Network Working Group
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Definitions for Textual Conventions and OBJECT-IDENTITIES for Pseudo-Wires Management

draft-nadeau-pw-tc-mib-00.txt

Status of this Memo

1.0 Abstract

This memo describes Textual Conventions and OBJECT-IDENTITIES used for managing Pseudo-Wire services.

Table of Contents

2.0 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 Textual Conventions used in IETF PW and PW-related MIBs.

Comments should be made directly to the MPLS mailing list at pwe3@ietf.org.

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 [BCP14].

For an introduction to the concepts of Pseudo-Wires, see [PWREQ] and [PWFRM].

3.0 Terminology

This document uses terminology from the document describing the Pseudo-Wires Requirements [PWE3REQ].

4.0 The SNMP Management Framework

The SNMP Management Framework presently consists of five major components:

- An overall architecture, described in RFC 2271 [SNMPArch].

- 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 [SMIv1], RFC 1212 [SNMPv1MIBDef] and RFC 1215 [SNMPv1Traps]. The second version, called SMIv2, is described in RFC 1902 [SMIv2], RFC 1903 [SNMPv2TC] and RFC 1904 [SNMPv2Conf].

- Message protocols for transferring management information. The first version of the SNMP message protocol is called SNMPv1 and described in RFC 1157 [SNMPv1]. A second version of the SNMP message protocol, which is not an Internet standards track protocol, is called SNMPv2c and described in RFC 1901 [SNMPv2c] and RFC 1906 [SNMPv2TM]. The third version of the message protocol is called SNMPv3 and described in RFC 1906 [SNMPv2TM], RFC 2272 [SNMPv3MP] and RFC 2574 [SNMPv3USM].

- Protocol operations for accessing management information. The

first set of protocol operations and associated PDU formats is described in RFC 1157 [SNMPv1]. A second set of protocol operations and associated PDU formats is described in RFC 1905 [SNMPv2PO].

- A set of fundamental applications described in RFC 2273 [SNMPv3App] and the view-based access control mechanism described in RFC 2575 [SNMPv3VACM].

A more detailed introduction to the current SNMP Management Framework can be found in RFC 2570 [RFC2570].

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.

5.0 Definitions

```
PW-TC-MIB DEFINITIONS ::= BEGIN

IMPORTS
   MODULE-IDENTITY, Unsigned32, transmission
      FROM SNMPv2-SMI

   TEXTUAL-CONVENTION
      FROM SNMPv2-TC;

pwTCMIB MODULE-IDENTITY
   LAST-UPDATED "200107121200Z"  -- 12 July 2001 12:00:00 GMT
   ORGANIZATION "Multiprotocol Label Switching (MPLS) Working Group,
                 Pseudo Wire Edge to Edge Emulation (PWE3) Working
                 Group"
   CONTACT-INFO
       "MPLS Working Group Mailing List: mpls@uu.net
        PWE3 Working Group Mailing List: pwe3@ietf.org"

   DESCRIPTION
       "This MIB Module provides Textual Conventions
        and OBJECT-IDENTITY Objects to be used PW services."

   -- Revision history.
```



```
   REVISION "200107121200Z"  -- 12 July 2001 12:00:00 GMT
   DESCRIPTION "Initial version."

   ::= { pwMIB 1 } -- pwMIB To Be Assigned by IANA

pwMIB OBJECT IDENTIFIER
       ::= { transmission 7777 } -- To be assigned by IANA ??

-- Textual Conventions defined below are organized alphabetically

PwGroupID ::= TEXTUAL-CONVENTION
   STATUS      current
   DESCRIPTION
        "An administrative identification mechanism for grouping a
         set of service-specific pseudo-wire services. May only
         have local significance"
```

```
      SYNTAX  Unsigned32

   PwVcID ::= TEXTUAL-CONVENTION
      STATUS      current
      DESCRIPTION
           "Virtual Circuit Identifier. Uniquely identifies a VC
            locally. Also uniquely identifies a VC at its end points."
      SYNTAX  Unsigned32

   PwVcIndex ::= TEXTUAL-CONVENTION
      STATUS      current
      DESCRIPTION
           "Virtual Circuit Index. Locally unique index for indexing
            one of several MIB tables associated with a particular VC."
      SYNTAX  Unsigned32

   PwVcInstance ::= TEXTUAL-CONVENTION
      STATUS      current
      DESCRIPTION
           "Virtual Circuit Instance. Use in conjunction with
            PwVcIndex when it is required to have more than one
            instance of a particular VC. The primary application
            for instances is APS where there are primary and backup
            VCs."
      SYNTAX  Unsigned32

   END
```

6.0 Security Considerations

This memo defines textual conventions and object identities for use in MPLS MIB modules. Security issues for these MIB modules are addressed in the memos defining those modules.

7.0 References

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