

# COMTEK

## NMServer SNMP System Management Agent for OpenVMS

### OpenVMS Agent Features

- Monitors OpenVMS systems from any SNMP Manager
- Manages systems via Remote Console Commands
- Extensive OpenVMS-specific MIB and Traps
- Provides performance monitoring and resource allocation statistics

NMServer for OpenVMS is designed to run HP, VAX, Alpha or Itanium systems to allow them to be monitored and managed remotely by SNMP Network Managers.

NMServer monitors important performance and resource utilization criteria including what processes are running, disk utilization, system errors, and CPU load statistics. It reports this information to the SNMP Manager when polled and sends traps (alarms) to notify the Manager of critical events such as mission critical process stopped, disk nearly full or CPU overload. NMServer also allows users to send their own data as traps.

### Monitor System Health

**System Errors.** NMServer reports as traps system errors that are detected on disks, tapes, buses, CPU and memory.

**Opcom Messages and Replies.** NMServer converts system Opcom messages into traps. The user may specify message filters to eliminate redundant or unimportant Opcom messages. NMServer also supports sending replies to Opcom requests.

**User Data.** NMServer accepts user data which is filtered against user specified criteria and then sent as traps. This feature can be particularly useful for processing of application log files.

### Monitor Processes

**Active Processes.** NMServer gathers statistics on current processes. NMServer analyzes these processes to determine if the system is compute bound or if processes are in resource wait (MWAIT) state.

**Mission Critical Processes.** NMServer detects if user specified mission critical processes are not active. NMServer permits the user to change critical process lists without restarting the agent to facilitate load balancing or time specific process monitoring.

### OpenVMS Agent MIB Overview

#### System Information

Node Name • Hardware Name • System Boot Time  
• Operating System Version • Available/Active CPU Counts • Page Size • Physical Memory • Page File • Swap File

#### Resource Information

CPU • Disk • Shadow Set • Queues and Queue Entries • Active Processes • Mission Critical Processes

#### Status Information

Hardware Errors • Opcom Messages

#### Agent Configuration

Configuration Information • User Specified Trap Thresholds • User Specified Time Intervals For Statistics Gathering

### Monitor Resources and Performance

**System Utilization.** NMServer oversees page file, swap file and physical memory utilization and sends traps when usage exceeds user defined thresholds.

**CPU.** NMServer maintains statistics on CPU utilization in each processor mode in one, five and fifteen minute intervals.

**Disks.** NMServer collects statistics on logical disks and monitors disk utilization levels. Disk utilization thresholds are set system wide with the option of specifying additional thresholds for specific critical logical disks. Thresholds may be specified in terms of percent full or minimum free space requirements.

**Queues.** NMServer watches user specified critical queues and their entries, sending traps to indicate problems with queues or queue entries.

## OpenVMS Agent Trap Summary

### System Information Traps

Page File Full • Swap File Full • Memory Full

### Resource Information Traps

Excessive CPU Utilization • Excessive Interrupts • Disk Full • Excessive Disk I/O • Disk Status Change • Disk I/O Queue Length • Shadow Set Failure • Shadow Set Copy • Shadow Set Merge • Queue Status Change • Queue Entry Status Change • Critical Job Missing • Excessive COM Processes • Excessive COMO • Process in MWAIT State • Excessive MWAIT Processes • Mission Critical Process Missing

### Status Information Traps

Opcom Message • Hardware Error

### Agent Status Traps

Cold Start • Warm Start • Process Termination

### User Trap

## Manage Systems Remotely

NMServer's Remote Console allows the SNMP Manager to send console commands to the OpenVMS system. These commands, which can include restarting a failed process or purging log files, are executed and the results (if any) are returned to the SNMP Manager. The Remote Console can be selectively disabled by the user if desired.

## OpenVMS Agent Traps

NMServer offers OpenVMS system operators a powerful proactive tool by identifying potential problems before they occur and alerting the SNMP Manager before users are impacted.

NMServer also allows the user to configure thresholds for all utilization traps, i.e. how full, how busy, etc. and define filters for Opcom message traps. In addition to standard critical event traps, the user can send any message desired as a trap. NMServer has also implemented a trap throttle mechanism which can be used to prevent traps from flooding the network. Reception of traps is confirmed with NMServer's Confirmed Trap Reception feature and recent traps are retained by NMServer so they can be retransmitted in the event of network problems – features which provide considerable peace of mind in remote computing environments.

## NMServer Package

NMServer for OpenVMS includes the agent sample configuration files, user guide, installation aids, and sample programs. NMServer is compatible with TCP/IP Services, MultiNet and TCPware. To install NMServer simply use VMSINSTAL, configure a few parameters, and upload the Network Manager.

### PREREQUISITES

OpenVMS version 5.5-2 or later; TCP connectivity to the Network Manager.

### LICENSING AND WARRANTY

COMTEK products are licensed on a per node basis and carry a money back guarantee. Quantity and corporate discounts are available.

### SUPPORT SERVICES

Worldwide support services are provided via FTP, e-mail, phone and fax on a 24x7 basis.

Other COMTEK NMServer products are available for IBM AS/400 (OS/400), and Stratus VOS.

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