

Instead, the variable should have been `ifOperStatus` and possibly `ifType`. The interface is determined by the instance of the `ifOperStatus` variable.

- **Problems with extra varBinds:**
An agent (or proxy) may add additional varBinds to an event report message. The event definition only specifies the required varBinds. Some management applications crash and burn when additional varBinds are present in an event report. Don't let this happen to you.

Has Everything About Events and Event Reporting Been Covered?

This column has covered much material in a brief space. However, only the most important and frequently asked questions about traps have been covered. The most important issue is that the infrastructure to use traps in SNMPv1 was not fully developed in the original SNMPv1 framework. However, in developing SNMPv3, much work was put into developing a complete infrastructure, and that infrastructure with a little more work (which is in progress) can also be used in SNMPv1. So you can see, work continues in the IETF SNMPv3 working group for supporting the SNMPv1 framework. The approach taken is to keep the SNMPv1 protocol unchanged and to enhance the surrounding SNMPv1 infrastructure using technology created during development of the SNMPv3 framework. The result is a better SNMPv1 infrastructure for vendors and users that want or need to continue using the SNMPv1 approach, with an easy transition to the SNMPv3 protocol, which provides security and additional protocol operation functionality.

Editor's Comment

Jürgen Schönwälder, TU Braunschweig
Aiko Pras, University of Twente

Welcome to the first issue of *The Simple Times* in 1998. There is a lot of enthusiasm back in the SNMP world and 1998 might become the "Year of SNMPv3". The SNMPv3 specifications have been published as RFCs in January and we already have several independent implementations of SNMPv3. The new year also brings some changes to *The Simple Times* newsletter and the leadership of the IETF "Operations and Management Area". More on all this below.

SNMPv3 Interoperability Demonstrations

The SNMPv3 specifications were published as Proposed Standards in January 1998 (RFC 2271 - RFC 2275). Three months after publication of the RFCs, an ad-hoc interoperability test with four independent SNMPv3 implementations was held at the 41st IETF meeting. This test is quite encouraging as the participants did not detect any serious interoperability problems. And the next big event is just around the corner: Network+Interop in Las Vegas will have an SNMPv3 Hot Spot where several vendors will demonstrate secure SNMPv3 interoperability including authentication, privacy and remote administration. The list of participating vendors includes Advent Network Management, Bay Networks, BMC Software, Cisco Systems, Hewlett-Packard, IBM, Liebert Corporation, SNMP Research, Tivoli and the University of Quebec in Montreal. More implementations by other vendors and universities are announced and will show up over the year.

If you want to read the latest news about SNMPv3, visit the SNMPv3 Web page at <http://www.ibr.cs.tu-bs.de/projects/snmpv3/>. This Web page is actively maintained and provides links to the SNMPv3 documents, short descriptions of SNMPv3 implementations, material from presentations about SNMPv3 and interoperability reports.

Editorial Board for *The Simple Times*

The editors of *The Simple Times* formed an editorial board which will help to ensure that this newsletter provides you with useful and technically accurate information. The motivation was simple: Making more people feel responsible for *The Simple Times* makes the job a bit easier for the editors. The members of the editorial board are listed on the last page of this newsletter. We would like to thank those volunteers for their support of *The Simple Times* newsletter and the interesting discussions we already had about the articles in this issue.

This issue also continues the tradition of *The Simple Times* to provide answers to frequently asked questions. In this issue, David T. Perkins addresses several questions concerning SNMP Traps in his featured column called "Questions Answered".

We also decided to make *The Simple Times*, including all the previews issues, available in Adobe's Portable Document Format (PDF). We provided a PDF version of the last issue on *The Simple Times* Web server and we got approximately the same number of hits for the PostScript and the PDF version. So we decided that providing PDF in addition to PostScript and HTML is worth the effort.

Nomination of IETF Area Directors

Finally, we would like to announce that the “Operations and Management Area” of the IETF, which hosts all the core SNMP technology working groups such as SNMPv3, AgentX or Distributed Management (DISMAN), got two new Area Directors. Harald Alvestrand (Maxware) and Bert Wijnen (IBM Research) were selected by the nominating committee to take over the positions previously held by Mike O’Dell (UUNET) and John Curran (BBN). Harald Alvestrand has previously served as one of the Area Directors in the “Applications Area”. Bert Wijnen is well known to this community as one of the driving forces behind SNMPv3 and the DPI protocol, which has had major influence on the AgentX protocol.

We like to wish the Area Directors good luck for their new position and that they find a good and pragmatic way to move Internet management technology forward, for the benefits of the whole community.

Standards Summary

Please consult the latest version of *Internet Official Protocol Standards*. As of this writing, the latest version is RFC 2200.

SNMPv1 Framework

Full Standards:

- RFC 1155 - Structure of Management Information (SMI);
- RFC 1157 - Simple Network Management Protocol (SNMP); and,
- RFC 1212 - Concise MIB definitions.

Proposed Standards:

- RFC 1418 - SNMP over OSI;
- RFC 1419 - SNMP over AppleTalk; and,
- RFC 1420 - SNMP over IPX.

Informational:

- RFC 1215 - A convention for defining traps for use with the SNMP.

SNMPv2 Framework

Draft Standards:

- RFC 1902 - SMI for SNMPv2;

- RFC 1903 - Textual Conventions for SNMPv2;
- RFC 1904 - Conformance Statements for SNMPv2;
- RFC 1905 - Protocol Operations for SNMPv2;
- RFC 1906 - Transport Mappings for SNMPv2;
- RFC 1907 - MIB for SNMPv2; and,
- RFC 1908 - Coexistence between SNMPv1 and SNMPv2.

Experimental:

- RFC 1901 - Introduction to Community-based SNMPv2;
- RFC 1909 - An Administrative Infrastructure for SNMPv2; and,
- RFC 1910 - User-based Security Model for SNMPv2.

SNMPv3 Framework

Proposed Standards:

- RFC 2271 - Architecture for Describing SNMP Management Frameworks;
- RFC 2272 - Message Processing and Dispatching;
- RFC 2273 - SNMPv3 Applications;
- RFC 2274 - User-based Security Model (USM); and,
- RFC 2275 - View-based Access Control Model (VACM).

Agent Extensibility

Proposed Standards:

- RFC 2257 - AgentX Protocol Version 1.

MIB Modules

Full Standards:

- RFC 1213 - Management Information Base (MIB-II); and,
- RFC 1643 - Ether-Like Interface Type (SMIv1).

Draft Standards:

- RFC 1493 - Bridge MIB;
- RFC 1559 - DECnet phase IV MIB;
- RFC 1657 - BGP version 4 MIB;