Definitions for Textual Conventions and OBJECT-IDENTITIES for Pseudo-Wires Management
draft-ietf-pwe3-pw-tc-mib-00.txt

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1 Abstract

This memo defines an experimental portion of the Management Information Base (MIB) for use with network management protocols in the Internet community. In particular, it describes the textual conventions to be used in the various Pseudo Wire (PW) MIB modules.
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 Textual Conventions used in IETF PW and PW-related MIBs.

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

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

Conventions used in this document
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].

3 Terminology

This document uses terminology from the document describing the PW framework [FRMWK].
The SNMP Management Framework presently consists of five major components:


A more detailed introduction to the current SNMP Management Framework can be found in [RFC 2570](https://tools.ietf.org/html/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.
4.1 Object Definitions

Managed objects are accessed via a virtual information store, termed the Management Information Base or MIB. Objects in the MIB are defined using the subset of Abstract Syntax Notation One (ASN.1) defined in the SMI. In particular, an OBJECT IDENTIFIER, an administratively assigned name, names each object type. The object type together with an object instance serves to uniquely identify a specific instantiation of the object. For human convenience, we often use a textual string, termed the descriptor, to also refer to the object type.

5 Object definitions

PW-TC-MIB DEFINITIONS ::= BEGIN

IMPORTS
   MODULE-IDENTITY, Unsigned32, Integer32, experimental
   FROM SNMPv2-SMI

   TEXTUAL-CONVENTION
   FROM SNMPv2-TC;

pwTCMIB MODULE-IDENTITY
   LAST-UPDATED "200205281200Z"  -- 28 May 2002 12:00:00 GMT
   ORGANIZATION "Pseudo Wire Edge to Edge Emulation (PWE3) Working Group"

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Nadeau et al Expires December 2002
DESCRIPTION
"This MIB Module provides Textual Conventions
and OBJECT-IDENTITY Objects to be used PW services."

-- Revision history.

REVISION "200205281200Z" -- 28 May 2002 12:00:00 GMT
DESCRIPTION "Adding PwVcType, and enhance some descriptions."

REVISION "200201301200Z" -- 30 January 2002 12:00:00 GMT
DESCRIPTION "Adding PwVcVlanCfg, PwAddressType and
PwOperStatus."

REVISION "200112201200Z" -- 20 Dec 2001 12:00:00 GMT
DESCRIPTION "Remove PwVcInstance"

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

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

pwMIB OBJECT IDENTIFIER
 ::= { experimental xxx } -- 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

PwVcIDType ::= TEXTUAL-CONVENTION
 STATUS current
 DESCRIPTION
 "Virtual Circuit Identifier. Used to identify the VC
 (together with some other fields) in the signaling
 session. Zero if the VC is set-up manually."
 SYNTAX Unsigned32
PwVcIndexType ::= TEXTUAL-CONVENTION
STATUS current
DESCRIPTION
"Virtual Circuit Index. Locally unique index for indexing
several MIB tables associated with a particular VC."
SYNTAX Unsigned32

PwVcVlanCfg ::= TEXTUAL-CONVENTION
STATUS current
DESCRIPTION
"VLAN configuration for Ethernet PW.
Values between 0 to 4095 indicate the actual VLAN field
value.
A value of 4096 indicates that the object refer to
untagged frames, i.e. frames without 802.1Q field.
A value of 4097 indicates that the object is not
relevant."
SYNTAX Integer32 (0..4097)

PwOperStatus ::= TEXTUAL-CONVENTION
STATUS current
DESCRIPTION
"Indicate the operational status of the PW VC.
- up: Ready to pass packets.
- down: If PW signaling has not yet finished, or
indications available at the service
level indicate that the VC is not
passing packets.
- testing: If AdminStatus at the VC level is set to
test.
- dormant: The VC is not available because of the
required resources are occupied VC with
higher priority VCs .
- notPresent: Some component is missing to accomplish
the set up of the VC.
- lowerLayerDown: The underlying PSN or outer tunnel is not
in OperStatus 'up'.
"
SYNTAX INTEGER {
  up(1),
  down(2),
  testing(3),
  unknown(4),
  dormant(5),
  notPresent(6),
  lowerLayerDown(7)
}

PwVcType ::= TEXTUAL-CONVENTION
STATUS current
DESCRIPTION
"Indicate the VC type (i.e. the carried service).
Note: the exact set of VC types is yet to be worked out by the WG."

SYNTAX  INTEGER {
other (0),
frameRelay (1),
atmAal5Vcc (2),
atmTransparent (3),
eternetVLAN (4),
ethernet (5),
hdlc (6),
ppp (7),
cep (8),
atmVccCell (9),
atmVpcCell (10),
eternetVPLS (11)
}

END

6 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 References


8 Author's Addresses

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