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G. Zorn
Network Zen
S. Comerica
Juniper Networks

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Diameter Base Protocol MIB
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Abstract

Along with providing support for certain basic authentication, authorization and accounting functions, the Diameter protocol is designed 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 protocol.

Status of this Memo

This Internet-Draft is submitted in full conformance with the provisions of BCP 78 and BCP 79.

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This Internet-Draft will expire on December 16, 2011.

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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 base Diameter protocol [I-D.ietf-dime-rfc3588bis].

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

This MIB defines objects supporting the management of the Diameter base protocol as defined in RFC 3588 [I-D.ietf-dime-rfc3588bis]. Objects related to Diameter applications are defined in separate documents.

4. Diameter Base Protocol MIB Definitions

```
DIAMETER-BASE-PROTOCOL-MIB DEFINITIONS ::= BEGIN

IMPORTS
      InetAddressType,
      InetAddress
            FROM INET-ADDRESS-MIB -- [RFC4001]
      MODULE-IDENTITY,
      OBJECT-TYPE,
      NOTIFICATION-TYPE,
      Integer32,
      Counter32,
      Unsigned32,
      Gauge32,
```

```
      TimeTicks
            FROM SNMPv2-SMI -- [RFC2578]
      SnmpAdminString
            FROM SNMP-FRAMEWORK-MIB -- [RFC3411]
      NOTIFICATION-GROUP,
      MODULE-COMPLIANCE,
      OBJECT-GROUP
            FROM SNMPv2-CONF -- [RFC2580]
      RowStatus,
      TruthValue,
      StorageType
            FROM SNMPv2-TC; -- [RFC2579]


diameterBaseProtocolMIB MODULE-IDENTITY
      LAST-UPDATED "201105040000Z" -- 4 May 2011
      ORGANIZATION "IETF dime Working Group."
      CONTACT-INFO
          "Glen Zorn
           Network Zen
           227/358 Thanon Sanphawut
           Bang Na, Bangkok 10260
           Thailand
           Email: gwz@net-zen.net"
       DESCRIPTION
           "The MIB module for entities implementing the
           Diameter Base Protocol.

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           as the document authors.  All rights reserved.

           The 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 "201105040000Z" -- 4 May 2011
      DESCRIPTION "Initial version as published in RFC yyyy"
-- RFC Ed.: replace yyyy with actual RFC number and remove this note
      ::= { mib-2 119 }  -- Experimental value assigned by IANA.

-- Top-Level Components of this MIB.

diameterBaseNotifications  OBJECT IDENTIFIER ::=
                                   { diameterBaseProtocolMIB 0 }
diameterBaseObjects        OBJECT IDENTIFIER ::=
```

```
                                    { diameterBaseProtocolMIB 1 }
diameterBaseConform        OBJECT IDENTIFIER ::=
                                    { diameterBaseProtocolMIB 2 }

dbpLocalCfgs    OBJECT IDENTIFIER ::= { diameterBaseObjects 1 }
dbpLocalStats   OBJECT IDENTIFIER ::= { diameterBaseObjects 2 }
dbpPeerCfgs     OBJECT IDENTIFIER ::= { diameterBaseObjects 3 }
dbpPeerStats    OBJECT IDENTIFIER ::= { diameterBaseObjects 4 }
dbpRealmCfgs    OBJECT IDENTIFIER ::= { diameterBaseObjects 5 }
dbpRealmStats   OBJECT IDENTIFIER ::= { diameterBaseObjects 6 }
dbpNotifCfgs    OBJECT IDENTIFIER ::= { diameterBaseObjects 7 }


-- Textual Conventions

ServiceType ::= TEXTUAL-CONVENTION
    DISPLAY-HINT  "d"
    STATUS        current
    DESCRIPTION
          "An enumerated value which provides an indication of the
          type of services supported for each Diameter application:
          accounting, authentication or both.

     SYNTAX        INTEGER { acct(1),
                             auth(2),
                             both(3) }
    }



-- Protocol Error Notifications

dbpProtocolErrorNotifEnabled OBJECT-TYPE
       SYNTAX      TruthValue
       MAX-ACCESS  read-write
       STATUS      current
       DESCRIPTION
             "Setting the value of this object to True(1)
              enables the dbpProtocolErrorNotif notification.
              The value persists across resets."
       DEFVAL      {false}
       ::= { dbpNotifCfgs 1 }

dbpProtocolErrorNotif NOTIFICATION-TYPE
       OBJECTS {
                  dbpPeerId,
                  dbpPerPeerStatsProtocolErrors
                }
```

```
       STATUS     current
       DESCRIPTION
             "An dbpProtocolError Notification is sent when both the
              following conditions are true:
              1) the value of dbpProtocolErrorNotifEnabled is True(1)
              2) the value of dbpPerPeerStatsProtocolErrors changes
              An agent must not generate more than one
              dbpProtocolError 'notification event' in a five second
              period, where a 'notification event' is the
              transmission of a single Notification PDU to a list of
              Notification destinations.
              If additional protocol errors occur within the
              five second 'throttling' period, then these
              notification events should be suppressed by the agent.
              An NMS should periodically check the value of
              dbpPerPeerStatsProtocolErrors to detect any missed
              dbpProtocolError notification events, e.g. due to
              throttling or transmission loss."
      ::= { diameterBaseNotifications 1 }


-- Transient Error Notifications

dbpTransientFailureNotifEnabled OBJECT-TYPE
       SYNTAX      TruthValue
       MAX-ACCESS  read-write
       STATUS      current
       DESCRIPTION
             "Setting the value of this object to True(1)
              enables the dbpTransientFailure Notification.
              The value persists across resets."
       ::= { dbpNotifCfgs 2 }

dbpTransientFailureNotif NOTIFICATION-TYPE
       OBJECTS  {
                   dbpPeerId,
                   dbpPerPeerStatsTransientFailures
                 }
       STATUS     current
       DESCRIPTION
             "An dbpTransientFailure Notification is sent when both
              the following conditions are true:
              1) the value of dbpTransientFailureNotifEnabled
                 is True(1)
              2) the value of dbpPerPeerStatsTransientFailures
                 changes
              An agent must not generate more than one
              dbpTransientFailure 'notification event' in a five
```

```
              second period, where a 'notification event' is the
              transmission of a single notification PDU to a list
              of notification destinations.
              If additional transient failures occur
              within the five second 'throttling' period, then
              these notification events should be suppressed
              by the agent.
              An NMS should periodically check the value of
              dbpPerPeerStatsTransientFailures to detect any
              missed dbpTransientFailure notification events,
              e.g. due to throttling or transmission loss."
      ::= { diameterBaseNotifications 2 }


-- Permanent Failure Notifications

dbpPermanentFailureNotifEnabled OBJECT-TYPE
       SYNTAX      TruthValue
       MAX-ACCESS  read-write
       STATUS      current
       DESCRIPTION
             "Setting the value of this object to True(1)
              enables the dbpPermanentFailure notification.
              The value persists across resets."
       DEFVAL    { false }
       ::= { dbpNotifCfgs 3 }

dbpPermanentFailureNotif NOTIFICATION-TYPE
       OBJECTS  {
                  dbpPeerId,
                  dbpPerPeerStatsPermanentFailures
                }
       STATUS     current
       DESCRIPTION
             "An dbpPermanentFailure notification is sent when
              both the following conditions are true:
              1) the value of dbpPermanentFailureNotifEnabled
                 is True(1)
              2) the value of dbpPerPeerStatsPermanentFailures
                 changes
              An agent must not generate more than one
              dbpPermanentFailure 'notification event' in a five
              second period, where a 'notification event' is the
              transmission of a single notification PDU to a list
              of notification destinations.
              If additional permanent failures occur within the
              five second 'throttling' period, then these
              trap-events should be suppressed by the agent.
```

```
              An NMS should periodically check the value of
              dbpPerPeerStatsPermanentFailures to detect
              any missed dbpPermanentFailure trap-events,
              e.g. due to throttling or transmission loss."
       ::= { diameterBaseNotifications 3 }


-- Connection Down Notifs

dbpPeerConnectionDownNotifEnabled OBJECT-TYPE
       SYNTAX      TruthValue
       MAX-ACCESS  read-write
       STATUS      current
       DESCRIPTION
             "Setting the value of this object to True(1)
              enables the dbpPeerConnectionDown notification.
              The value persists across resets."
       DEFVAL      { false }
       ::= { dbpNotifCfgs 4 }

dbpPeerConnectionDownNotif NOTIFICATION-TYPE
       OBJECTS  {
                   dbpLocalId,
                   dbpPeerId
                 }
       STATUS     current
       DESCRIPTION
             "An dbpPeerConnectionDown notification is sent when
              both the following conditions are true:
              1) the value of dbpPeerConnectionDownNotifEnabled is
                 True(1)
              2) dbpPerPeerStatsState changes to closed(1)
              An agent must not generate more than one
              dbpPeerConnectionDown
              'notification event' in a five second period, where a
              'notification event' is the transmission of a single
              notification PDU to a list of notification
              destinations.
              If additional 'transport down' events occur within the
              five second 'throttling' period, then these trap-events
              should be suppressed by the agent."
       ::= { diameterBaseNotifications 4 }


-- Connection Up Notifications

dbpPeerConnectionUpNotifEnabled OBJECT-TYPE
       SYNTAX      TruthValue
```

```
       MAX-ACCESS  read-write
       STATUS      current
       DESCRIPTION
             "Setting the value of this object to True(1)
              enables the dbpPeerConnectionUp notification.
              The value persists across resets."
       DEFVAL      { false }
       ::= { dbpNotifCfgs 5 }

dbpPeerConnectionUpNotif NOTIFICATION-TYPE
       OBJECTS  {
                   dbpLocalId,
                   dbpPeerId
                 }
       STATUS     current
       DESCRIPTION
             "An dbpPeerConnectionUp notification is sent
              when both thefollowing conditions are true:
              1) the value of dbpPeerConnectionUpNotifEnabled is
                 True(1)
              2) the value of dbpPerPeerStatsState changes to
                 either rOpen(6)or iOpen(7)
              An agent must not generate
              more than one dbpPeerConnectionUp
              'notification event' in a
              five second period, where a 'notification event' is the
              transmission of a single notification PDU to a
              list of notification destinations.
              If additional 'connection up' events
              occur within the five second 'throttling' period,
              then these trap-events should be suppressed by the
              agent."
      ::= { diameterBaseNotifications 5 }


-- Local Configs

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

dbpLocalTcpListenPort OBJECT-TYPE
```

```
       SYNTAX      Unsigned32 (1..65535)
       MAX-ACCESS  read-only
       STATUS      current
       DESCRIPTION
             "Diameter TCP 'listen' port."
       ::= { dbpLocalCfgs 3 }

dbpLocalSctpListenPort OBJECT-TYPE
       SYNTAX      Unsigned32 (1..65535)
       MAX-ACCESS  read-only
       STATUS      current
       DESCRIPTION
             "Diameter SCTP 'listen' port."
       ::= { dbpLocalCfgs 4 }

dbpLocalOriginHost OBJECT-TYPE
    SYNTAX          SnmpAdminString
    MAX-ACCESS      read-write
    STATUS          current
    DESCRIPTION     "This object represents the host name of
                    the local peer.
                    The value persists across resets."
    DEFVAL          { "" }
    ::= { dbpLocalCfgs 5 }

dbpLocalRealm OBJECT-TYPE
    SYNTAX          SnmpAdminString
    MAX-ACCESS      read-write
    STATUS          current
    DESCRIPTION     "This object represents the Local Realm Name."
    DEFVAL          { "" }
    ::= { dbpLocalCfgs 6 }


dbpLocalStatsTotalMessagesIn OBJECT-TYPE
       SYNTAX      Counter32 UNITS "messages"
       MAX-ACCESS  read-only
       STATUS      current
       DESCRIPTION
             "The total number of Diameter Base Protocol
              messages received since the last reset."
       ::= { dbpLocalStats 1 }

dbpLocalStatsTotalMessagesOut OBJECT-TYPE
       SYNTAX      Counter32 UNITS "messages"
       MAX-ACCESS  read-only
       STATUS      current
       DESCRIPTION
```

```
              "The total number of Diameter Base Protocol
               messages transmitted since the last reset."
       ::= { dbpLocalStats 2 }

dbpLocalStatsTotalUpTime OBJECT-TYPE
       SYNTAX     TimeTicks
       MAX-ACCESS read-only
       STATUS     current
       DESCRIPTION
              "This object represents the total amount of
               time this Diameter peer has been up from the
               beginning of time until now.  The value is cumulative
               and persists over resets."
       ::= { dbpLocalStats 3 }

dbpLocalResetTime OBJECT-TYPE
       SYNTAX     TimeTicks
       MAX-ACCESS read-only
       STATUS     current
       DESCRIPTION
              "If the peer keeps 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
               peer was 'reset'.  For software that does not
               have persistence or does not support a 'reset'
               operation, this value is undefined."
       ::= { dbpLocalStats 4 }

dbpLocalConfigReset OBJECT-TYPE
       SYNTAX     INTEGER { other(1),
                            initializing(2),
                            running(3),
                            reset(4) }
       MAX-ACCESS read-write
       STATUS     current
       DESCRIPTION
              "Status/action object to reinitialize any persistent
               local state.  When set to reset(4), any persistent
               local state (such as a process) is reinitialized as
               if the software 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) - peer in some unknown state;
                  initializing(2) - peer (re)initializing;
                  running(3) - peer currently running."
       DEFVAL      { other }
       ::= { dbpLocalStats 5 }
```

```
dbpLocalApplTable OBJECT-TYPE
       SYNTAX     SEQUENCE OF DbpLocalApplEntry
       MAX-ACCESS not-accessible
       STATUS     current
       DESCRIPTION
             "The table listing the Diameter applications
              supported by this peer."
       ::= { dbpLocalCfgs 7 }

dbpLocalApplEntry OBJECT-TYPE
       SYNTAX     DbpLocalApplEntry
       MAX-ACCESS not-accessible
       STATUS     current
       DESCRIPTION
             "A row entry representing a Diameter
              application on this peer."
       INDEX      { dbpLocalApplIndex }
       ::= { dbpLocalApplTable 1 }

DbpLocalApplEntry ::= SEQUENCE {
       dbpLocalApplIndex  Unsigned32,
       dbpLocalApplStorageType    StorageType,
       dbpLocalApplRowStatus      RowStatus
}

dbpLocalApplIndex OBJECT-TYPE
       SYNTAX      Unsigned32 ( 1..4294967295 )
       MAX-ACCESS  not-accessible
       STATUS      current
       DESCRIPTION
               "A number uniquely identifying a
               supported Diameter application. Upon reload,
               dbpLocalApplIndex values may be changed."
       ::= { dbpLocalApplEntry 1 }

dbpLocalApplStorageType 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 }
    ::= { dbpLocalApplEntry 2 }

dbpLocalApplRowStatus 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 dbpLocalApplRowStatus
             column is 'notReady'.

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

             dbpLocalApplIndex may not be modified while
             the value of this object is active(1): An attempt
             to set these objects while the value of
             dbpLocalApplRowStatus is active(1) will result in
             an inconsistentValue error.

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

             Entries in this table with dbpLocalApplRowStatus equal
             to values other than active(1) will be destroyed after
             timeout (5 minutes)."
        ::= { dbpLocalApplEntry 3 }

dbpPeerTable OBJECT-TYPE
        SYNTAX     SEQUENCE OF DbpPeerEntry
        MAX-ACCESS not-accessible
        STATUS     current
        DESCRIPTION
              "The table listing information regarding
               the discovered or configured Diameter
               peers."
        ::= { dbpPeerCfgs 1 }

dbpPeerEntry OBJECT-TYPE
        SYNTAX     DbpPeerEntry
        MAX-ACCESS not-accessible
        STATUS     current
        DESCRIPTION
```

```
              "A row entry representing a discovered
               or configured Diameter peer."
       INDEX      { dbpPeerIndex }
       ::= { dbpPeerTable 1 }

DbpPeerEntry ::= SEQUENCE {
       dbpPeerIndex                       Unsigned32,
       dbpPeerId                     SnmpAdminString,
       dbpPeerPortConnect                 Unsigned32,
       dbpPeerPortListen                  Unsigned32,
       dbpPeerTransportProtocol            Integer32,
       dbpPeerSecurity                     Integer32,
       dbpPeerFirmwareRevision       SnmpAdminString,
       dbpPeerStorageType                StorageType,
       dbpPeerRowStatus                    RowStatus }

dbpPeerIndex OBJECT-TYPE
       SYNTAX     Unsigned32 (1..4294967295)
       MAX-ACCESS not-accessible
       STATUS     current
       DESCRIPTION
              "A number uniquely identifying each Diameter peer
               with which the local peer communicates.
               Upon reload, dbpPeerIndex values may be changed."
       ::= { dbpPeerEntry  1 }

dbpPeerId OBJECT-TYPE
       SYNTAX     SnmpAdminString
       MAX-ACCESS read-create
       STATUS     current
       DESCRIPTION
              "The local identifier for the Diameter peer.
               It must be unique and non-empty."
       ::= { dbpPeerEntry  2 }

dbpPeerPortConnect OBJECT-TYPE
       SYNTAX     Unsigned32 (0|1..65535)
       MAX-ACCESS read-only
       STATUS     current
       DESCRIPTION
              "The connection port used
               to connect to the Diameter peer.
               If there is no active connection, this
               value will be zero(0)."
       ::= { dbpPeerEntry  3 }

dbpPeerPortListen OBJECT-TYPE
       SYNTAX     Unsigned32 (1..65535)
```

```
       MAX-ACCESS read-write
       STATUS     current
       DESCRIPTION
             "The port the peer is listening on."
       ::= { dbpPeerEntry  4 }

dbpPeerTransportProtocol OBJECT-TYPE
       SYNTAX     INTEGER { tcp(1),
                            sctp(2) }
       MAX-ACCESS read-only
       STATUS     current
       DESCRIPTION
             "The transport protocol (tcp/sctp) the
              Diameter peer is using."
       ::= { dbpPeerEntry  5 }

dbpPeerSecurity OBJECT-TYPE
       SYNTAX     INTEGER { other(1),
                            tls(2),
                            ipsec(3) }
       MAX-ACCESS read-only
       STATUS     current
       DESCRIPTION
             "The security the Diameter peer is using.

              other(1) - Unknown Security Protocol
              tls(2)   - Transport Layer Security Protocol
              ipsec(3) - Internet Protocol Security"
       DEFVAL          { other }
       ::= { dbpPeerEntry  6 }

dbpPeerFirmwareRevision OBJECT-TYPE
       SYNTAX     SnmpAdminString
       MAX-ACCESS read-only
       STATUS     current
       DESCRIPTION
             "Firmware revision of peer.
              If the Entity MIB is supported by
              the node, then the contents of this object MUST be
              identical to those of the entPhysicalFirmwareRev
              object [RFC4133]. If no firmware
              revision, the revision of the Diameter software
              module may be reported instead."
       ::= { dbpPeerEntry 7 }

dbpPeerStorageType OBJECT-TYPE
    SYNTAX          StorageType
    MAX-ACCESS      read-create
```

```
    STATUS          current
    DESCRIPTION
            "The storage type for this conceptual row.
            Only the dbpPeerPortListen object is writable when
            the conceptual row is permanent."
    REFERENCE       "Textual Conventions for SMIv2, Section 2."
    DEFVAL          { nonVolatile }
    ::= { dbpPeerEntry 8 }

dbpPeerRowStatus OBJECT-TYPE
       SYNTAX     RowStatus
       MAX-ACCESS read-create
       STATUS     current
       DESCRIPTION
             "Status of the peer entry: creating the entry
              enables the peer, destroying the entry disables
              the peer."
       ::= {dbpPeerEntry 9 }

dbpPeerIpAddrTable OBJECT-TYPE
       SYNTAX     SEQUENCE OF DbpPeerIpAddrEntry
       MAX-ACCESS not-accessible
       STATUS     current
       DESCRIPTION
             "The table listing the Diameter
              peer IP addresses."
       ::= { dbpPeerCfgs 2 }

dbpPeerIpAddrEntry OBJECT-TYPE
       SYNTAX     DbpPeerIpAddrEntry
       MAX-ACCESS not-accessible
       STATUS     current
       DESCRIPTION
             "A row entry representing a
              the IP address of a Diameter peer."
       INDEX      {
                    dbpPeerIndex,
                    dbpPeerIpAddressIndex }
       ::= { dbpPeerIpAddrTable 1 }

DbpPeerIpAddrEntry ::= SEQUENCE {
       dbpPeerIpAddressIndex Unsigned32,
       dbpPeerIpAddressType  InetAddressType,
       dbpPeerIpAddress      InetAddress }

dbpPeerIpAddressIndex OBJECT-TYPE
       SYNTAX     Unsigned32 (1..4294967295)
       MAX-ACCESS not-accessible
```

```
        STATUS     current
        DESCRIPTION
              "A number uniquely identifying an IP Address
               supported by this Diameter peer."
        ::= { dbpPeerIpAddrEntry  1 }

dbpPeerIpAddressType OBJECT-TYPE
        SYNTAX      InetAddressType
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "The type of address stored in dbpPeerIpAddress."
        ::= {dbpPeerIpAddrEntry 2}

dbpPeerIpAddress OBJECT-TYPE
        SYNTAX      InetAddress
        MAX-ACCESS  read-only
        STATUS      current
        DESCRIPTION
              "The active IP Address(es) used for connections."
        ::= {dbpPeerIpAddrEntry 3}

dbpAppAdvToPeerTable OBJECT-TYPE
        SYNTAX     SEQUENCE OF DbpAppAdvToPeerEntry
        MAX-ACCESS not-accessible
        STATUS     current
        DESCRIPTION
              "The table listing the applications advertised by
               this host to each peer and the types of service
               supported: accounting, authentication or both."
        ::= { dbpLocalCfgs 8 }

dbpAppAdvToPeerEntry OBJECT-TYPE
        SYNTAX     DbpAppAdvToPeerEntry
        MAX-ACCESS not-accessible
        STATUS     current
        DESCRIPTION
              "A row entry representing a discovered or
               configured Diameter peer."
        INDEX      { dbpPeerIndex,
                     dbpAppAdvToPeerVendorId,
                     dbpAppAdvToPeerIndex }
        ::= { dbpAppAdvToPeerTable 1 }

DbpAppAdvToPeerEntry ::= SEQUENCE {
        dbpAppAdvToPeerVendorId                Unsigned32,
        dbpAppAdvToPeerIndex                   Unsigned32,
        dbpAppAdvToPeerServices               ServiceType,
```

```
       dbpAppAdvToPeerStorageType             StorageType,
       dbpAppAdvToPeerRowStatus                  RowStatus }

dbpAppAdvToPeerVendorId OBJECT-TYPE
       SYNTAX     Unsigned32 ( 1..4294967295 )
       MAX-ACCESS not-accessible
       STATUS     current
       DESCRIPTION
             "The IANA Enterprise Code value assigned to
              the vendor of the Diameter device."
       ::= { dbpAppAdvToPeerEntry  1 }

dbpAppAdvToPeerIndex OBJECT-TYPE
       SYNTAX     Unsigned32 ( 1..4294967295 )
       MAX-ACCESS not-accessible
       STATUS     current
       DESCRIPTION
             "A number uniquely identifying a Diameter
              application advertised as supported by
              this host to each peer.  Upon reload,
              dbpAppAdvToPeerIndex values may be
              changed"
       ::= { dbpAppAdvToPeerEntry  2 }

dbpAppAdvToPeerServices OBJECT-TYPE
       SYNTAX     ServiceType
       MAX-ACCESS read-only
       STATUS     current
       DESCRIPTION
             "The type of services supported for each application,
              accounting, authentication or both."
       ::= { dbpAppAdvToPeerEntry  3 }

dbpAppAdvToPeerStorageType OBJECT-TYPE
    SYNTAX          StorageType
    MAX-ACCESS      read-create
    STATUS          current
    DESCRIPTION
            "The storage type for this conceptual row.
            None of the objects are writable when the
            conceptual row is permanent."
    REFERENCE       "Textual Conventions for SMIv2, Section 2."
    DEFVAL          { nonVolatile }
    ::= { dbpAppAdvToPeerEntry 4 }

dbpAppAdvToPeerRowStatus OBJECT-TYPE
       SYNTAX     RowStatus
       MAX-ACCESS read-create
```

```
       STATUS     current
       DESCRIPTION
             "Status of the entry: creating the entry causes the
              application to be advertised, destroying the entry
              ceases advertisement."
       ::= { dbpAppAdvToPeerEntry  5 }

-- Applications advertised BY peers

dbpAppAdvFromPeerTable OBJECT-TYPE
    SYNTAX          SEQUENCE OF DbpAppAdvFromPeerEntry
    MAX-ACCESS      not-accessible
    STATUS          current
    DESCRIPTION
            "The table listing the applications advertised by
            each peer to this host and the types of service
            supported: accounting, authentication or both."
    ::= { dbpPeerCfgs 3 }

dbpAppAdvFromPeerEntry OBJECT-TYPE
    SYNTAX          DbpAppAdvFromPeerEntry
    MAX-ACCESS      not-accessible
    STATUS          current
    DESCRIPTION
            "A row entry representing a discovered or
            configured Diameter peer."
    INDEX           {
                        dbpPeerIndex,
                        dbpAppAdvFromPeerVendorId,
                        dbpAppAdvFromPeerIndex
                    }
    ::= { dbpAppAdvFromPeerTable 1 }

DbpAppAdvFromPeerEntry ::= SEQUENCE {
        dbpAppAdvFromPeerVendorId Unsigned32,
        dbpAppAdvFromPeerIndex    Unsigned32,
        dbpAppAdvFromPeerType     ServiceType
}

dbpAppAdvFromPeerVendorId OBJECT-TYPE
    SYNTAX          Unsigned32 (1..4294967295 )
    MAX-ACCESS      not-accessible
    STATUS          current
    DESCRIPTION
            "The IANA Enterprise Code value assigned to
            the vendor of the Diameter application."
    ::= { dbpAppAdvFromPeerEntry 1 }
```

```
dbpAppAdvFromPeerIndex OBJECT-TYPE
    SYNTAX          Unsigned32 (1..4294967295 )
    MAX-ACCESS      not-accessible
    STATUS          current
    DESCRIPTION
            "A number uniquely identifying the applications
            advertised as supported from each Diameter peer."
    ::= { dbpAppAdvFromPeerEntry 2 }

dbpAppAdvFromPeerType OBJECT-TYPE
    SYNTAX          ServiceType
    MAX-ACCESS      read-only
    STATUS          current
    DESCRIPTION
            "The type of services supported for each application,
            accounting, authentication or both."
    ::= { dbpAppAdvFromPeerEntry 3 }

-- table of vendor-IDs supported by each peer

dbpPeerVendorTable OBJECT-TYPE
    SYNTAX          SEQUENCE OF DbpPeerVendorEntry
    MAX-ACCESS      not-accessible
    STATUS          current
    DESCRIPTION
            "The table listing the Vendor IDs
            supported by the peer."
    ::= { dbpPeerCfgs 4 }

dbpPeerVendorEntry OBJECT-TYPE
    SYNTAX          DbpPeerVendorEntry
    MAX-ACCESS      not-accessible
    STATUS          current
    DESCRIPTION
            "A row entry representing a
            Vendor ID supported by the peer."
    INDEX           {
                        dbpPeerIndex,
                        dbpPeerVendorIndex
                    }
    ::= { dbpPeerVendorTable 1 }

DbpPeerVendorEntry ::= SEQUENCE {
        dbpPeerVendorIndex       Unsigned32,
        dbpPeerVendorId          INTEGER,
        dbpPeerVendorStorageType StorageType,
        dbpPeerVendorRowStatus   RowStatus
}
```

```
dbpPeerVendorIndex OBJECT-TYPE
    SYNTAX          Unsigned32 (1..4294967295)
    MAX-ACCESS      not-accessible
    STATUS          current
    DESCRIPTION
            "A number uniquely identifying the Vendor
            ID supported by the peer. Upon reload,
            dbpPeerVendorIndex values may be changed."
    ::= { dbpPeerVendorEntry 1 }

dbpPeerVendorId OBJECT-TYPE
    SYNTAX          INTEGER  {
                        diameterVendorIetf (0),
                        diameterVendorCisco (9),
                        diameterVendor3gpp (10415),
                        diameterVendorVodafone (12645)
                    }
    MAX-ACCESS      read-create
    STATUS          current
    DESCRIPTION
            "The active vendor ID used for peer connections.
            diameterVendorIetf (0)           -- IETF
            diameterVendorCisco (9)         -- Cisco Systems
            diameterVendor3gpp (10415)       --  3GPP
            diameterVendorVodafone (12645)     --- Vodafone"
    DEFVAL          { diameterVendorIetf }
    ::= { dbpPeerVendorEntry 2 }

dbpPeerVendorStorageType OBJECT-TYPE
    SYNTAX          StorageType
    MAX-ACCESS      read-create
    STATUS          current
    DESCRIPTION
            "The storage type for this conceptual row.
            None of the objects are writable when the
            conceptual row is permanent."
    REFERENCE       "Textual Conventions for SMIv2, Section 2."
    DEFVAL          { nonVolatile }
    ::= { dbpPeerVendorEntry 3 }

dbpPeerVendorRowStatus 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 dbpPeerVendorRowStatus
            column is 'notReady'.

            In particular, a newly created row cannot be made
            active until the corresponding dbpPeerVendorId has been
            set. Also, a newly created row cannot be made active
            until the corresponding 'dbpPeerIndex' has been set.

            dbpPeerVendorId may not be modified while the
            value of this object is active(1):
            An attempt to set these objects while the value of
            dbpPeerVendorRowStatus is active(1) will result in
            an inconsistentValue error.

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

            Entries in this table with dbpPeerVendorRowStatus equal
            to values other than active(1) will be destroyed after
            timeout (5 minutes)."
    ::= { dbpPeerVendorEntry 4 }


dbpPerPeerInfoTable OBJECT-TYPE
       SYNTAX     SEQUENCE OF DbpPerPeerInfoEntry
       MAX-ACCESS not-accessible
       STATUS     current
       DESCRIPTION
             "The table listing Diameter per-peer information."
       ::= { dbpPeerInfo 1 }

dbpPerPeerInfoEntry OBJECT-TYPE
       SYNTAX     DbpPerPeerInfoEntry
       MAX-ACCESS not-accessible
       STATUS     current
       DESCRIPTION
             "A row entry representing a Diameter peer."
       INDEX     { dbpPeerIndex }
       ::= { dbpPerPeerInfoTable 1 }

DbpPerPeeInfoEntry ::= SEQUENCE {
       dbpPerPeerInfoState              Integer32,
       dbpPerPeeInfoStateDuration       TimeTicks,
```

```
        dbpPerPeerInfoLastDiscCause       Integer32,
        dbpPerPeerInfoWhoInitDisconnect   Integer32,
        dbpPerPeerStatsDWCurrentStatus     Integer32,
        dbpPerPeerStatsTimeoutConnAtmpts   Counter32,
        dbpPerPeerStatsASRsIn              Counter32,
        dbpPerPeerStatsASRsOut             Counter32,
        dbpPerPeerStatsASAsIn              Counter32,
        dbpPerPeerStatsASAsOut             Counter32,
        dbpPerPeerStatsACRsIn              Counter32,
        dbpPerPeerStatsACRsOut             Counter32,
        dbpPerPeerStatsACAsIn              Counter32,
        dbpPerPeerStatsACAsOut             Counter32,
        dbpPerPeerStatsCERsIn              Counter32,
        dbpPerPeerStatsCERsOut             Counter32,
        dbpPerPeerStatsCEAsIn              Counter32,
        dbpPerPeerStatsCEAsOut             Counter32,
        dbpPerPeerStatsDWRsIn              Counter32,
        dbpPerPeerStatsDWRsOut             Counter32,
        dbpPerPeerStatsDWAsIn              Counter32,
        dbpPerPeerStatsDWAsOut             Counter32,
        dbpPerPeerStatsDPRsIn              Counter32,
        dbpPerPeerStatsDPRsOut             Counter32,
        dbpPerPeerStatsDPAsIn              Counter32,
        dbpPerPeerStatsDPAsOut             Counter32,
        dbpPerPeerStatsRARsIn              Counter32,
        dbpPerPeerStatsRARsOut             Counter32,
        dbpPerPeerStatsRAAsIn              Counter32,
        dbpPerPeerStatsRAAsOut             Counter32,
        dbpPerPeerStatsSTRsIn              Counter32,
        dbpPerPeerStatsSTRsOut             Counter32,
        dbpPerPeerStatsSTAsIn              Counter32,
        dbpPerPeerStatsSTAsOut             Counter32,
        dbpPerPeerInfoDWReqTimer           TimeTicks,
        dbpPerPeerStatsRedirectEvents      Counter32,
        dbpPerPeerStatsAccDupRequests      Counter32,
        dbpPerPeerStatsMalformedReqsts     Counter32,
        dbpPerPeerStatsAccsNotRecorded     Counter32,
        dbpPerPeerStatsAccRetrans          Counter32,
        dbpPerPeerStatsTotalRetrans        Counter32,
        dbpPerPeerStatsAccPendReqstsOut    Gauge32,
        dbpPerPeerStatsAccReqstsDropped    Counter32,
        dbpPerPeerStatsHByHDropMessages    Counter32,
        dbpPerPeerStatsEToEDupMessages     Counter32,
        dbpPerPeerStatsUnknownTypes        Counter32,
        dbpPerPeerStatsProtocolErrors      Counter32,
        dbpPerPeerStatsTransientFailures   Counter32,
        dbpPerPeerStatsPermanentFailures   Counter32,
        dbpPerPeerStatsTransportDown       Counter32 }
```

```
dbpPerPeerInfoState 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 Peer State Machine of
              the peer with which this Diameter peer is
              communicating.

              closed      - Connection closed with this peer.
              waitConnAck - Waiting for an acknowledgment
                            from this peer.
              waitICea    - Waiting for a Capabilities-Exchange-Answer
                            from this peer.
              elect       - When the remote and local peers 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 - Waiting for election returns.
              r-open      - Responder transport connection is
                            used for communication.
              i-open      - Initiator transport connection is
                            used for communication.
              closing     - Actively closing and doing cleanup."
       ::= { dbpPerPeerInfoEntry 1 }

dbpPerPeerInfoStateDuration OBJECT-TYPE
       SYNTAX     TimeTicks
       MAX-ACCESS read-only
       STATUS     current
       DESCRIPTION
             "The elapsed time (in hundredths of a second)
              since the last state change."
       ::= { dbpPerPeerInfoEntry 2 }

dbpPerPeerInfoLastDiscCause OBJECT-TYPE
       SYNTAX     INTEGER { rebooting(1),
                            busy(2),
                            doNotWantToTalk(3),
                            election(4) }
```

```
       MAX-ACCESS read-only
       STATUS     current
       DESCRIPTION
             "The last cause for a peer's disconnection.

              rebooting       - A scheduled reboot is imminent.
              busy            - The peer's internal resources are
                                constrained, and it has determined
                                that the transport connection needs
                                to be shutdown.
              doNotWantToTalk - The peer has determined that
                                it does not see a need for the
                                transport connection to exist,
                                since it does not expect any
                                messages to be exchanged in
                                the foreseeable future.
              electionLost    - The peer has determined that it
                                has lost the election process
                                and has therefore disconnected
                                the transport connection."
       ::= { dbpPerPeerInfoEntry 3 }

dbpPerPeerInfoWhoInitDisconnect OBJECT-TYPE
       SYNTAX     INTEGER { host(1),
                            peer(2) }
       MAX-ACCESS read-only
       STATUS     current
       DESCRIPTION
             "Did the host or peer initiate the disconnect?

              host - If this peer initiated the disconnect.
              peer - If the peer with which this peer was
                     connected initiated the disconnect."
       ::= { dbpPerPeerInfoEntry 4 }

dbpPerPeerStatsDWCurrentStatus OBJECT-TYPE
       SYNTAX     INTEGER { okay(1),
                            suspect(2),
                            down(3),
                            reopen(4) }
       MAX-ACCESS read-only
       STATUS     current
       DESCRIPTION
             "okay    - Indicates the connection is presumed working.
              suspect - Indicates the connection is possibly
                        congested or down.
              down    - The peer is no longer reachable, causing
                        the transport connection to be shutdown.
```

```
              reopen  - Three watchdog messages are exchanged with
                        accepted round trip times, and the connection
                        to the peer is considered stabilized."
       ::= { dbpPerPeerInfoEntry 5 }

dbpPerPeerStatsTimeoutConnAtmpts OBJECT-TYPE
       SYNTAX     Counter32 UNITS "connection attempts"
       MAX-ACCESS read-only
       STATUS     current
       DESCRIPTION
             "If there is no transport connection with a peer,
              this is the number of times the local peer has attempted
              to connect to that peer.  This is reset on
              connection."
       ::= { dbpPerPeerInfoEntry 6 }

dbpPerPeerStatsASRsIn OBJECT-TYPE
       SYNTAX     Counter32 UNITS "messages"
       MAX-ACCESS read-only
       STATUS     current
       DESCRIPTION
             "Number of Abort-Session-Request messages
              received from the peer."
       ::= { dbpPerPeerInfoEntry 7 }

dbpPerPeerStatsASRsOut OBJECT-TYPE
       SYNTAX     Counter32 UNITS "messages"
       MAX-ACCESS read-only
       STATUS     current
       DESCRIPTION
             "Number of Abort-Session-Request
              messages sent to the peer."
       ::= { dbpPerPeerInfoEntry 8 }

dbpPerPeerStatsASAsIn OBJECT-TYPE
       SYNTAX     Counter32 UNITS "messages"
       MAX-ACCESS read-only
       STATUS     current
       DESCRIPTION
             "Number of Abort-Session-Answer
              messages received from the peer."
       ::= { dbpPerPeerInfoEntry 9 }

dbpPerPeerStatsASAsOut OBJECT-TYPE
       SYNTAX     Counter32 UNITS "messages"
       MAX-ACCESS read-only
       STATUS     current
       DESCRIPTION
```

```
              "Number of Abort-Session-Answer
               messages sent to the peer."
       ::= { dbpPerPeerInfoEntry 10 }

dbpPerPeerStatsACRsIn OBJECT-TYPE
       SYNTAX     Counter32 UNITS "messages"
       MAX-ACCESS read-only
       STATUS     current
       DESCRIPTION
              "Number of Accounting-Request messages
               received from the peer."
       ::= { dbpPerPeerInfoEntry 11 }

dbpPerPeerStatsACRsOut OBJECT-TYPE
       SYNTAX     Counter32 UNITS "messages"
       MAX-ACCESS read-only
       STATUS     current
       DESCRIPTION
              "Number of Accounting-Request messages
               sent to the peer."
       ::= { dbpPerPeerInfoEntry 12 }

dbpPerPeerStatsACAsIn OBJECT-TYPE
       SYNTAX     Counter32 UNITS "messages"
       MAX-ACCESS read-only
       STATUS     current
       DESCRIPTION
              "Number of Accounting-Answer messages
               received from the peer."
       ::= { dbpPerPeerInfoEntry 13 }

dbpPerPeerStatsACAsOut OBJECT-TYPE
       SYNTAX     Counter32 UNITS "messages"
       MAX-ACCESS read-only
       STATUS     current
       DESCRIPTION
              "Number of Accounting-Answer messages
               sent to the peer."
       ::= { dbpPerPeerInfoEntry 14 }

dbpPerPeerStatsCERsIn OBJECT-TYPE
       SYNTAX     Counter32 UNITS "messages"
       MAX-ACCESS read-only
       STATUS     current
       DESCRIPTION
              "Number of Capabilities-Exchange-Request
               messages received from the peer."
       ::= { dbpPerPeerInfoEntry 15 }
```

```
dbpPerPeerStatsCERsOut OBJECT-TYPE
       SYNTAX     Counter32 UNITS "messages"
       MAX-ACCESS read-only
       STATUS     current
       DESCRIPTION
             "Number of Capabilities-Exchange-Request
              messages sent to the peer."
       ::= { dbpPerPeerInfoEntry 16 }

dbpPerPeerStatsCEAsIn OBJECT-TYPE
       SYNTAX     Counter32 UNITS "messages"
       MAX-ACCESS read-only
       STATUS     current
       DESCRIPTION
             "Number of Capabilities-Exchange-Answer
              messages received from the peer."
       ::= { dbpPerPeerInfoEntry 17 }

dbpPerPeerStatsCEAsOut OBJECT-TYPE
       SYNTAX     Counter32 UNITS "messages"
       MAX-ACCESS read-only
       STATUS     current
       DESCRIPTION
             "Number of Capabilities-Exchange-Answer
              messages sent to the peer."
       ::= { dbpPerPeerInfoEntry 18 }

dbpPerPeerStatsDWRsIn OBJECT-TYPE
       SYNTAX     Counter32 UNITS "messages"
       MAX-ACCESS read-only
       STATUS     current
       DESCRIPTION
             "Number of Device-Watchdog-Request
              messages received from the peer."
       ::= { dbpPerPeerInfoEntry 19 }

dbpPerPeerStatsDWRsOut OBJECT-TYPE
       SYNTAX     Counter32 UNITS "messages"
       MAX-ACCESS read-only
       STATUS     current
       DESCRIPTION
             "Number of Device-Watchdog-Request
              messages sent to the peer."
       ::= { dbpPerPeerInfoEntry 20 }

dbpPerPeerStatsDWAsIn OBJECT-TYPE
       SYNTAX     Counter32 UNITS "messages"
       MAX-ACCESS read-only
```

```
        STATUS     current
        DESCRIPTION
              "Number of Device-Watchdog-Answer
               messages received from the peer."
        ::= { dbpPerPeerInfoEntry 21 }

dbpPerPeerStatsDWAsOut OBJECT-TYPE
        SYNTAX     Counter32 UNITS "messages"
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
              "Number of Device-Watchdog-Answer
               messages sent to the peer."
        ::= { dbpPerPeerInfoEntry 22 }

dbpPerPeerStatsDPRsIn OBJECT-TYPE
        SYNTAX     Counter32 UNITS "messages"
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
              "Number of Disconnect-Peer-Request messages
               received."
        ::= { dbpPerPeerInfoEntry 23 }

dbpPerPeerStatsDPRsOut OBJECT-TYPE
        SYNTAX     Counter32 UNITS "messages"
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
              "Number of Disconnect-Peer-Request messages
               sent."
        ::= { dbpPerPeerInfoEntry 24 }

dbpPerPeerStatsDPAsIn OBJECT-TYPE
        SYNTAX     Counter32 UNITS "messages"
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
              "Number of Disconnect-Peer-Answer messages
               received."
        ::= { dbpPerPeerInfoEntry 25 }

dbpPerPeerStatsDPAsOut OBJECT-TYPE
        SYNTAX     Counter32 UNITS "messages"
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
              "Number of Disconnect-Peer-Answer messages
```

```
              sent."
       ::= { dbpPerPeerInfoEntry 26 }

dbpPerPeerStatsRARsIn  OBJECT-TYPE
       SYNTAX     Counter32 UNITS "messages"
       MAX-ACCESS read-only
       STATUS     current
       DESCRIPTION
             "Number of Re-Auth-Request messages
              received."
       ::= { dbpPerPeerInfoEntry 27 }

dbpPerPeerStatsRARsOut OBJECT-TYPE
       SYNTAX     Counter32 UNITS "messages"
       MAX-ACCESS read-only
       STATUS     current
       DESCRIPTION
             "Number of Re-Auth-Request messages
              sent."
       ::= { dbpPerPeerInfoEntry 28 }

dbpPerPeerStatsRAAsIn OBJECT-TYPE
       SYNTAX     Counter32 UNITS "messages"
       MAX-ACCESS read-only
       STATUS     current
       DESCRIPTION
             "Number of Re-Auth-Answer messages
              received."
       ::= { dbpPerPeerInfoEntry 29 }

dbpPerPeerStatsRAAsOut OBJECT-TYPE
       SYNTAX     Counter32 UNITS "messages"
       MAX-ACCESS read-only
       STATUS     current
       DESCRIPTION
             "Number of Re-Auth-Answer messages
              sent."
       ::= { dbpPerPeerInfoEntry 30 }

dbpPerPeerStatsSTRsIn OBJECT-TYPE
       SYNTAX     Counter32 UNITS "messages"
       MAX-ACCESS read-only
       STATUS     current
       DESCRIPTION
             "Number of Session-Termination-Request
              messages received from the peer."
       ::= { dbpPerPeerInfoEntry 31 }
```

```
dbpPerPeerStatsSTRsOut OBJECT-TYPE
       SYNTAX     Counter32 UNITS "messages"
       MAX-ACCESS read-only
       STATUS     current
       DESCRIPTION
             "Number of Session-Termination-Request
              messages sent to the peer."
       ::= { dbpPerPeerInfoEntry 32 }

dbpPerPeerStatsSTAsIn OBJECT-TYPE
       SYNTAX     Counter32 UNITS "messages"
       MAX-ACCESS read-only
       STATUS     current
       DESCRIPTION
             "Number of Session-Termination-Answer
              messages received from the peer."
       ::= { dbpPerPeerInfoEntry 33 }

dbpPerPeerStatsSTAsOut OBJECT-TYPE
       SYNTAX     Counter32 UNITS "messages"
       MAX-ACCESS read-only
       STATUS     current
       DESCRIPTION
             "Number of Session-Termination-Answer
              messages sent to the peer."
       ::= { dbpPerPeerInfoEntry 34 }

dbpPerPeerInfoDWReqTimer OBJECT-TYPE
       SYNTAX     TimeTicks
       MAX-ACCESS read-only
       STATUS     current
       DESCRIPTION
             "Device-Watchdog Request Timer, which
              is the interval between messages sent to
              peers."
       ::= { dbpPerPeerInfoEntry 35 }

dbpPerPeerStatsRedirectEvents OBJECT-TYPE
       SYNTAX     Counter32 UNITS "messages"
       MAX-ACCESS read-only
       STATUS     current
       DESCRIPTION
             "Redirect Event count, which is the number
              of redirects sent from a peer."
       ::= { dbpPerPeerInfoEntry 36 }

dbpPerPeerStatsAccDupRequests OBJECT-TYPE
       SYNTAX     Counter32 UNITS "messages"
```

```
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
              "The number of duplicate Diameter Accounting-Request
               messages received."
        ::= { dbpPerPeerInfoEntry 37 }

dbpPerPeerStatsMalformedReqsts OBJECT-TYPE
        SYNTAX     Counter32 UNITS "messages"
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
              "The number of malformed Diameter
               messages received."
        ::= { dbpPerPeerInfoEntry 38 }

dbpPerPeerStatsAccsNotRecorded OBJECT-TYPE
        SYNTAX     Counter32 UNITS "messages"
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
              "The number of Diameter Accounting-Request messages
               which were received and responded to but not
               recorded."
        ::= { dbpPerPeerInfoEntry 39 }

dbpPerPeerStatsAccRetrans OBJECT-TYPE
        SYNTAX     Counter32 UNITS "messages"
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
              "The number of Diameter Accounting-Request messages
               retransmitted to this Diameter peer."
        ::= { dbpPerPeerInfoEntry 40 }

dbpPerPeerStatsTotalRetrans OBJECT-TYPE
        SYNTAX     Counter32 UNITS "messages"
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
              "The number of Diameter messages retransmitted
               to this Diameter peer, not to include Diameter
               Accounting-Request messages retransmitted."
        ::= { dbpPerPeerInfoEntry 41 }

dbpPerPeerStatsAccPendReqstsOut OBJECT-TYPE
        SYNTAX     Gauge32
        MAX-ACCESS read-only
```

```
        STATUS     current
        DESCRIPTION
           "The number of Diameter Accounting-Request messages
            sent to this peer that have not yet timed out or
            received a response. This variable is incremented when an
            Accounting-Request is received by this server and decremented
            due to the transmission of an Accounting-Response, a timeout
            or a retransmission."
        ::= { dbpPerPeerInfoEntry 42 }

dbpPerPeerStatsAccReqstsDropped OBJECT-TYPE
        SYNTAX     Counter32 UNITS "messages"
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
           "The number of Accounting-Requests to this server
            that have been dropped."
        ::= { dbpPerPeerInfoEntry 43 }

dbpPerPeerStatsHByHDropMessages OBJECT-TYPE
        SYNTAX     Counter32 UNITS "messages"
        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."
        ::= { dbpPerPeerInfoEntry 44 }

dbpPerPeerStatsEToEDupMessages OBJECT-TYPE
        SYNTAX     Counter32 UNITS "messages"
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
              "Duplicate answer messages that are to be locally
               consumed.  Does not include duplicate Accounting
               Requests received."
        ::= { dbpPerPeerInfoEntry 45 }

dbpPerPeerStatsUnknownTypes OBJECT-TYPE
        SYNTAX     Counter32 UNITS "messages"
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
              "The number of Diameter messages of unknown type
               which were received."
        ::= { dbpPerPeerInfoEntry 46 }
```

```
dbpPerPeerStatsProtocolErrors OBJECT-TYPE
       SYNTAX     Counter32 UNITS "errors"
       MAX-ACCESS read-only
       STATUS     current
       DESCRIPTION
             "Number of protocol errors returned to peer,
              but not including redirects."
       ::= { dbpPerPeerInfoEntry 47 }

dbpPerPeerStatsTransientFailures OBJECT-TYPE
       SYNTAX     Counter32 UNITS "errors"
       MAX-ACCESS read-only
       STATUS     current
       DESCRIPTION
             "Transient Failure count."
       ::= { dbpPerPeerInfoEntry 48 }

dbpPerPeerStatsPermanentFailures OBJECT-TYPE
       SYNTAX     Counter32 UNITS "errors"
       MAX-ACCESS read-only
       STATUS     current
       DESCRIPTION
             "Number of permanent failures returned to peer."
       ::= { dbpPerPeerInfoEntry 49 }

dbpPerPeerStatsTransportDown OBJECT-TYPE
       SYNTAX     Counter32 UNITS "errors"
       MAX-ACCESS read-only
       STATUS     current
       DESCRIPTION
             "Number of unexpected transport failures."
       ::= { dbpPerPeerInfoEntry 50 }


-- Realm-based Routing Table

dbpRealmMessageRouteTable OBJECT-TYPE
       SYNTAX     SEQUENCE OF DbpRealmMessageRouteEntry
       MAX-ACCESS not-accessible
       STATUS     current
       DESCRIPTION
             "The table listing the Diameter
              Realm-based Message Route information."
       ::= { dbpRealmStats 1 }

dbpRealmMessageRouteEntry OBJECT-TYPE
       SYNTAX     DbpRealmMessageRouteEntry
       MAX-ACCESS not-accessible
```

```
        STATUS     current
        DESCRIPTION
              "A row entry representing a Diameter
               Realm Based Message Route."
        INDEX      { dbpRealmMessageRouteIndex }
        ::= { dbpRealmMessageRouteTable 1 }

DbpRealmMessageRouteEntry ::= SEQUENCE {
        dbpRealmMessageRouteIndex             Unsigned32,
        dbpRealmMessageRouteRealm         SnmpAdminString,
        dbpRealmMessageRouteApp               Unsigned32,
        dbpRealmMessageRouteType             ServiceType,
        dbpRealmMessageRouteAction             Integer32,
        dbpRealmMessageRouteACRsIn             Counter32,
        dbpRealmMessageRouteACRsOut            Counter32,
        dbpRealmMessageRouteACAsIn             Counter32,
        dbpRealmMessageRouteACAsOut            Counter32,
        dbpRealmMessageRouteRARsIn             Counter32,
        dbpRealmMessageRouteRARsOut            Counter32,
        dbpRealmMessageRouteRAAsIn             Counter32,
        dbpRealmMessageRouteRAAsOut            Counter32,
        dbpRealmMessageRouteSTRsIn             Counter32,
        dbpRealmMessageRouteSTRsOut            Counter32,
        dbpRealmMessageRouteSTAsIn             Counter32,
        dbpRealmMessageRouteSTAsOut            Counter32,
        dbpRealmMessageRouteASRsIn             Counter32,
        dbpRealmMessageRouteASRsOut            Counter32,
        dbpRealmMessageRouteASAsIn             Counter32,
        dbpRealmMessageRouteASAsOut            Counter32,
        dbpRealmMessageRouteAccRetrans         Counter32,
        dbpRealmMessageRouteAccDupReqsts       Counter32,
        dbpRealmMessageRoutePendReqstsOut        Gauge32,
        dbpRealmMessageRouteReqstsDrop         Counter32 }

dbpRealmMessageRouteIndex OBJECT-TYPE
        SYNTAX     Unsigned32 (1..4294967295)
        MAX-ACCESS not-accessible
        STATUS     current
        DESCRIPTION
              "A number uniquely identifying each Realm."
        ::= { dbpRealmMessageRouteEntry 1 }

dbpRealmMessageRouteRealm OBJECT-TYPE
        SYNTAX     SnmpAdminString
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
              "Realm name"
```

```
       ::= { dbpRealmMessageRouteEntry 2 }

dbpRealmMessageRouteApp OBJECT-TYPE
       SYNTAX     Unsigned32 (1..4294967295)
       MAX-ACCESS read-only
       STATUS     current
       DESCRIPTION
             "Application id used to route messages
              to this realm."
       ::= { dbpRealmMessageRouteEntry 3 }

dbpRealmMessageRouteType OBJECT-TYPE
       SYNTAX     ServiceType
       MAX-ACCESS read-only
       STATUS     current
       DESCRIPTION
             "The types of service supported for each
              realm application: accounting,
              authentication or both."
       ::= { dbpRealmMessageRouteEntry 4 }

dbpRealmMessageRouteAction OBJECT-TYPE
       SYNTAX     INTEGER { local(1),
                            relay(2),
                            proxy(3),
                            redirect(4) }
       MAX-ACCESS read-only
       STATUS     current
       DESCRIPTION
             "The action is used to identify how a
              message should be treated based on the realm,
              application and type.
              local    - Diameter messages that resolve to a
                         route entry with the Local Action set to
                         Local can be satisfied locally, and do
                         not need to be routed to another peer.
              relay    - All Diameter messages that fall within
                         this category MUST be routed to a
                         next-hop peer, without modifying any
                         non-routing AVPs.
              proxy    - All Diameter messages that fall within this
                         category MUST be routed to a next-hop
                         peer.
              redirect - Diameter messages that fall within this
                         category MUST have the identity of the home
                         Diameter peer(s) appended, and returned
                         to the sender of the message."
       ::= { dbpRealmMessageRouteEntry 5 }
```

```
-- Per-realm message statistics

dbpRealmMessageRouteACRsIn OBJECT-TYPE
       SYNTAX     Counter32 UNITS "messages"
       MAX-ACCESS read-only
       STATUS     current
       DESCRIPTION
             "Number of Accounting-Request messages
              received from the realm."
       ::= { dbpRealmMessageRouteEntry 6 }

dbpRealmMessageRouteACRsOut OBJECT-TYPE
       SYNTAX     Counter32 UNITS "messages"
       MAX-ACCESS read-only
       STATUS     current
       DESCRIPTION
             "Number of Accounting-Request messages
              sent to the realm."
       ::= { dbpRealmMessageRouteEntry 7 }

dbpRealmMessageRouteACAsIn OBJECT-TYPE
       SYNTAX     Counter32 UNITS "messages"
       MAX-ACCESS read-only
       STATUS     current
       DESCRIPTION
             "Number of Accounting-Answer messages
              received from the realm."
       ::= { dbpRealmMessageRouteEntry 8 }

dbpRealmMessageRouteACAsOut OBJECT-TYPE
       SYNTAX     Counter32 UNITS "messages"
       MAX-ACCESS read-only
       STATUS     current
       DESCRIPTION
             "Number of Accounting-Answer messages
              sent to the realm."
       ::= { dbpRealmMessageRouteEntry 9 }

dbpRealmMessageRouteRARsIn OBJECT-TYPE
       SYNTAX     Counter32 UNITS "messages"
       MAX-ACCESS read-only
       STATUS     current
       DESCRIPTION
             "Number of Re-Auth-Request messages
              received from the realm."
       ::= { dbpRealmMessageRouteEntry 10 }

dbpRealmMessageRouteRARsOut OBJECT-TYPE
```

```
        SYNTAX     Counter32 UNITS "messages"
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
              "Number of Re-Auth-Request messages
               sent to the realm."
        ::= { dbpRealmMessageRouteEntry 11 }

dbpRealmMessageRouteRAAsIn OBJECT-TYPE
        SYNTAX     Counter32 UNITS "messages"
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
              "Number of Re-Auth-Answer messages
               received from the realm."
        ::= { dbpRealmMessageRouteEntry 12 }

dbpRealmMessageRouteRAAsOut OBJECT-TYPE
        SYNTAX     Counter32 UNITS "messages"
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
              "Number of Re-Auth-Answer messages
               sent to the realm."
        ::= { dbpRealmMessageRouteEntry 13 }

dbpRealmMessageRouteSTRsIn OBJECT-TYPE
        SYNTAX     Counter32 UNITS "messages"
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
              "Number of Session-Termination-Request messages
               received from the realm."
        ::= { dbpRealmMessageRouteEntry 14 }

dbpRealmMessageRouteSTRsOut OBJECT-TYPE
        SYNTAX     Counter32 UNITS "messages"
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
              "Number of Session-Termination-Request messages
               sent to the realm."
        ::= { dbpRealmMessageRouteEntry 15 }

dbpRealmMessageRouteSTAsIn OBJECT-TYPE
        SYNTAX     Counter32 UNITS "messages"
        MAX-ACCESS read-only
        STATUS     current
```

```
        DESCRIPTION
              "Number of Session-Termination-Answer messages
               received from the realm."
        ::= { dbpRealmMessageRouteEntry 16 }

dbpRealmMessageRouteSTAsOut OBJECT-TYPE
        SYNTAX     Counter32 UNITS "messages"
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
              "Number of Session-Termination-Answer messages
               sent to the realm."
        ::= { dbpRealmMessageRouteEntry 17 }

dbpRealmMessageRouteASRsIn OBJECT-TYPE
        SYNTAX     Counter32 UNITS "messages"
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
              "Number of Abort-Session-Request messages
               received from the realm."
        ::= { dbpRealmMessageRouteEntry 18 }

dbpRealmMessageRouteASRsOut OBJECT-TYPE
        SYNTAX     Counter32 UNITS "messages"
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
              "Number of Abort-Session-Request messages
               sent to the realm."
        ::= { dbpRealmMessageRouteEntry 19 }

dbpRealmMessageRouteASAsIn OBJECT-TYPE
        SYNTAX     Counter32 UNITS "messages"
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
              "Number of Abort-Session-Answer messages
               received from the realm."
        ::= { dbpRealmMessageRouteEntry 20 }

dbpRealmMessageRouteASAsOut OBJECT-TYPE
        SYNTAX     Counter32 UNITS "messages"
        MAX-ACCESS read-only
        STATUS     current
        DESCRIPTION
              "Number of Abort-Session-Answer messages
               sent to the realm."
```

```
       ::= { dbpRealmMessageRouteEntry 21 }

dbpRealmMessageRouteAccRetrans OBJECT-TYPE
       SYNTAX     Counter32 UNITS "messages"
       MAX-ACCESS read-only
       STATUS     current
       DESCRIPTION
             "The number of Diameter accounting messages
              retransmitted to this realm."
       ::= { dbpRealmMessageRouteEntry 22 }

dbpRealmMessageRouteAccDupReqsts OBJECT-TYPE
       SYNTAX     Counter32 UNITS "messages"
       MAX-ACCESS read-only
       STATUS     current
       DESCRIPTION
             "The number of duplicate Diameter accounting
              messages sent to this realm."
       ::= { dbpRealmMessageRouteEntry 23 }

dbpRealmMessageRoutePendReqstsOut OBJECT-TYPE
       SYNTAX     Gauge32
       MAX-ACCESS read-only
       STATUS     current
       DESCRIPTION
          "The number of Diameter Accounting-Request messages
           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 peer and decremented
           due to receipt of an Accounting-Response, a timeout or
           a retransmission."
       ::= { dbpRealmMessageRouteEntry 24 }

dbpRealmMessageRouteReqstsDrop OBJECT-TYPE
       SYNTAX     Counter32 UNITS "messages"
       MAX-ACCESS read-only
       STATUS     current
       DESCRIPTION
             "The number of requsts dropped by this realm."
       ::= { dbpRealmMessageRouteEntry 25 }

dbpRealmKnownPeersTable OBJECT-TYPE
       SYNTAX     SEQUENCE OF DbpRealmKnownPeersEntry
       MAX-ACCESS not-accessible
       STATUS     current
       DESCRIPTION
             "The table listing the Diameter
              Realms and known peers.
```

```
              This is an ordered list, where the ordering
              signifies the order in which the peers are
              tried."
       ::= { dbpRealmCfgs 1 }

dbpRealmKnownPeersEntry OBJECT-TYPE
       SYNTAX     DbpRealmKnownPeersEntry
       MAX-ACCESS not-accessible
       STATUS     current
       DESCRIPTION
             "A row entry representing a Diameter
              Realm and known peers."
       INDEX      { dbpRealmMessageRouteIndex,
                    dbpRealmKnownPeersIndex }
       ::= { dbpRealmKnownPeersTable 1 }

DbpRealmKnownPeersEntry ::= SEQUENCE {
       dbpRealmKnownPeersIndex               Unsigned32,
       dbpRealmKnownPeers                    Unsigned32,
       dbpRealmKnownPeersChosen                 Integer32 }

dbpRealmKnownPeersIndex OBJECT-TYPE
       SYNTAX     Unsigned32 (1..4294967295)
       MAX-ACCESS not-accessible
       STATUS     current
       DESCRIPTION
             "A sequential identifier number."
       ::= { dbpRealmKnownPeersEntry 1 }

dbpRealmKnownPeers OBJECT-TYPE
       SYNTAX     Unsigned32 (1..4294967295)
       MAX-ACCESS read-only
       STATUS     current
       DESCRIPTION
             "The index of the peer this realm knows about.
              Same as the dbpPeerIndex"
       ::= { dbpRealmKnownPeersEntry 2 }

dbpRealmKnownPeersChosen OBJECT-TYPE
       SYNTAX     INTEGER { other(1),
                            roundRobin(2),
                            loadBalance(3),
                            firstPreferred(4),
                            mostRecentFirst(5) }
       MAX-ACCESS read-only
       STATUS     current
       DESCRIPTION
             "How the realm chooses which peer to send
```

```
              messages to.
              roundRobin      - The peer used for each transaction
                                is selected based on the order in
                                which peers are configured.
              loadBalance     - The peer used for each transaction
                                is based on the load metric (
                                implementation dependent) of all
                                peers defined for the realm, with
                                the least loaded peer selected
                                first.
              firstPreferred  - The first defined peer is always
                                used for transactions unless
                                failover occurs.
              mostRecentFirst - The most recently used peer is
                                used first for each transaction."
       ::= { dbpRealmKnownPeersEntry 3 }

-- Conformance

diameterBaseProtocolMIBCompliances
                   OBJECT IDENTIFIER ::= { diameterBaseConform 1 }

diameterBaseProtocolMIBGroups
                   OBJECT IDENTIFIER ::= { diameterBaseConform 2 }

-- Compliance Statements

diameterBPMIBCompliances MODULE-COMPLIANCE
       STATUS     current
       DESCRIPTION
            "The compliance statement for Diameter Base
             Protocol entities."
       MODULE -- this module
            MANDATORY-GROUPS {
                              dbpLocalCfgGroup,
                              dbpPeerCfgGroup,
                              dbpPeerStatsGroup,
                              dbpNotificationsGroup,
                              dbpNotifCfgGroup }

            GROUP             dbpLocalCfgSkippedGroup
            DESCRIPTION
               "This group is only mandatory for a system that
                implements all the local config objects."

            GROUP             dbpLocalStatsSkippedGroup
            DESCRIPTION
               "This group is only mandatory for a system that
```

```
                implements all the local statistics objects."

            GROUP             dbpPeerCfgSkippedGroup
            DESCRIPTION
               "This group is only mandatory for a system that
                implements all the peer config objects."

            GROUP             dbpPeerStatsSkippedGroup
            DESCRIPTION
               "This group is only mandatory for a system that
                implements all the peer statistic objects."

            GROUP             dbpRealmCfgSkippedGroup
            DESCRIPTION
               "This group is only mandatory for a system that
                implementsall the realm config objects."

            GROUP             dbpRealmStatsSkippedGroup
            DESCRIPTION
               "This group is only mandatory for a system that
                implements all the realm statistic objects."

       ::= { diameterBaseProtocolMIBCompliances 1 }

-- Units of Conformance

dbpLocalCfgGroup OBJECT-GROUP
      OBJECTS {
              dbpLocalRealm,
              dbpLocalOriginHost,
              dbpLocalVendorId,
              dbpLocalVendorStorageType,
              dbpLocalVendorRowStatus
      }
      STATUS  current
      DESCRIPTION
            "A collection of objects providing configuration common
             to the peer."
      ::= { diameterBaseProtocolMIBGroups 1 }

dbpPeerCfgGroup OBJECT-GROUP
    OBJECTS   {
              dbpPeerId,
              dbpPeerPortConnect,
              dbpPeerPortListen,
              dbpPeerProtocol,
              dbpPeerSecurity,
              dbpPeerFirmwareRevision,
```

```
                dbpPeerStorageType,
                dbpPeerRowStatus,
                dbpPeerIpAddressType,
                dbpPeerIpAddress,
                dbpPeerVendorId,
                dbpPeerVendorStorageType,
                dbpPeerVendorRowStatus
    }
    STATUS          current
    DESCRIPTION
            "A collection of objects providing configuration
            of the Diameter peers."
    ::= { diameterBaseProtocolMIBGroups 2 }

dbpPeerStatsGroup OBJECT-GROUP
    OBJECTS   {
                dbpPeerStatsState,
                dbpPeerStatsStateDuration,
                dbpPeerStatsLastDiscCause,
                dbpPeerStatsWhoInitDisconnect,
                dbpPeerStatsDWCurrentStatus,
                dbpPeerStatsTimeoutConnAtmpts,
                dbpPeerStatsASRsIn,
                dbpPeerStatsASRsOut,
                dbpPeerStatsASAsIn,
                dbpPeerStatsASAsOut,
                dbpPeerStatsACRsIn,
                dbpPeerStatsACRsOut,
                dbpPeerStatsACAsIn,
                dbpPeerStatsACAsOut,
                dbpPeerStatsCERsIn,
                dbpPeerStatsCERsOut,
                dbpPeerStatsCEAsIn,
                dbpPeerStatsCEAsOut,
                dbpPeerStatsDWRsIn,
                dbpPeerStatsDWRsOut,
                dbpPeerStatsDWAsIn,
                dbpPeerStatsDWAsOut,
                dbpPeerStatsDPRsIn,
                dbpPeerStatsDPRsOut,
                dbpPeerStatsDPAsIn,
                dbpPeerStatsDPAsOut,
                dbpPeerStatsRARsIn,
                dbpPeerStatsRARsOut,
                dbpPeerStatsRAAsIn,
                dbpPeerStatsRAAsOut,
                dbpPeerStatsSTRsIn,
                dbpPeerStatsSTRsOut,
```

```
                dbpPeerStatsSTAsIn,
                dbpPeerStatsSTAsOut,
                dbpPeerStatsDWReqTimer,
                dbpPeerStatsRedirectEvents,
                dbpPeerStatsAccDupRequests,
                dbpPeerStatsMalformedReqsts,
                dbpPeerStatsAccsNotRecorded,
                dbpPeerStatsAccRetrans,
                dbpPeerStatsTotalRetrans,
                dbpPeerStatsAccPendReqstsOut,
                dbpPeerStatsAccReqstsDropped,
                dbpPeerStatsHByHDropMessages,
                dbpPeerStatsEToEDupMessages,
                dbpPeerStatsUnknownTypes,
                dbpPeerStatsProtocolErrors,
                dbpPeerStatsTransientFailures,
                dbpPeerStatsPermanentFailures,
                dbpPeerStatsTransportDown
    }
    STATUS          current
    DESCRIPTION
            "A collection of objects providing statistics
             of the Diameter peers."
    ::= { diameterBaseProtocolMIBGroups 3 }

dbpNotificationsGroup NOTIFICATION-GROUP
   NOTIFICATIONS    {
                    dbpProtocolErrorNotif,
                    dbpTransientFailureNotif,
                    dbpPermanentFailureNotif,
                    dbpPeerConnectionDownNotif,
                    dbpPeerConnectionUpNotif
                    }
    STATUS          current
    DESCRIPTION
            "The set of notifications which an agent is required
             to implement."
    ::= { diameterBaseProtocolMIBGroups 4 }

dbpNotifCfgGroup OBJECT-GROUP
    OBJECTS         {
                    dbpProtocolErrorNotifEnabled,
                    dbpTransientFailureNotifEnabled,
                    dbpPermanentFailureNotifEnabled,
                    dbpPeerConnectionDownNotifEnabled,
                    dbpPeerConnectionUpNotifEnabled
                    }
    STATUS          current
```

```
    DESCRIPTION
            "A collection of objects providing configuration for
            base protocol notifications."
    ::= { diameterBaseProtocolMIBGroups 5 }

dbpLocalCfgSkippedGroup OBJECT-GROUP
    OBJECTS         {
                    dbpLocalId,
                    dbpLocalTcpListenPort,
                    dbpLocalSctpListenPort,
                    dbpLocalStatsTotalPacketsIn,
                    dbpLocalStatsTotalPacketsOut,
                    dbpLocalStatsTotalUpTime,
                    dbpLocalResetTime,
                    dbpLocalConfigReset,
                    dbpLocalApplStorageType,
                    dbpLocalApplRowStatus,
                    dbpAppAdvToPeerServices,
                    dbpAppAdvToPeerStorageType,
                    dbpAppAdvToPeerRowStatus
                    }
    STATUS          current
    DESCRIPTION
            "A collection of objects providing configuration common
            to the peer."
    ::= { diameterBaseProtocolMIBGroups 6 }

dbpLocalStatsSkippedGroup OBJECT-GROUP
    OBJECTS         {
                    dbpLocalStatsTotalPacketsIn,
                    dbpLocalStatsTotalPacketsOut,
                    dbpLocalStatsTotalUpTime,
                    dbpLocalResetTime,
                    dbpLocalConfigReset
                    }
    STATUS          current
    DESCRIPTION
            "A collection of objects providing statistics common
            to the peer."
    ::= { diameterBaseProtocolMIBGroups 7 }

dbpPeerCfgSkippedGroup OBJECT-GROUP
    OBJECTS         { cdbpAppAdvFromPeerType }
    STATUS          current
    DESCRIPTION
            "A collection of objects providing configuration for
            Diameter peers."
    ::= { diameterBaseProtocolMIBGroups 8 }
```

```
dbpPeerStatsSkippedGroup OBJECT-GROUP
    OBJECTS         {
                    dbpPeerStatsDWCurrentStatus,
                    dbpPeerStatsDWReqTimer,
                    dbpPeerStatsRedirectEvents,
                    dbpPeerStatsAccDupRequests,
                    dbpPeerStatsEToEDupMessages
                    }
    STATUS          current
    DESCRIPTION
            "A collection of objects providing statistics
            of Diameter peers."
    ::= { diameterBaseProtocolMIBGroups 9 }

dbpRealmCfgSkippedGroup OBJECT-GROUP
    OBJECTS         {
                    dbpRealmKnownPeers,
                    dbpRealmKnownPeersChosen
                    }
    STATUS          current
    DESCRIPTION
            "A collection of objects providing configuration for
            realm message routing."
    ::= { diameterBaseProtocolMIBGroups 10 }

dbpRealmStatsSkippedGroup OBJECT-GROUP
    OBJECTS         {
                    dbpRealmMessageRouteRealm,
                    dbpRealmMessageRouteApp,
                    dbpRealmMessageRouteType,
                    dbpRealmMessageRouteAction,
                    dbpRealmMessageRouteACRsIn,
                    dbpRealmMessageRouteACRsOut,
                    dbpRealmMessageRouteACAsIn,
                    dbpRealmMessageRouteACAsOut,
                    dbpRealmMessageRouteRARsIn,
                    dbpRealmMessageRouteRARsOut,
                    dbpRealmMessageRouteRAAsIn,
                    dbpRealmMessageRouteRAAsOut,
                    dbpRealmMessageRouteSTRsIn,
                    dbpRealmMessageRouteSTRsOut,
                    dbpRealmMessageRouteSTAsIn,
                    dbpRealmMessageRouteSTAsOut,
                    dbpRealmMessageRouteASRsIn,
                    dbpRealmMessageRouteASRsOut,
                    dbpRealmMessageRouteASAsIn,
                    dbpRealmMessageRouteASAsOut,
                    dbpRealmMessageRouteAccRetrans,
```

```
                    dbpRealmMessageRouteAccDupReqsts,
                    dbpRealmMessageRoutePendReqstsOut,
                    dbpRealmMessageRouteReqstsDrop
                    }
    STATUS          current
    DESCRIPTION
            "A collection of objects providing statistics
            of realm message routing."
    ::= { diameterBaseProtocolMIBGroups 11 }

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
diameterBaseProtocolMIB	{ 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

There are managed objects defined in this MIB that have a MAX-ACCESS clause of read-write and/or read-create. Such objects may be considered sensitive or vulnerable in some network environments. The support for SET operations in a non-secure environment without proper protection can have a negative effect on network operations.

There are several of managed objects in this MIB that may contain sensitive information. These are:

- diameterHostAddress
- diameterPeerServerAddress
- diameterPeerIpAddress

These can be used to determine the address of the Diameter host, and/or peers with which the host is communicating. This information could be useful in impersonating the host or peer.

It is important to control GET access to these objects and possibly to even encrypt the values of these object when sending them over the network via SNMP. Not all versions of SNMP provide features for such a secure environment.

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 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. Contributors

This document is based upon and derived from work done by Jay Koehler, Mark Eklund, Hai Li and Subash Comerica.

8. Acknowledgements

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9. References

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Authors' Addresses

Glen Zorn
Network Zen
227/358 Thanon Sanphawut
Bang Na, Bangkok 10260
Thailand

Phone: +66 (0) 87 040-4617
Email: gwz@net-zen.net

Subash T. Comerica
Juniper Networks
1194 North Mathilda Avenue
Sunnyvale, California 94089
USA

Phone: +1 (408) 936-0830
Email: scomerica@juniper.net