Network Working Group
Request for Comments: 4265
Category: Standards Track

B. Schliesser
SAVVIS Communications
T. Nadeau
Cisco Systems, Inc.

November 2005

Definition of Textual Conventions for Virtual Private Network (VPN) Management

Status of This Memo

Copyright Notice

Abstract

This document describes Textual Conventions used for managing Virtual Private Networks (VPNs).

Table of Contents

1. 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 Virtual Private Networks (VPNs) and IETF VPN-related MIBs.

1.1. 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 [RFC2119].

2. 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, RFC 2578 [RFC2578], STD 58, RFC 2579 [RFC2579] and STD 58, RFC 2580 [RFC2580].

3. VPN-TC-STD-MIB

3.1. Description

The VPN-TC-STD-MIB defines a Textual Convention for the Global VPN Identifier, or VPN-ID, as specified in [RFC2685]. The purpose of a VPN-ID is to uniquely identify a VPN. It MUST be 7 octets in length, and SHOULD be comprised of a 3 octet Organizationally Unique Identifier (OUI) that uniquely identifies the VPN Authority, followed by a 4 octet value assigned by the VPN Authority that uniquely identifies the VPN within the context of the OUI.

3.2. Definitions

```
VPN-TC-STD-MIB DEFINITIONS ::= BEGIN

IMPORTS
    MODULE-IDENTITY, mib-2
        FROM SNMPv2-SMI

    TEXTUAL-CONVENTION
        FROM SNMPv2-TC;

vpnTcMIB MODULE-IDENTITY
    LAST-UPDATED "200511150000Z"  -- 15 November 2005
    ORGANIZATION
        "Layer 3 Virtual Private Networks (L3VPN) Working Group."
```

```
       CONTACT-INFO
           "Benson Schliesser
            bensons@savvis.net

            Thomas D. Nadeau
            tnadeau@cisco.com

            This TC MIB is a product of the PPVPN
            http://www.ietf.org/html.charters/ppvpn-charter.html
            and subsequently the L3VPN
            http://www.ietf.org/html.charters/l3vpn-charter.html
            working groups.

            Comments and discussion should be directed to
            l3vpn@ietf.org"
       DESCRIPTION
           "This MIB contains TCs for VPNs.

            Copyright (C) The Internet Society (2005).  This version
            of this MIB module is part of RFC 4265;  see the RFC
            itself for full legal notices."
       -- Revision history.
       REVISION "200511150000Z"  -- 15 November 2005
       DESCRIPTION "Initial version, published as RFC 4265."
       ::= { mib-2 129 }

   -- definition of textual conventions

   VPNId ::= TEXTUAL-CONVENTION
       STATUS current
       DESCRIPTION
           "The purpose of a VPN-ID is to uniquely identify a VPN.
            The Global VPN Identifier format is:
            3 octet VPN Authority, Organizationally Unique Identifier
            followed by 4 octet VPN index identifying VPN according
            to OUI"
       REFERENCE
           "Fox, B. and Gleeson, B., 'Virtual Private Networks
            Identifier', RFC 2685, September 1999."
       SYNTAX    OCTET STRING (SIZE (7))

   VPNIdOrZero ::= TEXTUAL-CONVENTION
       STATUS            current
       DESCRIPTION
           "This textual convention is an extension of the
            VPNId textual convention that defines a non-zero-length
            OCTET STRING to identify a physical entity.  This extension
            permits the additional value of a zero-length OCTET STRING.
```

```
            The semantics of the value zero-length OCTET STRING are
            object-specific and must therefore be defined
            as part of the description of any object that uses this
            syntax.  Examples of usage of this extension are
            situations where none or all VPN IDs need to be
            referenced."
        SYNTAX    OCTET STRING (SIZE (0 | 7))

    END
```

4. Security Considerations

This module does not define any management objects. Instead, it defines a set of textual conventions that may be used by other MIB modules to define management objects.

Meaningful security considerations can only be written in the MIB modules that define management objects. Therefore, this document has no impact on the security of the Internet.

5. IANA Considerations for VPN-TC-STD-MIB

The IANA has assigned { mib-2 129 } to the VPN-TC-STD-MIB module specified in this document.

6. References

6.1. Normative References

[RFC2119] Bradner, S., "Key words for use in RFCs to Indicate Requirement Levels", BCP 14, RFC 2119, March 1997.

[RFC2578] McCloghrie, K., Perkins, D., and J. Schoenwaelder, "Structure of Management Information Version 2 (SMIv2)", STD 58, RFC 2578, April 1999.

[RFC2579] McCloghrie, K., Perkins, D., and J. Schoenwaelder, "Textual Conventions for SMIv2", STD 58, RFC 2579, April 1999.

[RFC2580] McCloghrie, K., Perkins, D., and J. Schoenwaelder, "Conformance Statements for SMIv2", STD 58, RFC 2580, April 1999.

[RFC2685] Fox, B. and B. Gleeson, "Virtual Private Networks Identifier", RFC 2685, September 1999.

6.2. Informative References

[RFC3410] Case, J., Mundy, R., Partain, D., and B. Stewart, "Introduction and Applicability Statements for Internet-Standard Management Framework", RFC 3410, December 2002.

Authors' Addresses

Benson Schliesser
SAVVIS Communications
1 Savvis Parkway
Saint Louis, MO 63017
USA

Phone: +1-314-628-7036
EMail: bensons@savvis.net

Thomas D. Nadeau
Cisco Systems
1414 Massachusetts Ave.
Boxborough, MA 01719

Phone: +1-978-244-3051
EMail: tnadeau@cisco.com

Full Copyright Statement

Intellectual Property

Acknowledgement

Funding for the RFC Editor function is currently provided by the Internet Society.