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Definitions of Managed Objects for DLUR using SMIv2

Status of this Memo

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2. Introduction

This memo defines a portion of the Management Information Base (MIB) for use with network management protocols in the Internet community. In particular, it defines objects for monitoring and controlling network devices with DLUR (Dependent LU Requester) capabilities. This memo identifies managed objects for the DLUR protocol.

3. The SNMP Network Management Framework

The SNMP Network Management Framework consists of several components. For the purpose of this specification, the applicable components of the Framework are the SMI and related documents [1, 2, 3], which define the mechanisms used for describing and naming objects for the purpose of management.

The Framework permits new objects to be defined for the purpose of experimentation and evaluation.

4. Overview

This document identifies objects for monitoring the configuration and active characteristics of devices with DLUR capabilities. Dependent LU requester/server (DLUR/S) is an extension to the Advanced Peer-to-Peer Networking (APPN) architecture that provides dependent LU services in APPN networks. See the SNANAU APPN MIB [4] for management of APPN networks.

The base APPN architecture only provided for transport of data between independent logical units (LUs). However, customers have an enormous investment in applications based on dependent LU types. DLUR/S provides for support of dependent LU sessions in an APPN network.

A dependent LU server (DLUS) is an APPN node that provides System Services Control Point (SSCP) services over an APPN network to remote secondary dependent LUs by using SSCP-PU (physical unit) and SSCP-LU sessions whose flows are encapsulated on LU 6.2 session flows between the DLUS node and the appropriate dependent LU requester (DLUR) node. The secondary dependent LUs may be local to the DLUR node, or in adjacent type 2.0 or 2.1 nodes.

The LU 6.2 control sessions between a DLUS node and a DLUR node are referred to as a CPSVRMGR pipe. CPSVRMGR refers to the mode used for the sessions.

In this document, we describe DLUR managed objects.

The DLUR terms and overall architecture are described in [5].

Highlights of the management functions supported by the DLUR MIB module include the following:

- Identifying the node's DLUR capabilities
- Displaying the physical units (PUs) this node is supporting
- Identification of Dependent LU Servers
- Displaying the state of control sessions to Dependent LU Servers.

This MIB module does not support:

- Management of dependent LU servers
- Configuration of DLUR nodes.
- Changing the state of control session to the DLUS
- Displaying the dependent LUs this node is supporting
- Traps. The APPN MIB contains a trap for Alert conditions that may affect DLUR resources. The value for the affectedObject object contained in the alertTrap is determined by the implementation. It may contain a VariablePointer from the DLUR MIB. The APPN/DLUR Alerts are defined in [6].

4.1. DLUR MIB Structure

Although DLUR is an extension to APPN, the DLUR MIB relies very little upon the APPN MIB. The dlurNodeCpName object in this MIB has the same value as the appnNodeCpName object in the APPN MIB. If the dlurPuLsName object in the MIB has the same value as the appnLsName object in the APPN MIB, then the two objects are referring to the same link station.

The DLUR MIB module contains the following collections of objects:

- dlurNodeInfo--objects representing the capabilities and architecture options supported by the DLUR implementation, as well as default primary and backup DLUSs.
- dlurPuInfo--objects describing the PUs that this APPN node is supporting with DLUR.
- dlurDlusInfo--objects describing the control sessions with DLUSs.

These are described below in more detail.

4.1.1. dlurNodeInfo group

The dlurNodeInfo group consists of the following objects and table:

1) dlurNodeCapabilities group

These objects represent the capabilities and options of the DLUR implementation, such as the release level of the implementation

2) dlurDefaultDefBackupDlusTable

This table identifies the list of defined backup DLUSs for all PUs served by this DLUR, if there is no specific DLUS backup list for the PU. The list is in descending order of preference as a backup DLUS.

4.1.2. dlurPuInfo group

The dlurPuInfo group consists of the following tables:

1) dlurPuTable

This table has an entry for each PU this node is supporting via DLUR, including the locally known name, the SSCP supplied name (if known), and the PU status.

2) dlurPuDefBackupDlusTable

This table contains the backup DLUS list defined on a PU basis. The table has an entry for each specifically defined backup DLUS on each PU. The first index to the entry is the PU name, which organizes the table by PU name. The second index is a ranking which further sorts the table in descending order of preference as a backup DLUS for the PU.

If a PU name is not found in this table, the dlurDefaultDefBackupDlusNameTable is used as a backup list for that PU.

4.1.3. dlurDlusInfo group

This group consists of the following table:

1) dlurDlusTable

This table contains information about the control sessions (CPSVRMGR pipes) with the DLUS, including the control point (CP) name of the DLUS and the status of the control session.

5. Definitions

```
APPN-DLUR-MIB DEFINITIONS ::= BEGIN

IMPORTS
        DisplayString, TruthValue
                FROM SNMPv2-TC

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

        MODULE-COMPLIANCE, OBJECT-GROUP
                FROM SNMPv2-CONF

        snanauMIB
                FROM SNA-NAU-MIB

        SnaControlPointName
                FROM APPN-MIB;

dlurMIB MODULE-IDENTITY
        LAST-UPDATED  "9705101500Z"
        ORGANIZATION  "IETF SNA NAU MIB WG / AIW APPN/HPR MIBs SIG"
        CONTACT-INFO

                "
                        Bob Clouston
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                        E-mail: remoore@ralvm6.vnet.ibm.com
                "
      DESCRIPTION
                "This is the MIB module for objects used to manage
                network devices with DLUR capabilities.  This MIB
                contains information that is useful for managing an APPN
                product that implements a DLUR (Dependent Logical Unit
```

```
                Requester).  The DLUR product has a client/server
                relationship with an APPN product that implements a DLUS
                (Dependent Logical Unit Server)."

::= { snanauMIB 5 }
-- snanauMIB ::= { mib-2 34 }

-- ************************************************************************
-- Textual Convention
-- ************************************************************************
-- SnaControlPointName is imported from the APPN MIB

-- ************************************************************************
  dlurObjects OBJECT IDENTIFIER ::= { dlurMIB 1 }
-- ************************************************************************


dlurNodeInfo OBJECT IDENTIFIER ::= { dlurObjects 1 }
-- ************************************************************************
-- DLUR Capabilities of the node
--
--  This group represents the capabilities and options of the DLUR
--  implementation.
-- ************************************************************************
dlurNodeCapabilities OBJECT IDENTIFIER ::= { dlurNodeInfo 1 }

dlurNodeCpName OBJECT-TYPE
      SYNTAX SnaControlPointName
      MAX-ACCESS read-only
      STATUS current
      DESCRIPTION
          "Administratively assigned network name for the APPN node where
          this DLUR implementation resides.  If this object has the same
          value as the appnNodeCpName object in the APPN MIB, then the
          two objects are referring to the same APPN node."

      ::= { dlurNodeCapabilities 1 }

dlurReleaseLevel OBJECT-TYPE
      SYNTAX DisplayString (SIZE (2))
      MAX-ACCESS read-only
      STATUS current
      DESCRIPTION
          "The DLUR release level of this implementation.  This is the
          value that is encoded in the DLUR/DLUS Capabilites (CV 51).
          To insure consistent display, this one-byte value is encoded
          here as two displayable characters that are equivalent to a
          hexadecimal display.  For example, if the one-byte value as
```

```
          encoded in CV51 is X'01', this object will contain the
          displayable string '01'."

      ::= { dlurNodeCapabilities 2 }

dlurAnsSupport OBJECT-TYPE
      SYNTAX INTEGER {
                     continueOrStop(1),
                     stopOnly(2)
                     }
      MAX-ACCESS read-only
      STATUS current
      DESCRIPTION
          "Automatic Network Shutdown (ANS) capability of this node.

              - 'continueOrStop' indicates that the DLUR implementation
                supports either ANS value (continue or stop) as
                specified by the DLUS on ACTPU for each PU.

              - 'stopOnly' indicates that the DLUR implementation only
                supports the ANS value of stop.

           ANS = continue means that the DLUR node will keep LU-LU
           sessions active even if SSCP-PU and SSCP-LU control sessions
           are interrupted.

           ANS = stop means that LU-LU sessions will be interrupted when
           the SSCP-PU and SSCP-LU sessions are interrupted."

      ::= { dlurNodeCapabilities 3 }

dlurMultiSubnetSupport OBJECT-TYPE
      SYNTAX TruthValue
      MAX-ACCESS read-only
      STATUS current
      DESCRIPTION
          "Indication of whether this DLUR implementation can support
          CPSVRMGR sessions that cross NetId boundaries."

      ::= { dlurNodeCapabilities 4 }

dlurDefaultDefPrimDlusName OBJECT-TYPE
      SYNTAX SnaControlPointName
      MAX-ACCESS read-only
      STATUS current
      DESCRIPTION
          "The SNA name of the defined default primary DLUS for all of
          the PUs served by this DLUR.  This can be overridden for a
```

```
            particular PU by a defined primary DLUS for that PU,
            represented by the dlurPuDefPrimDlusName object."

        ::= { dlurNodeCapabilities 5 }

dlurNetworkNameForwardingSupport OBJECT-TYPE
        SYNTAX TruthValue
        MAX-ACCESS read-only
        STATUS current
        DESCRIPTION
            "Indication of whether this DLUR implementation supports
            forwarding of Network Name control vectors on ACTPUs and
            ACTLUs to DLUR-served PUs and their associated LUs.

            This object corresponds to byte 9. bit 3 of cv51."

        ::= { dlurNodeCapabilities 6 }

dlurNondisDlusDlurSessDeactSup OBJECT-TYPE
        SYNTAX TruthValue
        MAX-ACCESS read-only
        STATUS current
        DESCRIPTION
            "Indication of whether this DLUR implementation supports
            nondisruptive deactivation of its DLUR-DLUS sessions.
            Upon receiving from a DLUS an UNBIND for the CPSVRMGR pipe
            with sense data X'08A0 000B', a DLUR that supports this
            option immediately begins attempting to activate a CPSVRMGR
            pipe with a DLUS other than the one that sent the UNBIND.

            This object corresponds to byte 9. bit 4 of cv51."

        ::= { dlurNodeCapabilities 7 }

-- ************************************************************************
-- DLUR default defined backup DLUS table
-- ************************************************************************

dlurDefaultDefBackupDlusTable OBJECT-TYPE
        SYNTAX SEQUENCE OF DlurDefaultDefBackupDlusEntry
        MAX-ACCESS not-accessible
        STATUS current
        DESCRIPTION
            "This table contains an ordered list of defined backup DLUSs
            for all of the PUs served by this DLUR.  These can be
            overridden for a particular PU by a list of defined backup
            DLUSs for that PU, represented by the
            dlurPuDefBackupDlusNameTable.  Entries in this table are
```

```
          ordered from most preferred default backup DLUS to least
          preferred."

      ::= { dlurNodeInfo 2 }

dlurDefaultDefBackupDlusEntry OBJECT-TYPE
      SYNTAX DlurDefaultDefBackupDlusEntry
      MAX-ACCESS not-accessible
      STATUS current
      DESCRIPTION
          "This table is indexed by an integer-valued index, which
          orders the entries from most preferred default backup DLUS
          to least preferred."

      INDEX { dlurDefaultDefBackupDlusIndex }

      ::= { dlurDefaultDefBackupDlusTable 1 }

DlurDefaultDefBackupDlusEntry ::= SEQUENCE {
      dlurDefaultDefBackupDlusIndex      Unsigned32,
      dlurDefaultDefBackupDlusName       SnaControlPointName
                    }

dlurDefaultDefBackupDlusIndex OBJECT-TYPE
      SYNTAX Unsigned32 (1..4294967295)
      MAX-ACCESS not-accessible
      STATUS current
      DESCRIPTION
          "Index for this table.  The index values start at 1,
          which identifies the most preferred default backup DLUS."

      ::= { dlurDefaultDefBackupDlusEntry 1 }

dlurDefaultDefBackupDlusName OBJECT-TYPE
      SYNTAX SnaControlPointName
      MAX-ACCESS read-only
      STATUS current
      DESCRIPTION
          "Fully qualified name of a default backup DLUS for PUs served
          by this DLUR."

      ::= { dlurDefaultDefBackupDlusEntry 2 }

-- ****************************************************************
-- PU Information
--
--  The following table carries information about the PUs that this APPN
--  node is supporting via DLUR.
```

```
-- ************************************************************************
dlurPuInfo OBJECT IDENTIFIER ::= { dlurObjects 2 }

dlurPuTable OBJECT-TYPE
      SYNTAX SEQUENCE OF DlurPuEntry
      MAX-ACCESS not-accessible
      STATUS current
      DESCRIPTION
          "Information about the PUs supported by this DLUR."

      ::= { dlurPuInfo 1 }

dlurPuEntry OBJECT-TYPE
      SYNTAX DlurPuEntry
      MAX-ACCESS not-accessible
      STATUS current
      DESCRIPTION
          "Entry in a table of PU information, indexed by PU name."

      INDEX { dlurPuName  }

      ::= { dlurPuTable 1 }

DlurPuEntry ::= SEQUENCE {
      dlurPuName                  DisplayString,
      dlurPuSscpSuppliedName      DisplayString,
      dlurPuStatus                INTEGER,
      dlurPuAnsSupport            INTEGER,
      dlurPuLocation              INTEGER,
      dlurPuLsName                DisplayString,
      dlurPuDlusSessnStatus       INTEGER,
      dlurPuActiveDlusName        DisplayString,
      dlurPuDefPrimDlusName       DisplayString
                    }

dlurPuName OBJECT-TYPE
      SYNTAX DisplayString (SIZE (1..17))
      MAX-ACCESS not-accessible
      STATUS current
      DESCRIPTION
          "Locally administered name of the PU."

      ::= { dlurPuEntry 1 }


dlurPuSscpSuppliedName OBJECT-TYPE
      SYNTAX DisplayString (SIZE (0..17))
      MAX-ACCESS read-only
```

```
      STATUS current
      DESCRIPTION
          "The SNA name of the PU.  This value is supplied to a PU by the
          SSCP that activated it.  If a value has not been supplied, a
          zero-length string is returned."

      ::= { dlurPuEntry 2 }

dlurPuStatus OBJECT-TYPE
      SYNTAX INTEGER {
                      reset(1),
                      pendReqActpuRsp(2),
                      pendActpu(3),
                      pendActpuRsp(4),
                      active(5),
                      pendLinkact(6),
                      pendDactpuRsp(7),
                      pendInop(8),
                      pendInopActpu(9)
                     }
      MAX-ACCESS read-only
      STATUS current
      DESCRIPTION
          "Status of the DLUR-supported PU.  The following values are
          defined:

             reset(1)           -  reset
             pendReqActpuRsp(2) -  pending a response from the DLUS
                                   to a Request ACTPU
             pendActpu(3)       -  pending an ACTPU from the DLUS
             pendActpuRsp(4)    -  pending an ACTPU response from the PU
             active(5)          -  active
             pendLinkact(6)     -  pending activation of the link to a
                                   downstream PU
             pendDactpuRsp(7)   -  pending a DACTPU response from the PU
             pendInop(8)        -  the CPSVRMGR pipe became inoperative
                                   while the DLUR was pending an ACTPU
                                   response from the PU
             pendInopActpu(9)   -  when the DLUR was in the pendInop
                                   state, a CPSVRMGR pipe became active
                                   and a new ACTPU was received over it,
                                   before a response to the previous
                                   ACTPU was received from the PU."

      ::= { dlurPuEntry 3 }

dlurPuAnsSupport OBJECT-TYPE
      SYNTAX INTEGER {
```

```
                    continue(1),
                    stop(2)
                    }
      MAX-ACCESS read-only
      STATUS current
      DESCRIPTION
          "The Automatic Network Shutdown (ANS) support configured for
          this PU.  This value (as configured by the network
          administrator) is sent by DLUS with ACTPU for each PU.

              - 'continue' means that the DLUR node will attempt to keep
                LU-LU sessions active even if SSCP-PU and SSCP-LU
                control sessions are interrupted.

              - 'stop' means that LU-LU sessions will be interrupted
                when the SSCP-PU and SSCP-LU sessions are interrupted."

      ::= { dlurPuEntry 4 }

dlurPuLocation OBJECT-TYPE
      SYNTAX INTEGER {
                     internal(1),
                     downstream(2) }
      MAX-ACCESS read-only
      STATUS current
      DESCRIPTION
          "Location of the DLUR-support PU:
              internal(1)   - internal to the APPN node itself (no link)
              downstream(2) - downstream of the APPN node (connected via
                              a link)."

      ::= { dlurPuEntry 5 }

dlurPuLsName OBJECT-TYPE
      SYNTAX DisplayString (SIZE (0..10))
      MAX-ACCESS read-only
      STATUS current
      DESCRIPTION
          "Administratively assigned name of the link station through
          which a downstream PU is connected to this DLUR.  A zero-length
          string is returned for internal PUs.  If this object has the
          same value as the appnLsName object in the APPN MIB, then the
          two are identifying the same link station."

      ::= { dlurPuEntry 6 }

dlurPuDlusSessnStatus OBJECT-TYPE
      SYNTAX INTEGER {
```

```
                    reset(1),
                    pendingActive(2),
                    active(3),
                    pendingInactive(4)
                   }
      MAX-ACCESS read-only
      STATUS current
      DESCRIPTION
          "Status of the control session to the DLUS identified in
          dlurPuActiveDlusName.  This is a combination of the separate
          states for the contention-winner and contention-loser sessions:

          reset(1)           - none of the cases below
          pendingActive(2)   - either contention-winner session or
                               contention-loser session is pending active
          active(3)          - contention-winner and contention-loser
                               sessions are both active
          pendingInactive(4) - either contention-winner session or
                               contention-loser session is pending
                               inactive - this test is made AFTER the
                               'pendingActive' test.

          The following matrix provides a different representation of
          how the values of this object are related to the individual
          states of the contention-winner and contention-loser sessions:

               Conwinner
               | pA | pI | A | X = !(pA | pI | A)
          C ++++++++++++++++++++++++++++++++++
          o pA | 2  |  2 | 2 | 2
          n ++++++++++++++++++++++++++++++++++
          l pI | 2  |  4 | 4 | 4
          o ++++++++++++++++++++++++++++++++++
          s A  | 2  |  4 | 3 | 1
          e ++++++++++++++++++++++++++++++++++
          r X  | 2  |  4 | 1 | 1
            ++++++++++++++++++++++++++++++++++
          "

      ::= { dlurPuEntry 7 }

dlurPuActiveDlusName OBJECT-TYPE
      SYNTAX DisplayString (SIZE (0..17))
      MAX-ACCESS read-only
      STATUS current
      DESCRIPTION
          "The SNA name of the active DLUS for this PU.  If its length
          is not zero, this name follows the SnaControlPointName textual
```

```
            convention.  A zero-length string indicates that the PU does
            not currently have an active DLUS."

        ::= { dlurPuEntry 8 }

dlurPuDefPrimDlusName OBJECT-TYPE
        SYNTAX DisplayString (SIZE (0..17))
        MAX-ACCESS read-only
        STATUS current
        DESCRIPTION
            "The SNA name of the defined primary DLUS for this PU, if one
            has been defined.  If present, this name follows the
            SnaControlPointName textual convention.  A zero-length string
            indicates that no primary DLUS has been defined for this PU, in
            which case the global default represented by the
            dlurDefaultDefPrimDlusName object is used."

        ::= { dlurPuEntry 9 }

-- ****************************************
-- Defined backup DLUS table for a PU
-- ****************************************

dlurPuDefBackupDlusTable OBJECT-TYPE
        SYNTAX SEQUENCE OF DlurPuDefBackupDlusEntry
        MAX-ACCESS not-accessible
        STATUS current
        DESCRIPTION
            "This table contains an ordered list of defined backup DLUSs
            for those PUs served by this DLUR that have their own defined
            backup DLUSs.  PUs that have no entries in this table use the
            global default backup DLUSs for the DLUR, represented by the
            dlurDefaultDefBackupDlusNameTable.  Entries in this table are
            ordered from most preferred backup DLUS to least preferred for
            each PU."

        ::= { dlurPuInfo 2 }

dlurPuDefBackupDlusEntry OBJECT-TYPE
        SYNTAX DlurPuDefBackupDlusEntry
        MAX-ACCESS not-accessible
        STATUS current
        DESCRIPTION
            "This table is indexed by PU name and by an integer-valued
            index, which orders the entries from most preferred backup DLUS
            for the PU to least preferred."

        INDEX { dlurPuDefBackupDlusPuName,
```

```
              dlurPuDefBackupDlusIndex }

      ::= { dlurPuDefBackupDlusTable 1 }

DlurPuDefBackupDlusEntry ::= SEQUENCE {
      dlurPuDefBackupDlusPuName          DisplayString,
      dlurPuDefBackupDlusIndex           Unsigned32,
      dlurPuDefBackupDlusName            SnaControlPointName
                    }

dlurPuDefBackupDlusPuName OBJECT-TYPE
      SYNTAX DisplayString (SIZE (1..17))
      MAX-ACCESS not-accessible
      STATUS current
      DESCRIPTION
          "Locally administered name of the PU.  If this object has the
          same value as the dlurPuName object, then the two are
          identifying the same PU."

      ::= { dlurPuDefBackupDlusEntry 1 }

dlurPuDefBackupDlusIndex OBJECT-TYPE
      SYNTAX Unsigned32 (1..4294967295)
      MAX-ACCESS not-accessible
      STATUS current
      DESCRIPTION
          "Secondary index for this table.  The index values start at 1,
          which identifies the most preferred backup DLUS for the PU."

      ::= { dlurPuDefBackupDlusEntry 2 }

dlurPuDefBackupDlusName OBJECT-TYPE
      SYNTAX SnaControlPointName
      MAX-ACCESS read-only
      STATUS current
      DESCRIPTION
          "Fully qualified name of a backup DLUS for this PU."

      ::= { dlurPuDefBackupDlusEntry 3 }

-- ****************************************************************
--               DLUS Control Sessions (CPSVRMGR Pipes)
--
--  This table contains information about DLUS control sessions, also
--  known as CPSVRMGR pipes.  Although DLUR uses a pair of CPSVRMGR
--  sessions for communication, for the purpose of status, information
--  about these two sessions is combined to yield a single status for the
--  requester/server connection.
```

```
-- ************************************************************************

dlurDlusInfo OBJECT IDENTIFIER ::= { dlurObjects 3 }

dlurDlusTable OBJECT-TYPE
      SYNTAX SEQUENCE OF DlurDlusEntry
      MAX-ACCESS not-accessible
      STATUS current
      DESCRIPTION
           "Information about DLUS control sessions."

      ::= { dlurDlusInfo 1}

dlurDlusEntry OBJECT-TYPE
      SYNTAX DlurDlusEntry
      MAX-ACCESS not-accessible
      STATUS current
      DESCRIPTION
           "This entry is indexed by the name of the DLUS."

      INDEX { dlurDlusName }

      ::= { dlurDlusTable 1 }

DlurDlusEntry ::= SEQUENCE {
      dlurDlusName          SnaControlPointName,
      dlurDlusSessnStatus   INTEGER
                    }

dlurDlusName OBJECT-TYPE
      SYNTAX SnaControlPointName
      MAX-ACCESS not-accessible
      STATUS current
      DESCRIPTION
          "The SNA name of a DLUS with which this DLUR currently has a
          CPSVRMGR pipe established."

      ::= { dlurDlusEntry 1 }

dlurDlusSessnStatus OBJECT-TYPE
      SYNTAX INTEGER {
                     reset(1),
                     pendingActive(2),
                     active(3),
                     pendingInactive(4)
                    }
      MAX-ACCESS read-only
      STATUS current
```

```
      DESCRIPTION
          "Status of the CPSVRMGR pipe between the DLUR and this DLUS.
          This is a combination of the separate states for the
          contention-winner and contention-loser sessions:

          reset(1)           - none of the cases below
          pendingActive(2)   - either contention-winner session or
                               contention-loser session is pending active
          active(3)          - contention-winner and contention-loser
                               sessions are both active
          pendingInactive(4) - either contention-winner session or
                               contention-loser session is pending
                               inactive - this test is made AFTER the
                               'pendingActive' test.

          The following matrix provides a different representation of
          how the values of this object are related to the individual
          states of the contention-winner and contention-loser sessions:

               Conwinner
               | pA | pI | A | X = !(pA | pI | A)
          C +++++++++++++++++++++++++++++++++++
          o pA | 2  |  2 | 2 | 2
          n +++++++++++++++++++++++++++++++++++
          l pI | 2  |  4 | 4 | 4
          o +++++++++++++++++++++++++++++++++++
          s A  | 2  |  4 | 3 | 1
          e +++++++++++++++++++++++++++++++++++
          r X  | 2  |  4 | 1 | 1
            +++++++++++++++++++++++++++++++++++
          "

      ::= { dlurDlusEntry 2 }

-- ************************************************************
-- Conformance information
-- ************************************************************

dlurConformance       OBJECT IDENTIFIER ::= { dlurMIB 2 }

dlurCompliances       OBJECT IDENTIFIER ::= { dlurConformance 1 }
dlurGroups            OBJECT IDENTIFIER ::= { dlurConformance 2 }

-- Compliance statements

dlurCompliance MODULE-COMPLIANCE
      STATUS current
      DESCRIPTION
```

```
            "The compliance statement for the SNMPv2 entities which
            implement the DLUR MIB."

        MODULE -- this module

--      Unconditionally mandatory groups
        MANDATORY-GROUPS  { dlurConfGroup }

        ::= { dlurCompliances 1 }

-- Units of conformance
dlurConfGroup OBJECT-GROUP
        OBJECTS {
                  dlurNodeCpName,
                  dlurReleaseLevel,
                  dlurAnsSupport,
                  dlurMultiSubnetSupport,
                  dlurNetworkNameForwardingSupport,
                  dlurNondisDlusDlurSessDeactSup,
                  dlurDefaultDefPrimDlusName,
                  dlurDefaultDefBackupDlusName,
                  dlurPuSscpSuppliedName,
                  dlurPuStatus,
                  dlurPuAnsSupport,
                  dlurPuLocation,
                  dlurPuLsName,
                  dlurPuDlusSessnStatus,
                  dlurPuActiveDlusName,
                  dlurPuDefPrimDlusName,
                  dlurPuDefBackupDlusName,
                  dlurDlusSessnStatus
                 }
        STATUS current
        DESCRIPTION
            "A collection of objects providing information on an
            implementation of APPN DLUR."

        ::= { dlurGroups 1 }

-- end of conformance statement

END
```

6. Acknowledgments

This MIB module is the product of the IETF SNA NAU MIB WG and the AIW APPN/HPR MIBs SIG.

7. References

[1] Case, J., McCloghrie, K., Rose, M., and S. Waldbusser, "Structure of Management Information for version 2 of the Simple Network Management Protocol (SNMPv2)", RFC 1902, January 1996.

[2] Case, J., McCloghrie, K., Rose, M., and S. Waldbusser, "Textual Conventions for Version 2 of the Simple Network Management Protocol (SNMPv2)", RFC 1903, January 1996.

[3] Case, J., McCloghrie, K., Rose, M., and S. Waldbusser, "Conformance Statements for Version 2 of the Simple Network Management Protocol (SNMPv2)", RFC 1904, January 1996.

[4] Clouston, B., and B. Moore, "Definition of Managed Objects for APPN", RFC 2155, June 1997.

[5] IBM, Systems Network Architecture Advanced Peer-to-Peer Networking Dependent LU Requester Architecture Reference, Version 1.2, SV40-1010-01, December 1995.

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8. Security Considerations

In most cases, MIBs are not themselves security risks; if SNMP security is operating as intended, the use of a MIB to view information about a system, or to change some parameter at the system, is a tool, not a threat.

None of the read-only objects in the DLUR MIB reports a password, user data, or anything else that is particularly sensitive. Some enterprises view their network configuration itself, as well as information about network usage and performance, as corporate assets; such enterprises may wish to restrict SNMP access to most of the objects in the MIB.

There are no read-write objects in the DLUR MIB.

9. Authors' Addresses

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