

Definitions of Managed Objects  
for APPN TRAPS

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Abstract

This memo defines a portion of the Management Information Base (MIB) for

use with network management protocols in the Internet community. In particular, it defines objects for receiving notifications from network devices with APPN (Advanced Peer-to-Peer Network) and DLUR (Dependent LU Requester) capabilities. This memo identifies notifications for the APPN and DLUR architecture.

This memo does not specify a standard for the Internet community.

## **1. Introduction**

This document is a product of the SNA NAU Services MIB Working Group. It defines a MIB module for notifications for devices with Advanced Peer-to-Peer Networking (APPN) and Dependent LU Requester (DLUR) capabilities.

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](#) [[13](#)].

## **2. The SNMP Network Management Framework**

The SNMP Management Framework presently consists of five major components:

- o An overall architecture, described in [RFC 2271](#) [[1](#)].
- o Mechanisms for describing and naming objects and events for the purpose of management. The first version of this Structure of Management Information (SMI) is called SMIV1 and described in [RFC 1155](#) [[2](#)], [RFC 1212](#) [[3](#)] and [RFC 1215](#) [[4](#)]. The second version, called SMIV2, is described in [RFC 1902](#) [[5](#)], [RFC 1903](#) [[6](#)] and [RFC 1904](#) [[7](#)].
- o Message protocols for transferring management information. The first version of the SNMP message protocol is called SNMPv1 and described in [RFC 1157](#) [[8](#)]. A second version of the SNMP message protocol, which is not an Internet standards track protocol, is called SNMPv2c and described in [RFC 1901](#) [[9](#)] and [RFC 1906](#) [[10](#)]. The third version of the message protocol is called SNMPv3 and described in [RFC 1906](#) [[10](#)], [RFC 2272](#) [[11](#)] and [RFC 2274](#) [[12](#)].
- o Protocol operations for accessing management information. The first set of protocol operations and associated PDU formats is described in [RFC 1157](#) [[8](#)]. A second set of protocol operations and associated PDU formats is described in [RFC 1905](#) [[13](#)].

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- o A set of fundamental applications described in [RFC 2273](#) [14] and the view-based access control mechanism described in [RFC 2275](#) [15].

Managed objects are accessed via a virtual information store, termed the Management Information Base or MIB. Objects in the MIB are defined using the mechanisms defined in the SMI.

This memo specifies a MIB module that is compliant to the SMIV2. A MIB conforming to the SMIV1 can be produced through the appropriate translations. The resulting translated MIB must be semantically equivalent, except where objects or events are omitted because no translation is possible (use of Counter64). Some machine readable information in SMIV2 will be converted into textual descriptions in SMIV1 during the translation process. However, this loss of machine readable information is not considered to change the semantics of the MIB.

### **3. Overview**

This document identifies the set of objects for reporting the status of devices with APPN and DLUR capabilities via notifications.

See the SNANAU APPN MIB [18] and SNANAU DLUR MIB [19] for the objects for monitoring the configuration and active characteristics of the devices with APPN and DLUR capabilities. Many objects contained in the notifications of this MIB are imported from the APPN and DLUR MIBs. Implementors of this MIB must also implement the APPN MIB. Implementations that support the `appnTrapMibDlurConfGroup` and the `appnTrapMibDlurNotifGroup` must also implement the DLUR MIB.

The SNANAU APPN MIB allows a management station to collect the network topology of an APPN network (the network nodes (NNs) in the network and all of transmission groups (TGs) between the network nodes) from an APPN device. It also allows the management station to collect the local topology (TGs to end stations, and locally defined ports and link stations) from an APPN device. While the SNANAU APPN MIB has an efficient way to poll the APPN device for updates to the network topology, using flow reduction sequence numbers (FRSs) as a table index; it does not have a mechanism to poll the local topology tables (`appnLocalTgTable`, `appnPortTable`, and `appnLsTable`) for status changes.

This MIB provides a mechanism for an APPN device to send notifications to inform the management station of status changes to rows of these tables. Status changes include operational state changes, and for TGs also include control-point to control-point (CP-CP) session state

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changes. A notification is defined for each type of status change for each table.

The port and link operational state objects have intermediate states. Notifications are only sent for transition to active or inactive state.

Notifications are only sent for row creation if the state is active or operational. This is done to avoid sending a notification as the row is created with an inactive initial state, followed by another notification as the resource is activated.

Notifications are only sent for row deletion if the last state was active or operational. In most cases, a resource must be deactivated before it can be deleted, and the deactivation will cause a notification to be sent. There is no need for a second notification to be sent for the row deletion, except for the case where the deletion occurred without deactivation. In this case, the state of the object in the notification will indicate an inactive state, since a deleted resource can no longer be active.

The purpose of the appnLocalTgCpCpStateChangeTrap notification is to identify the loss or recovery of CP-CP sessions on a TG while the TG remains operational. Thus this notification is only sent if there is a change to an appnLocalTgCpCpSession object, but not a change to the appnLocalTgOperational object. This notification is never sent for the creation or deletion of a row in the appnLocalTgTable.

Each notification always contains an object which is a count of the number of times the status of a row in table has changed since the APPN node was last reinitialized. This enables a management station to detect that it has missed a notification, if it does not get the notifications in numerical sequence. If the notifications are not in sequence, the management station should retrieve the entire table to get the correct status for all rows.

Similarly, the SNANAU DLUR MIB provides a mechanism for retrieving the configuration and status of dependent LU server (DLUS) sessions on a device with DLUR capabilities. This MIB defines a notification for a DLUR-DLUS session state change of a row in the dlurDlusTable, in the manner described above. A notification is only sent for a session state transition to active or inactive. As with the above notifications, it is only sent on row creation if the initial state is active; and on row deletion is the last state was active, in which case the notification indicates that the state is now inactive.

The SNANAU APPN MIB also provides a mechanism for a management station

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to collect traffic statistics on intermediate sessions, primarily for accounting purposes. However, when the session is terminated, all statistics from the last poll until the session termination time are lost, since the row for that session is deleted from the appnIsInTable. This MIB defines a notification so that the session's final statistics can be sent to a management station. If the notification is not delivered, the final session statistics are lost. If this is a concern, polling of the appnIsInTable in the APPN MIB should be increased to more likely reduce the time between the last poll and the session termination, thereby reducing the amount of data lost.

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

- o A notification for an APPN local TG operational state change.
- o A notification for an APPN local TG CP-CP session state change.
- o A notification for an APPN port operational state change.
- o A notification for an APPN link station operational state change.
- o A notification for a DLUR-DLUS session state change.
- o A notification for reporting final APPN intermediate session statistics.

This MIB module does not support:

- o Objects to query the configuration or status of APPN nodes on demand.
- o Notifications for changes to local topology tables not related to status.

### **3.1. APPN TRAP MIB Structure**

The APPN TRAP MIB module contains a group of notifications, and a group of supporting objects.

The group of notifications consists of the following notifications:

- 1) appnIsrAccountingDataTrap



This notification is generated by an APPN device when an intermediate session is terminating, to report the final accounting statistics of the session.

2) appnLocalTgOperStateChangeTrap

This notification identifies a change to the appnLocalTgOperational object in a row of the SNANAU APPN MIB appnLocalTgTable.

3) appnLocalTgCpCpStateChangeTrap

This notification identifies a change to the appnLocalTgCpCpSession object in a row of the SNANAU APPN MIB appnLocalTgTable.

4) appnPortOperStateChangeTrap

This notification identifies a change to the appnPortOperState object in a row of the SNANAU APPN MIB appnPortTable.

5) appnLsOperStateChangeTrap

This notification identifies a change to the appnLsOperState object in a row of the SNANAU APPN MIB appnLsTable.

6) dlurDlusStateChangeTrap

This notification identifies a change to the dlurDlusSessnStatus object in a row of the SNANAU DLUR MIB dlurDlusTable.

The group of supporting objects contains the appnTrapControl object, which controls whether the APPN device generates each type of notification. Note that generation of the appnIsrAccountingDataTrap is not controlled by this object; instead it is controlled by the appnIsInGlobalCtrAdminStatus object in the SNANAU APPN MIB.

Although APPN notification generation could be controlled solely by entries in the snmpNotificationMIB, [RFC 2273](#) [9], the appnTrapControl object exists in this MIB so that implementations are not required to implement [RFC 2273](#) to control generation of APPN notifications. For a notification to be generated and sent as a TRAP or INFORM, the notification type must first be enabled by the appnTrapControl object. It must also not be disabled by an snmpNotificationMIB entry. The destination of notifications is not within the scope of this MIB.

Also contained in this group are objects for the TG, port, link, and

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DLUR-DLUS session notifications to indicate the number of times each of the tables has had a status change of a row since the APPN node was last reinitialized.

#### **4. Definitions**

APPN-TRAP-MIB DEFINITIONS ::= BEGIN

IMPORTS

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

TEXTUAL-CONVENTION  
FROM SNMPv2-TC

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

appnMIB, appnIsInP2SFmdPius, appnIsInS2PFmdPius,  
appnIsInP2SNonFmdPius, appnIsInS2PNonFmdPius,  
appnIsInP2SFmdBytes, appnIsInS2PFmdBytes,  
appnIsInP2SNonFmdBytes, appnIsInS2PNonFmdBytes,  
appnIsInSessUpTime, appnObjects,  
appnLocalTgDestVirtual, appnLocalTgDlcData,  
appnLocalTgPortName, appnLocalTgQuiescing,  
appnLocalTgOperational, appnLocalTgCpCpSession,  
appnLocalTgEffCap, appnLocalTgConnCost,  
appnLocalTgByteCost, appnLocalTgSecurity,  
appnLocalTgDelay, appnLocalTgUsr1,  
appnLocalTgUsr2, appnLocalTgUsr3,  
appnLocalTgHprSup, appnLocalTgIntersubnet,  
appnLocalTgMltgLinkType, appnLocalTgBranchLinkType,  
appnPortOperState, appnPortDlcType,  
appnPortPortType, appnPortSIMRIM,  
appnPortLsRole, appnPortNegotLs,  
appnPortDynamicLinkSupport, appnPortMaxRcvBtuSize,  
appnPortMaxIframeWindow, appnPortSpecific,  
appnPortDlcLocalAddr, appnPortCounterDisconTime,  
appnLsOperState, appnLsPortName,  
appnLsDlcType, appnLsDynamic,  
appnLsAdjCpName, appnLsAdjNodeType,  
appnLsTgNum, appnLsLimResource,  
appnLsActOnDemand, appnLsMigration,  
appnLsPartnerNodeId, appnLsCpCpSessionSupport,  
appnLsMaxSendBtuSize, appnLsSpecific,  
appnLsHprSup, appnLsErrRecoSup,  
appnLsForAnrLabel, appnLsRevAnrLabel,  
appnLsCpCpNceId, appnLsRouteNceId,

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appnLsBfNceId, appnLsLocalAddr,

appnLsRemoteAddr, appnLsRemoteLsName,  
appnLsCounterDisconTime, appnCompliances, appnGroups  
FROM APPN-MIB

dlurDlusSessnStatus  
FROM APPN-DLUR-MIB;

appnTrapMIB MODULE-IDENTITY

LAST-UPDATED "9807160000Z" -- July 16, 1998  
ORGANIZATION "IETF SNA NAU MIB WG / AIW APPN MIBs SIG"  
CONTACT-INFO

"

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"

DESCRIPTION

"This MIB module defines notifications to be generated by network devices with APPN capabilities. It presupposes support for the APPN MIB ([RFC 2155](#)). It also presupposes support for the DLUR MIB ([RFC 2232](#)) for implementations that support the DLUR-related groups."

::= { appnMIB 0 }

-- \*\*\*\*\*  
-- Textual Conventions  
-- \*\*\*\*\*

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AppnLastChangeType ::= TEXTUAL-CONVENTION

STATUS current

DESCRIPTION

"A value reporting the type of the last change made to a specified table. Defined values are:

addition(1) - a new row was added to the table  
 deletion(2) - an existing row was removed from the table  
 modification(3) - the value of one or more objects in an existing row of the table changed. Changes to objects with the syntax counter32 or counter64 are not considered modifications. Changes to other objects may also be excluded in the definition of an object having this syntax."

SYNTAX INTEGER { addition(1),  
 deletion(2),  
 modification(3)  
 }

-- \*\*\*\*\*  
 -- Notifications  
 -- \*\*\*\*\*

appnIsrAccountingDataTrap NOTIFICATION-TYPE

OBJECTS {  
 appnIsInP2SFmdPius,  
 appnIsInS2PFmdPius,  
 appnIsInP2SNonFmdPius,  
 appnIsInS2PNonFmdPius,  
 appnIsInP2SFmdBytes,  
 appnIsInS2PFmdBytes,  
 appnIsInP2SNonFmdBytes,  
 appnIsInS2PNonFmdBytes,  
 appnIsInSessUpTime  
 }

STATUS current

DESCRIPTION

"When it has been enabled, this notification is generated by an APPN node whenever an ISR session passing through the node is taken down, regardless of whether the session went down normally or abnormally. Its purpose is to allow a management application (primarily an accounting application) that is monitoring the ISR counts to receive the final values of these



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counts, so that the application can properly account for the amounts the counts were incremented since the last time the application polled them. The appnIsInSessUpTime object provides the total amount of time that the session was active.

This notification is not a substitute for polling the ISR counts. In particular, the count values reported in this notification cannot be assumed to be the complete totals for the life of the session, since they may have wrapped while the session was up.

The session to which the objects in this notification apply is identified by the fully qualified CP name and PCID that make up the table index. An instance of this notification will contain exactly one instance of each of its objects, and these objects will all belong to the same conceptual row of the appnIsInTable.

Generation of this notification is controlled by the same object in the APPN MIB, appnIsInGlobeCtrAdminStatus, that controls whether the count objects themselves are being incremented."

::= { appnTrapMIB 1 }

appnLocalTgTopoChangeTrap NOTIFICATION-TYPE

OBJECTS {  
    appnLocalTgTableChanges,  
    appnLocalTgTableLastChangeType,  
    appnLocalTgDestVirtual,  
    appnLocalTgDlcData,  
    appnLocalTgPortName,  
    appnLocalTgQuiescing,  
    appnLocalTgOperational,  
    appnLocalTgCpCpSession,  
    appnLocalTgEffCap,  
    appnLocalTgConnCost,  
    appnLocalTgByteCost,  
    appnLocalTgSecurity,  
    appnLocalTgDelay,  
    appnLocalTgUsr1,  
    appnLocalTgUsr2,  
    appnLocalTgUsr3,  
    appnLocalTgHprSup,  
    appnLocalTgIntersubnet,  
    appnLocalTgMltgLinkType,

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```
        appnLocalTgBranchLinkType
    }
```

STATUS current

DESCRIPTION

"When it has been enabled, this notification makes it possible for an APPN topology application to get asynchronous notifications of local topology changes, and thus to reduce the frequency with which it polls for these changes. The notification is more than a simple 'poll me now' indication. It carries both a count of local TG topology changes, and the updated objects themselves. The count of changes allows an application to detect lost notifications, either when polling or upon receiving a subsequent notification, at which point it knows it must retrieve the entire appnLocalTgTable again.

An instance of this notification reports a change (addition, deletion, or modification) to a single row in the appnLocalTgTable. It contains the two global objects appnLocalTgTableChanges and appnLocalTgTableLastChangeType, plus one or more objects from the affected row, as follows:

- For an addition to the table, all the objects in the new row;
- For a deletion, the appnLocalTgDestVirtual object;
- For a modification, all the objects whose values changed.

The choice of appnLocalTgDestVirtual as the object to include in the deletion case was totally arbitrary. All the receiving application needs is some object from the deleted row, so it can determine the index of the row.

Generation of this notification is controlled by the appnTrapControl object."

```
::= { appnTrapMIB 2 }
```

appnPortChangeTrap NOTIFICATION-TYPE

```
OBJECTS {
    appnPortTableChanges,
    appnPortTableLastChangeType,
    appnPortOperState,
    appnPortDlcType,
    appnPortPortType,
    appnPortSIMRIM,
    appnPortLsRole,
```

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```
    appnPortNegotLs,  
    appnPortDynamicLinkSupport,  
    appnPortMaxRcvBtuSize,  
    appnPortMaxIframeWindow,  
    appnPortSpecific,  
    appnPortDlcLocalAddr,  
    appnPortCounterDisconTime  
}
```

STATUS current

#### DESCRIPTION

"When it has been enabled, this notification makes it possible for an APPN topology application to get asynchronous notifications of port table changes, and thus to reduce the frequency with which it polls for these changes. The notification is more than a simple 'poll me now' indication. It carries both a count of port table changes, and the updated objects themselves. The count of changes allows an application to detect lost notifications, either when polling or upon receiving a subsequent notification, at which point it knows it must retrieve the entire appnPortTable again.

An instance of this notification reports a change (addition, deletion, or modification) to a single row in the appnPortTable. It contains the two global objects appnPortTableChanges and appnPortTableLastChangeType, plus one or more objects from the affected row, as follows:

- For an addition to the table, all the objects listed here in the new row;
- For a deletion, only the appnPortDlcType object;
- For a modification, all the objects listed here whose values changed.

Note that the counter objects in the appnPortTable are not included here, since notifications should not be issued as they are incremented.

The choice of appnPortDlcType as the object to include in the deletion case was totally arbitrary. All the receiving application needs is some object from the deleted row, so it can determine the index of the row.

Generation of this notification is controlled by the appnTrapControl object."

::= { appnTrapMIB 3 }

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## appnLsChangeTrap NOTIFICATION-TYPE

```
OBJECTS {
    appnLsTableChanges,
    appnLsTableLastChangeType,
    appnLsOperState,
    appnLsPortName,
    appnLsDlcType,
    appnLsDynamic,
    appnLsAdjCpName,
    appnLsAdjNodeType,
    appnLsTgNum,
    appnLsLimResource,
    appnLsActOnDemand,
    appnLsMigration,
    appnLsPartnerNodeId,
    appnLsCpCpSessionSupport,
    appnLsMaxSendBtuSize,
    appnLsSpecific,
    appnLsHprSup,
    appnLsErrRecoSup,
    appnLsForAnrLabel,
    appnLsRevAnrLabel,
    appnLsCpCpNceId,
    appnLsRouteNceId,
    appnLsBfNceId,
    appnLsLocalAddr,
    appnLsRemoteAddr,
    appnLsRemoteLsName,
    appnLsCounterDisconTime
}
```

STATUS current

## DESCRIPTION

"When it has been enabled, this notification makes it possible for an APPN topology application to get asynchronous notifications of link station table changes, and thus to reduce the frequency with which it polls for these changes. The notification is more than a simple 'poll me now' indication. It carries both a count of link station table changes, and the updated objects themselves. The count of changes allows an application to detect lost notifications, either when polling or upon receiving a subsequent notification, at which point it knows it must retrieve the entire appnLsTable again.

An instance of this notification reports a change (addition, deletion, or modification) to a single row in the appnLsTable. It contains the two global objects appnLsTableChanges and



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appnLsTableLastChangeType, plus one or more objects from the affected row, as follows:

- For an addition to the table, all the objects listed here in the new row;
- For a deletion, only the appnLsPortName object;
- For a modification, all the objects listed here whose values changed.

Note that the counter and gauge objects in the appnLsTable are not included here, since notifications should not be issued as their values change.

The choice of appnLsPortName as the object to include in the deletion case was totally arbitrary. All the receiving application needs is some object from the deleted row, so it can determine the index of the row.

Generation of this notification is controlled by the appnTrapControl object."

::= { appnTrapMIB 4 }

dlurDlusChangeTrap NOTIFICATION-TYPE

OBJECTS {  
    dlurDlusTableChanges,  
    dlurDlusTableLastChangeType,  
    dlurDlusSessnStatus  
}

STATUS current

DESCRIPTION

"When it has been enabled, this notification makes it possible for an APPN topology application to get asynchronous notifications of DLUR-DLUS table changes, and thus to reduce the frequency with which it polls for these changes. The notification is more than a simple 'poll me now' indication. It carries both a count of DLUR-DLUS table changes, and the updated objects themselves. The count of changes allows an application to detect lost notifications, either when polling or upon receiving a subsequent notification, at which point it knows it must retrieve the entire dlurDlusTable again.

An instance of this notification reports a change (addition, deletion, or modification) to a single row in the dlurDlusTable. It contains the two global objects dlurDlusTableChanges and dlurDlusTableLastChangeType, plus

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the table's one accessible object: dlurDlusSessnStatus.

Generation of this notification is controlled by the appnTrapControl object."

::= { appnTrapMIB 5 }

```
-- *****
-- Supporting Objects
-- *****
```

appnTrapObjects OBJECT IDENTIFIER ::= { appnObjects 7 }

appnTrapControl OBJECT-TYPE

```
SYNTAX BITS {
    appnLocalTgTopoChangeTrap(0),
    appnPortChangeTrap(1),
    appnLsChangeTrap(2),
    dlurDlusChangeTrap(3)
    -- add other notification types here
}
```

MAX-ACCESS read-write

STATUS current

DESCRIPTION

"An object to turn APPN notification generation on and off. Setting a notification type's bit to 1 enables generation of notifications of that type, subject to further filtering resulting from entries in the snmpNotificationMIB. Setting this bit to 0 disables generation of notifications of that type.

Note that generation of the appnIsrAccountingDataTrap is controlled by the appnIsInGlobeCtrAdminStatus object in the APPN MIB: if counts of intermediate session traffic are being kept at all, then the notification is also enabled."

::= { appnTrapObjects 1 }

appnLocalTgTableChanges OBJECT-TYPE

SYNTAX Counter32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"A count of the number of times the appnLocalTgTable has

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changed since the APPN node was last reinitialized.  
Addition, deletion, or modification of a row in the table  
counts as a single change."

::= { appnTrapObjects 2 }

appnLocalTgTableLastChangeType OBJECT-TYPE

SYNTAX AppnLastChangeType

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"An object reporting the type of the last change made  
to the appnLocalTgTable."

::= { appnTrapObjects 3 }

appnPortTableChanges OBJECT-TYPE

SYNTAX Counter32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"A count of the number of times the appnPortTable has  
changed since the APPN node was last reinitialized.  
Addition, deletion, or modification of a row in the table  
counts as a single change."

::= { appnTrapObjects 4 }

appnPortTableLastChangeType OBJECT-TYPE

SYNTAX AppnLastChangeType

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"An object reporting the type of the last change made  
to the appnPortTable."

::= { appnTrapObjects 5 }

appnLsTableChanges OBJECT-TYPE

SYNTAX Counter32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"A count of the number of times the appnLsTable has  
changed since the APPN node was last reinitialized.  
Addition, deletion, or modification of a row in the table

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counts as a single change."

::= { appnTrapObjects 6 }

appnLsTableLastChangeType OBJECT-TYPE

SYNTAX AppnLastChangeType

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"An object reporting the type of the last change made to the appnLsTable."

::= { appnTrapObjects 7 }

dlurDlusTableChanges OBJECT-TYPE

SYNTAX Counter32

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"A count of the number of times the dlurDlusTable has changed since the APPN node was last reinitialized. Addition, deletion, or modification of a row in the table counts as a single change."

::= { appnTrapObjects 8 }

dlurDlusTableLastChangeType OBJECT-TYPE

SYNTAX AppnLastChangeType

MAX-ACCESS read-only

STATUS current

DESCRIPTION

"An object reporting the type of the last change made to the dlurDlusTable."

::= { appnTrapObjects 9 }

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

-- Tie into the conformance structure in the APPN MIB:

-- appnConformance OBJECT IDENTIFIER ::= {appnMIB 3 }

--

-- appnCompliances OBJECT IDENTIFIER ::= {appnConformance 1 }



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```
-- appnGroups          OBJECT IDENTIFIER ::= {appnConformance 2 }

-- Compliance statement
appnTrapMibCompliance  MODULE-COMPLIANCE
    STATUS  current
    DESCRIPTION
        "The compliance statement for the SNMP entities that
        implement the APPN-TRAP-MIB."

    MODULE  -- this module

--  Conditionally mandatory groups
    GROUP appnTrapMibIsrNotifGroup
    DESCRIPTION
        "This group is mandatory for APPN nodes supporting
        reporting of final ISR counter values via notifications."

    GROUP appnTrapMibTopoConfGroup
    DESCRIPTION
        "This group is mandatory for APPN nodes supporting
        polling reduction for local topology."

    GROUP appnTrapMibTopoNotifGroup
    DESCRIPTION
        "This group is mandatory for APPN nodes supporting
        polling reduction for local topology."

    GROUP appnTrapMibDlurConfGroup
    DESCRIPTION
        "This group is mandatory for APPN nodes supporting
        polling reduction for the dlurDlusTable."

    GROUP appnTrapMibDlurNotifGroup
    DESCRIPTION
        "This group is mandatory for APPN nodes supporting
        polling reduction for the dlurDlusTable."

    OBJECT appnTrapControl
        MIN-ACCESS  read-only
        DESCRIPTION
            "An agent is not required to support a set to
            this object."

::= {appnCompliances 2 }
```

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```
-- Units of conformance
appnTrapMibIsrNotifGroup    NOTIFICATION-GROUP
    NOTIFICATIONS {
        appnIsrAccountingDataTrap
    }
    STATUS    current
    DESCRIPTION
        "A notification for reporting the final values of the
        APPN MIB's ISR counters."

    ::= { appnGroups 21 }

appnTrapMibTopoConfGroup    OBJECT-GROUP
    OBJECTS {
        appnTrapControl,
        appnLocalTgTableChanges,
        appnLocalTgTableLastChangeType,
        appnPortTableChanges,
        appnPortTableLastChangeType,
        appnLsTableChanges,
        appnLsTableLastChangeType
    }
    STATUS    current
    DESCRIPTION
        "A collection of objects for reducing the polling
        associated with the local topology tables in the
        APPN MIB.  Nodes that implement this group SHALL
        also implement the appnTrapMibTopoNotifGroup."

    ::= { appnGroups 22 }

appnTrapMibTopoNotifGroup    NOTIFICATION-GROUP
    NOTIFICATIONS {
        appnLocalTgTopoChangeTrap,
        appnPortChangeTrap,
        appnLsChangeTrap
    }
    STATUS    current
    DESCRIPTION
        "A collection of notifications for reducing the polling
        associated with the local topology tables in the
        APPN MIB.  Nodes that implement this group SHALL
        also implement the appnTrapMibTopoConfGroup."

    ::= { appnGroups 23 }
```

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```
appnTrapMibDlurConfGroup  OBJECT-GROUP
    OBJECTS {
        appnTrapControl,
        dlurDlusTableChanges,
        dlurDlusTableLastChangeType
    }
    STATUS current
    DESCRIPTION
        "A collection of objects for reducing the polling
        associated with the dlurDlusTable in the DLUR
        MIB.  Nodes that implement this group SHALL also
        implement the appnTrapMibDlurNotifGroup."

    ::= { appnGroups 24 }

appnTrapMibDlurNotifGroup  NOTIFICATION-GROUP
    NOTIFICATIONS {
        dlurDlusChangeTrap
    }
    STATUS current
    DESCRIPTION
        "A notification for reducing the polling associated
        with the dlurDlusTable in the DLUR MIB.  Nodes that
        implement this group SHALL also implement the
        appnTrapMibDlurConfGroup."

    ::= { appnGroups 25 }

END
```

## **5. Security Considerations**

Certain management information defined in this MIB may be considered sensitive in some network environments. Therefore, authentication of received SNMP requests and controlled access to management information SHOULD be employed in such environments. An authentication protocol is defined in [12]. A protocol for access control is defined in [15].

None of the read-only objects in the APPN TRAP 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 is one read-write object in the APPN TRAP MIB, appnTrapControl. This object controls the generation of the notifications defined in the APPN TRAP MIB.

## **6. Intellectual Property**

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## **7. Acknowledgments**

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

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