostIpAddrType,
    dccaHostIpAddress,
    dccaHostID
}
STATUS current
DESCRIPTION
    "A collection of objects providing
     configuration common to the server."
::= { dccaMIBGroups 1 }
```

```
dccaPeerCfgGroup OBJECT-GROUP
OBJECTS {
    dccaPeerId,
    dccaPeerVendorId,
    dccaPeerStorageType,
    dccaPeerVendorStorageType,
    dccaPeerFirmwareRevision,
    dccaPeerRowStatus,
    dccaPeerVendorRowStatus
}
STATUS current
DESCRIPTION
    "A collection of objects providing peer
     configuration common to the server."
```

```

 ::= { dccaMIBGroups 2 }

dccaPeerStatsGroup OBJECT-GROUP
    OBJECTS {
        dccaPerPeerStatsCCRIn,
        dccaPerPeerStatsCCROut,
        dccaPerPeerStatsCCRDropped,
        dccaPerPeerStatsCCAIIn,
        dccaPerPeerStatsCCAOut,
        dccaPerPeerStatsCCADropped,
        dccaPerPeerStatsRARIn,
        dccaPerPeerStatsRARDropped,
        dccaPerPeerStatsRAAOut,
        dccaPerPeerStatsRAADropped,
        dccaPerPeerStatsSTROut,

```

Zorn & Comerica

Expires July 19, 2010

[Page 18]

Internet-Draft

DCCA MIB

January 2010

```

        dccaPerPeerStatsSTRDropped,
        dccaPerPeerStatsSTAIn,
        dccaPerPeerStatsSTADropped,
        dccaPerPeerStatsAAROut,
        dccaPerPeerStatsAARDropped,
        dccaPerPeerStatsAAAIn,
        dccaPerPeerStatsAAADropped,
        dccaPerPeerStatsASRIn,
        dccaPerPeerStatsASRDropped,
        dccaPerPeerStatsASAOut,
        dccaPerPeerStatsASADropped
    }
STATUS      current
DESCRIPTION
    "A collection of objects providing peer
     statistics common to the server."
 ::= { dccaMIBGroups 3 }

```

END

5. IANA Considerations

The MIB module in this document uses the following IANA-assigned OBJECT IDENTIFIER values recorded in the SMI Numbers registry:

Descriptor	OBJECT IDENTIFIER value
diameterCCAMIB	{ mib-2 XXX }

Editor's Note (to be removed prior to publication) The IANA is requested to assign a value for "XXX" under the 'mib-2' subtree and to record the assignment in the SMI Numbers registry. When the assignment has been made, the RFC Editor is asked to replace "XXX" (here and in the MIB module) with the assigned value and to remove this note.

[6.](#) Security Considerations

SNMPv1 by itself is not a secure environment. Even if the network itself is secure (for example by using IPSec), there is no control as to who on the secure network is allowed to access and GET (read) the objects in this MIB.

It is recommended that the implementers consider the security features as provided by the SNMPv3 framework. Specifically, the use of the User-based Security Model [[RFC3414](#)] and the View-based Access

Zorn & Comerica

Expires July 19, 2010

[Page 19]

Internet-Draft

DCCA MIB

January 2010

Control Model [[RFC3415](#)] is recommended.

It is then a customer/user responsibility to ensure that the SNMP entity giving access to an instance of this MIB, 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.

[7.](#) Acknowledgements

Thanks to Sumanth Mithra and Biswaranjan Panda for helpful suggestions and feedback.

[8.](#) References

[8.1.](#) Normative References

- [RFC2119] Bradner, S., "Key words for use in RFCs to Indicate Requirement Levels", [BCP 14](#), [RFC 2119](#), March 1997.
- [RFC2578] McCloghrie, K., Ed., Perkins, D., Ed., and J. Schoenwaelder, Ed., "Structure of Management Information Version 2 (SMIV2)", STD 58, [RFC 2578](#), April 1999.
- [RFC2579] McCloghrie, K., Ed., Perkins, D., Ed., and J. Schoenwaelder, Ed., "Textual Conventions for SMIV2", STD 58, [RFC 2579](#), April 1999.
- [RFC2580] McCloghrie, K., Perkins, D., and J. Schoenwaelder, "Conformance Statements for SMIV2", STD 58, [RFC 2580](#), April 1999.
- [RFC3411] Harrington, D., Presuhn, R., and B. Wijnen, "An Architecture for Describing Simple Network Management Protocol (SNMP) Management Frameworks", STD 62, [RFC 3411](#), December 2002.
- [RFC3588] Calhoun, P., Loughney, J., Guttman, E., Zorn, G., and J. Arkko, "Diameter Base Protocol", [RFC 3588](#), September 2003.
- [RFC4001] Daniele, M., Haberman, B., Routhier, S., and J. Schoenwaelder, "Textual Conventions for Internet Network Addresses", [RFC 4001](#), February 2005.
- [RFC4006] Hakala, H., Mattila, L., Koskinen, J-P., Stura, M., and J. Loughney, "Diameter Credit-Control Application", [RFC 4006](#),

Zorn & Comerica

Expires July 19, 2010

[Page 20]

Internet-Draft

DCCA MIB

January 2010

August 2005.

[8.2. Informative References](#)

- [I-D.ietf-dime-diameter-base-protocol-mib]
 - Zorn, G. and S. Comerica, "Diameter Base Protocol MIB", [draft-ietf-dime-diameter-base-protocol-mib-04](#) (work in progress), November 2009.
- [RFC3410] Case, J., Mundy, R., Partain, D., and B. Stewart, "Introduction and Applicability Statements for Internet-Standard Management Framework", [RFC 3410](#), December 2002.

- [RFC3414] Blumenthal, U. and B. Wijnen, "User-based Security Model (USM) for version 3 of the Simple Network Management Protocol (SNMPv3)", STD 62, [RFC 3414](#), December 2002.
- [RFC3415] Wijnen, B., Presuhn, R., and K. McCloghrie, "View-based Access Control Model (VACM) for the Simple Network Management Protocol (SNMP)", STD 62, [RFC 3415](#), December 2002.

Authors' Addresses

Glen Zorn (editor)
Network Zen
1463 East Republican Street, #358
Seattle, Washington 98112
USA

Email: gzw@net-zen.net

Subash Comerica
Cisco Systems
Global Development Centre, Prestige Waterford
No. 9 Brunton Road
BGL3/MZ/
Bangalore, Karnataka 560025
India

Phone: +91 80 4103 6427
Email: subashtc@cisco.com