Specifications Sheet

The following Nagios-plugins for NetApp are available as of today.

Bundles

Base Bundle (Hardware, Usage, Status, Snapshots) Base-packet addressing the most important metrics. Hoever you can can order and use also a single plugin or any combination of them.

Caches

BufferCache checks several metrics of the system buffer cache (=system memory) like Buffers being read, Buffers being written, Empty (unused) buffers, Buffers with modified data, Buffers associated with CP IO, ... [--help]

FlashCache checks several metrics of the external FlashCache (PAM II) like External cache hit rate, Average latency of read I/Os, Number of wafl buffers served off the external cache, ... [--help]

FlexCache checks several metrics of the FlexCache like Bandwidth savings on FlexCache volume, Proxy rate on FlexCache volume, Per-op hit rate on FlexCache volume, ... [--help]

FlexCacheConnections checks the rate of data transmitted over a flexcache connection. [--help]

NVRAM checks data-rates and latency of the NVRAM. [--help]

Hardware

Hardware checks the NVRAM, cooling-devices, temperature-sensors and power-supplies of the head and its shelves. Also checks all disks in the system, if they are in a broken, pre-failed or replacing state. [--help]

Management

StorageEfficiency (pre-alpha) Storage Efficiency answers the question, "How much more real storage would I have needed to install without some key storage saving technologies like deduplication, cloning, snapshots, etc.?"

StorageUtilization Storage Utilization answers the question, "Am I effectively using the storage capacity available to my applications. [--help]

Network

PerfIf Checks and counts transfer-rates and errors per network-interface (ifnet). Especially useful for monitoring 10GbE-ports. [--help]

Performance

ConsistencyPoints reads the performance-counter cp_count twice and calculates the rate of CPs per second. The argument –counter|-z defines the type of consistency-point (wafl-timer, back-to-back, ...). The information gathered from this plugin corresponds to the CPty-column of 'sysstat -x 1'. [--help]

PerfCpu checks one or all processors in a NetApp system for their utilization. [--help]

PerfDisk checks all disks in a NetApp system for their utilization (Percentage of time there was at least one outstanding request to the disk). Optional the check can be limited to the disks of a single aggregate. [--help]

PerfSys checks various performance counters of the NetApp-system (mostly operations/second and transfer-rates). Counters supported: net_data_sent, dafs_ops, total_ops, disk_data_written, net_data_recv, cifs_ops, streaming_pkts, http_ops, nfs_ops, fcp_ops, disk_data_read, iscsi_ops [--help]

PerfVolume Checks the 'latency' and 'operations per second' (ops) per volume. Shows details for total, read, write and other. NetApp recommends monitoring latency as the primary performance indicator.

[--help]

Snap

SnapMirror checks and logs: lag-time, pair-state, pair-transfer-status, last-transfer-duration, transfer-errors. [--help]

SnapVault monitors a SnapVault-relationship (lag-time, state, last-transfer-duration, transfer-errors) [--help]

Storage

Quotas sends an alarm, if one of the defined quotas are exceeded. One service-check can monitor the whole filer, since we use the internal definitions of the quota-system as thresholds. [--help]

Snapshots checks, if the snap-reserve is still sufficient. Thresholds are set in percent; performance-data can be either in percent or absolute (Byte). Additional criteria are the age or name of the snapshot. This can be used for monitoring snapshot-backups and whether they are up to date or not. Also can be used to find snapshots related to a specific application like SNMV and check all volumes for left-over snapshots. [--help]

Usage checks the used space in volumes and aggregates. Thresholds can be set in GB or percent. [--help]

Status

Cluster checks the cluster-members regarding their state (connected, taken over, takeover failed, ...) and time-master-status (master, slave). [--help]

iSCSI monitors one or all iSCSI-adapters (online, offline, local, partner, error). [--help]

Raidstatus alarms, if one of the RAIDs is degraded. Checks aggregates and volumes. [--help]

Status alarms, according to the global-status. [--help]

Uptime checks the seconds since last reboot. [--help]

Other

modules Helper modules (Na, Il)