

OSA SNMP Light

SNMP proxy agent helping the management systems to communicate

Introduction

SNMP, the Simple Network Management Protocol, is a protocol used to remotely manage the nodes on a TCP/IP network. It is used for the transfer of network Management information between two or more Network Management Systems (NMS), network entities or nodes.

When management systems exchange information using the SNMP protocol, they are actually sending SNMP messages, whereof some also are called SNMP Traps. Each SNMP Trap is a separate package of binary information. These SNMP Traps are sent to user-defined Trap Destination (e.g. node or work station addresses). Several Trap Destinations can be grouped in a Community.

The OSA SNMP Light proxy agent is an application that converts the SyncView™Plus alarms and events into SNMP V1 Traps. These SNMP Traps are sent spontaneously, whenever an alarm or event occurs. It is also possible to remotely request sets of alarms and/or events.

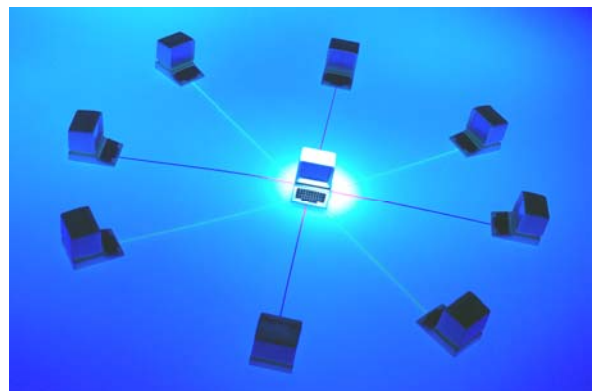
Through the SNMP manager, the user can choose which are the parameters of the alarm set according to the MIB variables.

This application, is a subagent of the Windows SNMP agent which has the possibility to forward alarms and events of SyncView™Plus to an upper layer SNMP management system. For each new alarm in the SyncView™Plus DB two traps are spontaneously sent: one when the alarm is set and another when the alarm is cleared.

The OSA SNMP Light proxy agent resides in the same machine as the SyncView™Plus Server (on Windows or Terminal Server) and connects directly to the SyncView™Plus system. On the SNMP Manager side a SyncView™Plus MIB (Management Information Base) is provided in order to understand the SyncView™Plus.

Highlights

- Standardised: SNMP is the standard management protocol for TCP/IP Networks
- Universal supported: SNMP are supported by all main TCP/IP vendors.
- Portable: SNMP operates independent of Hardware and Operating Systems.
- NMS Interoperability: SNMP provides communications with other NMSs through a standard protocol



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Configuration Examples

Example 1: The following configuration is divided into sub-networks, each sub-network is managed by a NM, the maximum number of elements for each NM shall be 50. Having a OSA SNMP Light proxy agent performing alarm and event forwarding, the NM server can scale up to 200 clients, depending on the performance settings.



Example 2: This configuration is a special configuration of Example 1, where the leading sub-network has a Network Manager (NM) and an OSA SNMP Light proxy agent that forwards alarms and events to the SNMP manager. The other subnetwork are managed by Regional Managers (RM) which are also connected to the National Manager (NM). The configuration and performances are done by SyncView™ Plus at the NM and/or RM level.

In order to have redundancy in the alarms, in the events and in the configuration information, all elements are connected to their corresponding RM and also to the NM (mandatory). The elements depending on the leading region managed by the NM can also be connected to a selected RM to have redundancy (not mandatory).

The total number of elements that can be managed by the OSA SNMP Light proxy agent shall be limited to 200, depending on the performance settings.

Conclusion: In both examples the number of NMs is virtually unlimited. The configuration, performances and security management are done by SyncView™ Plus at the NM level and there is no redundancy in the alarms or events forwarded from the elements to the NM.

For further information please consult our local representative or Oscilloquartz directly.

Table 3 : SNMP Light trap structure

Field no.	Field	SNMP PDU Trap Type	Description
1	Managed Object	Octet String	Equipment or communication server name as it is defined in SyncView database
2	Event Type	Integer	Alarm Event Type according to X.733
3	Event Time	Octet String	Event time stamp coming from the source of the alarm
4	Specific Problem	Integer	Corresponds to the SyncView alarm id.
5	Perceived Severity	Integer	The event severity according to X.733
6	Probable Cause	Integer	Alarm probable cause according to X.733
7	Notification Id	Octet String	Corresponds to SyncView Alarm Number
8	Correlated Notification	Octet String	Not used
9	Acknowledgement	Integer	Indicates that the corresponding alarm has been acknowledged
10	Additional Text	Octet String	Slogan and Module (optional) Equipment type Alarm source IP address Enterprise SNMP Id Resend trap flag (audit trap only)

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