NuDesign's Middle Layer SNMP Manager Server

A Summary

NuDesign's SNMP Middle Layer Manager (MLM) Server software consists of a number of software components allowing it to act as a network's devices SNMP Manager. Typically, a larger network would have a number of MLM Servers acting as local SNMP Managers to its domain SNMP Agents. The MLM Server collects vital local stats and alarms in its own MIB objects, then periodically stores so collected data in the local SQL database for future analysis, reporting, archiving and long term trends applications.

The typical application for SNMP MLM Server would be a large geographically spread communication network where local clusters of devices are being managed by local SNMP MLM Servers. The SNMP MLM Server is highly configurable, all monitoring, trending and events tracking aspects are remotely settable, so adding new devices or new monitoring strategy to the network is as simple as adding new monitoring rows to the MLM SNMP tables.

The MLM Server presents itself as an SNMP agent in the "NOC direction" providing for synchronization of configuration and status information between the NOC center and locally stored data, and forwarding all critical alarms to the central NOC application. The MLM Server's SQL database data are available for analysis by SQL applications.

The SNMP MLM Server contains the following modules:

- Extensible SNMPv3 agent with extension DLLs implementing local network monitoring and configuration MIB(s).
- Alarm, Events, Notification, Tracking and Trends Manager Modules implementing alarm definition configurations, SNMP Trap reception, forwarding and storage of alarm information for domain's SNMP Agents including equipment health status.
- SQL Server Database Update Manager Module storing local server domain stats and alarm information in the external SQL database for analysis, reporting and archiving.

The Notification Manager (formally referred to as the 'Trap Sink') provides for other SNMP agents in the system to forward notifications to the MLM. This capability enables local notification processing and selective forwarding, containing possibility of "trap storms" and enabling the long-term data retention in a database tables.

Additionally, the SNMP MLM Server supports standard SNMPv3 Proxy functionality, providing for secure (authenticated and encrypted) communications between a NOC center and insecure SNMPv1/v2c devices within the MLM Server's management domain.

The NOC traffic, typically going over the Internet or private WAN network, uses secure SNMPv3 protocol which is translated to SNMPv1/v2c by the MLM Server's SNMPv3 Proxy function for the local domain traffic.

Supported host environments are Windows Server 2003, Server 2008, Server 2012, Server 2016, Vista, Windows 7, Windows 8/8.1 and Windows 10, 32bit or 64bit versions.

Please also see Product Briefs for NuDesign's SNMP Agent, SNMP Manager and Command Line Interface (CLI) agent code generation tools and how they integrate together. For more information and product evaluation kits please visit www.ndt-inc.com

If you would like to further explore applicability of this product to your overall solution please contact us. We would work with you to tailor our technology to your specific environment.

About NuDesign Technologies

NuDesign Technologies, Inc, based in Toronto, Canada, specializes in the development of management agents and client applications used in remote configuration, monitoring and control of Windows and Linux Servers & Workstations, embedded devices, networking services and applications. For all of our software products, supporting standard management protocols such as NETCONF, SNMP, CLI and web protocols such as RESTCONF, please visit our main site at www.ndt-inc.com.

The benefits of deploying NuDesign's management software technologies are reliable, low risk, quick-to-market and well supported solutions. The highly automated code generation tools with associated applications and tutorials enable fast prototyping and development. They also facilitate organization and design process for multiple target environments.

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