PanFS Metrics Reference Guide

A catalog of the metrics, logs, and alerts behind VDURA observability



Documentation for PanFS 12.0.0

© 2002–2026 VDURA Inc. All rights reserved. VDURA, the VDURA logo, VDURA Data Platform, VeLO, VPOD, DirectFlow, PanView, PanMove, and Multi-Level Erasure Coding (MLEC) are trademarks or registered trademarks of VDURA, Inc. in the U.S. and/or other countries. All other trademarks, registered trademarks, trade names, company names, and service marks are the respective properties of their holders.

Parts of this product are derived from Berkeley Database software, licensed from Sleepycat Software.

Parts of this product are derived from Berkeley BSD systems, licensed from the University of California. The BDB software is also BSD licensed, and carries the following copyrights:

- Copyright © 1990–2009 Oracle. All rights reserved.
- Copyright © 1990, 1993, 1994, 1995 The Regents of the University of California. All rights reserved.
- Copyright © 1995, 1996 The President and Fellows of Harvard University. All rights reserved.
- Copyright © 2000–2005 INRIA, France Telecom

Parts of this product are derived from gd Version 1.8.4, licensed by Boutell.Com, Inc.

Copyright © 1982, 1986, 1991, 1993 The Regents of the University of California. All rights reserved.

© UNIX System Laboratories, Inc.

All or some portions of this file are derived from material licensed to the University of California by American Telephone and Telegraph Co. or Unix System Laboratories, Inc. and are reproduced herein with the permission of UNIX System Laboratories, Inc.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

1. Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.
3. Neither the name of the University nor the names of its contributors may be used to endorse or promote products derived from this software without specific prior written permission.

THIS SOFTWARE IS PROVIDED BY THE REGENTS AND CONTRIBUTORS "AS IS" AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE REGENTS OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

Disclaimer

VDURA has carefully checked the information in this document and believes it to be accurate. However, VDURA assumes no responsibility for any inaccuracies that this document may contain. In no event will VDURA be liable for direct, indirect, special, exemplary, incidental, or consequential damages resulting from any defect or omission in this document, even if advised of the possibility of such damages.

Any alterations or inconsistent replications of this document cannot be considered accurate and are void. VDURA may not be able to support issues related to altered documents that are not approved by subject matter experts.

Document version 12.0.0-2026-11-12-11:51:42

1. The Observability Stack 1
1.1 Realm Topology in the Data 1
1.2 Collection Cadence and Retention 2

2. Naming Conventions 3
2.1 Metric Types 3

3. Metric Reference by Subsystem 4
3.1 Realm Inventory and State (panfs_*) 4
3.2 Alerts and Events 7
3.3 Host Operating System Metrics (Telegraf Style) 8
3.4 Management Agent: Hardware Inventory (magent_local_hw_*) 11
3.5 Management Agent: Node Services (hagent, monitor, mcproxy, pm, sys, shelf) 12
3.6 Directors: File Manager Operations (magent_local_sw_fm_*) 14
3.7 Directors: Metadata Caches (magent_local_sw_gen_cache_*) 15
3.8 Storage Nodes: OSD I/O Path (magent_local_sw_iopath_*) 16
3.9 S3 Gateways (versitygw_*) 20

4. Sample Dashboards and Their Metrics 22
4.1 PanFS Alerts (panfs-alerts) 22
4.2 PanFS API - Audit (panfs-api-audit) 22
4.3 PanFS Logs - Browser (panfs-logs-browser) 23
4.4 PanFS Realm Node (panfs-realm-node) 23
4.5 PanFS Realm Overview (panfs-overall-cluster) 24
4.6 VersityGW S3 Metrics (panfs-s3) 26
4.7 PanFS Hardware Health (panfs-hardware) 27
4.8 PanFS Performance (panfs-performance) 29

Appendix A. Realm Alert Catalog (panfs_alerts_info) 32
Appendix B. Complete Metric Index 67
Appendix C. VictoriaLogs Fields and Sources 96

1. The Observability Stack

The VDURA observability feature pairs a metrics pipeline with a logs pipeline. Every node runs a set of vdura-* services that collect data and forward it to the observability stack, where it is kept in VictoriaMetrics (metrics) and VictoriaLogs (logs).

VDURA does not ship Grafana, and no Grafana instance is part of a VDURA system. Grafana appears in this reference for two reasons. It is a common way to read the stored data, and VDURA provides sample dashboards (Chapter 4) that you can import into a Grafana instance that you run yourself. Grafana reads the stored metrics through a VictoriaMetrics data source.

This reference catalogs the time series stored in the VictoriaMetrics database behind that stack, covering what each metric family measures, which labels it carries, how it is collected, and how the sample Grafana dashboards use it. It was compiled from a realm with three Directors and 12 Storage Nodes.

Component	Where	Role
VictoriaMetrics cluster (vmselect)	http://<director-ip>:8481/select/0/prometheus	Metrics query endpoint. Cluster edition, tenant 0. Prometheus compatible API plus MetricsQL.
VictoriaLogs	http://<director-ip>:9471	Log storage and LogsQL query endpoint for file and journald logs from every node.
vmalert	Not reachable from a Grafana data source	Evaluates rule groups panfs.alerts and panfs.processes and writes ALERTS/ALERTS_FOR_STATE series.
vdura-metrics-agent	every realm node	Telegraf style host collection (cpu, mem, disk, net, procstat…) plus the PanFS management agent statistics tree (magent_*).
Realm collector	Director Nodes (host <director-ip>, the master)	Reads realm state from the management database and emits the panfs_* inventory, alert catalog, and event metrics.

In this guide, <director-ip> stands for the management IP address of a Director Node, and <realm-name> for the name of your realm. Replace each with the value for your own realm.

1.1 Realm Topology in the Data

Every series carries a common set of labels that identify the emitting node. These make it possible to slice any metric by node or by node role without joins.

Label	Example	Meaning
host	<realm-name>-director-0, <realm-name>-osd-7	Linux hostname of the node.
host_id	fdbe4872-bf8a-a74a-…	Stable node UUID assigned by the VDURA node identity service.
ip_address	<director-ip> (Directors), the storage network range (storage)	Management IP of the node.

Label	Example	Meaning
node_name	VCH-1,1 … VCH-15,1	PanFS realm name of the node in enclosure,slot form. Realm level panfs_* inventory metrics carry only this label.
node_type	director_l or vpod	Node role: director_l = Director (Linux), vpod = Storage Node.

Node counts by role: count by (node_type) (system_uptime) returns director_l = 3, vpod = 12. The magent_* families split cleanly on role; 3 series per metric means Director only (File Manager, caches, keys), 12 means storage only (iopath), 15 means every node.

1.2 Collection Cadence and Retention

Management agent (magent_*) and realm (panfs_*) metrics arrive every 60 seconds. Host metrics (cpu, disk, mem, net, procstat) are collected every 10 seconds. The vmalert series ALERTS and ALERTS_FOR_STATE are evaluated every 30 seconds.

Every sample of a magent_*, panfs_* or host series is stored three times, with the same timestamp and the same value. The duplicates come from the node collectors, which send each batch to all three VictoriaMetrics insert services without deduplication. The rate, increase, avg_over_time, max_over_time, and last_over_time functions are not affected, and neither are sums across nodes or the other usual dashboard queries. Functions that count or add samples (count_over_time, sum_over_time) return three times the expected value; divide by 3 or use a rate-based form. The ALERTS series are stored once.

2. Naming Conventions

Four naming families coexist in the database. Recognizing them tells you the source of a metric and how to read it.

Prefix	Count	Source and reading rules
magent_local_*, magent_shelf_*	about 1,100	The PanFS management agent statistics tree, flattened: magent_local_<hw|sw|sys>_<subsystem>_<stat>. Array statistics are flattened with a numeric suffix (_0.._37), and per slot items with an embedded index (nic1_, fs0_, hd12_). String stats become a series with value 1 and the text in a "value" label.
panfs_*	27	Realm level inventory and events from the management database. Info metric style: The sample is a state code, the content is in labels. Each family has a <family>_scrape_success gauge.
cpu_, mem_, disk_, diskio_, net_, netstat_, nstat_, ethtool_, processes_, procstat_, system_	about 370	Telegraf input plugins, named <measurement>_<field>. Standard Linux semantics; counters need rate() or increase().
ALERTS, ALERTS_FOR_STATE, observability_node_type	3	vmalert output and the agent role declaration.

2.1 Metric Types

VictoriaMetrics does not store type metadata, so this reference gives the type of each metric. Counters (Telegraf diskio, net, nstat; magent fm op_count) increase monotonically and should be rated. Gauges are read directly. Info metrics have a constant sample value and carry content in labels; read them with last_over_time() or group by (...) and never with rate(). The iopath measure_* group holds last-value gauges and flags, not per-interval sums; it reports the most recent value, so neither rate() nor a sum divided by the collection interval gives a meaningful result.

3. Metric Reference by Subsystem

Tables list families rather than every flattened name; Appendix B has the complete index. “Extra labels” are those beyond the five common node labels.

3.1 Realm Inventory and State (panfs_*)

These metrics are produced by a collector that reads the PanFS realm database on the Director Nodes (the same source the GUI and PanCLI use). The inventory families (panfs_node, panfs_volume, panfs_storageset, panfs_nic, panfs_alerts_info, panfs_sysstat_error_event, and the scrape_success gauges) carry only node_name, not the five host labels because they describe realm objects rather than the emitting host; join them to host level metrics on node_name. They follow the Prometheus “info metric” pattern; the sample value is a state code or a constant, and the interesting content is in the labels. Every panfs_* family has a companion <family>_scrape_success gauge (1 = the last collection of that family succeeded, 0 = it failed), emitted once per realm rather than per node. Dashboards read these with last_over_time(...[5m]) and group by the labels they need.

Metric/family	Type	Extra labels	Meaning	Example query
panfs_node	gauge (state code)	name, node_name, node_role (Director, Storage), node_state_name (online), node_state_description, node_data_serial, node_hardware_serial, node_ip_address, enclosure_name, enclosure_hardware_serial, model_number, display_model_number, software_revision, cpu_model, cpu_hw_cores, cpu_hw_threads, cpu_active_cores, memory_bytes, bios_date, bios_revision, platform_id (cloudvm), platform_variant, system_model, system_vendor, slot_id, activated, upgrading, reinit_eligible, remove_eligible, leds_blinking, primary_nic_mode, primary_link_count, secondary_nic_mode, secondary_link_count, nic_physical_port_mode, cpu_temperature_celsius,	One series per realm node. The value is the numeric node state code (6 = online). The labels are a full hardware and software inventory of the node. The Realm Overview “Cluster Nodes” and “Versions” tables are built from this metric.	group by (node_name, node_role, software_revision) (last_over_time(panfs_node[5m]))

Metric/family	Type	Extra labels	Meaning	Example query
		internal_temperature_celsius, incoming_air_temperature_celsius		
panfs_node_repset	gauge (0/1)	node_name, node_data_serial, node_ip_address, model_number, activated	Whether a node is a member of the realm manager replica set. 1 = member, 0 = not. Storage nodes are always 0, so join with panfs_node{node_role="Director"} before alerting. The vmalert rule PanFSDirectorNotInReplicaSet fires from this.	panfs_node_repset == 0 and on(node_name) panfs_node{node_role="Director"}
panfs_president	gauge (0/1)	datasn, slot, president_slot	Which node currently holds the realm "president" role (the elected realm manager among Directors). 1 on the president, 0 elsewhere. datasn is the node data serial.	panfs_president == 1
panfs_master_mserver_up	gauge (0/1)	master_ip	Whether the master mserver (the realm management server) at master_ip is reachable from this node. 1 = up.	min(panfs_master_mserver_up)
panfs_storageset	gauge (state code)	name, bladeset_id, state ("6/6 OSDs online"), capacity_balancing_enabled, balancing_rate_bytes_per_second, imbalance_bytes, blade_imbalance_bytes, spare_osd_count, desired_spare_osd_count, brickset_flags, mlec, osd_filesystem_version, sed_key_generation_number, correctable_error_count, uncorrectable_error_count	One series per StorageSet (formerly BladeSet). Value is a state code: Healthy sets report 1 or 2, and the "Mixed" pseudo set reports -1; the dashboard filters with > 0 to drop the placeholder. Labels carry the capacity balancing status, spare OSD counts, and error counters.	count(group by (name) (panfs_storageset > 0))

Metric/family	Type	Extra labels	Meaning	Example query
panfs_volume	gauge (state code)	name, volume_id, bladeset_id, volume_state_display (Online), volume_state_description, volume_raid (Object RAID6+), raid_layout, raid_group_osd_width, raid_group_stripe_depth, stripe_unit_bytes, stripe_osd_count_max, max_failures_files, directory_replicas, aggregate_layout, compression, compression_type (lz4), efsa_mode, recovery_priority, soft_quota_bytes, hard_quota_bytes, quota_consumed_bytes, space_used, space_available, user_and_group_quotas_policy, down_storage_node_count, corrupt_object_count, corrupt_parity_object_count, corrupt_log_count, object_id, vsm_id, volume_flags, volume_dynamic_flags, volume_mgmt_flags, online_since, offline_since	One series per volume. The value is a state code (3 = online). Labels carry the volume configuration, RAID layout, quota settings, and integrity counters. Note quota_consumed_bytes and space_used are labels (strings) not sample values, so they cannot be graphed without label_value(); treat them as snapshot inventory. Tenant volumes appear under /.tenants/<id>/...	topk(1, last_over_time(panfs_volume[5m])) by (volume_id)
panfs_nic	gauge (index)	interface (eth0, bond0..2), nic_type, node_name, node_data_serial, node_ip_address, active, in_use, mode_of_operation, uplink_down, warnings_disabled, firmware	One series per NIC per Director (12 series = 4 NICs x 3 Directors). Value is the NIC index (1..4). active/in_use/uplink_down labels give link status.	panfs_nic{uplink_down="true"}
panfs_events_dropped_total	counter	(common only)	Number of realm manager (rmm) events that could not be delivered to mserver during bring-up. It does not count queue overflow or parse failures.	increase(panfs_events_dropped_total[1h])
panfs_*_scrape_success	gauge (0/1)	none	One per collected family: alert_occurrences, alerts_active, alerts_info, drive, drive_bytes_read, drive_bytes_written, fan, ipmi, nic, node, node_repset, power_supply, storageset, switch, sysstat_error_event, volume. Value 1 = the last collection succeeded. The panfs_drive*, panfs_fan, panfs_ipmi, panfs_power_supply, and panfs_switch families appear on physical hardware.	min by (__name__) ({__name__=~"panfs_.*_scrape_success"}) == 0

Metric/family	Type	Extra labels	Meaning	Example query
observability_node_type	gauge (1)	role (director_l, vpod)	Emitted by the VDURA metrics agent on every node to declare its role. role matches the node_type label stamped on all other series (director_l = Director, vpod = Storage Node).	count by (role) (observability_node_type)

3.2 Alerts and Events

Two alerting layers are visible. The PanFS realm has its own alert and event system (alert codes, the same ones shown in the PanFS GUI), exported as info metrics. On top of that, vmalert evaluates rule groups (panfs.alerts, panfs.processes) and writes the standard ALERTS and ALERTS_FOR_STATE series, which are what the PanFS Alerts dashboard reads.

Metric/family	Type	Extra labels	Meaning	Example query
ALERTS	gauge (1)	alertname, alertstate (firing/pending), alertgroup, severity, category, source, message, node_name, activated	One series per active vmalert alert. The alert rule names are PanFSAlertActive, PanFSAlertActiveInformational, PanFSAlertEvent, PanFSAlertsScrapeFailed, PanFSDirectorNotInReplicaSet, PanFSEventsDropped, PanFSNoMasterMserver, PanFSNodeNeedsRepair, PanFSNodeStuckNotOnline, and PanFSRootNotMounted (group panfs.alerts), and ProcessDown (group panfs.processes). Only the alertnames whose condition has been true appear; list the current set with count by (alertname) (ALERTS). The message label is the human readable text (for example “Software Process Stopped: The process mserver...”). severity values: Critical, Warning, Informational, None.	count by (severity) (ALERTS{alertstate=“firing”})
ALERTS_FOR_STATE	gauge (unix time)	same as ALERTS minus alertstate	Standard vmalert companion series: Value is the unix timestamp at which the alert condition first became true. Used to restore “for” durations after a restart. time() - ALERTS_FOR_STATE gives the age of an alert.	time() - ALERTS_FOR_STATE
panfs_alerts_info	info (1)	alert_code, alert_name (PAN_MGMT_EV_*), severity, error_level_name (info/warn/crit/none), category (hardware/volume/bladeset), is_manually_clearable, action_message, node_name	The realm alert catalog: One series per alert definition known to the realm (703 in this release). It is static reference data, not active alerts. It is the best source for decoding an alert_code seen elsewhere; Appendix A lists it.	panfs_alerts_info{alert_code=“8455”}

Metric/family	Type	Extra labels	Meaning	Example query
panfs_alert_occurrences	gauge (count)	alert_code, alert_name, category, severity, message, node_name	Number of times a given realm alert is currently raised (active occurrences). Only alerts with at least one occurrence appear.	sum by (severity) (panfs_alert_occurrences)
panfs_alerts_active (family)	info	alert_code, category, message, severity, node_name, node_ip_address, node_data_serial, tenant_id	One series (value 1) per active realm alert, for example `category="hardware"`, `message="NIC4 is not active."`, `severity="Warning"`. The series disappears when the alert clears. A separate panfs_alerts_active_scrape_success series reports whether the collector's last read of the alert list succeeded.	count by (severity) (panfs_alerts_active)
panfs_sysstat_error_event	info (1)	alert_code, alert_name, category, severity, error_level_name, is_manually_clearable, message, action_message, alert_details (JSON, e.g. {"volume_id": 1}), last_updated (timestamp), node_name	Realm system status events (the "sysstat" event log). Each event is re emitted every collection with a fresh last_updated label, so a single logical event produces a new series every minute.	count by (alert_name) (last_over_time(panfs_sysstat_error_event[5m]))

3.3 Host Operating System Metrics (Telegraf Style)

The vdura-metrics-agent service on every node ships host level metrics using Telegraf input plugin naming (measurement_field). All of them carry the five common labels. Sample rate is high; about 30 samples per 10 minutes for most agent metrics and up to 180 per 10 minutes for system_uptime. These are the metrics behind the Realm Node dashboard.

Metric/family	Type	Extra labels	Meaning	Example query
cpu_usage_{user,system,idle,iowait,irq,softirq,steal,nice,guest,guest_nice}	gauge (percent)	cpu (cpu-total, cpu0..cpuN)	Per CPU and aggregate CPU time breakdown in percent over the collection interval. Utilization is 100 - cpu_usage_idle.	100 - avg by (host) (cpu_usage_idle{cpu="cpu-total"})
system_load1, system_load5, system_load15	gauge	none	Standard load averages.	system_load5/system_n_cpus
system_n_cpus, system_n_physical_cpus	gauge	none	Logical and physical CPU count.	
system_uptime	gauge (seconds)	none	Seconds since boot. Used by the dashboards as the "node is reporting" heartbeat and as the source of the $Node variable.	count by (node_type) (system_uptime)
system_n_users, system_n_unique_users	gauge	none	Logged in user sessions.	

Metric/family	Type	Extra labels	Meaning	Example query
mem_total, mem_used, mem_free, mem_available, mem_used_percent, mem_available_percent, mem_active, mem_inactive, mem_buffered, mem_cached, mem_shared, mem_slab, mem_sreclaimable, mem_sunreclaim, mem_mapped, mem_dirty, mem_write_back, mem_write_back_tmp, mem_page_tables, mem_commit_limit, mem_committed_as, mem_swap_total, mem_swap_free, mem_swap_cached, mem_huge_page_size, mem_huge_pages_total, mem_huge_pages_free, mem_vmalloc_total, mem_vmalloc_used, mem_vmalloc_chunk, mem_high_*, mem_low_*	gauge (bytes, percent)	none	/proc/meminfo fields in bytes.	mem_used_percent
disk_total, disk_used, disk_free, disk_used_percent, disk_inodes_total, disk_inodes_used, disk_inodes_free, disk_inodes_used_percent	gauge (bytes, count, percent)	device, fstype (ext4, btrfs, zfs, vfat, efivarfs, panfs), path, mode, label	Filesystem usage per mount. This includes the PanFS mount itself (device="panfs://<director-ip>/", fstype="panfs") on nodes that mount the realm, which is a convenient realm wide capacity number, and the ZFS datapool datasets on Storage Nodes (datapool-0/pandata-0/...).	disk_used_percent{fstype="panfs"}
diskio_reads, diskio_writes, diskio_read_bytes, diskio_write_bytes, diskio_read_time, diskio_write_time, diskio_io_time, diskio_weighted_io_time, diskio_merged_reads, diskio_merged_writes, diskio_iops_in_progress	counter (except iops_in_progress: Gauge)	name (sda, sda1.., sdb..)	Block device counters from /proc/diskstats, per whole disk and per partition. Times are milliseconds. Rate them for throughput and IOPS. The dashboards exclude name="pass0" (a FreeBSD device name) which is harmless here.	sum by (host) (rate(diskio_read_bytes[$__rate_interval]) + rate(diskio_write_bytes[$__rate_interval]))
diskio_io_util, diskio_io_await, diskio_io_svctm	gauge (percent, ms)	name	Derived iostat style values (utilization percent, average wait, average service time). Present only for whole disks (84 series vs 213 for the counters).	max by (host) (diskio_io_util)

Metric/family	Type	Extra labels	Meaning	Example query
net_bytes_sent, net_bytes_recv, net_packets_sent, net_packets_recv, net_err_in, net_err_out, net_drop_in, net_drop_out	counter	interface	Interface counters. The interface label takes the values bond0, bond1, bond2 (Directors), the physical ports (for example enp164s0 and enp165s0 on Directors) and pri0 to pri3 (all node types).	sum by (node_type) (rate(net_bytes_recv[$__rate_interval]) * 8)
net_speed	gauge (Mbit/s)	interface	Link speed reported by the driver.	
netstat_tcp_{established,listen,time_wait,close_wait,syn_sent,syn_recv,fin_wait1,fin_wait2,closing,last_ack,close,none}, netstat_udp_socket	gauge (count)	none	Socket counts by TCP state.	netstat_tcp_established
nstat_*	counter	none	Kernel SNMP/netstat counters from /proc/net/snmp and /proc/net/netstat with their kernel names (nstat_TcpRetransSegs, nstat_TcpExtTCPTimeouts, nstat_IpInReceives, nstat_UdpInErrors, nstat_Icmp*...). Useful ones for a storage network: TcpRetransSegs, TcpExtTCPLostRetransmit, TcpExtTCPTimeouts, TcpExtListenDrops, TcpExtTCPOFOQueue, UdpRcvbufErrors, IpReasmFails.	rate(nstat_TcpRetransSegs[5m])/rate(nstat_TcpOutSegs[5m])
ethtool_*	counter/gauge	interface, driver	NIC driver statistics from ethtool -S. Which statistics appear depends on the NIC driver; typical examples are per queue rx/tx bytes, descriptors, and drops, plus link state (ethtool_link, ethtool_speed, ethtool_duplex, ethtool_autoneg, ethtool_interface_up). Suffix _0/_1 is the queue index.	rate(ethtool_rx_dropped[5m])
processes_{total,running,sleeping,idle,blocked,stopped,zombies,dead,paging,unknown}, processes_total_threads	gauge (count)	none	Process table summary by state.	processes_blocked
procstat_cpu_usage, procstat_memory_rss, procstat_memory_vms, procstat_num_fds, procstat_num_threads, procstat_created_at	gauge	process_name, pid, pattern	Per process resource usage for processes matched by the agent's configured patterns (the pattern label shows the regex; one pattern is a catch all, ".*"). Because pid is a label and one pattern is ".*", short lived processes (sleep, kworker) create a new series each time, so procstat_created_at can accumulate a very large number of series.	topk(10, procstat_cpu_usage{host=~"$Node"})

3.4 Management Agent: Hardware Inventory (magent_local_hw_*)

The magent_* namespace is the PanFS management agent statistics tree (the same counters PanCLI and the realm manager read from each node), flattened into metric names of the form magent_local_<subsystem>_<stat>. String valued stats are encoded as a series with sample value 1 and the text in a value label. All hw metrics are emitted by every node (15 series).

Metric/family	Type	Extra labels	Meaning	Example query
magent_local_hw_{bios_date, bios_version, cpu_model, platform_id, variant_id, system_model, system_vendor, sysname_str, sn, version, nic_phys_ports}	info (value label)	value	Hardware identity strings: BIOS date/vendor, CPU model, platform, system model, node serial (sn), model/version code, and physical port list.	magent_local_hw_cpu_model
magent_local_hw_cpu_active_cores, cpu_hw_cores, cpu_hw_threads	gauge	none	Core and thread counts (same as the panfs_node labels).	
magent_local_hw_mem	gauge (MiB)	none	Physical memory in MiB (for example 15690 on a 16 GiB node).	magent_local_hw_mem * 1048576
magent_local_hw_status	gauge	none	Overall hardware status code. 0 = OK and 1 = FAILED. The node sets FAILED when it cannot read a temperature sensor, so on a platform where the sensors are unreadable the value is a constant 1 and every temperature is 0. Alert on a value not equal to 0.	magent_local_hw_status != 0
magent_local_hw_{internal_temp, external_temp, incoming_air_temp}	gauge (Celsius)	none	Enclosure temperatures. All 0 on cloud VMs (no sensors); meaningful on physical enclosures.	

Metric/family	Type	Extra labels	Meaning	Example query
magent_local_hw_{high_temp_alert, trip_temp_alert, temperature_shutdown}	gauge (0/1)	none	Thermal alarm flags. The thresholds are per sensor. The hardware threshold is the sensor's own high limit from the hardware model, and the software threshold is the hardware threshold plus 3 degrees Celsius. The Incoming Air sensor is overridden to 35 degrees Celsius for a warning and 40 degrees Celsius for a shutdown. high_temp_alert is 1 while any sensor is above its hardware threshold and below its software threshold. trip_temp_alert is 1 while any sensor is at or above its software threshold. temperature_shutdown is 1 once that condition has lasted 3 minutes; setting it is the shutdown decision, so it is 1 only in the short window before power-off and is 0 again after the reboot. All three are 0 while temperature monitoring is paused.	max(magent_local_hw_trip_temp_alert)
magent_local_hw_nic{1..4}_{desc, name, type, status, firmware, nic_warnings}	info/gauge	value (for desc, name, firmware)	Per NIC slot inventory: The `desc` label is a descriptor string such as "10 GE Network Interface 1<physical,active,...>", name is the Linux device (eth0, bond0..2), type is a link-speed code (6 = 10G, 7 = 2x10G LAG, 13 = 200G, 14 = 400G, 15 = unknown, 0 = LAG with no member), status is always 0 because the agent sets AVAILABLE unconditionally, nic_warnings is a bit mask with ten documented bits. Bit 0x1 is the "not active" condition, so a NIC with a "is not active" alert reports nic_warnings = 1. The value 256 means impaired, a failover LAG with a member down. To detect an inactive or impaired NIC, test nic_warnings, never status.	magent_local_hw_nic4_nic_warnings != 0

3.5 Management Agent: Node Services (hagent, monitor, mcproxy, pm, sys, shelf)

Agent level counters describing the node's management daemons. Emitted by all nodes unless noted.

Metric/family	Type	Extra labels	Meaning	Example query
magent_local_sw_hagent_{version, hwserial, slot_id, shelf_master}	info/gauge	value (version, hwserial)	Hardware agent (pan_mgr_hw_agent): Software version string, hardware serial, slot in shelf, and whether this node is the shelf master (0/1).	count by (value) (magent_local_sw_hagent_version)

Metric/family	Type	Extra labels	Meaning	Example query
magent_local_sw_monitor_{runlevel, runevent, checkmodule, startmodule, stopmodule, restartmodule, corefile, ledstate, brick_property, brick_property_set, brick_property_clr}	info/gauge	value	Process monitor (pan_monitor2) state. The values are strings, so they show the latest value and not counts. runlevel is the current node state; its values are booting, clock-sync, fsck, low-battery-check, oobe-config, umounted_panfs, waiting-offversion-upgrade, normal, reinit, failed, perm-failed, drives-missing, offline, and diag, and a healthy node reports normal. runevent is the name of the last event. checkmodule, startmodule, stopmodule, and restartmodule are command mailboxes that hold whatever the last caller of the matching command wrote. corefile is the last core file recorded, in four fields (exit code, seconds, nanoseconds, and module; the third field is not a size). ledstate is a code (0 normal, 1 booting, 2 fault, 3 critical shutdown warning, 4 off, 5 flash failure, 6 flash offline, 7 invalid). brick_property is a bit mask (0x1 failed, 0x2 configured, 0x4 diagnostic, 0x8 offline, 0x10 factory, 0x20 service, 0x40 perm-failed, 0x80 customer, 0x100 shelf-master, 0x200 realm-manager, 0x400 object-server, 0x800 panfs-mounted), and a Director in a realm reads 514. brick_property_set and brick_property_clr are write mailboxes that control the bits, not state.	magent_local_sw_monitor_corefile
magent_local_sw_mcproxy_{primary,secondary}_lagg_config_{mode, link_count, flags}, magent_local_sw_mcproxy_nic_warning_disabled	gauge	none	Multicast/management proxy view of link aggregation: LAGG mode code (3 = failover, 5 = LACP). link_count is the configured member-link count, read once when mcproxy starts and never updated, so it does not show how many links are up; link status comes from bit 0x100 of nic_warnings. flags has one bit, 0x1, which means LACP long timeout. nic_warning_disabled is a bitmap by NIC number, not a boolean; a value of 64 means NIC6 has its warnings disabled.	
magent_local_sw_pm_{cpty_size, cpty_used}	gauge	none	Performance monitor summary: Bytes across the local OS filesystems (/, /pan, and /var), counting only those that are separate mount points. cpty_size is the filesystem total minus the blocks reserved for root, and cpty_used is the total minus the free space. The values do not cover the whole system disk (/boot/efi and other partitions are excluded), so cpty_size is slightly below the df total. The ratio of the two is a valid fill percentage.	magent_local_sw_pm_cpty_used/magent_local_sw_pm_cpty_size

Metric/family	Type	Extra labels	Meaning	Example query
magent_local_sw_pm_{disk_util, proc_util, text_info}	gauge	none	disk_util is the highest percent busy of the local drives, not a percent full. proc_util is the processor utilization percent. text_info is empty when the node is healthy; otherwise it holds fragments such as "/var: tight space(95%)" or "/pan: inode(97%)" joined with |.	magent_local_sw_pm_disk_util
magent_local_sw_pm_pm_status	gauge	none	Not used. The value is only ever 0.	
magent_shelf_sn, magent_shelf_version	info	none	The shelf serial number and version, as readable strings.	

3.6 Directors: File Manager Operations (magent_local_sw_fm_*)

The File Manager (FM) is the PanFS metadata service running on Directors; these counters are Director only (3 series each). Every operation name appears three times with the suffixes op_count, op_lifetime, and op_occurred. op_count is a cumulative count since the FM process started and resets when the FM restarts or the node reboots, so rate() and increase() handle it; op_lifetime is the duration of the most recent execution of that operation, in nanoseconds, and is not an accumulated total; op_occurred is set to 1 the first time the operation runs and is never cleared. The fm_mgr_* set is the management facing operations (volume and directory lifecycle) and the plain fm_* set is the client facing metadata protocol.

Metric/family	Type	Extra labels	Meaning	Example query
magent_local_sw_fm_op_count_<op>	counter	none	Client metadata operations: lookup, readdir, rename, dir_create, dir_delete, dir_check, dir_compact, file_create, file_create_special, file_delete, obj_setattr, obj_link, obj_start_write, obj_end_write, obj_get_r_capability (read capability grant), obj_report_io_error, obj_report_parity, ogroup_info_get, renew_callback, cancel_callback, cancel_callback_multi, cancel_all_callbacks (client cache callbacks/leases), userquota_get, id_identity_translate, id_identity_get_name.	sum by (host) (rate(magent_local_sw_fm_op_count_lookup[5m]))
magent_local_sw_fm_op_lifetime_<op>	gauge (ns)	none	Duration of the most recent execution of the operation, in nanoseconds. It is not an accumulated total, so a mean latency cannot be computed from lifetime and count.	magent_local_sw_fm_op_lifetime_lookup
magent_local_sw_fm_op_occurred_<op>	gauge (0/1)	none	Set to 1 the first time the operation runs and never cleared. It does not show whether the operation ran in the last interval.	

Metric/family	Type	Extra labels	Meaning	Example query
magent_local_sw_fm_mgr_op_{count,lifetime,occurred}_<op>	counter/gauge	none	Management operations on the FM: config_get, dir_create_realm_root, dir_create_volume_root, dir_delete_volume_root, dir_batch_sync_all, dir_flush_for_fsrc, dir_update_ent_map_hint, volume_flush_dirs, notify_new_volume_info, notify_ogroup_deleted, obj_attrs_updated, obj_recall_caps, obj_update_map_hint, obj_update_parent_info. The count is cumulative; lifetime is the last execution's duration in nanoseconds, and occurred is set to 1 once and never cleared.	magent_local_sw_fm_mgr_op_count_dir_create_volume_root
magent_local_sw_fm_global_op_{count,lifetime,occurred}	counter/gauge	none	Totals across all FM operations. The count equals the sum of every op_count_* and mgr_op_count_* metric. lifetime is the last operation's duration in nanoseconds, not a total, and occurred is set to 1 once and never cleared.	rate(magent_local_sw_fm_global_op_count[5m])

3.7 Directors: Metadata Caches (magent_local_sw_gen_cache_*)

The generic cache subsystem on Directors. The two views are per cache statistics (cache_<name>_*) and per memory partition statistics (partition_<name>_*). The caches are FM_dir_cache (directory entries), FM_object_attribute_cache, FM_ogroup_cache (object groups), SM_object_cache (Storage Manager objects) and pan_id_user_info_cache (identity mapping). The partitions are fm_dir, fm_attr, fm_ogroup, sm_obj, and default. Director only except the default partition, which every node reports.

Metric/family	Type	Extra labels	Meaning	Example query
magent_local_sw_gen_cache_cache_<cache>_{lookup, get, miss}_{count, occurred}	counter/gauge	none	Lookups, successful gets, and misses per cache. Both the lookup and the get paths count misses, so the hit ratio is 1 - miss/(lookup + get).	1 - rate(magent_local_sw_gen_cache_cache_FM_dir_cache_miss_count[5m])/(rate(magent_local_sw_gen_cache_cache_FM_dir_cache_lookup_count[5m]) + rate(magent_local_sw_gen_cache_cache_FM_dir_cache_get_count[5m]))
magent_local_sw_gen_cache_cache_<cache>_{load_io, reload_io, insert_io, store_io}_{count, lifetime, occurred}	counter/gauge	none	Backing store I/O performed on behalf of the cache: Load (fill on miss), reload (refresh), insert (new entry written), store (dirty entry written back). lifetime is the duration of the last operation in nanoseconds, not an accumulated total.	magent_local_sw_gen_cache_cache_FM_object_attribute_cache_load_io_lifetime

Metric/family	Type	Extra labels	Meaning	Example query
magent_local_sw_gen_cache_partition_<part>_{bytes_cur, bytes_hiwat, bytes_limit, ents_cur, ents_hiwat, evicted_ent_count, eviction_event_count, eviction_event_occurred}	gauge/counter	none	Memory partition sizing: Current bytes, high water mark, configured limit (fm_attr about 1.67 GB and sm_obj about 1.38 GB on 16 GiB Directors), current and peak entry counts, and eviction counters. Both eviction counts are cumulative, and eviction_event_occurred is a sticky 1. bytes_cur/bytes_limit is cache pressure.	magent_local_sw_gen_cache_partition_fm_attr_bytes_cur/magent_local_sw_gen_cache_partition_fm_attr_bytes_limit

3.8 Storage Nodes: OSD I/O Path (magent_local_sw_iopath_*)

iopathv4 is the OSD (object storage device) service on Storage Nodes; these metrics are Storage Node only (12 series each). This is the largest family (about 900 names) because several statistics are arrays flattened with a numeric suffix. Two index spaces exist: _0.._37 (38 slots) on counts/durations/timings, which is indexed by OSD command type, and _0.._34 (35 slots) on measure_client_times_*, which is a per client table whose IP is given by measure_client_times_ip_addr_N. The command index N is the OSD opcode of the command, and the command index table at the end of this section lists all 38 indexes. The “measure” group holds last-value gauges and flags, not per-interval sums, and the timings_N group holds the values of the last command. Only counts_N and the duration*_N tables accumulate, so they are the source for rates and latency.

Metric/family	Type	Extra labels	Meaning	Example query
magent_local_sw_iopath_counts_N, success_counts_N	counter (cumulative)	none	counts_N counts the commands of type N that completed since the service started. success_counts_N accumulates the same way, once per completed command with status 0.	sum(rate(magent_local_sw_iopath_counts_18[5m]))
magent_local_sw_iopath_duration{all, active, queue, wire, osdfs}_N	counter (usec, cumulative)	none	Latency breakdown per command type, in microseconds summed over completed commands, so durationall_N / counts_N is the mean latency in microseconds: Total (all), time actively processing (active), time queued before processing (queue), network transfer time (wire), and time in the OSD filesystem (osdfs). The metric names have no underscore between “duration” and the suffix (for example magent_local_sw_iopath_durationall_0).	rate(magent_local_sw_iopath_durationall_18[5m])/rate(magent_local_sw_iopath_counts_18[5m])
magent_local_sw_iopath_timings_{lifetime, active_time, inactive_time, wire_time, diskreads}_N	gauge	none	Second timing table with the same command index. Each series holds the values of the last command of that type (lifetime, active time, wire time, and number of disk reads), not accumulated totals. inactive_time is never written.	

Metric/family	Type	Extra labels	Meaning	Example query
magent_local_sw_iopath_measure_{bytes_in, bytes_out, cur_bytes_transferred, io_occured, io_duration_usec, rd_duration_usec, wr_duration_usec, rw_duration_usec, ra_duration_usec, read_size, write_size, op_count_write, op_count_non_write, sol_data_write, sol_data_non_write, task_queue_depth, lowpri_count}	gauge (last value)	none	Last-value gauges and flags for the whole OSD, not per-interval sums: bytes in/out, number of I/Os, total and per class (read, write, read+write, readahead) durations, read and write sizes, write vs non write op counts, solicited data counts, current task queue depth, and low priority I/O count. bytes_in is the length of the last transfer, and io_occured is a sticky 1. Summing these values or dividing them by the collection interval gives no meaningful rate. For throughput and latency use the cumulative counts_N and duration*_N series.	magent_local_sw_iopath_measure_bytes_in
magent_local_sw_iopath_measure_df_{bytes_in, bytes_out, io_occured, io_duration_usec}	gauge (last value)	none	Same last-value measurements restricted to DirectFlow client traffic (df). They equal the totals when all traffic is DirectFlow.	sum(last_over_time(magent_local_sw_iopath_measure_df_bytes_out[$__rate_interval]))
magent_local_sw_iopath_measure_client_times_{ip_addr, read_active_times, read_wire_times, write_active_times, write_wire_times}_N	info/gauge (usec)	value (ip_addr)	Per client latency table (35 slots). ip_addr_N gives the client IP in the value label; the four timing metrics give read/write active and wire time for that client. Join on the suffix to attribute latency to a client. Each time is the last request's value in microseconds, not a total. Slots are filled first come, one per client IP, and are never released, so the 36th client IP and later are not tracked and a client that stopped mounting keeps its stale values. Use the table for spot checks only.	magent_local_sw_iopath_measure_client_times_ip_addr_0

Metric/family	Type	Extra labels	Meaning	Example query
magent_local_sw_iopath_measure_{capacity_bytes, remaining_capacity_bytes, bucket0_capacity_bytes, bucket0_remaining_capacity_bytes, bucket1_capacity_bytes, bucket1_remaining_capacity_bytes}	gauge (bytes)	none	OSD raw capacity and free space and the same split across two capacity buckets. bucket0 is the data bucket; its capacity is the device size and its remaining value is the free bytes. bucket1 is the spare bucket, which holds space that the realm manager reserved with the “move space reservation” command. The spare bucket’s capacity is written as 0 when the device is formatted and never changes, so bucket1_capacity_bytes is always 0, and a bucket1_remaining_capacity_bytes value above 0 means reserved spare space is parked there. A node with 0 in both bucket1 values has no reservation at that time. remaining_capacity_bytes is the device’s remaining capacity and includes the spare bucket, so it equals bucket0_remaining_capacity_bytes plus bucket1_remaining_capacity_bytes, plus a test bucket that is not exported and is normally 0. Free space for new data is sum(bucket0_remaining_capacity_bytes). The sum of remaining_capacity_bytes counts the parked spare reservation as free, although users cannot use it; the two sums differ by exactly the spare space the realm holds.	1 - sum(magent_local_sw_iopath_measure_bucket0_remaining_capacity_bytes)/sum(magent_local_sw_iopath_measure_bucket0_capacity_bytes)
magent_local_sw_iopath_measure_{num_failed_allocations, num_timeout_cmds, num_timeout_sessions}	counter	none	Cumulative error counters: Failed space allocations, commands that timed out, and client sessions that timed out. increase() is the right function for them.	increase(magent_local_sw_iopath_measure_num_timeout_cmds[1h])
magent_local_sw_iopath_fs{0,1,2}_{purpose, data_capacity, metadata_capacity, free_capacity, total_inodes}, magent_local_sw_iopath_hd{0..14}_fs	info/gauge	value (purpose)	The OSD’s local filesystems (up to 3) and the drive to filesystem map (15 drive slots). purpose carries a UUID identifying the filesystem, capacities are bytes, hdN_fs is the index of the filesystem the drive belongs to (4294967295 = slot empty). Realm Overview sums fsN_metadata_capacity as “Metadata Used” and fs0_free_capacity as “Total Capacity (Free)”.	sum(magent_local_sw_iopath_fs0_free_capacity)
magent_local_sw_iopath_iscsi_{num_cur_conns, config_rcv_buf_size, config_snd_buf_size}	gauge	none	iSCSI transport for the OSD protocol: Current connections and socket buffer sizes (128 KiB receive, 512 KiB send).	sum(magent_local_sw_iopath_iscsi_num_cur_conns)

Metric/family	Type	Extra labels	Meaning	Example query
magent_local_sw_iopath_info_iopath_state	gauge	none	State of the iopath service. 0 = starting, 1 = running, 2 = software failed, 3 = permanently failed, 4 = SSD failed, 5 = HD0 failed, 6 = HD1 failed. A healthy node reports 1.	

Command index table. The index N in counts_N, success_counts_N, the duration*_N values, and timings_N is the OSD opcode of the command in this table.

Index	OSD command	Note
0	(none)	No opcode; always reads 0
1	(none)	No opcode; always reads 0
2	upgrade firmware	
3	commit upgrade firmware	
4	abort upgrade firmware	
5	create object group	
6	create object	
7	remove object group	
8	clone object group	
9	open	
10	close	
11	set attribute	
12	get attribute	
13	flush	
14	list	
15	remove object	
16	clone object	
17	read	DirectFlow reads arrive as index 33, so this index stays 0
18	write	
19	append	
20	clear	
21	xor write	RAID parity path
22	write returning xor	RAID parity path
23	move objects	Deprecated
24	read map	
25	diff read	
26	move space reservation	Bucket space reservations
27	commit bucket usage	
28	list marked objects	Deprecated
29	create multigroup object	Deprecated

Index	OSD command	Note
30	get errors	
31	clear error	
32	read and prefetch	
33	clustered read and prefetch	The normal read path
34	set attribute multigroup object	
35	clone multigroup object	
36	list objects clones	OSDv4 only
37	unaligned write	Also counted in index 18

3.9 S3 Gateways (versitygw_*)

These metrics come from the S3 gateways (VersityGW) that serve a tenant's S3 endpoint. The gateways send StatsD counters to the node-local Telegraf listener, which stores them in VictoriaMetrics under the names below. Collection is on by default and is controlled per tenant by the `metrics_enabled` setting of the tenant's S3 configuration in PanAPI (the Vantage S3 chapter calls it `--metrics-enabled`). The six names match the queries of the VersityGW S3 Metrics sample dashboard (section 4.6). The service label identifies the tenant and the gateway instance; the dashboard's Instance variable selects the values that start with the chosen tenant followed by two underscores.

Every S3 series carries the five common node labels (host, host_id, ip_address, node_name, node_type), stamped with the Director that runs the gateway instance. In the table, "S3 labels" are the labels the gateway adds to its series, namely service, tenant_id, bucket (only on requests that name a bucket), api (s3), action (the S3 operation, such as PutObject, GetObject, ListObjects, or DeleteObject), method (the HTTP method), status (the HTTP status code of the request) and metric_type (counter). A separate series exists for each combination of these label values, so the number of series grows with the buckets, operations, and status codes a gateway has served. The counters are running totals, so a gateway restart does not reset them.

Metric/family	Type	Extra labels	Meaning	Example query
versitygw_success_count_value	counter	S3 labels	Number of S3 requests that completed successfully.	sum(rate(versitygw_success_count_value{service=~"$service"}[$__rate_interval]))
versitygw_failed_count_value	counter	S3 labels	Number of S3 requests that failed. The sample dashboard splits its rate by action (the S3 operation) and by status (the HTTP status).	sum by (action)(rate(versitygw_failed_count_value{service=~"$service"}[$__rate_interval]))
versitygw_bytes_written_value	counter	S3 labels	Bytes written through the gateway.	sum(rate(versitygw_bytes_written_value{service=~"$service"}[$__rate_interval]))

Metric/family	Type	Extra labels	Meaning	Example query
versitygw_bytes_read_value	counter	S3 labels	Bytes read through the gateway.	sum(rate(versitygw_bytes_read_value{service=~"$service"}[$__rate_interval]))
versitygw_object_created_count_value	counter	S3 labels	Number of PutObject requests, counted per status code. A failed upload is counted under its own status (for example 411), so filter on status="200" to count only the objects that were created.	sum(rate(versitygw_object_created_count_value{service=~"$service"}[$__rate_interval]))
versitygw_object_removed_count_value	counter	S3 labels	Number of objects removed.	sum(rate(versitygw_object_removed_count_value{service=~"$service"}[$__rate_interval]))

4. Sample Dashboards and Their Metrics

VDURA provides eight sample dashboards. They are examples for you to import into your own Grafana instance, not part of the VDURA system. To get the dashboard files, request them from your VDURA representative or contact VDURA Technical Support. Their queries show which metrics VDURA treats as primary signals, and they double as worked examples for the tables above.

4.1 PanFS Alerts (panfs-alerts)

vmalert view: Firing counts by severity, category, and node, a firing over time chart, and a table of the ALERTS series.

Panel	Type	Query
Firing (total)	stat	count(ALERTS{alertstate="firing"}) or vector(0)
Critical	stat	count(ALERTS{alertstate="firing",severity="Critical"}) or vector(0)
Warning	stat	count(ALERTS{alertstate="firing",severity="Warning"}) or vector(0)
Informational	stat	count(ALERTS{alertstate="firing",severity="Informational"}) or vector(0)
Firing alerts by severity over time	timeseries	count by (severity) (ALERTS{alertstate="firing"})
Currently firing	table	ALERTS{alertstate="firing"}
Firing by category	bargauge	count by (category) (ALERTS{alertstate="firing"})
Firing by node	bargauge	count by (node_name) (ALERTS{alertstate="firing"})

4.2 PanFS API - Audit (panfs-api-audit)

VictoriaLogs only. Reads /var/log/panapi-audit.log with tenant_id and user_id filters. Panels cover events over time by result, failed operations, top action x resource pairs, failures by status_code.

Panel	Type	Query
Audit events over time (by result)	timeseries	filename:="/var/log/panapi-audit.log" tenant_id:$tenant_id user_id:$user_id | stats by (_time:$__interval, result) count() events
Failed operations (selected range)	stat	filename:="/var/log/panapi-audit.log" result:=failed tenant_id:$tenant_id user_id:$user_id | stats count() failures
Top operations (action x resource)	table	filename:="/var/log/panapi-audit.log" tenant_id:$tenant_id user_id:$user_id | stats by (action, resource) count() requests | sort by (requests desc) limit 20
Failures by status_code	table	filename:="/var/log/panapi-audit.log" result:=failed tenant_id:$tenant_id user_id:$user_id | stats by (status_code, action, resource) count() failures | sort by (failures desc) limit 50
Audit log stream	logs	filename:="/var/log/panapi-audit.log" tenant_id:$tenant_id user_id:$user_id

4.3 PanFS Logs - Browser (panfs-logs-browser)

VictoriaLogs only. Generic browser over any log file (filename variable) or systemd unit (unit variable) with error/warning/info counts and top collapsed message patterns.

Panel	Type	Query
Total lines	stat	filename:$filepath | stats count() total
Errors	stat	filename:$filepath (level:~"(?i)error|fatal" OR (NOT level:* AND _msg:~"(?i)error|fail")) | stats count() errors
Warnings	stat	filename:$filepath (level:~"(?i)warn" OR (NOT level:* AND _msg:~"(?i)warn")) | stats count() warnings
Info	stat	filename:$filepath (level:~"(?i)info" OR (NOT level:* AND _msg:~"(?i)info")) | stats count() info
Top 10 patterns (numbers collapsed)	table	filename:$filepath | collapse_nums | stats by (_msg) count() hits | sort by (hits desc) limit 10
Errors by file	table	filename:$filepath (level:~"(?i)error|fatal" OR (NOT level:* AND _msg:~"(?i)error|fail")) | stats by (filename) count() errors | sort by (errors desc) limit 50
File logs (filename=~$filepath)	logs	filename:$filepath
Total lines	stat	unit:$unit | stats count() total
Errors	stat	unit:$unit (level:~"(?i)error|fatal" OR (NOT level:* AND _msg:~"(?i)error|fail")) | stats count() errors
Warnings	stat	unit:$unit (level:~"(?i)warn" OR (NOT level:* AND _msg:~"(?i)warn")) | stats count() warnings
Info	stat	unit:$unit (level:~"(?i)info" OR (NOT level:* AND _msg:~"(?i)info")) | stats count() info
Top 10 patterns (numbers collapsed)	table	unit:$unit | collapse_nums | stats by (_msg) count() hits | sort by (hits desc) limit 10
Errors by unit	table	unit:$unit (level:~"(?i)error|fatal" OR (NOT level:* AND _msg:~"(?i)error|fail")) | stats by (unit) count() errors | sort by (errors desc) limit 50
Journal/unit logs (unit=~$unit)	logs	unit:$unit

4.4 PanFS Realm Node (panfs-realm-node)

Per node drill down driven by a $Node variable built from label_values(system_uptime, host). It shows CPU per core, top processes by CPU and RSS, memory breakdown, disk I/O and IOPS per device.

Panel	Type	Query
Per-host CPU utilization (Total)	gauge	100 - avg by (host) (cpu_usage_idle{cpu="cpu-total", host=~"$Node"})
Per-host CPU utilization (Total)	timeseries	100 - avg by (host) (cpu_usage_idle{cpu="cpu-total", host=~"$Node"})
CPU utilization (Cores)	bargauge	100 - cpu_usage_idle{cpu!="cpu-total", host="$Node"}
Top 10 Processes (CPU Usage)	bargauge	topk(10, procstat_cpu_usage{host=~"$Node"})

Panel	Type	Query
Memory Used	gauge	mem_used_percent{host=~"$Node"}
Memory Usage	timeseries	mem_total{host=~"$Node"} mem_used{host=~"$Node"}
Memory Usage	timeseries	mem_wired{host=~"$Node"} mem_active{host=~"$Node"} mem_inactive{host=~"$Node"} mem_laundry{host=~"$Node"} mem_free{host=~"$Node"}
Top 10 Processes (Memory Usage)	bargauge	topk(10, procstat_memory_rss{host=~"$Node"})
Disk IO (Read/Write)	timeseries	diskio_read_bytes{host=~"$Node", name!="pass0"} diskio_write_bytes{host=~"$Node", name!="pass0"}
Disk IO (Rate[$__rate_interval])	timeseries	rate(diskio_read_bytes{host=~"$Node", name!="pass0"}[$__rate_interval]) rate(diskio_write_bytes{host=~"$Node", name!="pass0"}[$__rate_interval])
Disk Throughput	timeseries	sum by (host, node_type) (rate(diskio_read_bytes{host=~"$Node"}[$__rate_interval]) + rate(diskio_write_bytes{host=~"$Node"}[$__rate_interval]))
Total IOPS (read + write) per host	timeseries	sum by (node_type) (rate(diskio_reads{host=~"$Node"}[$__rate_interval]) + rate(diskio_writes{host=~"$Node"}[$__rate_interval]))

4.5 PanFS Realm Overview (panfs-overall-cluster)

Realm wide view: Node inventory (panfs_node), StorageSet and volume tables, firing alerts by severity, CPU and memory utilization, disk and network throughput by node_type, metadata and free capacity from the iopath fs0..2 gauges, DirectFlow bytes in/out, and log volume from VictoriaLogs. The DirectFlow panels read the iopath measure_df_* metrics, which are last-value gauges (section 3.8), so they show the most recent value and not a sum over the interval.

Panel	Type	Query
Uptime Cluster Nodes	table	count by (node_type) (system_uptime)
Storage	table	count(group by (name) (panfs_storageset > 0)) count(group by (volume_id) (panfs_volume > 0))
Firing Alerts	bargauge	count by (severity) (ALERTS{alertstate="firing"})
Versions	table	group by (software_revision) (last_over_time(panfs_node[$__rate_interval]))
CPU Utilization	stat	100 - avg by (host) (cpu_usage_idle{cpu="cpu-total"})

Panel	Type	Query
Memory Utilization	stat	mem_used_percent
Cluster Nodes	table	group by (name, ip_address, node_type, node_name, node_state, node_data_serial, node_hardware_serial, node_state_name, node_state_description, enclosure_name, software_revision, cpu_model, memory_bytes, cpu_active_cores, internal_ temperature_celsius, cpu_temperature_celsius) (last_over_time(panfs_node[$__rate_ interval]))
Storage Sets	table	topk(1, last_over_time(panfs_storageset[5m]>0)) by (name)
Volumes	table	topk(1, last_over_time(panfs_volume[5m])) by (volume_id)
Active alert messages	state-timeline	max by (message) ((ALERTS{severity="Critical"}) * 3 or (ALERTS{severity="Warning"}) * 2 or (ALERTS{severity="Informational"}) * 1)
StorageSets Alerts	table	ALERTS{message=~".*(BladeSet |Storage[ ]?[Ss]et).*"}
Volume Alerts	table	ALERTS{message=~".*(Volume).*"}
Software Alerts	table	ALERTS{message=~"(Software Process.|The process .restarted)"}
Disk Throughput	timeseries	sum by (host, node_type) (rate(diskio_read_bytes[$__rate_interval]) + rate(diskio_ write_bytes[$__rate_interval]))
Total IOPS (read + write) per host	timeseries	sum by (host, node_type) (rate(diskio_reads[$__rate_interval]) + rate(diskio_writes[$__ rate_interval]))
CPU Utilization	timeseries	avg by (host) (100 - cpu_usage_idle{cpu="cpu-total"})
Disk IO Usage	timeseries	(sum(rate(diskio_read_bytes{node_type="vpod"}[$__rate_interval])) + sum(rate(diskio_write_bytes{node_type="vpod"}[$__rate_interval]))) sum(rate(diskio_reads{node_type="vpod"}[$__rate_interval])) + sum(rate(diskio_ writes{node_type="vpod"}[$__rate_interval]))
Throughput Out	timeseries	sum(rate(net_bytes_sent{interface=~"eth0|bond0"}[$__rate_interval]) * 8) by (node_ type)
Throughput In	timeseries	sum(rate(net_bytes_recv[$__rate_interval]) * 8) by (node_type)
Metadata Used	timeseries	sum(magent_local_sw_iopath_fs0_metadata_capacity+magent_local_sw_iopath_fs1_ metadata_capacity+magent_local_sw_iopath_fs2_metadata_capacity)
Total Capacity (Free)	timeseries	sum(last_over_time(magent_local_sw_iopath_fs0_free_capacity[$__rate_interval]))
IOPath Measure (DF Bytes In/Out)	timeseries	sum(last_over_time(magent_local_sw_iopath_measure_df_bytes_in[$__rate_interval])) sum(last_over_time(magent_local_sw_iopath_measure_df_bytes_out[$__rate_ interval]))
Duration	timeseries	sum(last_over_time(magent_local_sw_iopath_measure_df_io_duration_usec[$__rate_ interval]))
Log volume (all logs)	timeseries	• stats by (_time:$__interval) count() logs

Panel	Type	Query
Log rate (total vs error), per second	timeseries	• stats by (_time:$__interval) rate() log_rate i(error) \| stats by (_time:$__interval) rate() error_rate

4.6 VersityGW S3 Metrics (panfs-s3)

VictoriaMetrics only. Request, error, throughput, and object counters for the S3 gateways of one tenant (metrics in section 3.9). Two variables narrow the view, Tenant (the values of the service label of versitygw_failed_count_value) and Instance (service), a multi-select list of the services whose names start with the chosen tenant followed by two underscores. The default time range is the last hour, refreshed every 30 seconds.

Panel	Type	Query
Failed req/s	stat	sum(rate(versitygw_failed_count_value{service=~"$service"}[$__rate_interval]))
Success req/s	stat	sum(rate(versitygw_success_count_value{service=~"$service"}[$__rate_interval]))
Error ratio	stat	100 * sum(rate(versitygw_failed_count_value{service=~"$service"}[$__rate_interval])) / clamp_min(sum(rate(versitygw_failed_count_value{service=~"$service"}[$__rate_interval])) + sum(rate(versitygw_success_count_value{service=~"$service"}[$__rate_interval])), 0.0001)
Throughput (read+write)	stat	sum(rate(versitygw_bytes_read_value{service=~"$service"}[$__rate_interval])) + sum(rate(versitygw_bytes_written_value{service=~"$service"}[$__rate_interval]))
Request rate – success vs failed	timeseries	sum(rate(versitygw_success_count_value{service=~"$service"}[$__rate_interval])) (success) and sum(rate(versitygw_failed_count_value{service=~"$service"}[$__rate_interval])) (failed)
Failed rate by instance	timeseries	sum by (service) (rate(versitygw_failed_count_value{service=~"$service"}[$__rate_interval]))
Rate by action	timeseries	sum by (action) (rate(versitygw_failed_count_value{service=~"$service"}[$__rate_interval]))
Rate by HTTP status	timeseries	sum by (status) (rate(versitygw_failed_count_value{service=~"$service"}[$__rate_interval]))
Throughput – bytes/s	timeseries	sum(rate(versitygw_bytes_read_value{service=~"$service"}[$__rate_interval])) (read) and sum(rate(versitygw_bytes_written_value{service=~"$service"}[$__rate_interval])) (written)
Objects/s – created vs removed	timeseries	sum(rate(versitygw_object_created_count_value{service=~"$service"}[$__rate_interval])) (created) and sum(rate(versitygw_object_removed_count_value{service=~"$service"}[$__rate_interval])) (removed)

4.7 PanFS Hardware Health (panfs-hardware)

VictoriaMetrics only. Hardware health from the management agent on each node (the magent_local_hw_* metrics and related agent metrics) and from the realm database (the panfs_* metrics). Panels cover hardware status, temperatures and thermal alarms, NICs, memory, CPU and system disks, core files, power supplies, fans, switches, drive inventory and wear, and the status of the realm collectors. The temperature panels read a flat 0 where there are no sensors. A chassis whose firmware does not report power supplies or fans also leaves those two tables empty, and the Switches table is expected to be empty on current hardware. Treat an empty or flat-zero panel as missing data, not as proof of health. The hardware status value is 0 for OK and 1 for FAILED (section 3.4), so the "Nodes with non-OK hardware status" panel, which tests for a value other than 1, counts the nodes that are not FAILED. The NIC slot status panel always shows 0 because the agent never changes the NIC status; the NIC link warnings panel carries the NIC condition. The fan-failure trip and drives over temp series in the Thermal alarms panel are never set and always read 0. The System disk utilisation panel shows the highest percent busy of the local drives, not how full the system disk is. The dashboard has no variables; the default time range is the last hour, refreshed every 30 seconds.

Panel	Type	Query
Nodes reporting hardware status	stat	count(magent_local_hw_status)
Nodes with non-OK hardware status	stat	count(magent_local_hw_status != 1) or vector(0)
Hardware status by node	bargauge	magent_local_hw_status
Enclosure temperatures	timeseries	magent_local_hw_internal_temp ({{node_name}} internal) magent_local_hw_external_temp ({{node_name}} external) magent_local_hw_incoming_air_temp ({{node_name}} incoming air)
CPU and node temperatures (realm inventory)	timeseries	label_value(last_over_time(panfs_node[5m]), "cpu_temperature_celsius") ({{node_name}} cpu) label_value(last_over_time(panfs_node[5m]), "internal_temperature_celsius") ({{node_name}} internal)
Thermal alarms	timeseries	sum(magent_local_hw_high_temp_alert) (high temp) sum(magent_local_hw_trip_temp_alert) (trip temp) sum(magent_local_hw_ff_trip_temp_alert) (fan-failure trip) sum(magent_local_hw_temperature_shutdown) (thermal shutdown) sum(magent_local_hw_drives_over_temp) (drives over temp)
Nodes in thermal alarm	bargauge	magent_local_hw_high_temp_alert + magent_local_hw_trip_temp_alert + magent_local_hw_temperature_shutdown
NIC slot status	timeseries	sum(magent_local_hw_nic1_status) (nic1 status) sum(magent_local_hw_nic2_status) (nic2 status) sum(magent_local_hw_nic3_status) (nic3 status) sum(magent_local_hw_nic4_status) (nic4 status)
NIC link warnings	timeseries	sum(magent_local_hw_nic1_nic_warnings) (nic1 warnings) sum(magent_local_hw_nic2_nic_warnings) (nic2 warnings) sum(magent_local_hw_nic3_nic_warnings) (nic3 warnings) sum(magent_local_hw_nic4_nic_warnings) (nic4 warnings)
NICs with uplink down	stat	count(last_over_time(panfs_nic{uplink_down="true"}[5m])) or vector(0)

Panel	Type	Query
NIC inventory	table	group by (node_name, interface, device, nic_type, active, in_use, uplink_down, mode_of_operation, firmware, warnings_disabled) (last_over_time(panfs_nic[$__rate_interval]))
IPMI sensors	table	group by (node_name, node_ip_address, ipmi_ip_address, mac_address, firmware_revision, netmask, default_router) (last_over_time(panfs_ipmi[$__rate_interval]))
Installed memory per node	bargauge	magent_local_hw_mem * 1048576
CPU cores per node	bargauge	magent_local_hw_cpu_active_cores ({{node_name}} active) magent_local_hw_cpu_hw_threads ({{node_name}} threads)
System disk utilisation	bargauge	magent_local_sw_pm_disk_util
System disk capacity used	timeseries	magent_local_sw_pm_cpty_used ({{node_name}} used) magent_local_sw_pm_cpty_size ({{node_name}} total)
Core files recorded	timeseries	count by (host) (magent_local_sw_monitor_corefile)
Power supplies	table	last_over_time(panfs_hw_power_supply[$__rate_interval])
Fans	table	last_over_time(panfs_hw_fan[$__rate_interval])
Switches [blocked on PanFS platform fix]	table	group by (enclosure_name, switch_number, firmware_revision, kernel_revision, mac_address, flooding) (last_over_time(panfs_switch[$__rate_interval]))
Drives	table	group by (node_name, drive_number, name, type, vendor, model, hardware_serial, firmware_version, hardware_status, ssd_remaining_lifetime, reallocation_count, lun) (last_over_time(panfs_drive[$__rate_interval]))
Drive throughput	timeseries	sum by (node_name) (rate(panfs_drive_bytes_read[$__rate_interval])) ({{node_name}} read) sum by (node_name) (rate(panfs_drive_bytes_written[$__rate_interval])) ({{node_name}} write)
Drive status by slot	timeseries	label_replace(sum by (__name__) ({__name__=~"magent_local_hw_hd[0-9]+_status"}), "slot", "$1", "__name__", "magent_local_hw_(hd[0-9]+)_status")
SSD wearout indicator	bargauge	{__name__=~"magent_local_hw_hd[0-9]+_ssd_wearout_indicator_value"}
Drive reallocation count	timeseries	{__name__=~"magent_local_hw_hd[0-9]+_hdd_reallocation_count"}
Drive reserve-space and wearout alerts	timeseries	sum({__name__=~"magent_local_hw_hd[0-9]+_ssd_wearout_indicator_alert"}) (wearout alerts) sum({__name__=~"magent_local_hw_hd[0-9]+_ssd_available_reserve_space_alert"}) (reserve-space alerts)
Realm collectors failing	stat	count({__name__=~"panfs_.+_scrape_success"} == 0) or vector(0)
Realm collector scrape status	bargauge	label_replace({__name__=~"panfs_.+_scrape_success"}, "collector", "$1", "__name__", "panfs_(.+)_scrape_success")

4.8 PanFS Performance (panfs-performance)

VictoriaMetrics only. File Manager (metadata) operation rates and latency, the metadata caches, OSD I/O (throughput, operations, latency breakdown, task queue depth, errors and timeouts, iSCSI connections), raw capacity and free space, and volume and StorageSet health counters. It reads the magent_local_sw_fm_*, magent_local_sw_gen_cache_* and magent_local_sw_iopath_* metrics (sections 3.6 to 3.8) and the panfs_volume_* and panfs_storageset_* metrics (section 3.1). The dashboard has no variables; the default time range is the last hour, refreshed every 30 seconds. Several panels do not show what their titles say. The FM and cache latency panels divide a lifetime value by a count, but each lifetime value is the duration of the last operation in nanoseconds and not an accumulated total (sections 3.6 and 3.7). The metadata cache hit ratio panels divide misses by lookups only, while the correct divisor is lookups plus gets. The OSD throughput, OSD IOPS, and mean OSD I/O latency panels sum the iopath measure_* gauges, which hold the last value and flags (section 3.8), and divide by 20 seconds, so they do not show a rate. The per-command counts and duration series are the cumulative source. The Realm raw capacity used, Realm raw capacity free, and Free capacity per storage node panels read remaining_capacity_bytes, which includes the spare bucket (section 3.8), so they count reserved spare space as free; free space for new data is the bucket0 remaining value.

Panel	Type	Query
Metadata operation rate (all FM ops)	timeseries	sum by (host) (rate(magent_local_sw_fm_global_op_count[$__rate_interval]))
Mean metadata latency (all FM ops)	timeseries	sum by (host) (rate(magent_local_sw_fm_global_op_lifetime[$__rate_interval])) / sum by (host) (rate(magent_local_sw_fm_global_op_count[$__rate_interval]))
Top 10 metadata operations by rate	bargauge	topk(10, sum by (op) (label_replace(rate({__name__=~"magent_local_sw_fm_op_count_.+"}[$__rate_interval]) keep_metric_names, "op", "$1", "__name__", "magent_local_sw_fm_op_count_(.+)")))
Mean latency by metadata operation (top 10)	bargauge	topk(10, sum by (op) (label_replace(rate({__name__=~"magent_local_sw_fm_op_lifetime_.+"}[$__rate_interval]) keep_metric_names, "op", "$1", "__name__", "magent_local_sw_fm_op_lifetime_(.+)")))
Metadata cache hit ratio	timeseries	1 - sum(rate(magent_local_sw_gen_cache_cache_FM_dir_cache_miss_count[$__rate_interval])) / sum(rate(magent_local_sw_gen_cache_cache_FM_dir_cache_lookup_count[$__rate_interval])) (FM_dir_cache) 1 - sum(rate(magent_local_sw_gen_cache_cache_FM_object_attribute_cache_miss_count[$__rate_interval])) / sum(rate(magent_local_sw_gen_cache_cache_FM_object_attribute_cache_lookup_count[$__rate_interval])) (FM_object_attribute_cache) 1 - sum(rate(magent_local_sw_gen_cache_cache_FM_ogroup_cache_miss_count[$__rate_interval])) / sum(rate(magent_local_sw_gen_cache_cache_FM_ogroup_cache_lookup_count[$__rate_interval])) (FM_ogroup_cache) 1 - sum(rate(magent_local_sw_gen_cache_cache_SM_object_cache_miss_count[$__rate_interval])) / sum(rate(magent_local_sw_gen_cache_cache_SM_object_cache_lookup_count[$__rate_interval])) (SM_object_cache) 1 - sum(rate(magent_local_sw_gen_cache_cache_pan_id_user_info_cache_miss_count[$__rate_interval])) / sum(rate(magent_local_sw_gen_cache_cache_pan_id_user_info_cache_lookup_count[$__rate_interval])) (pan_id_user_info_cache)

Panel	Type	Query
Cache partition pressure (used / limit)	bargauge	sum(magent_local_sw_gen_cache_partition_fm_dir_bytes_cur) / sum(magent_local_sw_gen_cache_partition_fm_dir_bytes_limit) (fm_dir) sum(magent_local_sw_gen_cache_partition_fm_attr_bytes_cur) / sum(magent_local_sw_gen_cache_partition_fm_attr_bytes_limit) (fm_attr) sum(magent_local_sw_gen_cache_partition_fm_ogroup_bytes_cur) / sum(magent_local_sw_gen_cache_partition_fm_ogroup_bytes_limit) (fm_ogroup) sum(magent_local_sw_gen_cache_partition_sm_obj_bytes_cur) / sum(magent_local_sw_gen_cache_partition_sm_obj_bytes_limit) (sm_obj) sum(magent_local_sw_gen_cache_partition_default_bytes_cur) / sum(magent_local_sw_gen_cache_partition_default_bytes_limit) (default)
Cache evictions	timeseries	sum(rate(magent_local_sw_gen_cache_partition_fm_dir_evicted_ent_count[$__rate_interval])) (fm_dir) sum(rate(magent_local_sw_gen_cache_partition_fm_attr_evicted_ent_count[$__rate_interval])) (fm_attr) sum(rate(magent_local_sw_gen_cache_partition_fm_ogroup_evicted_ent_count[$__rate_interval])) (fm_ogroup) sum(rate(magent_local_sw_gen_cache_partition_sm_obj_evicted_ent_count[$__rate_interval])) (sm_obj) sum(rate(magent_local_sw_gen_cache_partition_default_evicted_ent_count[$__rate_interval])) (default)
Cache backing-store I/O latency	timeseries	sum(rate(magent_local_sw_gen_cache_cache_FM_dir_cache_load_io_lifetime[$__rate_interval])) / sum(rate(magent_local_sw_gen_cache_cache_FM_dir_cache_load_io_count[$__rate_interval])) (FM_dir_cache) sum(rate(magent_local_sw_gen_cache_cache_FM_object_attribute_cache_load_io_lifetime[$__rate_interval])) / sum(rate(magent_local_sw_gen_cache_cache_FM_object_attribute_cache_load_io_count[$__rate_interval])) (FM_object_attribute_cache) sum(rate(magent_local_sw_gen_cache_cache_FM_ogroup_cache_load_io_lifetime[$__rate_interval])) / sum(rate(magent_local_sw_gen_cache_cache_FM_ogroup_cache_load_io_count[$__rate_interval])) (FM_ogroup_cache) sum(rate(magent_local_sw_gen_cache_cache_SM_object_cache_load_io_lifetime[$__rate_interval])) / sum(rate(magent_local_sw_gen_cache_cache_SM_object_cache_load_io_count[$__rate_interval])) (SM_object_cache) sum(rate(magent_local_sw_gen_cache_cache_pan_id_user_info_cache_load_io_lifetime[$__rate_interval])) / sum(rate(magent_local_sw_gen_cache_cache_pan_id_user_info_cache_load_io_count[$__rate_interval])) (pan_id_user_info_cache)
OSD throughput	timeseries	sum(magent_local_sw_iopath_measure_bytes_in) / 20 (in) sum(magent_local_sw_iopath_measure_bytes_out) / 20 (out)
OSD IOPS	timeseries	sum(magent_local_sw_iopath_measure_io_occured) / 20 (total) sum(magent_local_sw_iopath_measure_op_count_write) / 20 (write) sum(magent_local_sw_iopath_measure_op_count_non_write) / 20 (non-write)
OSD latency breakdown (queue vs osdfs vs wire)	timeseries	sum({__name__=~"magent_local_sw_iopath_durationall_.+"}) (all) sum({__name__=~"magent_local_sw_iopath_durationqueue_.+"}) (queue) sum({__name__=~"magent_local_sw_iopath_durationosdfs_.+"}) (osdfs) sum({__name__=~"magent_local_sw_iopath_durationwire_.+"}) (wire) sum({__name__=~"magent_local_sw_iopath_durationactive_.+"}) (active)
Mean OSD I/O latency by class	timeseries	sum(magent_local_sw_iopath_measure_io_duration_usec) / sum(magent_local_sw_iopath_measure_io_occured) (all) sum(magent_local_sw_iopath_measure_rd_duration_usec) / sum(magent_local_sw_iopath_measure_io_occured) (read) sum(magent_local_sw_iopath_measure_wr_duration_usec) / sum(magent_local_sw_iopath_measure_io_occured) (write) sum(magent_local_sw_iopath_measure_ra_duration_usec) / sum(magent_local_sw_iopath_measure_io_occured) (readahead)
OSD task queue depth	timeseries	sum by (host) (magent_local_sw_iopath_measure_task_queue_depth)

Panel	Type	Query
OSD errors and timeouts	timeseries	sum(increase(magent_local_sw_iopath_measure_num_timeout_cmds[$__rate_interval])) (command timeouts) sum(increase(magent_local_sw_iopath_measure_num_timeout_sessions[$__rate_interval])) (session timeouts) sum(increase(magent_local_sw_iopath_measure_num_failed_allocations[$__rate_interval])) (failed allocations)
iSCSI connections	timeseries	sum by (host) (magent_local_sw_iopath_iscsi_num_cur_conns)
Realm raw capacity used	gauge	1 - sum(magent_local_sw_iopath_measure_remaining_capacity_bytes) / sum(magent_local_sw_iopath_measure_capacity_bytes)
Realm raw capacity free	stat	sum(magent_local_sw_iopath_measure_remaining_capacity_bytes)
Free capacity per storage node	bargauge	sum by (host) (magent_local_sw_iopath_measure_remaining_capacity_bytes)
Capacity by bucket	timeseries	sum(magent_local_sw_iopath_measure_bucket0_capacity_bytes) (bucket0 total) sum(magent_local_sw_iopath_measure_bucket0_remaining_capacity_bytes) (bucket0 free) sum(magent_local_sw_iopath_measure_bucket1_capacity_bytes) (bucket1 total) sum(magent_local_sw_iopath_measure_bucket1_remaining_capacity_bytes) (bucket1 free)
OSD local filesystem capacity	timeseries	sum(magent_local_sw_iopath_fs0_data_capacity + magent_local_sw_iopath_fs1_data_capacity + magent_local_sw_iopath_fs2_data_capacity) (data) sum(magent_local_sw_iopath_fs0_metadata_capacity + magent_local_sw_iopath_fs1_metadata_capacity + magent_local_sw_iopath_fs2_metadata_capacity) (metadata) sum(magent_local_sw_iopath_fs0_free_capacity) (free (fs0))
Volume space used	timeseries	panfs_volume_space_used
Volume quota consumption	bargauge	panfs_volume_quota_consumed_bytes / panfs_volume_hard_quota_bytes
Volume integrity counters	timeseries	sum(panfs_volume_corrupt_object_count) (corrupt objects) sum(panfs_volume_corrupt_parity_object_count) (corrupt parity objects) sum(panfs_volume_corrupt_log_count) (corrupt logs) sum(panfs_volume_down_storage_node_count) (down storage nodes)
StorageSet imbalance and errors	timeseries	panfs_storageset_imbalance_bytes ({{name}} imbalance) panfs_storageset_blade_imbalance_bytes ({{name}} blade imbalance) sum(panfs_storageset_uncorrectable_error_count) (uncorrectable errors) sum(panfs_storageset_correctable_error_count) (correctable errors)

Appendix A. Realm Alert Catalog (panfs_alerts_info)

All 703 alert definitions exported by the realm, sorted by code. Severity is the GUI severity; level is the error_level_name label; Clr is is_manually_clearable. Hardware alerts dominate (638) followed by volume (47) and bladeset/StorageSet (18). The terms “bladeset” and “BRICKSET” are legacy identifiers for StorageSets and appear unchanged in labels and alert names. Alerts are named PAN_MGMT_EV_<subject>_<condition>; drive alerts carry the slot in the name (BRICK_HD<n>_...). A blank Recommended action cell means no action is documented for that alert in the realm.

Code	Alert name	Severity	Level	Category	Clr	Recommended action
0	PAN_MGMT_EV_INVALID	None	none	hardware	no	
9	PAN_MGMT_EV_BRICK_MAX_NICS	None	none	hardware	no	
20	PAN_MGMT_EV_BRICK_MAX_NIC_EVENTS	None	none	hardware	no	
4807	PAN_MGMT_EV_SHELF_PS1_INCOMPATIBLE	Critical	crit	hardware	no	Remove one of the Power Supplies.
7000	PAN_MGMT_EV_SEDAGENT_HD0_UNLOCK_OK	None	none	hardware	no	
7001	PAN_MGMT_EV_SEDAGENT_HD1_UNLOCK_OK	None	none	hardware	no	
7002	PAN_MGMT_EV_SEDAGENT_HD2_UNLOCK_OK	None	none	hardware	no	
7003	PAN_MGMT_EV_SEDAGENT_HD3_UNLOCK_OK	None	none	hardware	no	
7004	PAN_MGMT_EV_SEDAGENT_HD4_UNLOCK_OK	None	none	hardware	no	
7005	PAN_MGMT_EV_SEDAGENT_HD5_UNLOCK_OK	None	none	hardware	no	
7006	PAN_MGMT_EV_SEDAGENT_HD6_UNLOCK_OK	None	none	hardware	no	
7007	PAN_MGMT_EV_SEDAGENT_HD7_UNLOCK_OK	None	none	hardware	no	
7008	PAN_MGMT_EV_SEDAGENT_HD8_UNLOCK_OK	None	none	hardware	no	
7009	PAN_MGMT_EV_SEDAGENT_HD9_UNLOCK_OK	None	none	hardware	no	
7010	PAN_MGMT_EV_SEDAGENT_HD10_UNLOCK_OK	None	none	hardware	no	
7011	PAN_MGMT_EV_SEDAGENT_HD11_UNLOCK_OK	None	none	hardware	no	
7012	PAN_MGMT_EV_SEDAGENT_HD12_UNLOCK_OK	None	none	hardware	no	

Code	Alert name	Severity	Level	Category	Clr	Recommended action
7013	PAN_MGMT_EV_SEDAGENT_HD13_UNLOCK_OK	None	none	hardware	no	
7014	PAN_MGMT_EV_SEDAGENT_HD14_UNLOCK_OK	None	none	hardware	no	
7015	PAN_MGMT_EV_SEDAGENT_HD0_CONFIG_OK	None	none	hardware	no	
7016	PAN_MGMT_EV_SEDAGENT_HD1_CONFIG_OK	None	none	hardware	no	
7017	PAN_MGMT_EV_SEDAGENT_HD2_CONFIG_OK	None	none	hardware	no	
7018	PAN_MGMT_EV_SEDAGENT_HD3_CONFIG_OK	None	none	hardware	no	
7019	PAN_MGMT_EV_SEDAGENT_HD4_CONFIG_OK	None	none	hardware	no	
7020	PAN_MGMT_EV_SEDAGENT_HD5_CONFIG_OK	None	none	hardware	no	
7021	PAN_MGMT_EV_SEDAGENT_HD6_CONFIG_OK	None	none	hardware	no	
7022	PAN_MGMT_EV_SEDAGENT_HD7_CONFIG_OK	None	none	hardware	no	
7023	PAN_MGMT_EV_SEDAGENT_HD8_CONFIG_OK	None	none	hardware	no	
7024	PAN_MGMT_EV_SEDAGENT_HD9_CONFIG_OK	None	none	hardware	no	
7025	PAN_MGMT_EV_SEDAGENT_HD10_CONFIG_OK	None	none	hardware	no	
7026	PAN_MGMT_EV_SEDAGENT_HD11_CONFIG_OK	None	none	hardware	no	
7027	PAN_MGMT_EV_SEDAGENT_HD12_CONFIG_OK	None	none	hardware	no	
7028	PAN_MGMT_EV_SEDAGENT_HD13_CONFIG_OK	None	none	hardware	no	
7029	PAN_MGMT_EV_SEDAGENT_HD14_CONFIG_OK	None	none	hardware	no	
7400	PAN_MGMT_EV_SHELF_FAN1_ONLINE	None	none	hardware	no	
7401	PAN_MGMT_EV_SHELF_FAN2_ONLINE	None	none	hardware	no	
7402	PAN_MGMT_EV_SHELF_FAN3_ONLINE	None	none	hardware	no	
7403	PAN_MGMT_EV_PS1_NORMAL_TEMP	None	none	hardware	no	
7404	PAN_MGMT_EV_PS2_NORMAL_TEMP	None	none	hardware	no	
7405	PAN_MGMT_EV_BATTERY_NORMAL_TEMP	None	none	hardware	no	

Code	Alert name	Severity	Level	Category	Clr	Recommended action
7406	PAN_MGMT_EV_SHELF_NET1_NORMAL_TEMP	None	none	hardware	no	
7407	PAN_MGMT_EV_SHELF_NET2_NORMAL_TEMP	None	none	hardware	no	
8405	PAN_MGMT_EV_SHELF_PS1_FAILED	Warning	warn	hardware	no	Please contact VDURA Technical Support for further assistance regarding this message.
8406	PAN_MGMT_EV_SHELF_PS1_UNSUPPORTED_VERSION	Warning	warn	hardware	no	Please contact VDURA Technical Support for further assistance regarding this message.
8408	PAN_MGMT_EV_SHELF_PS1_NOT_FOUND	Warning	warn	hardware	no	Check if Power Supply 1 is inserted properly.
8409	PAN_MGMT_EV_SHELF_PS1_TRIP_TEMP	Critical	crit	hardware	no	Ambient temperature is too high. Adjust room temperature.
8410	PAN_MGMT_EV_SHELF_PS1_HIGH_TEMP	Warning	warn	hardware	no	Ambient temperature is too high. Adjust room temperature.
8411	PAN_MGMT_EV_SHELF_PS1_UNDER_TEMP	Warning	warn	hardware	no	Ambient temperature is too low. Adjust room temperature.
8412	PAN_MGMT_EV_SHELF_PS1_NO_AC_INPUT	Warning	warn	hardware	no	Check that Power Supply is plugged in.
8413	PAN_MGMT_EV_SHELF_PS1_BAD_DC_DC_OUTPUT	Warning	warn	hardware	no	Please contact VDURA Technical Support for further assistance regarding this message.
8414	PAN_MGMT_EV_SHELF_PS1_BAD_REPLACEMENT	Warning	warn	hardware	no	Please contact VDURA Technical Support for further assistance regarding this message.
8415	PAN_MGMT_EV_SHELF_PS2_FAILED	Warning	warn	hardware	no	Please contact VDURA Technical Support for further assistance regarding this message.
8416	PAN_MGMT_EV_SHELF_PS2_UNSUPPORTED_VERSION	Warning	warn	hardware	no	Please contact VDURA Technical Support for further assistance regarding this message.
8417	PAN_MGMT_EV_BRICK_HD9_FAILED	Critical	crit	hardware	yes	Please contact VDURA Technical Support.
8418	PAN_MGMT_EV_SHELF_PS2_NOT_FOUND	Warning	warn	hardware	no	Check if Power Supply 2 is inserted properly.
8419	PAN_MGMT_EV_SHELF_PS2_TRIP_TEMP	Critical	crit	hardware	no	Ambient temperature is too high. Adjust room temperature.
8420	PAN_MGMT_EV_SHELF_PS2_HIGH_TEMP	Warning	warn	hardware	no	Ambient temperature is too high. Adjust room temperature.
8421	PAN_MGMT_EV_SHELF_PS2_UNDER_TEMP	Informational	info	hardware	no	Ambient temperature is too low. Adjust room temperature.
8422	PAN_MGMT_EV_SHELF_PS2_NO_AC_INPUT	Informational	info	hardware	no	Check that Power Supply is plugged in.
8423	PAN_MGMT_EV_SHELF_PS2_BAD_DC_DC_OUTPUT	Informational	info	hardware	no	Please contact VDURA Technical Support for further assistance regarding this message.

Code	Alert name	Severity	Level	Category	Clr	Recommended action
8424	PAN_MGMT_EV_SHELF_PS2_BAD_REPLACEMENT	Informational	info	hardware	no	Please contact VDURA Technical Support for further assistance regarding this message.
8425	PAN_MGMT_EV_BATTERY_TRIP_TEMP	Critical	crit	hardware	no	
8426	PAN_MGMT_EV_SHELF_BATTERY_FAILED	Critical	crit	hardware	no	Please contact VDURA Technical Support for further assistance regarding this message.
8427	PAN_MGMT_EV_SHELF_BATTERY_UNSUPPORTED_VERSION	Warning	warn	hardware	no	Please contact VDURA Technical Support for further assistance regarding this message.
8428	PAN_MGMT_EV_SHELF_BATTERY_PREDICTED_FAILURE	Warning	warn	hardware	no	Please contact VDURA Technical Support for further assistance regarding this message.
8429	PAN_MGMT_EV_SHELF_BATTERY_NOT_FOUND	Critical	crit	hardware	no	Check if battery is inserted properly.
8430	PAN_MGMT_EV_BATTERY_HIGH_TEMP	Warning	warn	hardware	no	Ambient temperature is too high. Adjust room temperature.
8431	PAN_MGMT_EV_SHELF_BATTERY_LOW	Warning	warn	hardware	no	Wait until fully charged. It can take up to 6 hours to become fully charged. If the problem persists, please contact VDURA Technical Support for further assis
8432	PAN_MGMT_EV_BATTERY_UNDER_TEMP	Informational	info	hardware	no	Ambient temperature is too low. Adjust room temperature.
8433	PAN_MGMT_EV_BRICK_HD10_FAILED	Critical	crit	hardware	yes	Please contact VDURA Technical Support.
8434	PAN_MGMT_EV_SHELF_OVER_POWER_BUDGET	Warning	warn	hardware	no	Contact VDURA Technical Support for steps to bring the enclosure within power budget.
8435	PAN_MGMT_EV_SHELF_NET1_FAILED	Critical	crit	hardware	no	Please contact VDURA Technical Support for further assistance regarding this message.
8436	PAN_MGMT_EV_SHELF_NET1_UNSUPPORTED_VERSION	Warning	warn	hardware	no	Please contact VDURA Technical Support for further assistance regarding this message.
8437	PAN_MGMT_EV_BRICK_HD11_FAILED	Critical	crit	hardware	yes	Please contact VDURA Technical Support.
8438	PAN_MGMT_EV_SHELF_NET1_NOT_FOUND	Critical	crit	hardware	no	Check if switch 1 is inserted properly.
8439	PAN_MGMT_EV_BRICK_HD12_FAILED	Critical	crit	hardware	yes	Please contact VDURA Technical Support.
8440	PAN_MGMT_EV_SHELF_NET1_U6_CHECKSUM_FAILED	Warning	warn	hardware	no	Please contact VDURA Technical Support for further assistance regarding this message.
8441	PAN_MGMT_EV_SHELF_NET1_U8_CHECKSUM_FAILED	Warning	warn	hardware	no	Please contact VDURA Technical Support for further assistance regarding this message.

Code	Alert name	Severity	Level	Category	Clr	Recommended action
8442	PAN_MGMT_EV_BRICK_HD13_FAILED	Critical	crit	hardware	yes	Please contact VDURA Technical Support.
8443	PAN_MGMT_EV_SHELF_NET1_TRIP_TEMP	Critical	crit	hardware	no	Ambient temperature is too high. Adjust room temperature.
8444	PAN_MGMT_EV_SHELF_NET1_HIGH_TEMP	Warning	warn	hardware	no	Ambient temperature is too high. Adjust room temperature.
8445	PAN_MGMT_EV_SHELF_NET1_UNDER_TEMP	Informational	info	hardware	no	Ambient temperature is too low. Adjust room temperature.
8446	PAN_MGMT_EV_SHELF_NET1_RESETTING	Warning	warn	hardware	no	Switch management interface did not respond. Please wait 90 seconds for reset to complete.
8447	PAN_MGMT_EV_SHELF_NET1_NO_RESP	Warning	warn	hardware	no	Switch management interface is not responding. Please reset the switch when system is not busy, and check that the switch firmware is up-to-date.
8448	PAN_MGMT_EV_SHELF_NET1_FW_OPTIONAL_UPGRADE	Warning	warn	hardware	yes	Switch firmware is out of date; upgrade is recommended. Please contact VDURA Technical Support for further assistance.
8449	PAN_MGMT_EV_SHELF_NET1_FW_NEW_UNSUPPORTED	Warning	warn	hardware	yes	Switch firmware is not supported. Downgrading firmware to a supported version is recommended. Please contact VDURA Technical Support for further assistance.
8450	PAN_MGMT_EV_BRICK_MIA_NOTIMER	Critical	crit	hardware	no	Please contact VDURA Technical Support to repair this node. If the node cannot be repaired, go to the Node Detail page, and use the 'Reconstruct' control to st
8451	PAN_MGMT_EV_BRICK_TRIP_TEMP	Critical	crit	hardware	no	Adjust room temperature and check fans.
8452	PAN_MGMT_EV_BRICK_TEMPERATURE_SHUTDOWN	Critical	crit	hardware	no	Adjust room temperature and check fans.
8453	PAN_MGMT_EV_BRICK_AC_POWER_INACTIVE	Critical	crit	hardware	no	Go to the Hardware page and press the System Shutdown button.
8454	PAN_MGMT_EV_BRICK_DISK_NEAR_FULL	Warning	warn	hardware	yes	Add more storage to the StorageSet.
8455	PAN_MGMT_EV_BRICK_DISK_FULL	Critical	crit	hardware	no	Add more storage to the StorageSet.
8456	PAN_MGMT_EV_BRICK_HIGH_TEMP	Warning	warn	hardware	no	Ambient temperature is too high. Adjust room temperature.
8457	PAN_MGMT_EV_BRICK_MEM_ERRORS	Warning	warn	hardware	no	Please contact VDURA Technical Support.
8458	PAN_MGMT_EV_BRICK_OFFLINE	Warning	warn	hardware	no	
8459	PAN_MGMT_EV_BRICK_NEEDS_REINIT	Warning	warn	hardware	no	Please contact VDURA Technical Support for further assistance regarding this message.

Code	Alert name	Severity	Level	Category	Clr	Recommended action
8460	PAN_MGMT_EV_BRICK_MIA_TIMER	Warning	warn	hardware	no	Node may be rebooting. Check for any network problems, and be sure that the node is properly inserted in the slot.
8461	PAN_MGMT_EV_BRICK_DEAD	Warning	warn	hardware	no	Wait until reconstruction completes on all volumes in the StorageSet, and then replace the OSD.
8462	PAN_MGMT_EV_SHELF_NET1_FW_NEW_NO_DATA	Warning	warn	hardware	yes	There is no compatibility info for the switch firmware. Downgrading firmware to a supported version is recommended. Please contact VDURA Technical Support for f
8463	PAN_MGMT_EV_SHELF_NET1_FW_INCOMPATIBLE	Critical	crit	hardware	no	Please upgrade switch firmware to a supported version. Please contact VDURA Technical Support for further assistance.
8464	PAN_MGMT_EV_BRICK_HD14_FAILED	Critical	crit	hardware	yes	Please contact VDURA Technical Support.
8465	PAN_MGMT_EV_BRICK_REMOVED	Informational	info	hardware	yes	
8466	PAN_MGMT_EV_BRICK_UNDER_TEMP	Informational	info	hardware	no	Ambient temperature is too low. Adjust room temperature.
8467	PAN_MGMT_EV_BRICK_REG	Informational	info	hardware	yes	
8468	PAN_MGMT_EV_BRICK_ONLINE	Informational	info	hardware	yes	
8469	PAN_MGMT_EV_BRICK_MOVED	Informational	info	hardware	yes	
8470	PAN_MGMT_EV_BRICK_NEEDS_UPGRADE	Informational	info	hardware	no	The system will automatically attempt to apply its software to this node. No action is needed.
8471	PAN_MGMT_EV_BRICK_FSCK	Informational	info	hardware	no	Wait until fsck completes.
8472	PAN_MGMT_EV_BRICK_UNSUPPORTED_VERSION	Warning	warn	hardware	no	Check that the hardware serial on this node is valid.
8473	PAN_MGMT_EV_BRICK_FILESYSTEM_NEARLY_FULL	Warning	warn	hardware	yes	
8474	PAN_MGMT_EV_BRICK_FILESYSTEM_NO_LONGER_FULL	Informational	info	hardware	yes	
8475	PAN_MGMT_EV_BRICK_DISK_NO_LONGER_FULL	Informational	info	hardware	yes	
8476	PAN_MGMT_EV_BRICK_HD9_WILL_FAIL	Warning	warn	hardware	yes	Please contact VDURA Technical Support.
8477	PAN_MGMT_EV_BRICK_HD10_WILL_FAIL	Warning	warn	hardware	yes	Please contact VDURA Technical Support.
8478	PAN_MGMT_EV_BRICK_NORMAL_TEMP	None	none	hardware	no	
8479	PAN_MGMT_EV_BRICK_BAD_SERIAL	None	none	hardware	no	
8480	PAN_MGMT_EV_BRICK_HD0_FAILED	Critical	crit	hardware	no	Please contact VDURA Technical Support.

Code	Alert name	Severity	Level	Category	Clr	Recommended action
8481	PAN_MGMT_EV_BRICK_HD0_ WILL_FAIL	Warning	warn	hardware	no	Please contact VDURA Technical Support.
8482	PAN_MGMT_EV_BRICK_HD0_ UNSUPPORTED_VERSION	Warning	warn	hardware	no	Please contact VDURA Technical Support for further assistance regarding this message.
8483	PAN_MGMT_EV_BRICK_HD0_ NOT_FOUND	Warning	warn	hardware	no	Please contact VDURA Technical Support for further assistance regarding this message.
8484	PAN_MGMT_EV_BRICK_HD0_ REBUILDING	Informational	info	hardware	no	This is just an informational message. No action is needed.
8485	PAN_MGMT_EV_SHELF_NET1_ FW_UPGRADE_NEEDS_FILE	Warning	warn	hardware	yes	Please contact VDURA Technical Support to obtain the firmware file and for further assistance.
8486	PAN_MGMT_EV_SHELF_NET1_ FW_NEW_COMPATIBLE	Warning	warn	hardware	yes	Consider downgrading switch firmware to a supported version. Please contact VDURA Technical Support for further assistance.
8487	PAN_MGMT_EV_SHELF_NET1_ INVALID_UPLINK	Warning	warn	hardware	no	Check that the enclosure switch is cabled correctly - uplink should be sfp6, cx4, or lagg of ge.
8488	PAN_MGMT_EV_BRICK_HD11_ WILL_FAIL	Warning	warn	hardware	yes	Please contact VDURA Technical Support.
8489	PAN_MGMT_EV_SHELF_NET1_ FLOODING	Informational	info	hardware	no	If the warning persists, Please contact VDURA Technical Support.
8490	PAN_MGMT_EV_BRICK_HD1_ FAILED	Critical	crit	hardware	no	Please contact VDURA Technical Support.
8491	PAN_MGMT_EV_BRICK_HD1_ WILL_FAIL	Warning	warn	hardware	no	Please contact VDURA Technical Support.
8492	PAN_MGMT_EV_BRICK_HD1_ UNSUPPORTED_VERSION	Warning	warn	hardware	no	Please contact VDURA Technical Support.
8493	PAN_MGMT_EV_BRICK_HD1_ NOT_FOUND	Warning	warn	hardware	no	Please contact VDURA Technical Support.
8494	PAN_MGMT_EV_BRICK_HD1_ SSD_LIFETIME	Warning	warn	hardware	no	Please contact VDURA Technical Support.
8495	PAN_MGMT_EV_BRICK_HD1_ SSD_RESERVE_SPACE	Warning	warn	hardware	no	Please contact VDURA Technical Support.
8496	PAN_MGMT_EV_BRICK_HD1_ REBUILDING	Informational	info	hardware	no	This is just an informational message. No action is needed.
8497	PAN_MGMT_EV_BRICK_HD0_ SSD_LIFETIME	Warning	warn	hardware	no	Please contact VDURA Technical Support.
8498	PAN_MGMT_EV_BRICK_HD0_ SSD_RESERVE_SPACE	Warning	warn	hardware	no	Please contact VDURA Technical Support.
8499	PAN_MGMT_EV_BRICK_HD12_ WILL_FAIL	Warning	warn	hardware	yes	Please contact VDURA Technical Support.
8500	PAN_MGMT_EV_BRICK_HD13_ WILL_FAIL	Warning	warn	hardware	yes	Please contact VDURA Technical Support.
8501	PAN_MGMT_EV_BRICKSET_ ADDED_STORAGE	Informational	info	bladeset	yes	

Code	Alert name	Severity	Level	Category	Clr	Recommended action
8502	PAN_MGMT_EV_SHELF_BRICKSET_AFFINITY_CHANGED	Informational	info	bladeset	yes	
8503	PAN_MGMT_EV_BRICKSET_FULL	Critical	crit	bladeset	no	Add more storage to the StorageSet.
8504	PAN_MGMT_EV_BRICK_HD14_WILL_FAIL	Warning	warn	hardware	yes	Please contact VDURA Technical Support.
8505	PAN_MGMT_EV_BRICK_HD9_UNSUPPORTED_VERSION	Warning	warn	hardware	yes	Please contact VDURA Technical Support.
8506	PAN_MGMT_EV_BRICKSET_NOT_ALL_ONLINE	Warning	warn	bladeset	no	Check node and volume status.
8507	PAN_MGMT_EV_BRICK_HD10_UNSUPPORTED_VERSION	Warning	warn	hardware	yes	Please contact VDURA Technical Support.
8508	PAN_MGMT_EV_BRICKSET_NEAR_FULL	Warning	warn	bladeset	yes	Add more storage to the StorageSet.
8509	PAN_MGMT_EV_BRICKSET_SPARE_SPACE_LOW	Critical	crit	bladeset	no	Add more storage to the StorageSet.
8510	PAN_MGMT_EV_BRICKSET_CREATED	Informational	info	bladeset	yes	
8511	PAN_MGMT_EV_BRICKSET_DELETED	Informational	info	bladeset	yes	
8512	PAN_MGMT_EV_BRICKSET_NO_LONGER_FULL	None	none	hardware	no	
8513	PAN_MGMT_EV_BRICKSET_IMBALANCE	Informational	info	bladeset	yes	Turn on capacity balancing for this StorageSet. If capacity balancing is already turned on, the system will automatically balance the distribution of used spac
8514	PAN_MGMT_EV_BRICKSET_NOW_BALANCED	None	none	hardware	no	
8515	PAN_MGMT_EV_BRICKSET_BTRFS_INCONSISTENCY	Warning	warn	bladeset	no	
8516	PAN_MGMT_EV_BRICKSET_BTRFS_DEPRECATION	Warning	warn	bladeset	no	
8517	PAN_MGMT_EV_BRICK_HD11_UNSUPPORTED_VERSION	Warning	warn	hardware	yes	Please contact VDURA Technical Support.
8518	PAN_MGMT_EV_BRICK_HD12_UNSUPPORTED_VERSION	Warning	warn	hardware	yes	Please contact VDURA Technical Support.
8519	PAN_MGMT_EV_BRICK_HD13_UNSUPPORTED_VERSION	Warning	warn	hardware	yes	Please contact VDURA Technical Support.
8520	PAN_MGMT_EV_BRICK_HD14_UNSUPPORTED_VERSION	Warning	warn	hardware	yes	Please contact VDURA Technical Support.
8521	PAN_MGMT_EV_VOL_DEGRADED	Warning	warn	volume	no	Minimize accessing this volume for reads and writes. The performance of the system will be slower than expected. Reconstruction of data will start soon.
8522	PAN_MGMT_EV_VOL_OFFLINE	Warning	warn	volume	no	

Code	Alert name	Severity	Level	Category	Clr	Recommended action
8523	PAN_MGMT_EV_VOL_DOWN	Critical	crit	volume	no	
8524	PAN_MGMT_EV_VOL_ONLINE	Informational	info	volume	yes	
8525	PAN_MGMT_EV_VOL_CREATED	Informational	info	volume	yes	
8526	PAN_MGMT_EV_VOL_DELETED	Informational	info	volume	yes	
8527	PAN_MGMT_EV_VOL_CORRUPT_OBJ_FOUND	Warning	warn	volume	yes	Please contact VDURA Technical Support for further assistance regarding this message.
8528	PAN_MGMT_EV_VOL_PAUSED	Warning	warn	volume	no	
8529	PAN_MGMT_EV_VOL_PARITY_ERROR	Warning	warn	volume	yes	Please contact VDURA Technical Support for assistance.
8530	PAN_MGMT_EV_VOL_STATE_UPDATE	None	none	hardware	no	
8531	PAN_MGMT_EV_VOL_READ_ONLY	Informational	info	volume	yes	
8532	PAN_MGMT_EV_BRICK_HD9_NOT_FOUND	Warning	warn	hardware	yes	Please contact VDURA Technical Support.
8533	PAN_MGMT_EV_VOL_BC_START	Informational	info	volume	yes	
8534	PAN_MGMT_EV_VOL_BC_STOP	Informational	info	volume	yes	
8535	PAN_MGMT_EV_FSRC_START	Critical	crit	volume	yes	The system is checking and repairing the volume. During this process, the volume is offline.
8536	PAN_MGMT_EV_FSRC_NEEDED	Warning	warn	volume	no	The system has discovered an unexpected filesystem inconsistency. To repair inconsistencies, click the volume name, then start FSRC using the “Recover Volume”
8537	PAN_MGMT_EV_FSRC_END	Informational	info	volume	yes	The system has finished checking and repairing the volume. To examine any damaged files, click on the volume name and follow the link to “Damaged Files in Volu
8538	PAN_MGMT_EV_VOL_BC_END	Informational	info	volume	yes	
8539	PAN_MGMT_EV_VOL_EFSA	Critical	crit	volume	no	
8540	PAN_MGMT_EV_FSRC_ERROR	Critical	crit	volume	yes	An error occurred while checking and repairing the volume. The system is unable to bring the volume online. To start FSRC again, click the volume name, then c
8541	PAN_MGMT_EV_FSRC_REPAIR_FAILED	Critical	crit	volume	yes	Data fragment have been removed from filesystem but are still occupying space in the system. Please contact VDURA Technical Support for assistance to recover t
8542	PAN_MGMT_EV_RECON_DRAIN	Informational	info	volume	no	Wait until volume comes back online.

Code	Alert name	Severity	Level	Category	Clr	Recommended action
8543	PAN_MGMT_EV_RESCUE_END	Informational	info	volume	yes	The system has finished rescuing the volume. Please run pancli 'volume rescue report' in service mode to download a detailed report.
8544	PAN_MGMT_EV_BRICK_HD10_NOT_FOUND	Warning	warn	hardware	yes	Please contact VDURA Technical Support.
8545	PAN_MGMT_EV_BRICK_HD11_NOT_FOUND	Warning	warn	hardware	yes	Please contact VDURA Technical Support.
8546	PAN_MGMT_EV_BRICK_HD12_NOT_FOUND	Warning	warn	hardware	yes	Please contact VDURA Technical Support.
8547	PAN_MGMT_EV_BRICK_HD13_NOT_FOUND	Warning	warn	hardware	yes	Please contact VDURA Technical Support.
8548	PAN_MGMT_EV_BRICK_HD14_NOT_FOUND	Warning	warn	hardware	yes	Please contact VDURA Technical Support.
8549	PAN_MGMT_EV_RECON_STOP	Informational	info	volume	yes	Check node and volume status for more details.
8550	PAN_MGMT_EV_RECON_RESERVE_NOT_ENOUGH_OSDS	Warning	warn	volume	no	Add more storage to the StorageSet.
8551	PAN_MGMT_EV_RECON_RESERVE_NOT_ENOUGH_SPACE	Critical	crit	bladeset	no	
8552	PAN_MGMT_EV_RECON_START	Warning	warn	volume	no	Wait until reconstruction completes.
8553	PAN_MGMT_EV_RECON_ERROR	Critical	crit	volume	yes	Please contact VDURA Technical Support.
8554	PAN_MGMT_EV_RECON_END	Informational	info	volume	yes	
8555	PAN_MGMT_EV_RECON_RESERVE_SUCCESS	Informational	info	volume	yes	
8556	PAN_MGMT_EV_RECON_FAILED_SOME_OBJS_NOT_RECON	Critical	crit	volume	yes	Please contact VDURA Technical Support for assistance.
8557	PAN_MGMT_EV_RECON_ERROR_OUT_OF_SPACE	Critical	crit	volume	yes	Add more storage to the StorageSet.
8558	PAN_MGMT_EV_RECON_RESERVE_ENOUGH_OSDS	Informational	info	bladeset	yes	
8559	PAN_MGMT_EV_RESCUE_RECON	Critical	crit	volume	yes	Wait until rescue reconstruction completes.
8560	PAN_MGMT_EV_QUOTA_VIOLATION_HARD	Critical	crit	volume	yes	Try one or more of the following: 1. Increase hard quota for the volume. You may need to add more storage to the StorageSet. 2. Delete unneeded files from th
8561	PAN_MGMT_EV_QUOTA_VIOLATION_SOFT	Warning	warn	volume	yes	Try one or more of the following: 1. Increase soft quota for the volume. You need to add more storage to the StorageSet. 2. Delete unneeded files from the vo
8562	PAN_MGMT_EV_QUOTA_BELOW_SOFT_LIMIT	Informational	info	hardware	no	

Code	Alert name	Severity	Level	Category	Clr	Recommended action
8563	PAN_MGMT_EV_QUOTA_BELOW_HARD_LIMIT	Informational	info	hardware	no	
8564	PAN_MGMT_EV_BRICK_HD9_SSD_LIFETIME	Warning	warn	hardware	yes	Please contact VDURA Technical Support.
8565	PAN_MGMT_EV_SNAPSHOT_VIOLATION	Warning	warn	volume	yes	Delete this snapshot. Also check whether any of the volumes covered by this snapshot need FSRC. Snapshots taken on a volume that needs FSRC will automatically
8566	PAN_MGMT_EV_BRICK_HD10_SSD_LIFETIME	Warning	warn	hardware	yes	Please contact VDURA Technical Support.
8567	PAN_MGMT_EV_BRICK_HD11_SSD_LIFETIME	Warning	warn	hardware	yes	Please contact VDURA Technical Support.
8568	PAN_MGMT_EV_BRICK_HD12_SSD_LIFETIME	Warning	warn	hardware	yes	Please contact VDURA Technical Support.
8569	PAN_MGMT_EV_SNAPSHOT_CREATE_FAILED	Warning	warn	volume	yes	Retry the snapshot creation manually.
8570	PAN_MGMT_EV_SNAPSHOT_DELETE_FAILED	Warning	warn	volume	yes	Retry the snapshot deletion manually.
8571	PAN_MGMT_EV_SOFTWARE_FAILURE	Warning	warn	hardware	yes	
8572	PAN_MGMT_EV_CORE_FILE_DETECTED	Informational	info	hardware	yes	The system has restarted this application automatically, so no action is needed. If you see many such messages, please report a bug with VDURA Technical Suppor
8573	PAN_MGMT_EV_PROCESS_EXIT_ZERO	Informational	info	hardware	yes	The system has restarted this application automatically, so no action is needed. If you see many such messages, please report a bug with VDURA Technical Suppor
8574	PAN_MGMT_EV_LEASES_LOW	Informational	info	hardware	yes	Add more IP addresses to address range. Go to the Network page and select the IP Ranges page to make changes.
8575	PAN_MGMT_EV_REALM_ONLINE	Informational	info	hardware	yes	
8576	PAN_MGMT_EV_REALM_GOING_OFFLINE	Informational	info	hardware	yes	
8577	PAN_MGMT_EV_REALM_OFFLINE	Warning	warn	hardware	no	
8578	PAN_MGMT_EV_REALM_REBOOTING	Informational	info	hardware	yes	
8579	PAN_MGMT_EV_REALM_POWERING_DOWN	Informational	info	hardware	yes	
8580	PAN_MGMT_EV_REALM_LOCKED	Warning	warn	hardware	yes	To let the node join, go to the Hardware page and unlock the system. If the new node is intended for a different system on this subnet, no action is required.

Code	Alert name	Severity	Level	Category	Clr	Recommended action
8581	PAN_MGMT_EV_LEASE_STOLEN	Warning	warn	hardware	yes	To fix this problem, either edit the system IP ranges not to include any IPs that are taken by machines outside of your system, or change the outside machine to
8582	PAN_MGMT_EV_CLIENT_CLOCK_SKEW	Warning	warn	hardware	yes	
8583	PAN_MGMT_EV_REALM_REBOOT_FAILED	Warning	warn	hardware	yes	
8584	PAN_MGMT_EV_REALM_POWERDOWN_FAILED	Warning	warn	hardware	yes	
8585	PAN_MGMT_EV_BRICK_HD13_SSD_LIFETIME	Warning	warn	hardware	yes	Please contact VDURA Technical Support.
8586	PAN_MGMT_EV_BRICK_HD14_SSD_LIFETIME	Warning	warn	hardware	yes	Please contact VDURA Technical Support.
8587	PAN_MGMT_EV_BRICK_GENERIC_INFO	Informational	info	hardware	yes	This is just an informational message. No action is needed.
8588	PAN_MGMT_EV_BRICK_GENERIC_WARN	Warning	warn	hardware	yes	No specific user action is required. Please call VDURA Technical Support if the event reported causes any malfunction.
8589	PAN_MGMT_EV_BRICK_GENERIC_ERR	Critical	crit	hardware	yes	No specific user action is required. Please call VDURA Technical Support if the event reported causes any malfunction.
8590	PAN_MGMT_EV_BRICK_SLOW_SYNC_INFO	Informational	info	hardware	yes	No specific user action is required. Please call VDURA Technical Support if the event reported causes any malfunction.
8591	PAN_MGMT_EV_BRICK_NTP_SKEW_RM_INFO	Informational	info	hardware	yes	This is an informational message only. It does suggest, however, that the node generating the message is having problems contacting time servers or with its cl
8592	PAN_MGMT_EV_BRICK_NTP_SKEW_RM_WARN	Warning	warn	hardware	yes	Clock drift/skew like this can be caused by loss of contact with your external time sources.
8593	PAN_MGMT_EV_BRICK_NTP_SKEW_NON_RM_INFO	Informational	info	hardware	yes	Clock drift/skew like this can be caused by loss of contact with your external time sources.
8594	PAN_MGMT_EV_BRICK_NTP_SKEW_NON_RM_WARN	Warning	warn	hardware	yes	Clock drift/skew like this can be caused by loss of contact with your external time sources.
8595	PAN_MGMT_EV_BRICK_NTP_SKEW_IMPROV_INFO	Informational	info	hardware	yes	No action is needed. The time skew between the external time source and the node is improving.
8596	PAN_MGMT_EV_BRICK_NTP_LOCAL_SYNC_RM_WARN	Warning	warn	hardware	yes	Entering local clock sync can be caused by loss of contact with the time servers configured. You can use tools like ntptrace and ping to diagnose and rectify t

Code	Alert name	Severity	Level	Category	Clr	Recommended action
8597	PAN_MGMT_EV_BRICK_NTP_LOCAL_SYNC_NON_RM_WARN	Warning	warn	hardware	yes	Nodes going into local time sync like this can be caused by loss of contact with the realm president or local hardware or software failures.
8598	PAN_MGMT_EV_BRICK_NTP_LOCAL_SYNC_BACK_INFO	Informational	info	hardware	yes	No action is needed. Whatever caused nodes to move to local sync has been rectified.
8599	PAN_MGMT_EV_BRICK_NOTIFY_LOGIN_FAILURE	Informational	info	hardware	yes	Collect the /var/log/security file from this host to check the origin of failed login attempts.
8600	PAN_MGMT_EV_FAN_AT_MAX_SPEED	None	none	hardware	no	
8601	PAN_MGMT_EV_REALM_READY	None	none	hardware	no	
8602	PAN_MGMT_EV_EMAIL_FAILURE	Warning	warn	hardware	yes	Check the connectivity to SMTP server as well as SMTP server security settings.
8603	PAN_MGMT_EV_BRICK_HD9_SSD_RESERVE_SPACE	Warning	warn	hardware	yes	Please contact VDURA Technical Support.
8604	PAN_MGMT_EV_BRICK_HD10_SSD_RESERVE_SPACE	Warning	warn	hardware	yes	Please contact VDURA Technical Support.
8605	PAN_MGMT_EV_BRICK_HD11_SSD_RESERVE_SPACE	Warning	warn	hardware	yes	Please contact VDURA Technical Support.
8606	PAN_MGMT_EV_BRICK_HD12_SSD_RESERVE_SPACE	Warning	warn	hardware	yes	Please contact VDURA Technical Support.
8607	PAN_MGMT_EV_BRICK_HD13_SSD_RESERVE_SPACE	Warning	warn	hardware	yes	Please contact VDURA Technical Support.
8608	PAN_MGMT_EV_BRICK_HD14_SSD_RESERVE_SPACE	Warning	warn	hardware	yes	Please contact VDURA Technical Support.
8609	PAN_MGMT_EV_BRICK_HD9_REBUILDING	Informational	info	hardware	yes	This is just an informational message. No action is needed.
8610	PAN_MGMT_EV_BRICK_HD10_REBUILDING	Informational	info	hardware	yes	This is just an informational message. No action is needed.
8611	PAN_MGMT_EV_PM_EXCEPT_COND_REPORT	None	none	hardware	no	
8612	PAN_MGMT_EV_BRICK_HD11_REBUILDING	Informational	info	hardware	yes	This is just an informational message. No action is needed.
8613	PAN_MGMT_EV_BRICK_HD12_REBUILDING	Informational	info	hardware	yes	This is just an informational message. No action is needed.
8614	PAN_MGMT_EV_BRICK_HD13_REBUILDING	Informational	info	hardware	yes	This is just an informational message. No action is needed.
8615	PAN_MGMT_EV_BRICK_HD14_REBUILDING	Informational	info	hardware	yes	This is just an informational message. No action is needed.
8620	PAN_MGMT_EV_UPGRADE_STARTED	Informational	info	hardware	yes	
8621	PAN_MGMT_EV_UPGRADE_ENLISTING	Informational	info	hardware	yes	

Code	Alert name	Severity	Level	Category	Clr	Recommended action
8622	PAN_MGMT_EV_UPGRADE_DISTRIBUTING	Informational	info	hardware	yes	
8623	PAN_MGMT_EV_UPGRADE_PREPARING	Informational	info	hardware	yes	
8624	PAN_MGMT_EV_UPGRADE_COMMITING	Informational	info	hardware	yes	
8625	PAN_MGMT_EV_UPGRADE_ROLLINGBACK	Critical	crit	hardware	yes	
8626	PAN_MGMT_EV_UPGRADE_REBOOTING	Informational	info	hardware	yes	
8627	PAN_MGMT_EV_UPGRADE_ENLIST_ERROR	Critical	crit	hardware	yes	
8628	PAN_MGMT_EV_UPGRADE_DISTRIBUTE_ERROR	Critical	crit	hardware	yes	
8629	PAN_MGMT_EV_UPGRADE_PREPARE_ERROR	Critical	crit	hardware	yes	
8630	PAN_MGMT_EV_UPGRADE_COMMIT_ERROR	Critical	crit	hardware	yes	
8631	PAN_MGMT_EV_UPGRADE_ROLLBACK_ERROR	Critical	crit	hardware	yes	
8632	PAN_MGMT_EV_UPGRADE_REBOOT_ERROR	Critical	crit	hardware	yes	
8633	PAN_MGMT_EV_UPGRADE_ABORTED	Informational	info	hardware	yes	
8634	PAN_MGMT_EV_UPGRADE_FAILED	Critical	crit	hardware	yes	
8635	PAN_MGMT_EV_UPGRADE_ENLIST_WARN	Warning	warn	hardware	yes	
8636	PAN_MGMT_EV_UPGRADE_DISTRIBUTE_CANCELLED	Informational	info	hardware	yes	
8637	PAN_MGMT_EV_UPGRADE_DISTRIBUTE_PENDING	Informational	info	hardware	yes	
8638	PAN_MGMT_EV_UPGRADE_DISTRIBUTE_SUCCESS	Informational	info	hardware	yes	
8639	PAN_MGMT_EV_UPGRADE_DISTRIBUTE_INFO	Informational	info	hardware	yes	
8640	PAN_MGMT_EV_UPGRADE_DISTRIBUTE_COMPLETE	Informational	info	hardware	yes	
8641	PAN_MGMT_EV_BRICK_DRIVE_SSD_LIFETIME	Warning	warn	hardware	yes	Please contact VDURA Technical Support.
8642	PAN_MGMT_EV_BRICK_DRIVE_FAILED	Critical	crit	hardware	yes	Please contact VDURA Technical Support.
8643	PAN_MGMT_EV_BRICK_DRIVE_WILL_FAIL	Warning	warn	hardware	yes	Please contact VDURA Technical Support.
8644	PAN_MGMT_EV_BRICK_DRIVE_NOT_FOUND	Warning	warn	hardware	yes	Please contact VDURA Technical Support.

Code	Alert name	Severity	Level	Category	Clr	Recommended action
8645	PAN_MGMT_EV_BRICK_DRIVE_UNSUPPORTED_VERSION	Warning	warn	hardware	yes	Please contact VDURA Technical Support.
8646	PAN_MGMT_EV_BRICK_DRIVE_REBUILDING	Informational	info	hardware	yes	This is just an informational message. No action is needed.
8647	PAN_MGMT_EV_BRICK_DRIVE_SSD_RESERVE_SPACE	Warning	warn	hardware	yes	This is just an informational message. No action is needed.
8650	PAN_MGMT_EV_REALM_POLLING	Informational	info	hardware	yes	Wait a few minutes.
8651	PAN_MGMT_EV_REALM_POLLING_DONE	Informational	info	hardware	yes	Check the health of the system.
8652	PAN_MGMT_EV_VOLSERVICE_MOVED	Informational	info	volume	yes	
8653	PAN_MGMT_EV_VOLSERVICE_MOVED_BACKUP_DISABLED	Warning	warn	volume	yes	To ensure the volume service gets a backup location, make sure all director nodes are online.
8654	PAN_MGMT_EV_VOLSERVICE_BACKUP_ENABLED	Informational	info	volume	yes	
8655	PAN_MGMT_EV_VOLSERVICE_BACKUP_DISABLED	Warning	warn	volume	yes	To ensure the volume service gets a backup location, make sure all director nodes are online.
8656	PAN_MGMT_EV_REALM_PAUSING	Informational	info	hardware	yes	
8657	PAN_MGMT_EV_REALM_PAUSED	Warning	warn	hardware	no	
8658	PAN_MGMT_EV_REALM_UPGRADE_QUIESCING	Warning	warn	hardware	yes	
8659	PAN_MGMT_EV_REALM_UPGRADE	Warning	warn	hardware	no	
8660	PAN_MGMT_EV_ALIAS_REASSIGNMENT	None	none	hardware	no	
8661	PAN_MGMT_EV_ALIAS_ASSIGNED	Informational	info	hardware	yes	
8662	PAN_MGMT_EV_ALIAS_FAILED	Warning	warn	hardware	yes	Check the status of all director nodes, and validate IP alias configuration.
8663	PAN_MGMT_EV_SERVICE_DELETED	Informational	info	volume	yes	
8664	PAN_MGMT_EV_REALM_NOTIFY_LOGIN_FAILURE	Warning	warn	hardware	yes	Collect the /var/log/security file from affected hosts to check the origin of failed login attempts.
8665	PAN_MGMT_EV_REALM_NOTIFY_CLIENT_AWOL	Warning	warn	hardware	yes	Check the health of the clients reported as AWOL.
8666	PAN_MGMT_EV_VOLSERVICE_CHANGED	None	none	hardware	no	
8667	PAN_MGMT_EV_REALM_POWERED_DOWN	None	none	hardware	no	

Code	Alert name	Severity	Level	Category	Clr	Recommended action
8670	PAN_MGMT_EV_BATTERY_TOO_OLD	Warning	warn	hardware	no	The battery can continue to be used, but should be replaced as soon as reasonably possible. Please open a Service Request with a list of battery hardware seria
8671	PAN_MGMT_EV_BATTERY_NOT_TOO_OLD	None	none	hardware	no	
8684	PAN_MGMT_EV_SSD_FILESYSTEM_FULL	Critical	crit	hardware	no	Delete data or add additional storage.
8685	PAN_MGMT_EV_SSD_FILESYSTEM_NEAR_FULL	Warning	warn	hardware	yes	Delete data or add additional storage.
8686	PAN_MGMT_EV_SSD_FILESYSTEM_HALF_FULL	Informational	info	hardware	yes	
8687	PAN_MGMT_EV_SSD_FILESYSTEM_NO_LONGER_FULL	Informational	info	hardware	yes	
8688	PAN_MGMT_EV_HDD_FILESYSTEM_FULL	Critical	crit	hardware	no	Delete data or add additional storage.
8689	PAN_MGMT_EV_HDD_FILESYSTEM_NEAR_FULL	Warning	warn	hardware	yes	Delete data or add additional storage.
8690	PAN_MGMT_EV_HDD_FILESYSTEM_HALF_FULL	Informational	info	hardware	yes	
8691	PAN_MGMT_EV_HDD_FILESYSTEM_NO_LONGER_FULL	Informational	info	hardware	yes	
8697	PAN_MGMT_EV_METADATA_FILESYSTEM_FULL	Critical	crit	hardware	no	Contact service.
8698	PAN_MGMT_EV_METADATA_FILESYSTEM_NEAR_FULL	Warning	warn	hardware	no	Contact service.
8699	PAN_MGMT_EV_METADATA_FILESYSTEM_NO_LONGER_NEAR_FULL	Informational	info	hardware	yes	
8800	PAN_MGMT_EV_EXTERNAL_JBOD_FAILED	Critical	crit	hardware	no	Please contact VDURA Technical Support for further assistance regarding this message.
8801	PAN_MGMT_EV_EXTERNAL_JBOD_NOT_FOUND	Critical	crit	hardware	no	Please contact VDURA Technical Support for further assistance regarding this message.
8802	PAN_MGMT_EV_EXTERNAL_JBOD_WILL_FAIL	Warning	warn	hardware	no	Please contact VDURA Technical Support for further assistance regarding this message.
8803	PAN_MGMT_EV_EXTERNAL_JBOD_IOM_FAILED	Critical	crit	hardware	no	Please contact VDURA Technical Support for further assistance regarding this message.
8804	PAN_MGMT_EV_EXTERNAL_JBOD_IOM_NOT_FOUND	Critical	crit	hardware	no	Please contact VDURA Technical Support for further assistance regarding this message.
8805	PAN_MGMT_EV_EXTERNAL_JBOD_IOM_WILL_FAIL	Warning	warn	hardware	no	Please contact VDURA Technical Support for further assistance regarding this message.

Code	Alert name	Severity	Level	Category	Clr	Recommended action
8806	PAN_MGMT_EV_EXTERNAL_JBOD_FAN_FAILED	Critical	crit	hardware	no	Please contact VDURA Technical Support for further assistance regarding this message.
8807	PAN_MGMT_EV_EXTERNAL_JBOD_FAN_NOT_FOUND	Critical	crit	hardware	no	Please contact VDURA Technical Support for further assistance regarding this message.
8808	PAN_MGMT_EV_EXTERNAL_JBOD_FAN_WILL_FAIL	Warning	warn	hardware	no	Please contact VDURA Technical Support for further assistance regarding this message.
8809	PAN_MGMT_EV_EXTERNAL_JBOD_PS_FAILED	Critical	crit	hardware	no	Please contact VDURA Technical Support for further assistance regarding this message.
8810	PAN_MGMT_EV_EXTERNAL_JBOD_PS_NOT_FOUND	Critical	crit	hardware	no	Please contact VDURA Technical Support for further assistance regarding this message.
8811	PAN_MGMT_EV_EXTERNAL_JBOD_PS_WILL_FAIL	Warning	warn	hardware	no	Please contact VDURA Technical Support for further assistance regarding this message.
8812	PAN_MGMT_EV_EXTERNAL_JBOD_PS_BAD_DC_DC_OUTPUT	Warning	warn	hardware	no	Please contact VDURA Technical Support for further assistance regarding this message.
8813	PAN_MGMT_EV_EXTERNAL_JBOD_PS_NO_AC_INPUT	Warning	warn	hardware	no	Please contact VDURA Technical Support for further assistance regarding this message.
8814	PAN_MGMT_EV_JBOD_GENERIC_EVENT	None	none	hardware	no	
8815	PAN_MGMT_EV_EXTERNAL_JBOD_PS_OK	None	none	hardware	no	
8816	PAN_MGMT_EV_EXTERNAL_JBOD_IOM_OK	None	none	hardware	no	
8817	PAN_MGMT_EV_EXTERNAL_JBOD_FAN_OK	None	none	hardware	no	
8818	PAN_MGMT_EV_EXTERNAL_JBOD_OK	None	none	hardware	no	
8900	PAN_MGMT_EV_SHELF_FAN1_FAILED	Warning	warn	hardware	no	Please contact VDURA Technical Support for further assistance regarding this message.
8901	PAN_MGMT_EV_SHELF_FAN2_FAILED	Warning	warn	hardware	no	Please contact VDURA Technical Support for further assistance regarding this message.
8902	PAN_MGMT_EV_SHELF_FAN3_FAILED	Warning	warn	hardware	no	Please contact VDURA Technical Support for further assistance regarding this message.
8903	PAN_MGMT_EV_SHELF_TOO_MANY_FAN_FAILED	Critical	crit	hardware	no	Please contact VDURA Technical Support for further assistance regarding this message.
8915	PAN_MGMT_EV_BRICK_FF_TRIP_TEMP	None	none	hardware	no	

Code	Alert name	Severity	Level	Category	Clr	Recommended action
8916	PAN_MGMT_EV_PS1_FF_TRIP_TEMP	None	none	hardware	no	
8917	PAN_MGMT_EV_PS2_FF_TRIP_TEMP	None	none	hardware	no	
8918	PAN_MGMT_EV_BATTERY_FF_TRIP_TEMP	None	none	hardware	no	
8919	PAN_MGMT_EV_SHELF_NET1_FF_TRIP_TEMP	None	none	hardware	no	
8920	PAN_MGMT_EV_SHELF_NET2_FF_TRIP_TEMP	None	none	hardware	no	
8950	PAN_MGMT_EV_SHELF_NET2_FAILED	Critical	crit	hardware	no	Please contact VDURA Technical Support for further assistance regarding this message.
8951	PAN_MGMT_EV_SHELF_NET2_UNSUPPORTED_VERSION	Warning	warn	hardware	no	Please contact VDURA Technical Support for further assistance regarding this message.
8952	PAN_MGMT_EV_SHELF_NET2_NOT_FOUND	Critical	crit	hardware	no	Check if switch 2 is inserted properly.
8953	PAN_MGMT_EV_SHELF_NET2_TRIP_TEMP	Critical	crit	hardware	no	Ambient temperature is too high. Adjust room temperature.
8954	PAN_MGMT_EV_SHELF_NET2_HIGH_TEMP	Warning	warn	hardware	no	Ambient temperature is too high. Adjust room temperature.
8955	PAN_MGMT_EV_SHELF_NET2_UNDER_TEMP	Informational	info	hardware	no	Ambient temperature is too low. Adjust room temperature.
8956	PAN_MGMT_EV_SHELF_NET2_U6_CHECKSUM_FAILED	Warning	warn	hardware	no	Please contact VDURA Technical Support for assistance.
8957	PAN_MGMT_EV_SHELF_NET2_U8_CHECKSUM_FAILED	Warning	warn	hardware	no	Please contact VDURA Technical Support for assistance.
8958	PAN_MGMT_EV_SHELF_NET2_RESETTING	Warning	warn	hardware	no	Switch management interface did not respond. Please wait 90 seconds for reset to complete.
8959	PAN_MGMT_EV_SHELF_NET2_NO_RESP	Warning	warn	hardware	no	Switch management interface is not responding. Please reset the switch when system is not busy, and check that the switch firmware is up-to-date.
8960	PAN_MGMT_EV_SHELF_NET2_FW_OPTIONAL_UPGRADE	Warning	warn	hardware	yes	Switch firmware is out of date; upgrade is recommended. Please contact VDURA Technical Support for further assistance.
8961	PAN_MGMT_EV_SHELF_NET2_FW_NEW_UNSUPPORTED	Warning	warn	hardware	yes	Switch firmware is not supported. Downgrading firmware to a supported version is recommended. Please contact VDURA Technical Support for further assistance.

Code	Alert name	Severity	Level	Category	Clr	Recommended action
8962	PAN_MGMT_EV_SHELF_NET2_FW_NEW_NO_DATA	Warning	warn	hardware	yes	There is no compatibility info for the switch firmware. Downgrading firmware to a supported version is recommended. Please contact VDURA Technical Support for f
8963	PAN_MGMT_EV_SHELF_NET2_FW_INCOMPATIBLE	Critical	crit	hardware	no	Please upgrade switch firmware to a supported version. Please contact VDURA Technical Support for further assistance.
8964	PAN_MGMT_EV_SHELF_NET2_FW_UPGRADE_NEEDS_FILE	Warning	warn	hardware	yes	Please contact VDURA Technical Support to obtain the firmware file and for further assistance.
8965	PAN_MGMT_EV_SHELF_NET2_FW_NEW_COMPATIBLE	Warning	warn	hardware	yes	Consider downgrading switch firmware to a supported version. Please contact VDURA Technical Support for further assistance.
8966	PAN_MGMT_EV_SHELF_NET2_INVALID_UPLINK	Warning	warn	hardware	no	Check that the enclosure switch is cabled correctly - uplink should be sfp6, cx4, or lagg of ge.
8968	PAN_MGMT_EV_SHELF_NET2_FLOODING	Informational	info	hardware	no	If the warning persists, Please contact VDURA Technical Support.
8969	PAN_MGMT_EV_SHELF_NET1_NO_FLOODING	None	none	hardware	no	
8970	PAN_MGMT_EV_SHELF_NET2_NO_FLOODING	None	none	hardware	no	
8975	PAN_MGMT_EV_BATTERY_TEST_START	Informational	info	hardware	yes	
8976	PAN_MGMT_EV_BATTERY_TEST_SUCCESS	Informational	info	hardware	yes	
8977	PAN_MGMT_EV_BATTERY_TEST_FAILED	Critical	crit	hardware	yes	
8978	PAN_MGMT_EV_BATTERY_TEST_TRANSIENT_ERROR	Informational	info	hardware	yes	Battery test will automatically run again later.
9050	PAN_MGMT_EV_BRICK_LOW_BATTERY	Warning	warn	hardware	no	Node power failure protection is not ready.
9051	PAN_MGMT_EV_BRICK_BACKGROUND_FSCK_ACTIVE	Informational	info	hardware	no	
9052	PAN_MGMT_EV_BRICK_BACKGROUND_FSCK_INACTIVE	Informational	info	hardware	no	
9053	PAN_MGMT_EV_BRICK_GOT_ADDRS	Informational	info	hardware	yes	
9062	PAN_MGMT_EV_BRICK_CLOCK_SYNC	Informational	info	hardware	no	Wait up to 2 minutes for clock synchronization to complete. If clock synchronization lasts longer than 2 minutes, make sure at least one of the NTP servers is
9063	PAN_MGMT_EV_BRICK_DRIVE_TEST_FAILED	Warning	warn	hardware	yes	Please contact VDURA Technical Support.

Code	Alert name	Severity	Level	Category	Clr	Recommended action
9064	PAN_MGMT_EV_BRICK_DRIVE_TEST_INCONCLUSIVE	Warning	warn	hardware	yes	Please contact VDURA Technical Support.
9065	PAN_MGMT_EV_BRICK_DRIVE_TEST_RETRY	Informational	info	hardware	yes	No action is needed.
9066	PAN_MGMT_EV_BRICK_DRIVE_TEST_PASSED	Informational	info	hardware	yes	
9067	PAN_MGMT_EV_BRICK_NOT_READY	Informational	info	hardware	no	
9068	PAN_MGMT_EV_BRICK_ACTIVATED	Informational	info	hardware	yes	
9069	PAN_MGMT_EV_BRICK_SECURE_ERASE	Informational	info	hardware	no	
9070	PAN_MGMT_EV_BRICK_BOOTING	Informational	info	hardware	no	
9071	PAN_MGMT_EV_BRICK_SHUTDOWN	Informational	info	hardware	no	
9072	PAN_MGMT_EV_BRICK_NOTIFY_CLIENT_AWOL	Informational	info	hardware	yes	Check the health of this client.
9073	PAN_MGMT_EV_BRICK_ECC_ERROR_FILTER	Warning	warn	hardware	yes	Node may need to be drained depending on severity of ECC correctable error rate.
9074	PAN_MGMT_EV_BRICK_ATA_ERROR_FILTER	Warning	warn	hardware	yes	Node may need to be drained depending on severity of ATA sector error rate.
9075	PAN_MGMT_EV_BRICK_IMPAIRED	Warning	warn	hardware	no	Please contact VDURA Technical Support for further assistance regarding this message.
9079	PAN_MGMT_EV_BRICK_IPS_COMM_TIMEOUT_FILTER	Warning	warn	hardware	yes	Please collect logs for the director and OSD, then contact VDURA Technical Support.
9080	PAN_MGMT_EV_BRICK_DEACTIVATED	Informational	info	hardware	yes	
9081	PAN_MGMT_EV_BRICK_NETWORK_ERR	Informational	info	hardware	no	
9082	PAN_MGMT_EV_BRICK_NOT_RECONCILED	Informational	info	hardware	no	
9083	PAN_MGMT_EV_BRICK_CONFIG_ERR	Informational	info	hardware	no	
9100	PAN_MGMT_EV_PM_DRAIN_BLADE_SUCCESS	Informational	info	hardware	yes	
9101	PAN_MGMT_EV_PM_DRAIN_BLADE_FAILURE	Informational	info	hardware	yes	Check the drain status on the Node Detail page to see whether drain is blocked.
9102	PAN_MGMT_EV_NIS_AUTHSVC_CONFIG_FAILED	Warning	warn	hardware	yes	Please correct NIS configuration.
9103	PAN_MGMT_EV_NIS_AUTHSVC_CONFIGURED	Informational	info	hardware	yes	

Code	Alert name	Severity	Level	Category	Clr	Recommended action
9104	PAN_MGMT_EV_NIS_BIND_CONFIG_FAILED	Warning	warn	hardware	yes	Please make sure the NIS servers is responding.
9105	PAN_MGMT_EV_NIS_BIND_CONFIGURED	Informational	info	hardware	yes	
9120	PAN_MGMT_EV_LDAP_CONN_LOST	Warning	warn	hardware	yes	Check the LDAP server connectivity. To retry, disable and re-enable LDAP. Also make sure that LDAP is in the Name Resolution Order list.
9122	PAN_MGMT_EV_LDAP_CONN_RE_ESTABLISHED	Warning	warn	hardware	yes	
9124	PAN_MGMT_EV_AD_CONN_LOST	Warning	warn	hardware	yes	
9125	PAN_MGMT_EV_AD_CONN_RE_ESTABLISHED	Warning	warn	hardware	yes	
9126	PAN_MGMT_EV_NIS_CONN_LOST	Warning	warn	hardware	yes	Check the NIS server connectivity. To retry, disable and re-enable NIS User/Group Name Resolution. Also make sure that NIS is in the Name Resolution Order lis
9127	PAN_MGMT_EV_NIS_CONN_RE_ESTABLISHED	Warning	warn	hardware	yes	
9150	PAN_MGMT_EV_USERQUOTA_BYTES_VIOLATION_HARD	Informational	info	volume	yes	1. Increase hard quota bytes limit. 2. Delete unneeded files from volume to keep usage below limit.
9151	PAN_MGMT_EV_USERQUOTA_BYTES_VIOLATION_SOFT	Informational	info	volume	yes	1. Increase soft quota bytes limit. 2. Delete unneeded files from volume to keep usage below limit.
9152	PAN_MGMT_EV_USERQUOTA_FILES_VIOLATION_HARD	Informational	info	volume	yes	1. Increase hard quota file limit. 2. Delete unneeded files from volume to keep usage below limit.
9153	PAN_MGMT_EV_USERQUOTA_FILES_VIOLATION_SOFT	Informational	info	volume	yes	1. Increase soft quota file limit. 2. Delete unneeded files from volume to keep usage below limit.
9154	PAN_MGMT_EV_USERQUOTA_BYTES_BELOW_HARD_LIMIT	None	none	hardware	no	
9155	PAN_MGMT_EV_USERQUOTA_BYTES_BELOW_SOFT_LIMIT	None	none	hardware	no	
9156	PAN_MGMT_EV_USERQUOTA_FILES_BELOW_HARD_LIMIT	None	none	hardware	no	
9157	PAN_MGMT_EV_USERQUOTA_FILES_BELOW_SOFT_LIMIT	None	none	hardware	no	
9170	PAN_MGMT_EV_QUOTA_CALC_IN_PROGRESS	Informational	info	volume	yes	
9171	PAN_MGMT_EV_QUOTA_CALC_PENDING	Informational	info	volume	yes	
9172	PAN_MGMT_EV_QUOTA_CALC_COMPLETE	Informational	info	volume	yes	
9180	PAN_MGMT_EV_BRICK_NIC_START	None	none	hardware	no	

Code	Alert name	Severity	Level	Category	Clr	Recommended action
9181	PAN_MGMT_EV_BRICK_NIC_FAILED	None	none	hardware	no	
9182	PAN_MGMT_EV_BRICK_NIC1_FAILED	Warning	warn	hardware	no	Please contact VDURA Technical Support for further assistance regarding this message.
9183	PAN_MGMT_EV_BRICK_NIC2_FAILED	Warning	warn	hardware	no	Please contact VDURA Technical Support for further assistance regarding this message.
9184	PAN_MGMT_EV_BRICK_NIC3_FAILED	Warning	warn	hardware	no	Please contact VDURA Technical Support for further assistance regarding this message.
9185	PAN_MGMT_EV_BRICK_NIC4_FAILED	Warning	warn	hardware	no	Please contact VDURA Technical Support for further assistance regarding this message.
9186	PAN_MGMT_EV_BRICK_NIC5_FAILED	Warning	warn	hardware	no	Please contact VDURA Technical Support for further assistance regarding this message.
9187	PAN_MGMT_EV_BRICK_NIC6_FAILED	Warning	warn	hardware	no	Please contact VDURA Technical Support for further assistance regarding this message.
9188	PAN_MGMT_EV_BRICK_NIC7_FAILED	Warning	warn	hardware	no	Please contact VDURA Technical Support for further assistance regarding this message.
9189	PAN_MGMT_EV_BRICK_NIC8_FAILED	Warning	warn	hardware	no	Please contact VDURA Technical Support for further assistance regarding this message.
9190	PAN_MGMT_EV_BRICK_NIC9_FAILED	Warning	warn	hardware	no	Please contact VDURA Technical Support for further assistance regarding this message.
9200	PAN_MGMT_EV_BRICK_NIC_TRANSMISSION_ERRORS	None	none	hardware	no	
9201	PAN_MGMT_EV_BRICK_NIC_TRANSMISSION_ERRORS			hardware	no	
9202	PAN_MGMT_EV_BRICK_NIC1_TRANSMISSION_ERRORS	Warning	warn	hardware	no	Check cabling.
9203	PAN_MGMT_EV_BRICK_NIC2_TRANSMISSION_ERRORS	Warning	warn	hardware	no	Check cabling.
9204	PAN_MGMT_EV_BRICK_NIC3_TRANSMISSION_ERRORS	Warning	warn	hardware	no	Check cabling.
9205	PAN_MGMT_EV_BRICK_NIC4_TRANSMISSION_ERRORS	Warning	warn	hardware	no	Check cabling.
9206	PAN_MGMT_EV_BRICK_NIC5_TRANSMISSION_ERRORS	Warning	warn	hardware	no	Check cabling.
9207	PAN_MGMT_EV_BRICK_NIC6_TRANSMISSION_ERRORS	Warning	warn	hardware	no	Check cabling.
9208	PAN_MGMT_EV_BRICK_NIC7_TRANSMISSION_ERRORS	Warning	warn	hardware	no	Check cabling.
9209	PAN_MGMT_EV_BRICK_NIC8_TRANSMISSION_ERRORS	Warning	warn	hardware	no	Check cabling.

Code	Alert name	Severity	Level	Category	Clr	Recommended action
9210	PAN_MGMT_EV_BRICK_NIC9_TRANSMISSION_ERRORS	Warning	warn	hardware	no	Check cabling.
9220	PAN_MGMT_EV_BRICK_NIC_SLOW_SPEED	None	none	hardware	no	
9221	PAN_MGMT_EV_BRICK_NIC_SLOW_SPEED			hardware	no	
9222	PAN_MGMT_EV_BRICK_NIC1_SLOW_SPEED	Warning	warn	hardware	no	Check 10GE switch configuration.
9223	PAN_MGMT_EV_BRICK_NIC2_SLOW_SPEED	Warning	warn	hardware	no	Check 10GE switch configuration.
9224	PAN_MGMT_EV_BRICK_NIC3_SLOW_SPEED	Warning	warn	hardware	no	Check 10GE switch configuration.
9225	PAN_MGMT_EV_BRICK_NIC4_SLOW_SPEED	Warning	warn	hardware	no	Check 10GE switch configuration.
9226	PAN_MGMT_EV_BRICK_NIC5_SLOW_SPEED	Warning	warn	hardware	no	Check 10GE switch configuration.
9227	PAN_MGMT_EV_BRICK_NIC6_SLOW_SPEED	Warning	warn	hardware	no	Check 10GE switch configuration.
9228	PAN_MGMT_EV_BRICK_NIC7_SLOW_SPEED	Warning	warn	hardware	no	Check 10GE switch configuration.
9229	PAN_MGMT_EV_BRICK_NIC8_SLOW_SPEED	Warning	warn	hardware	no	Check 10GE switch configuration.
9230	PAN_MGMT_EV_BRICK_NIC9_SLOW_SPEED	Warning	warn	hardware	no	Check 10GE switch configuration.
9240	PAN_MGMT_EV_BRICK_NIC_NOT_FULL_DUPLEX	None	none	hardware	no	
9241	PAN_MGMT_EV_BRICK_NIC_NOT_FULL_DUPLEX			hardware	no	
9242	PAN_MGMT_EV_BRICK_NIC1_NOT_FULL_DUPLEX	Warning	warn	hardware	no	Check switch configuration.
9243	PAN_MGMT_EV_BRICK_NIC2_NOT_FULL_DUPLEX	Warning	warn	hardware	no	Check switch configuration.
9244	PAN_MGMT_EV_BRICK_NIC3_NOT_FULL_DUPLEX	Warning	warn	hardware	no	Check switch configuration.
9245	PAN_MGMT_EV_BRICK_NIC4_NOT_FULL_DUPLEX	Warning	warn	hardware	no	Check switch configuration.
9246	PAN_MGMT_EV_BRICK_NIC5_NOT_FULL_DUPLEX	Warning	warn	hardware	no	Check switch configuration.
9247	PAN_MGMT_EV_BRICK_NIC6_NOT_FULL_DUPLEX	Warning	warn	hardware	no	Check switch configuration.
9248	PAN_MGMT_EV_BRICK_NIC7_NOT_FULL_DUPLEX	Warning	warn	hardware	no	Check switch configuration.
9249	PAN_MGMT_EV_BRICK_NIC8_NOT_FULL_DUPLEX	Warning	warn	hardware	no	Check switch configuration.
9250	PAN_MGMT_EV_BRICK_NIC9_NOT_FULL_DUPLEX	Warning	warn	hardware	no	Check switch configuration.

Code	Alert name	Severity	Level	Category	Clr	Recommended action
9260	PAN_MGMT_EV_BRICK_NIC_NOT_ACTIVE	None	none	hardware	no	
9261	PAN_MGMT_EV_BRICK_NIC_NOT_ACTIVE			hardware	no	
9262	PAN_MGMT_EV_BRICK_NIC1_NOT_ACTIVE	Warning	warn	hardware	no	Check cabling.
9263	PAN_MGMT_EV_BRICK_NIC2_NOT_ACTIVE	Warning	warn	hardware	no	Check cabling.
9264	PAN_MGMT_EV_BRICK_NIC3_NOT_ACTIVE	Warning	warn	hardware	no	Check cabling.
9265	PAN_MGMT_EV_BRICK_NIC4_NOT_ACTIVE	Warning	warn	hardware	no	Check cabling.
9266	PAN_MGMT_EV_BRICK_NIC5_NOT_ACTIVE	Warning	warn	hardware	no	Check cabling.
9267	PAN_MGMT_EV_BRICK_NIC6_NOT_ACTIVE	Warning	warn	hardware	no	Check cabling.
9268	PAN_MGMT_EV_BRICK_NIC7_NOT_ACTIVE	Warning	warn	hardware	no	Check cabling.
9269	PAN_MGMT_EV_BRICK_NIC8_NOT_ACTIVE	Warning	warn	hardware	no	Check cabling.
9270	PAN_MGMT_EV_BRICK_NIC9_NOT_ACTIVE	Warning	warn	hardware	no	Check cabling.
9280	PAN_MGMT_EV_BRICK_NIC_BRDCST_ADDR_ERR	None	none	hardware	no	
9281	PAN_MGMT_EV_BRICK_NIC_BRDCST_ADDR_ERR			hardware	no	
9282	PAN_MGMT_EV_BRICK_NIC1_BRDCST_ADDR_ERR	Critical	crit	hardware	no	Configure the broadcast address correctly.
9283	PAN_MGMT_EV_BRICK_NIC2_BRDCST_ADDR_ERR	Critical	crit	hardware	no	Configure the broadcast address correctly.
9284	PAN_MGMT_EV_BRICK_NIC3_BRDCST_ADDR_ERR	Critical	crit	hardware	no	Configure the broadcast address correctly.
9285	PAN_MGMT_EV_BRICK_NIC4_BRDCST_ADDR_ERR	Critical	crit	hardware	no	Configure the broadcast address correctly.
9286	PAN_MGMT_EV_BRICK_NIC5_BRDCST_ADDR_ERR	Critical	crit	hardware	no	Configure the broadcast address correctly.
9287	PAN_MGMT_EV_BRICK_NIC6_BRDCST_ADDR_ERR	Critical	crit	hardware	no	Configure the broadcast address correctly.
9288	PAN_MGMT_EV_BRICK_NIC7_BRDCST_ADDR_ERR	Critical	crit	hardware	no	Configure the broadcast address correctly.
9289	PAN_MGMT_EV_BRICK_NIC8_BRDCST_ADDR_ERR	Critical	crit	hardware	no	Configure the broadcast address correctly.
9290	PAN_MGMT_EV_BRICK_NIC9_BRDCST_ADDR_ERR	Critical	crit	hardware	no	Configure the broadcast address correctly.
9300	PAN_MGMT_EV_BRICK_NIC_NOT_CONFIGURED	None	none	hardware	no	

Code	Alert name	Severity	Level	Category	Clr	Recommended action
9301	PAN_MGMT_EV_BRICK_NIC_NOT_CONFIGURED			hardware	no	
9302	PAN_MGMT_EV_BRICK_NIC1_NOT_CONFIGURED	Warning	warn	hardware	no	Try rebooting the node.
9303	PAN_MGMT_EV_BRICK_NIC2_NOT_CONFIGURED	Warning	warn	hardware	no	Try rebooting the node.
9304	PAN_MGMT_EV_BRICK_NIC3_NOT_CONFIGURED	Warning	warn	hardware	no	Try rebooting the node.
9305	PAN_MGMT_EV_BRICK_NIC4_NOT_CONFIGURED	Warning	warn	hardware	no	Try rebooting the node.
9306	PAN_MGMT_EV_BRICK_NIC5_NOT_CONFIGURED	Warning	warn	hardware	no	Try rebooting the node.
9307	PAN_MGMT_EV_BRICK_NIC6_NOT_CONFIGURED	Warning	warn	hardware	no	Try rebooting the node.
9308	PAN_MGMT_EV_BRICK_NIC7_NOT_CONFIGURED	Warning	warn	hardware	no	Try rebooting the node.
9309	PAN_MGMT_EV_BRICK_NIC8_NOT_CONFIGURED	Warning	warn	hardware	no	Try rebooting the node.
9310	PAN_MGMT_EV_BRICK_NIC9_NOT_CONFIGURED	Warning	warn	hardware	no	Try rebooting the node.
9320	PAN_MGMT_EV_BRICK_NIC_EXT_LINK_DOWN	None	none	hardware	no	
9321	PAN_MGMT_EV_BRICK_NIC_EXT_LINK_DOWN			hardware	no	
9322	PAN_MGMT_EV_BRICK_NIC1_EXT_LINK_DOWN	Warning	warn	hardware	no	Check cable and switch configuration.
9323	PAN_MGMT_EV_BRICK_NIC2_EXT_LINK_DOWN	Warning	warn	hardware	no	Check cable and switch configuration.
9324	PAN_MGMT_EV_BRICK_NIC3_EXT_LINK_DOWN	Warning	warn	hardware	no	Check cable and switch configuration.
9325	PAN_MGMT_EV_BRICK_NIC4_EXT_LINK_DOWN	Warning	warn	hardware	no	Check cable and switch configuration.
9326	PAN_MGMT_EV_BRICK_NIC5_EXT_LINK_DOWN	Warning	warn	hardware	no	Check cable and switch configuration.
9327	PAN_MGMT_EV_BRICK_NIC6_EXT_LINK_DOWN	Warning	warn	hardware	no	Check cable and switch configuration.
9328	PAN_MGMT_EV_BRICK_NIC7_EXT_LINK_DOWN	Warning	warn	hardware	no	Check cable and switch configuration.
9329	PAN_MGMT_EV_BRICK_NIC8_EXT_LINK_DOWN	Warning	warn	hardware	no	Check cable and switch configuration.
9330	PAN_MGMT_EV_BRICK_NIC9_EXT_LINK_DOWN	Warning	warn	hardware	no	Check cable and switch configuration.
9340	PAN_MGMT_EV_BRICK_NIC_IMPAIRED	None	none	hardware	no	
9341	PAN_MGMT_EV_BRICK_NIC_IMPAIRED			hardware	no	

Code	Alert name	Severity	Level	Category	Clr	Recommended action
9360	PAN_MGMT_EV_BRICK_NIC_ LACP_NOT_ACTIVE	None	none	hardware	no	
9361	PAN_MGMT_EV_BRICK_NIC_ LACP_NOT_ACTIVE			hardware	no	
9362	PAN_MGMT_EV_BRICK_NIC1_ LACP_NOT_ACTIVE	Warning	warn	hardware	no	Check switch configuration.
9363	PAN_MGMT_EV_BRICK_NIC2_ LACP_NOT_ACTIVE	Warning	warn	hardware	no	Check switch configuration.
9364	PAN_MGMT_EV_BRICK_NIC3_ LACP_NOT_ACTIVE	Warning	warn	hardware	no	Check switch configuration.
9365	PAN_MGMT_EV_BRICK_NIC4_ LACP_NOT_ACTIVE	Warning	warn	hardware	no	Check switch configuration.
9366	PAN_MGMT_EV_BRICK_NIC5_ LACP_NOT_ACTIVE	Warning	warn	hardware	no	Check switch configuration.
9367	PAN_MGMT_EV_BRICK_NIC6_ LACP_NOT_ACTIVE	Warning	warn	hardware	no	Check switch configuration.
9368	PAN_MGMT_EV_BRICK_NIC7_ LACP_NOT_ACTIVE	Warning	warn	hardware	no	Check switch configuration.
9369	PAN_MGMT_EV_BRICK_NIC8_ LACP_NOT_ACTIVE	Warning	warn	hardware	no	Check switch configuration.
9370	PAN_MGMT_EV_BRICK_NIC9_ LACP_NOT_ACTIVE	Warning	warn	hardware	no	Check switch configuration.
9380	PAN_MGMT_EV_BRICK_NIC_END	None	none	hardware	no	
9381	PAN_MGMT_EV_BRICK_NIC_END			hardware	no	
9400	PAN_MGMT_EV_BOX_PS1_ FAILED	Warning	warn	hardware	no	Please contact VDURA Technical Support for further assistance regarding this message.
9401	PAN_MGMT_EV_BOX_PS1_ UNSUPPORTED_VERSION	Warning	warn	hardware	no	Please contact VDURA Technical Support for further assistance regarding this message.
9402	PAN_MGMT_EV_BOX_PS1_NOT_ FOUND	Warning	warn	hardware	no	Check whether Power Supply 1 is inserted properly.
9403	PAN_MGMT_EV_BOX_PS1_ PREDICTED_FAILURE	Warning	warn	hardware	no	Please contact VDURA Technical Support for further assistance regarding this message.
9404	PAN_MGMT_EV_BOX_PS1_NO_ AC_INPUT	Warning	warn	hardware	no	Check that Power Supply 1 is plugged in.
9410	PAN_MGMT_EV_BOX_PS2_ FAILED	Warning	warn	hardware	no	Please contact VDURA Technical Support for further assistance regarding this message.
9411	PAN_MGMT_EV_BOX_PS2_ UNSUPPORTED_VERSION	Warning	warn	hardware	no	Please contact VDURA Technical Support for further assistance regarding this message.
9412	PAN_MGMT_EV_BOX_PS2_NOT_ FOUND	Warning	warn	hardware	no	Check whether Power Supply 2 is inserted properly.

Code	Alert name	Severity	Level	Category	Clr	Recommended action
9413	PAN_MGMT_EV_BOX_PS2_ PREDICTED_FAILURE	Warning	warn	hardware	no	Please contact VDURA Technical Support for further assistance regarding this message.
9414	PAN_MGMT_EV_BOX_PS2_NO_ AC_INPUT	Warning	warn	hardware	no	Check that Power Supply 2 is plugged in.
9420	PAN_MGMT_EV_BOX_IPMI_ FAILED	Warning	warn	hardware	no	Please contact VDURA Technical Support for further assistance regarding this message.
9421	PAN_MGMT_EV_BOX_IPMI_ PREDICTED_FAILURE	Warning	warn	hardware	no	Please contact VDURA Technical Support for further assistance regarding this message.
9422	PAN_MGMT_EV_BOX_IPMI_NOT_ FOUND	Warning	warn	hardware	no	Please contact VDURA Technical Support for further assistance regarding this message.
9423	PAN_MGMT_EV_BOX_NVM_ PREDICTED_FAILURE	Warning	warn	hardware	no	Please contact VDURA Technical Support for further assistance regarding this message.
9424	PAN_MGMT_EV_BOX_NVM_ FAILED	Warning	warn	hardware	no	Please contact VDURA Technical Support for further assistance regarding this message.
9430	PAN_MGMT_EV_BOX_FAN1_ FAILED	Warning	warn	hardware	no	Please contact VDURA Technical Support for further assistance regarding this message.
9431	PAN_MGMT_EV_BOX_FAN1_ SLOW_SPEED	Warning	warn	hardware	no	Please contact VDURA Technical Support for further assistance regarding this message.
9435	PAN_MGMT_EV_BOX_FAN2_ FAILED	Warning	warn	hardware	no	Please contact VDURA Technical Support for further assistance regarding this message.
9436	PAN_MGMT_EV_BOX_FAN2_ SLOW_SPEED	Warning	warn	hardware	no	Please contact VDURA Technical Support for further assistance regarding this message.
9440	PAN_MGMT_EV_BOX_FAN3_ FAILED	Warning	warn	hardware	no	Please contact VDURA Technical Support for further assistance regarding this message.
9441	PAN_MGMT_EV_BOX_FAN3_ SLOW_SPEED	Warning	warn	hardware	no	Please contact VDURA Technical Support for further assistance regarding this message.
9445	PAN_MGMT_EV_BOX_FAN4_ FAILED	Warning	warn	hardware	no	Please contact VDURA Technical Support for further assistance regarding this message.
9446	PAN_MGMT_EV_BOX_FAN4_ SLOW_SPEED	Warning	warn	hardware	no	Please contact VDURA Technical Support for further assistance regarding this message.
9450	PAN_MGMT_EV_BOX_FAN5_ FAILED	Warning	warn	hardware	no	Please contact VDURA Technical Support for further assistance regarding this message.
9451	PAN_MGMT_EV_BOX_FAN5_ SLOW_SPEED	Warning	warn	hardware	no	Please contact VDURA Technical Support for further assistance regarding this message.

Code	Alert name	Severity	Level	Category	Clr	Recommended action
9455	PAN_MGMT_EV_BOX_FAN6_FAILED	Warning	warn	hardware	no	Please contact VDURA Technical Support for further assistance regarding this message.
9456	PAN_MGMT_EV_BOX_FAN6_SLOW_SPEED	Warning	warn	hardware	no	Please contact VDURA Technical Support for further assistance regarding this message.
9460	PAN_MGMT_EV_BOX_FAN7_FAILED	Warning	warn	hardware	no	Please contact VDURA Technical Support for further assistance regarding this message.
9461	PAN_MGMT_EV_BOX_FAN7_SLOW_SPEED	Warning	warn	hardware	no	Please contact VDURA Technical Support for further assistance regarding this message.
9470	PAN_MGMT_EV_BOX_HBA0_FAILED	Warning	warn	hardware	no	Please contact VDURA Technical Support for further assistance regarding this message.
9471	PAN_MGMT_EV_BOX_HBA0_SLOW_SPEED	Warning	warn	hardware	no	Check cabling and SFP+ modules.
9472	PAN_MGMT_EV_BOX_HBA0_NOT_CONNECTED	Warning	warn	hardware	no	Check cabling and SFP+ modules.
9473	PAN_MGMT_EV_BOX_HBA1_FAILED	Warning	warn	hardware	no	Please contact VDURA Technical Support for further assistance regarding this message.
9474	PAN_MGMT_EV_BOX_HBA1_SLOW_SPEED	Warning	warn	hardware	no	Check cabling and SFP+ modules.
9475	PAN_MGMT_EV_BOX_HBA1_NOT_CONNECTED	Warning	warn	hardware	no	Check cabling and SFP+ modules.
9500	PAN_MGMT_EV_BRICK_HD2_FAILED	Critical	crit	hardware	no	Please contact VDURA Technical Support.
9501	PAN_MGMT_EV_BRICK_HD2_WILL_FAIL	Warning	warn	hardware	no	Please contact VDURA Technical Support.
9502	PAN_MGMT_EV_BRICK_HD2_UNSUPPORTED_VERSION	Warning	warn	hardware	no	Please contact VDURA Technical Support.
9503	PAN_MGMT_EV_BRICK_HD2_NOT_FOUND	Warning	warn	hardware	no	Please contact VDURA Technical Support.
9504	PAN_MGMT_EV_BRICK_HD2_SSD_LIFETIME	Warning	warn	hardware	no	Please contact VDURA Technical Support.
9505	PAN_MGMT_EV_BRICK_HD2_SSD_RESERVE_SPACE	Warning	warn	hardware	no	Please contact VDURA Technical Support.
9506	PAN_MGMT_EV_BRICK_HWSN_CHANGED	Informational	info	hardware	yes	
9600	PAN_MGMT_EV_SHELF_BATTERY_FAN_MOD1_FAILED	Warning	warn	hardware	no	Pease contact VDURA Technical Support for further assistance regarding this message.
9601	PAN_MGMT_EV_SHELF_BATTERY_FAN_MOD2_FAILED	Warning	warn	hardware	no	Pease contact VDURA Technical Support for further assistance regarding this message.
9602	PAN_MGMT_EV_SHELF_BATTERY_FAN_MOD3_FAILED	Warning	warn	hardware	no	Pease contact VDURA Technical Support for further assistance regarding this message.

Code	Alert name	Severity	Level	Category	Clr	Recommended action
9603	PAN_MGMT_EV_SHELF_BATTERY_FAN_MOD1_NOT_FOUND	Warning	warn	hardware	no	Pease contact VDURA Technical Support for further assistance regarding this message.
9604	PAN_MGMT_EV_SHELF_BATTERY_FAN_MOD2_NOT_FOUND	Warning	warn	hardware	no	Pease contact VDURA Technical Support for further assistance regarding this message.
9605	PAN_MGMT_EV_SHELF_BATTERY_FAN_MOD3_NOT_FOUND	Warning	warn	hardware	no	Pease contact VDURA Technical Support for further assistance regarding this message.
9606	PAN_MGMT_EV_SHELF_BATTERY_FAN_MOD1_ONLINE	None	none	hardware	no	
9607	PAN_MGMT_EV_SHELF_BATTERY_FAN_MOD2_ONLINE	None	none	hardware	no	
9608	PAN_MGMT_EV_SHELF_BATTERY_FAN_MOD3_ONLINE	None	none	hardware	no	
9609	PAN_MGMT_EV_NODE_FAN_MOD1_FAILED	Warning	warn	hardware	no	Pease contact VDURA Technical Support for further assistance regarding this message.
9610	PAN_MGMT_EV_NODE_FAN_MOD2_FAILED	Warning	warn	hardware	no	Pease contact VDURA Technical Support for further assistance regarding this message.
9611	PAN_MGMT_EV_NODE_FAN_MOD3_FAILED	Warning	warn	hardware	no	Pease contact VDURA Technical Support for further assistance regarding this message.
9612	PAN_MGMT_EV_NODE_FAN_MOD1_NOT_FOUND	Warning	warn	hardware	no	Pease contact VDURA Technical Support for further assistance regarding this message.
9613	PAN_MGMT_EV_NODE_FAN_MOD2_NOT_FOUND	Warning	warn	hardware	no	Pease contact VDURA Technical Support for further assistance regarding this message.
9614	PAN_MGMT_EV_NODE_FAN_MOD3_NOT_FOUND	Warning	warn	hardware	no	Pease contact VDURA Technical Support for further assistance regarding this message.
9615	PAN_MGMT_EV_NODE_FAN_MOD1_ONLINE	None	none	hardware	no	
9616	PAN_MGMT_EV_NODE_FAN_MOD2_ONLINE	None	none	hardware	no	
9617	PAN_MGMT_EV_NODE_FAN_MOD3_ONLINE	None	none	hardware	no	
9618	PAN_MGMT_EV_OSDV2_BRICK_SSD_NEAR_FULL	Warning	warn	hardware	no	Please contact VDURA Technical Support to rebalance the OSD.
9619	PAN_MGMT_EV_OSDV2_BRICK_SSD_FULL	Critical	crit	hardware	no	Please contact VDURA Technical Support to rebalance the OSD.
9620	PAN_MGMT_EV_OSDV2_BRICK_SSD_NO_LONGER_FULL	Informational	info	hardware	yes	
9621	PAN_MGMT_EV_OSDV2_BRICKSET_SSD_FULL	Critical	crit	bladeset	no	Please contact VDURA Technical Support to rebalance the BRICKSET.

Code	Alert name	Severity	Level	Category	Clr	Recommended action
9622	PAN_MGMT_EV_OSDV2_ BRICKSET_SSD_NEAR_FULL	Warning	warn	bladeset	no	Please contact VDURA Technical Support to rebalance the BRICKSET.
9623	PAN_MGMT_EV_OSDV2_ BRICKSET_SSD_NO_LONGER_ FULL	None	none	hardware	no	
9624	PAN_MGMT_EV_BRICK_ METADATA_FILESYSTEM_NEAR_ FULL	Warning	warn	hardware	yes	Delete data or add additional storage.
9625	PAN_MGMT_EV_BRICK_ METADATA_FILESYSTEM_FULL	Critical	crit	hardware	yes	Delete data or add additional storage.
9626	PAN_MGMT_EV_BRICK_ METADATA_FILESYSTEM_NO_ LONGER_FULL	Informational	info	hardware	yes	
9627	PAN_MGMT_EV_BRICKSET_ METADATA_FILESYSTEM_NEAR_ FULL	Warning	warn	bladeset	yes	Please contact VDURA Technical Support.
9628	PAN_MGMT_EV_BRICKSET_ METADATA_FILESYSTEM_FULL	Critical	crit	bladeset	yes	Please contact VDURA Technical Support.
9629	PAN_MGMT_EV_BRICKSET_ METADATA_FILESYSTEM_NO_ LONGER_FULL	Informational	info	bladeset	yes	
9630	PAN_MGMT_EV_SEDAGENT_ KMIP1_FAILED	Warning	warn	hardware	no	Please contact VDURA Technical Support.
9631	PAN_MGMT_EV_SEDAGENT_ KMIP2_FAILED	Warning	warn	hardware	no	Please contact VDURA Technical Support.
9632	PAN_MGMT_EV_SEDAGENT_ KMIP1_OK	None	none	hardware	no	
9633	PAN_MGMT_EV_SEDAGENT_ KMIP2_OK	None	none	hardware	no	
9640	PAN_MGMT_EV_SEDAGENT_ HD0_UNLOCK_FAILED	Critical	crit	hardware	no	Please contact VDURA Technical Support.
9641	PAN_MGMT_EV_SEDAGENT_ HD1_UNLOCK_FAILED	Critical	crit	hardware	no	Please contact VDURA Technical Support.
9642	PAN_MGMT_EV_SEDAGENT_ HD2_UNLOCK_FAILED	Critical	crit	hardware	no	Please contact VDURA Technical Support.
9643	PAN_MGMT_EV_SEDAGENT_ HD3_UNLOCK_FAILED	Critical	crit	hardware	no	Please contact VDURA Technical Support.
9644	PAN_MGMT_EV_SEDAGENT_ HD4_UNLOCK_FAILED	Critical	crit	hardware	no	Please contact VDURA Technical Support.
9645	PAN_MGMT_EV_SEDAGENT_ HD5_UNLOCK_FAILED	Critical	crit	hardware	no	Please contact VDURA Technical Support.
9646	PAN_MGMT_EV_SEDAGENT_ HD6_UNLOCK_FAILED	Critical	crit	hardware	no	Please contact VDURA Technical Support.
9647	PAN_MGMT_EV_SEDAGENT_ HD7_UNLOCK_FAILED	Critical	crit	hardware	no	Please contact VDURA Technical Support.
9648	PAN_MGMT_EV_SEDAGENT_ HD8_UNLOCK_FAILED	Critical	crit	hardware	no	Please contact VDURA Technical Support.

Code	Alert name	Severity	Level	Category	Clr	Recommended action
9649	PAN_MGMT_EV_SEDAGENT_HD9_UNLOCK_FAILED	Critical	crit	hardware	no	Please contact VDURA Technical Support.
9650	PAN_MGMT_EV_SEDAGENT_HD10_UNLOCK_FAILED	Critical	crit	hardware	no	Please contact VDURA Technical Support.
9651	PAN_MGMT_EV_SEDAGENT_HD11_UNLOCK_FAILED	Critical	crit	hardware	no	Please contact VDURA Technical Support.
9652	PAN_MGMT_EV_SEDAGENT_HD12_UNLOCK_FAILED	Critical	crit	hardware	no	Please contact VDURA Technical Support.
9653	PAN_MGMT_EV_SEDAGENT_HD13_UNLOCK_FAILED	Critical	crit	hardware	no	Please contact VDURA Technical Support.
9654	PAN_MGMT_EV_SEDAGENT_HD14_UNLOCK_FAILED	Critical	crit	hardware	no	Please contact VDURA Technical Support.
9655	PAN_MGMT_EV_SEDAGENT_HD0_CONFIG_FAILED	Warning	warn	hardware	no	Please contact VDURA Technical Support.
9656	PAN_MGMT_EV_SEDAGENT_HD1_CONFIG_FAILED	Warning	warn	hardware	no	Please contact VDURA Technical Support.
9657	PAN_MGMT_EV_SEDAGENT_HD2_CONFIG_FAILED	Warning	warn	hardware	no	Please contact VDURA Technical Support.
9658	PAN_MGMT_EV_SEDAGENT_HD3_CONFIG_FAILED	Warning	warn	hardware	no	Please contact VDURA Technical Support.
9659	PAN_MGMT_EV_SEDAGENT_HD4_CONFIG_FAILED	Warning	warn	hardware	no	Please contact VDURA Technical Support.
9660	PAN_MGMT_EV_SEDAGENT_HD5_CONFIG_FAILED	Warning	warn	hardware	no	Please contact VDURA Technical Support.
9661	PAN_MGMT_EV_SEDAGENT_HD6_CONFIG_FAILED	Warning	warn	hardware	no	Please contact VDURA Technical Support.
9662	PAN_MGMT_EV_SEDAGENT_HD7_CONFIG_FAILED	Warning	warn	hardware	no	Please contact VDURA Technical Support.
9663	PAN_MGMT_EV_SEDAGENT_HD8_CONFIG_FAILED	Warning	warn	hardware	no	Please contact VDURA Technical Support.
9664	PAN_MGMT_EV_SEDAGENT_HD9_CONFIG_FAILED	Warning	warn	hardware	no	Please contact VDURA Technical Support.
9665	PAN_MGMT_EV_SEDAGENT_HD10_CONFIG_FAILED	Warning	warn	hardware	no	Please contact VDURA Technical Support.
9666	PAN_MGMT_EV_SEDAGENT_HD11_CONFIG_FAILED	Warning	warn	hardware	no	Please contact VDURA Technical Support.
9667	PAN_MGMT_EV_SEDAGENT_HD12_CONFIG_FAILED	Warning	warn	hardware	no	Please contact VDURA Technical Support.
9668	PAN_MGMT_EV_SEDAGENT_HD13_CONFIG_FAILED	Warning	warn	hardware	no	Please contact VDURA Technical Support.
9669	PAN_MGMT_EV_SEDAGENT_HD14_CONFIG_FAILED	Warning	warn	hardware	no	Please contact VDURA Technical Support.
9870	PAN_MGMT_EV_KMIP1_CC_CERTIFICATE_EXPIRATION	Warning	warn	hardware	no	Please update the client certificate for KMIP 1 until the expiration date.
9871	PAN_MGMT_EV_KMIP1_CA_CERTIFICATE_EXPIRATION	Warning	warn	hardware	no	Please update the root certificate for KMIP 1 until the expiration date.

Code	Alert name	Severity	Level	Category	Clr	Recommended action
9872	PAN_MGMT_EV_KMIP2_CC_ CERTIFICATE_EXPIRATION	Warning	warn	hardware	no	Please update the client certificate for KMIP 2 until the expiration date.
9873	PAN_MGMT_EV_KMIP2_CA_ CERTIFICATE_EXPIRATION	Warning	warn	hardware	no	Please update the root certificate for KMIP 2 until the expiration date.
9874	PAN_MGMT_EV_KMIP1_CC_ CERTIFICATE_EXPIRED	Critical	crit	hardware	no	Please update the client certificate.
9875	PAN_MGMT_EV_KMIP1_CA_ CERTIFICATE_EXPIRED	Critical	crit	hardware	no	Please update the root certificate.
9876	PAN_MGMT_EV_KMIP2_CC_ CERTIFICATE_EXPIRED	Critical	crit	hardware	no	Please update the client certificate.
9877	PAN_MGMT_EV_KMIP2_CA_ CERTIFICATE_EXPIRED	Critical	crit	hardware	no	Please update the root certificate.
9878	PAN_MGMT_EV_KMIP1_CA_ CERTIFICATE_OK	None	none	hardware	no	
9879	PAN_MGMT_EV_KMIP2_CA_ CERTIFICATE_OK	None	none	hardware	no	
9880	PAN_MGMT_EV_KMIP1_CC_ CERTIFICATE_OK	None	none	hardware	no	
9881	PAN_MGMT_EV_KMIP2_CC_ CERTIFICATE_OK	None	none	hardware	no	
9902	PAN_MGMT_EV_NODE_DRIVES_ MISMATCH	Critical	crit	hardware	yes	Place drives into proper location.
9903	PAN_MGMT_EV_NODE_DRIVES_ UNEXPECTED	Warning	warn	hardware	yes	Place drives into proper location.
9904	PAN_MGMT_EV_NODE_DRIVES_ MATCH	None	none	hardware	no	
10000	PAN_MGMT_EV_SHELF_PS3_ FAILED	Warning	warn	hardware	yes	Please contact VDURA Technical Support for further assistance regarding this message.
10001	PAN_MGMT_EV_SHELF_PS3_ UNSUPPORTED_VERSION	Warning	warn	hardware	yes	Please contact VDURA Technical Support for further assistance regarding this message.
10002	PAN_MGMT_EV_SHELF_PS3_ NOT_FOUND	Warning	warn	hardware	yes	Check if power supply module 3 is inserted properly.
10003	PAN_MGMT_EV_PS3_TRIP_TEMP	Critical	crit	hardware	yes	Ambient temperature is too high. Adjust room temperature.
10004	PAN_MGMT_EV_PS3_HIGH_TEMP	Warning	warn	hardware	yes	Ambient temperature is too high. Adjust room temperature.
10005	PAN_MGMT_EV_PS3_UNDER_ TEMP	Informational	info	hardware	yes	Ambient temperature is too low. Adjust room temperature.
10006	PAN_MGMT_EV_SHELF_PS3_NO_ AC_INPUT	Warning	warn	hardware	yes	Check that power supply module is plugged in.
10007	PAN_MGMT_EV_SHELF_PS3_ BAD_DC_DC_OUTPUT	Warning	warn	hardware	yes	Please contact VDURA Technical Support for further assistance regarding this message.
10008	PAN_MGMT_EV_SHELF_PS3_ BAD_REPLACEMENT	Warning	warn	hardware	yes	Insert a 950W power supply module into this location.

Code	Alert name	Severity	Level	Category	Clr	Recommended action
10009	PAN_MGMT_EV_PS3_FF_TRIP_TEMP			hardware	no	
10010	PAN_MGMT_EV_PS3_NORMAL_TEMP			hardware	no	
10100	PAN_MGMT_EV_SHELF_PS4_FAILED	Warning	warn	hardware	yes	Please contact VDURA Technical Support for further assistance regarding this message.
10101	PAN_MGMT_EV_SHELF_PS4_UNSUPPORTED_VERSION	Warning	warn	hardware	yes	Please contact VDURA Technical Support for further assistance regarding this message.
10102	PAN_MGMT_EV_SHELF_PS4_NOT_FOUND	Warning	warn	hardware	yes	Check if power supply module 4 is inserted properly.
10103	PAN_MGMT_EV_PS4_TRIP_TEMP	Critical	crit	hardware	yes	Ambient temperature is too high. Adjust room temperature.
10104	PAN_MGMT_EV_PS4_HIGH_TEMP	Warning	warn	hardware	yes	Ambient temperature is too high. Adjust room temperature.
10105	PAN_MGMT_EV_PS4_UNDER_TEMP	Informational	info	hardware	yes	Ambient temperature is too low. Adjust room temperature.
10106	PAN_MGMT_EV_SHELF_PS4_NO_AC_INPUT	Warning	warn	hardware	yes	Check that power supply module is plugged in.
10107	PAN_MGMT_EV_SHELF_PS4_BAD_DC_DC_OUTPUT	Warning	warn	hardware	yes	Please contact VDURA Technical Support for further assistance regarding this message.
10108	PAN_MGMT_EV_SHELF_PS4_BAD_REPLACEMENT	Warning	warn	hardware	yes	Insert a 950W power supply module into this location.
10109	PAN_MGMT_EV_PS4_FF_TRIP_TEMP			hardware	no	
10110	PAN_MGMT_EV_PS4_NORMAL_TEMP			hardware	no	
10902	PAN_MGMT_EV_SHELF_FAN4_FAILED	Warning	warn	hardware	yes	Please contact VDURA Technical Support for further assistance regarding this message.
10903	PAN_MGMT_EV_SHELF_FAN5_FAILED	Warning	warn	hardware	yes	Please contact VDURA Technical Support for further assistance regarding this message.
10904	PAN_MGMT_EV_SHELF_FAN4_ONLINE			hardware	no	
10905	PAN_MGMT_EV_SHELF_FAN5_ONLINE			hardware	no	
12000	PAN_MGMT_EV_BRICK_HD3_FAILED	Warning	warn	hardware	yes	Please contact VDURA Technical Support.
12001	PAN_MGMT_EV_BRICK_HD3_WILL_FAIL	Warning	warn	hardware	yes	Please contact VDURA Technical Support.
12002	PAN_MGMT_EV_BRICK_HD3_UNSUPPORTED_VERSION	Warning	warn	hardware	yes	Please contact VDURA Technical Support for further assistance regarding this message.

Code	Alert name	Severity	Level	Category	Clr	Recommended action
12003	PAN_MGMT_EV_BRICK_HD3_NOT_FOUND	Warning	warn	hardware	yes	Please contact VDURA Technical Support for further assistance regarding this message.
12004	PAN_MGMT_EV_BRICK_HD3_SSD_LIFETIME	Warning	warn	hardware	yes	Please contact VDURA Technical Support.
12005	PAN_MGMT_EV_BRICK_HD3_SSD_RESERVE_SPACE	Warning	warn	hardware	yes	Please contact VDURA Technical Support.
12006	PAN_MGMT_EV_BRICK_HD3_REBUILDING	Informational	info	hardware	yes	This is just an informational message. No action is needed.
12020	PAN_MGMT_EV_BRICK_HD4_FAILED	Warning	warn	hardware	yes	Please contact VDURA Technical Support.
12021	PAN_MGMT_EV_BRICK_HD4_WILL_FAIL	Warning	warn	hardware	yes	Please contact VDURA Technical Support.
12022	PAN_MGMT_EV_BRICK_HD4_UNSUPPORTED_VERSION	Warning	warn	hardware	yes	Please contact VDURA Technical Support for further assistance regarding this message.
12023	PAN_MGMT_EV_BRICK_HD4_NOT_FOUND	Warning	warn	hardware	yes	Please contact VDURA Technical Support for further assistance regarding this message.
12024	PAN_MGMT_EV_BRICK_HD4_SSD_LIFETIME	Warning	warn	hardware	yes	Please contact VDURA Technical Support.
12025	PAN_MGMT_EV_BRICK_HD4_SSD_RESERVE_SPACE	Warning	warn	hardware	yes	Please contact VDURA Technical Support.
12026	PAN_MGMT_EV_BRICK_HD4_REBUILDING	Informational	info	hardware	yes	This is just an informational message. No action is needed.
12040	PAN_MGMT_EV_BRICK_HD5_FAILED	Warning	warn	hardware	yes	Please contact VDURA Technical Support.
12041	PAN_MGMT_EV_BRICK_HD5_WILL_FAIL	Warning	warn	hardware	yes	Please contact VDURA Technical Support.
12042	PAN_MGMT_EV_BRICK_HD5_UNSUPPORTED_VERSION	Warning	warn	hardware	yes	Please contact VDURA Technical Support for further assistance regarding this message.
12043	PAN_MGMT_EV_BRICK_HD5_NOT_FOUND	Warning	warn	hardware	yes	Please contact VDURA Technical Support for further assistance regarding this message.
12044	PAN_MGMT_EV_BRICK_HD5_SSD_LIFETIME	Warning	warn	hardware	yes	Please contact VDURA Technical Support.
12045	PAN_MGMT_EV_BRICK_HD5_SSD_RESERVE_SPACE	Warning	warn	hardware	yes	Please contact VDURA Technical Support.
12046	PAN_MGMT_EV_BRICK_HD5_REBUILDING	Informational	info	hardware	yes	This is just an informational message. No action is needed.
12060	PAN_MGMT_EV_BRICK_HD6_FAILED	Warning	warn	hardware	yes	Please contact VDURA Technical Support.
12061	PAN_MGMT_EV_BRICK_HD6_WILL_FAIL	Warning	warn	hardware	yes	Please contact VDURA Technical Support.
12062	PAN_MGMT_EV_BRICK_HD6_UNSUPPORTED_VERSION	Warning	warn	hardware	yes	Please contact VDURA Technical Support for further assistance regarding this message.

Code	Alert name	Severity	Level	Category	Clr	Recommended action
12063	PAN_MGMT_EV_BRICK_HD6_NOT_FOUND	Warning	warn	hardware	yes	Please contact VDURA Technical Support for further assistance regarding this message.
12064	PAN_MGMT_EV_BRICK_HD6_SSD_LIFETIME	Warning	warn	hardware	yes	Please contact VDURA Technical Support.
12065	PAN_MGMT_EV_BRICK_HD6_SSD_RESERVE_SPACE	Warning	warn	hardware	yes	Please contact VDURA Technical Support.
12066	PAN_MGMT_EV_BRICK_HD6_REBUILDING	Informational	info	hardware	yes	This is just an informational message. No action is needed.
12080	PAN_MGMT_EV_BRICK_HD7_FAILED	Warning	warn	hardware	yes	Please contact VDURA Technical Support.
12081	PAN_MGMT_EV_BRICK_HD7_WILL_FAIL	Warning	warn	hardware	yes	Please contact VDURA Technical Support.
12082	PAN_MGMT_EV_BRICK_HD7_UNSUPPORTED_VERSION	Warning	warn	hardware	yes	Please contact VDURA Technical Support for further assistance regarding this message.
12083	PAN_MGMT_EV_BRICK_HD7_NOT_FOUND	Warning	warn	hardware	yes	Please contact VDURA Technical Support for further assistance regarding this message.
12084	PAN_MGMT_EV_BRICK_HD7_SSD_LIFETIME	Warning	warn	hardware	yes	Please contact VDURA Technical Support.
12085	PAN_MGMT_EV_BRICK_HD7_SSD_RESERVE_SPACE	Warning	warn	hardware	yes	Please contact VDURA Technical Support.
12086	PAN_MGMT_EV_BRICK_HD7_REBUILDING	Informational	info	hardware	yes	This is just an informational message. No action is needed.
12100	PAN_MGMT_EV_BRICK_HD8_FAILED	Warning	warn	hardware	yes	Please contact VDURA Technical Support.
12101	PAN_MGMT_EV_BRICK_HD8_WILL_FAIL	Warning	warn	hardware	yes	Please contact VDURA Technical Support.
12102	PAN_MGMT_EV_BRICK_HD8_UNSUPPORTED_VERSION	Warning	warn	hardware	yes	Please contact VDURA Technical Support for further assistance regarding this message.
12103	PAN_MGMT_EV_BRICK_HD8_NOT_FOUND	Warning	warn	hardware	yes	Please contact VDURA Technical Support for further assistance regarding this message.
12104	PAN_MGMT_EV_BRICK_HD8_SSD_LIFETIME	Warning	warn	hardware	yes	Please contact VDURA Technical Support.
12105	PAN_MGMT_EV_BRICK_HD8_SSD_RESERVE_SPACE	Warning	warn	hardware	yes	Please contact VDURA Technical Support.
12106	PAN_MGMT_EV_BRICK_HD8_REBUILDING	Informational	info	hardware	yes	This is just an informational message. No action is needed.
12200	PAN_MGMT_EV_BRICK_HD2_REBUILDING	Informational	info	hardware	yes	This is just an informational message. No action is needed.

Appendix B. Complete Metric Index

Every metric name in the database (1436 names collapsed to 744 families; _N stands for a numeric suffix and nicN_/fsN_/hdN_ for an embedded slot index). Names = number of flattened names in the family, Series = active series, Scope = which nodes emit it (Directors = 3 series per name, Storage = 12, All nodes = 15, Realm = one series from the realm collector). A blank Extra labels cell means the family carries no labels beyond the common node labels.

Family	Names	Series	Scope	Extra labels
ALERTS	1	12	Storage	activated, alertgroup, alertname, alertstate, category, message, model_number, n
ALERTS_FOR_STATE	1	12	Storage	activated, alertgroup, alertname, category, message, model_number, node_data_ser
cpu_usage_guest	1	51	51 series	cpu
cpu_usage_guest_nice	1	51	51 series	cpu
cpu_usage_idle	1	51	51 series	cpu
cpu_usage_iowait	1	51	51 series	cpu
cpu_usage_irq	1	51	51 series	cpu
cpu_usage_nice	1	51	51 series	cpu
cpu_usage_softirq	1	51	51 series	cpu
cpu_usage_steal	1	51	51 series	cpu
cpu_usage_system	1	51	51 series	cpu
cpu_usage_user	1	51	51 series	cpu
disk_free	1	228	228 series	device, fstype, label, mode, path
disk_inodes_free	1	228	228 series	device, fstype, label, mode, path
disk_inodes_total	1	228	228 series	device, fstype, label, mode, path
disk_inodes_used	1	228	228 series	device, fstype, label, mode, path
disk_inodes_used_percent	1	228	228 series	device, fstype, label, mode, path
disk_total	1	228	228 series	device, fstype, label, mode, path
disk_used	1	228	228 series	device, fstype, label, mode, path
disk_used_percent	1	228	228 series	device, fstype, label, mode, path
diskio_io_await	1	84	84 series	name
diskio_io_svctm	1	84	84 series	name
diskio_io_time	1	213	213 series	name
diskio_io_util	1	213	213 series	name
diskio_iops_in_progress	1	213	213 series	name
diskio_merged_reads	1	213	213 series	name
diskio_merged_writes	1	213	213 series	name
diskio_read_bytes	1	213	213 series	name

Family	Names	Series	Scope	Extra labels
diskio_read_time	1	213	213 series	name
diskio_reads	1	213	213 series	name
diskio_weighted_io_time	1	213	213 series	name
diskio_write_bytes	1	213	213 series	name
diskio_write_time	1	213	213 series	name
diskio_writes	1	213	213 series	name
ethtool_adminq_cfg_device_resources_cnt	1	15	All nodes	driver, interface
ethtool_adminq_cmd_fail	1	15	All nodes	driver, interface
ethtool_adminq_create_rx_queue_cnt	1	15	All nodes	driver, interface
ethtool_adminq_create_tx_queue_cnt	1	15	All nodes	driver, interface
ethtool_adminq_dcfg_device_resources_cnt	1	15	All nodes	driver, interface
ethtool_adminq_describe_device_cnt	1	15	All nodes	driver, interface
ethtool_adminq_destroy_rx_queue_cnt	1	15	All nodes	driver, interface
ethtool_adminq_destroy_tx_queue_cnt	1	15	All nodes	driver, interface
ethtool_adminq_prod_cnt	1	15	All nodes	driver, interface
ethtool_adminq_register_page_list_cnt	1	15	All nodes	driver, interface
ethtool_adminq_report_link_speed_cnt	1	15	All nodes	driver, interface
ethtool_adminq_report_stats_cnt	1	15	All nodes	driver, interface
ethtool_adminq_set_driver_parameter_cnt	1	15	All nodes	driver, interface
ethtool_adminq_timeouts	1	15	All nodes	driver, interface
ethtool_adminq_unregister_page_list_cnt	1	15	All nodes	driver, interface
ethtool_autoneg	1	15	All nodes	driver, interface
ethtool_dma_mapping_error	1	15	All nodes	driver, interface
ethtool_duplex	1	15	All nodes	driver, interface
ethtool_interface_down_cnt	1	15	All nodes	driver, interface
ethtool_interface_up	1	15	All nodes	driver, interface
ethtool_interface_up_cnt	1	15	All nodes	driver, interface
ethtool_link	1	15	All nodes	driver, interface
ethtool_page_alloc_fail	1	15	All nodes	driver, interface
ethtool_reset_cnt	1	15	All nodes	driver, interface
ethtool_rx_buf_alloc_fail	1	15	All nodes	driver, interface
ethtool_rx_bytes	1	15	All nodes	driver, interface

Family	Names	Series	Scope	Extra labels
ethtool_rx_bytes_N	2	18	All nodes/Directors	driver, interface
ethtool_rx_completed_desc_N	2	18	All nodes/Directors	driver, interface
ethtool_rx_consumed_desc_N	2	18	All nodes/Directors	driver, interface
ethtool_rx_cont_packet_cnt_N	2	18	All nodes/Directors	driver, interface
ethtool_rx_copied_pkt_N	2	18	All nodes/Directors	driver, interface
ethtool_rx_copybreak_pkt_N	2	18	All nodes/Directors	driver, interface
ethtool_rx_desc_err_dropped_pkt	1	15	All nodes	driver, interface
ethtool_rx_dropped	1	15	All nodes	driver, interface
ethtool_rx_dropped_pkt_N	2	18	All nodes/Directors	driver, interface
ethtool_rx_drops_invalid_checksum_N	2	18	All nodes/Directors	driver, interface
ethtool_rx_drops_packet_over_mru_N	2	18	All nodes/Directors	driver, interface
ethtool_rx_frag_alloc_cnt_N	2	18	All nodes/Directors	driver, interface
ethtool_rx_frag_copy_cnt_N	2	18	All nodes/Directors	driver, interface
ethtool_rx_frag_flip_cnt_N	2	18	All nodes/Directors	driver, interface
ethtool_rx_no_buffers_posted_N	2	18	All nodes/Directors	driver, interface
ethtool_rx_packets	1	15	All nodes	driver, interface
ethtool_rx_posted_desc_N	2	18	All nodes/Directors	driver, interface
ethtool_rx_queue_drop_cnt_N	2	18	All nodes/Directors	driver, interface
ethtool_rx_skb_alloc_fail	1	15	All nodes	driver, interface

Family	Names	Series	Scope	Extra labels
ethtool_rx_xdp_aborted_N	2	18	All nodes/Directors	driver, interface
ethtool_rx_xdp_alloc_fails_N	2	18	All nodes/Directors	driver, interface
ethtool_rx_xdp_drop_N	2	18	All nodes/Directors	driver, interface
ethtool_rx_xdp_pass_N	2	18	All nodes/Directors	driver, interface
ethtool_rx_xdp_redirect_N	2	18	All nodes/Directors	driver, interface
ethtool_rx_xdp_redirect_errors_N	2	18	All nodes/Directors	driver, interface
ethtool_rx_xdp_tx_N	2	18	All nodes/Directors	driver, interface
ethtool_rx_xdp_tx_errors_N	2	18	All nodes/Directors	driver, interface
ethtool_speed	1	15	All nodes	driver, interface
ethtool_stats_report_trigger_cnt	1	15	All nodes	driver, interface
ethtool_tx_bytes	1	15	All nodes	driver, interface
ethtool_tx_bytes_N	2	18	All nodes/Directors	driver, interface
ethtool_tx_completed_desc_N	2	18	All nodes/Directors	driver, interface
ethtool_tx_consumed_desc_N	2	18	All nodes/Directors	driver, interface
ethtool_tx_dma_mapping_error_N	2	18	All nodes/Directors	driver, interface
ethtool_tx_dropped	1	15	All nodes	driver, interface
ethtool_tx_event_counter_N	2	18	All nodes/Directors	driver, interface
ethtool_tx_packets	1	15	All nodes	driver, interface
ethtool_tx_posted_desc_N	2	18	All nodes/Directors	driver, interface

Family	Names	Series	Scope	Extra labels
ethtool_tx_stop_N	2	18	All nodes/Directors	driver, interface
ethtool_tx_timeouts	1	15	All nodes	driver, interface
ethtool_tx_wake_N	2	18	All nodes/Directors	driver, interface
ethtool_tx_xdp_xmit_N	2	18	All nodes/Directors	driver, interface
ethtool_tx_xdp_xmit_errors_N	2	18	All nodes/Directors	driver, interface
ethtool_tx_xsk_done_N	2	18	All nodes/Directors	driver, interface
ethtool_tx_xsk_sent_N	2	18	All nodes/Directors	driver, interface
ethtool_tx_xsk_wakeup_N	2	18	All nodes/Directors	driver, interface
magent_local_hw_bios_date	1	15	All nodes	value
magent_local_hw_bios_version	1	15	All nodes	value
magent_local_hw_cpu_active_cores	1	15	All nodes	
magent_local_hw_cpu_hw_cores	1	15	All nodes	
magent_local_hw_cpu_hw_threads	1	15	All nodes	
magent_local_hw_cpu_model	1	15	All nodes	value
magent_local_hw_external_temp	1	15	All nodes	
magent_local_hw_high_temp_alert	1	15	All nodes	
magent_local_hw_incoming_air_temp	1	15	All nodes	
magent_local_hw_internal_temp	1	15	All nodes	
magent_local_hw_mem	1	15	All nodes	
magent_local_hw_nicN_desc	4	60	All nodes	value
magent_local_hw_nicN_firmware	4	60	All nodes	value
magent_local_hw_nicN_name	4	60	All nodes	value
magent_local_hw_nicN_nic_warnings	4	60	All nodes	
magent_local_hw_nicN_status	4	60	All nodes	
magent_local_hw_nicN_type	4	60	All nodes	
magent_local_hw_nic_phys_ports	1	15	All nodes	value
magent_local_hw_platform_id	1	15	All nodes	value
magent_local_hw_sn	1	15	All nodes	value
magent_local_hw_status	1	15	All nodes	

Family	Names	Series	Scope	Extra labels
magent_local_hw_sysname_str	1	15	All nodes	value
magent_local_hw_system_model	1	15	All nodes	value
magent_local_hw_system_vendor	1	15	All nodes	value
magent_local_hw_temperature_shutdown	1	15	All nodes	
magent_local_hw_trip_temp_alert	1	15	All nodes	
magent_local_hw_variant_id	1	15	All nodes	value
magent_local_hw_version	1	15	All nodes	value
magent_local_sw_fm_global_op_count	1	3	Directors	
magent_local_sw_fm_global_op_lifetime	1	3	Directors	
magent_local_sw_fm_global_op_occurred	1	3	Directors	
magent_local_sw_fm_mgr_op_count_config_get	1	3	Directors	
magent_local_sw_fm_mgr_op_count_debug	1	3	Directors	
magent_local_sw_fm_mgr_op_count_dir_batch_sync_all	1	3	Directors	
magent_local_sw_fm_mgr_op_count_dir_create_realm_root	1	3	Directors	
magent_local_sw_fm_mgr_op_count_dir_create_volume_root	1	3	Directors	
magent_local_sw_fm_mgr_op_count_dir_delete_volume_root	1	3	Directors	
magent_local_sw_fm_mgr_op_count_dir_flush_for_fsrc	1	3	Directors	
magent_local_sw_fm_mgr_op_count_dir_update_ent_map_hint	1	3	Directors	
magent_local_sw_fm_mgr_op_count_notify_new_volume_info	1	3	Directors	
magent_local_sw_fm_mgr_op_count_notify_ogroup_deleted	1	3	Directors	
magent_local_sw_fm_mgr_op_count_obj_attrs_updated	1	3	Directors	
magent_local_sw_fm_mgr_op_count_obj_recall_caps	1	3	Directors	
magent_local_sw_fm_mgr_op_count_obj_update_map_hint	1	3	Directors	
magent_local_sw_fm_mgr_op_count_obj_update_parent_info	1	3	Directors	
magent_local_sw_fm_mgr_op_count_set_defer_delete_enable	1	3	Directors	

Family	Names	Series	Scope	Extra labels
magent_local_sw_fm_mgr_op_count_set_defer_dir_write_enable	1	3	Directors	
magent_local_sw_fm_mgr_op_count_volume_flush_dirs	1	3	Directors	
magent_local_sw_fm_mgr_op_lifetime_config_get	1	3	Directors	
magent_local_sw_fm_mgr_op_lifetime_debug	1	3	Directors	
magent_local_sw_fm_mgr_op_lifetime_dir_batch_sync_all	1	3	Directors	
magent_local_sw_fm_mgr_op_lifetime_dir_create_realm_root	1	3	Directors	
magent_local_sw_fm_mgr_op_lifetime_dir_create_volume_root	1	3	Directors	
magent_local_sw_fm_mgr_op_lifetime_dir_delete_volume_root	1	3	Directors	
magent_local_sw_fm_mgr_op_lifetime_dir_flush_for_fsrc	1	3	Directors	
magent_local_sw_fm_mgr_op_lifetime_dir_update_ent_map_hint	1	3	Directors	
magent_local_sw_fm_mgr_op_lifetime_notify_new_volume_info	1	3	Directors	
magent_local_sw_fm_mgr_op_lifetime_notify_ogroup_deleted	1	3	Directors	
magent_local_sw_fm_mgr_op_lifetime_obj_attrs_updated	1	3	Directors	
magent_local_sw_fm_mgr_op_lifetime_obj_recall_caps	1	3	Directors	
magent_local_sw_fm_mgr_op_lifetime_obj_update_map_hint	1	3	Directors	
magent_local_sw_fm_mgr_op_lifetime_obj_update_parent_info	1	3	Directors	
magent_local_sw_fm_mgr_op_lifetime_set_defer_delete_enable	1	3	Directors	
magent_local_sw_fm_mgr_op_lifetime_set_defer_dir_write_enable	1	3	Directors	
magent_local_sw_fm_mgr_op_lifetime_volume_flush_dirs	1	3	Directors	
magent_local_sw_fm_mgr_op_occurred_config_get	1	3	Directors	
magent_local_sw_fm_mgr_op_occurred_debug	1	3	Directors	
magent_local_sw_fm_mgr_op_occurred_dir_batch_sync_all	1	3	Directors	
magent_local_sw_fm_mgr_op_occurred_dir_create_realm_root	1	3	Directors	

Family	Names	Series	Scope	Extra labels
magent_local_sw_fm_mgr_op_occurred_dir_create_volume_root	1	3	Directors	
magent_local_sw_fm_mgr_op_occurred_dir_delete_volume_root	1	3	Directors	
magent_local_sw_fm_mgr_op_occurred_dir_flush_for_fsrc	1	3	Directors	
magent_local_sw_fm_mgr_op_occurred_dir_update_ent_map_hint	1	3	Directors	
magent_local_sw_fm_mgr_op_occurred_notify_new_volume_info	1	3	Directors	
magent_local_sw_fm_mgr_op_occurred_notify_ogroup_deleted	1	3	Directors	
magent_local_sw_fm_mgr_op_occurred_obj_attrs_updated	1	3	Directors	
magent_local_sw_fm_mgr_op_occurred_obj_recall_caps	1	3	Directors	
magent_local_sw_fm_mgr_op_occurred_obj_update_map_hint	1	3	Directors	
magent_local_sw_fm_mgr_op_occurred_obj_update_parent_info	1	3	Directors	
magent_local_sw_fm_mgr_op_occurred_set_defer_delete_enable	1	3	Directors	
magent_local_sw_fm_mgr_op_occurred_set_defer_dir_write_enable	1	3	Directors	
magent_local_sw_fm_mgr_op_occurred_volume_flush_dirs	1	3	Directors	
magent_local_sw_fm_op_count_cancel_all_callbacks	1	3	Directors	
magent_local_sw_fm_op_count_cancel_callback	1	3	Directors	
magent_local_sw_fm_op_count_cancel_callback_multi	1	3	Directors	
magent_local_sw_fm_op_count_dir_check	1	3	Directors	
magent_local_sw_fm_op_count_dir_compact	1	3	Directors	
magent_local_sw_fm_op_count_dir_create	1	3	Directors	
magent_local_sw_fm_op_count_dir_delete	1	3	Directors	
magent_local_sw_fm_op_count_file_create	1	3	Directors	
magent_local_sw_fm_op_count_file_create_special	1	3	Directors	
magent_local_sw_fm_op_count_file_delete	1	3	Directors	

Family	Names	Series	Scope	Extra labels
magent_local_sw_fm_op_count_id_identity_get_name	1	3	Directors	
magent_local_sw_fm_op_count_id_identity_translate	1	3	Directors	
magent_local_sw_fm_op_count_lookup	1	3	Directors	
magent_local_sw_fm_op_count_obj_end_write	1	3	Directors	
magent_local_sw_fm_op_count_obj_get_r_capability	1	3	Directors	
magent_local_sw_fm_op_count_obj_link	1	3	Directors	
magent_local_sw_fm_op_count_obj_report_io_error	1	3	Directors	
magent_local_sw_fm_op_count_obj_report_parity	1	3	Directors	
magent_local_sw_fm_op_count_obj_setattr	1	3	Directors	
magent_local_sw_fm_op_count_obj_start_write	1	3	Directors	
magent_local_sw_fm_op_count_ogroup_info_get	1	3	Directors	
magent_local_sw_fm_op_count_readdir	1	3	Directors	
magent_local_sw_fm_op_count_rename	1	3	Directors	
magent_local_sw_fm_op_count_renew_callback	1	3	Directors	
magent_local_sw_fm_op_count_userquota_get	1	3	Directors	
magent_local_sw_fm_op_lifetime_cancel_all_callbacks	1	3	Directors	
magent_local_sw_fm_op_lifetime_cancel_callback	1	3	Directors	
magent_local_sw_fm_op_lifetime_cancel_callback_multi	1	3	Directors	
magent_local_sw_fm_op_lifetime_dir_check	1	3	Directors	
magent_local_sw_fm_op_lifetime_dir_compact	1	3	Directors	
magent_local_sw_fm_op_lifetime_dir_create	1	3	Directors	
magent_local_sw_fm_op_lifetime_dir_delete	1	3	Directors	
magent_local_sw_fm_op_lifetime_file_create	1	3	Directors	

Family	Names	Series	Scope	Extra labels
magent_local_sw_fm_op_lifetime_file_create_special	1	3	Directors	
magent_local_sw_fm_op_lifetime_file_delete	1	3	Directors	
magent_local_sw_fm_op_lifetime_id_identity_get_name	1	3	Directors	
magent_local_sw_fm_op_lifetime_id_identity_translate	1	3	Directors	
magent_local_sw_fm_op_lifetime_lookup	1	3	Directors	
magent_local_sw_fm_op_lifetime_obj_end_write	1	3	Directors	
magent_local_sw_fm_op_lifetime_obj_get_r_capability	1	3	Directors	
magent_local_sw_fm_op_lifetime_obj_link	1	3	Directors	
magent_local_sw_fm_op_lifetime_obj_report_io_error	1	3	Directors	
magent_local_sw_fm_op_lifetime_obj_report_parity	1	3	Directors	
magent_local_sw_fm_op_lifetime_obj_setattr	1	3	Directors	
magent_local_sw_fm_op_lifetime_obj_start_write	1	3	Directors	
magent_local_sw_fm_op_lifetime_ogroup_info_get	1	3	Directors	
magent_local_sw_fm_op_lifetime_readdir	1	3	Directors	
magent_local_sw_fm_op_lifetime_rename	1	3	Directors	
magent_local_sw_fm_op_lifetime_renew_callback	1	3	Directors	
magent_local_sw_fm_op_lifetime_userquota_get	1	3	Directors	
magent_local_sw_fm_op_occurred_cancel_all_callbacks	1	3	Directors	
magent_local_sw_fm_op_occurred_cancel_callback	1	3	Directors	
magent_local_sw_fm_op_occurred_cancel_callback_multi	1	3	Directors	
magent_local_sw_fm_op_occurred_dir_check	1	3	Directors	
magent_local_sw_fm_op_occurred_dir_compact	1	3	Directors	
magent_local_sw_fm_op_occurred_dir_create	1	3	Directors	

Family	Names	Series	Scope	Extra labels
magent_local_sw_fm_op_occurred_dir_delete	1	3	Directors	
magent_local_sw_fm_op_occurred_file_create	1	3	Directors	
magent_local_sw_fm_op_occurred_file_create_special	1	3	Directors	
magent_local_sw_fm_op_occurred_file_delete	1	3	Directors	
magent_local_sw_fm_op_occurred_id_identity_get_name	1	3	Directors	
magent_local_sw_fm_op_occurred_id_identity_translate	1	3	Directors	
magent_local_sw_fm_op_occurred_lookup	1	3	Directors	
magent_local_sw_fm_op_occurred_obj_end_write	1	3	Directors	
magent_local_sw_fm_op_occurred_obj_get_r_capability	1	3	Directors	
magent_local_sw_fm_op_occurred_obj_link	1	3	Directors	
magent_local_sw_fm_op_occurred_obj_report_io_error	1	3	Directors	
magent_local_sw_fm_op_occurred_obj_report_parity	1	3	Directors	
magent_local_sw_fm_op_occurred_obj_setattr	1	3	Directors	
magent_local_sw_fm_op_occurred_obj_start_write	1	3	Directors	
magent_local_sw_fm_op_occurred_ogroup_info_get	1	3	Directors	
magent_local_sw_fm_op_occurred_readdir	1	3	Directors	
magent_local_sw_fm_op_occurred_rename	1	3	Directors	
magent_local_sw_fm_op_occurred_renew_callback	1	3	Directors	
magent_local_sw_fm_op_occurred_userquota_get	1	3	Directors	
magent_local_sw_gen_cache_cache_FM_dir_cache_get_count	1	3	Directors	
magent_local_sw_gen_cache_cache_FM_dir_cache_get_occurred	1	3	Directors	
magent_local_sw_gen_cache_cache_FM_dir_cache_insert_io_count	1	3	Directors	
magent_local_sw_gen_cache_cache_FM_dir_cache_insert_io_lifetime	1	3	Directors	

Family	Names	Series	Scope	Extra labels
magent_local_sw_gen_cache_cache_FM_dir_cache_insert_io_occurred	1	3	Directors	
magent_local_sw_gen_cache_cache_FM_dir_cache_load_io_count	1	3	Directors	
magent_local_sw_gen_cache_cache_FM_dir_cache_load_io_lifetime	1	3	Directors	
magent_local_sw_gen_cache_cache_FM_dir_cache_load_io_occurred	1	3	Directors	
magent_local_sw_gen_cache_cache_FM_dir_cache_lookup_count	1	3	Directors	
magent_local_sw_gen_cache_cache_FM_dir_cache_lookup_occurred	1	3	Directors	
magent_local_sw_gen_cache_cache_FM_dir_cache_miss_count	1	3	Directors	
magent_local_sw_gen_cache_cache_FM_dir_cache_miss_occurred	1	3	Directors	
magent_local_sw_gen_cache_cache_FM_dir_cache_reload_io_count	1	3	Directors	
magent_local_sw_gen_cache_cache_FM_dir_cache_reload_io_lifetime	1	3	Directors	
magent_local_sw_gen_cache_cache_FM_dir_cache_reload_io_occurred	1	3	Directors	
magent_local_sw_gen_cache_cache_FM_dir_cache_store_io_count	1	3	Directors	
magent_local_sw_gen_cache_cache_FM_dir_cache_store_io_lifetime	1	3	Directors	
magent_local_sw_gen_cache_cache_FM_dir_cache_store_io_occurred	1	3	Directors	
magent_local_sw_gen_cache_cache_FM_object_attribute_cache_get_count	1	3	Directors	
magent_local_sw_gen_cache_cache_FM_object_attribute_cache_get_occurred	1	3	Directors	
magent_local_sw_gen_cache_cache_FM_object_attribute_cache_insert_io_count	1	3	Directors	
magent_local_sw_gen_cache_cache_FM_object_attribute_cache_insert_io_lifetime	1	3	Directors	
magent_local_sw_gen_cache_cache_FM_object_attribute_cache_insert_io_occurred	1	3	Directors	
magent_local_sw_gen_cache_cache_FM_object_attribute_cache_load_io_count	1	3	Directors	

Family	Names	Series	Scope	Extra labels
magent_local_sw_gen_cache_cache_FM_object_attribute_cache_load_io_lifetime	1	3	Directors	
magent_local_sw_gen_cache_cache_FM_object_attribute_cache_load_io_occurred	1	3	Directors	
magent_local_sw_gen_cache_cache_FM_object_attribute_cache_lookup_count	1	3	Directors	
magent_local_sw_gen_cache_cache_FM_object_attribute_cache_lookup_occurred	1	3	Directors	
magent_local_sw_gen_cache_cache_FM_object_attribute_cache_miss_count	1	3	Directors	
magent_local_sw_gen_cache_cache_FM_object_attribute_cache_miss_occurred	1	3	Directors	
magent_local_sw_gen_cache_cache_FM_object_attribute_cache_reload_io_count	1	3	Directors	
magent_local_sw_gen_cache_cache_FM_object_attribute_cache_reload_io_lifetime	1	3	Directors	
magent_local_sw_gen_cache_cache_FM_object_attribute_cache_reload_io_occurred	1	3	Directors	
magent_local_sw_gen_cache_cache_FM_object_attribute_cache_store_io_count	1	3	Directors	
magent_local_sw_gen_cache_cache_FM_object_attribute_cache_store_io_lifetime	1	3	Directors	
magent_local_sw_gen_cache_cache_FM_object_attribute_cache_store_io_occurred	1	3	Directors	
magent_local_sw_gen_cache_cache_FM_ogroup_cache_get_count	1	3	Directors	
magent_local_sw_gen_cache_cache_FM_ogroup_cache_get_occurred	1	3	Directors	
magent_local_sw_gen_cache_cache_FM_ogroup_cache_insert_io_count	1	3	Directors	
magent_local_sw_gen_cache_cache_FM_ogroup_cache_insert_io_lifetime	1	3	Directors	
magent_local_sw_gen_cache_cache_FM_ogroup_cache_insert_io_occurred	1	3	Directors	
magent_local_sw_gen_cache_cache_FM_ogroup_cache_load_io_count	1	3	Directors	

Family	Names	Series	Scope	Extra labels
magent_local_sw_gen_cache_cache_FM_ogroup_cache_load_io_lifetime	1	3	Directors	
magent_local_sw_gen_cache_cache_FM_ogroup_cache_load_io_occurred	1	3	Directors	
magent_local_sw_gen_cache_cache_FM_ogroup_cache_lookup_count	1	3	Directors	
magent_local_sw_gen_cache_cache_FM_ogroup_cache_lookup_occurred	1	3	Directors	
magent_local_sw_gen_cache_cache_FM_ogroup_cache_miss_count	1	3	Directors	
magent_local_sw_gen_cache_cache_FM_ogroup_cache_miss_occurred	1	3	Directors	
magent_local_sw_gen_cache_cache_FM_ogroup_cache_reload_io_count	1	3	Directors	
magent_local_sw_gen_cache_cache_FM_ogroup_cache_reload_io_lifetime	1	3	Directors	
magent_local_sw_gen_cache_cache_FM_ogroup_cache_reload_io_occurred	1	3	Directors	
magent_local_sw_gen_cache_cache_FM_ogroup_cache_store_io_count	1	3	Directors	
magent_local_sw_gen_cache_cache_FM_ogroup_cache_store_io_lifetime	1	3	Directors	
magent_local_sw_gen_cache_cache_FM_ogroup_cache_store_io_occurred	1	3	Directors	
magent_local_sw_gen_cache_cache_SM_object_cache_get_count	1	3	Directors	
magent_local_sw_gen_cache_cache_SM_object_cache_get_occurred	1	3	Directors	
magent_local_sw_gen_cache_cache_SM_object_cache_insert_io_count	1	3	Directors	
magent_local_sw_gen_cache_cache_SM_object_cache_insert_io_lifetime	1	3	Directors	
magent_local_sw_gen_cache_cache_SM_object_cache_insert_io_occurred	1	3	Directors	
magent_local_sw_gen_cache_cache_SM_object_cache_load_io_count	1	3	Directors	
magent_local_sw_gen_cache_cache_SM_object_cache_load_io_lifetime	1	3	Directors	
magent_local_sw_gen_cache_cache_SM_object_cache_load_io_occurred	1	3	Directors	
magent_local_sw_gen_cache_cache_SM_object_cache_lookup_count	1	3	Directors	
magent_local_sw_gen_cache_cache_SM_object_cache_lookup_occurred	1	3	Directors	
magent_local_sw_gen_cache_cache_SM_object_cache_miss_count	1	3	Directors	

Family	Names	Series	Scope	Extra labels
magent_local_sw_gen_cache_cache_SM_object_cache_miss_occurred	1	3	Directors	
magent_local_sw_gen_cache_cache_SM_object_cache_reload_io_count	1	3	Directors	
magent_local_sw_gen_cache_cache_SM_object_cache_reload_io_lifetime	1	3	Directors	
magent_local_sw_gen_cache_cache_SM_object_cache_reload_io_occurred	1	3	Directors	
magent_local_sw_gen_cache_cache_SM_object_cache_store_io_count	1	3	Directors	
magent_local_sw_gen_cache_cache_SM_object_cache_store_io_lifetime	1	3	Directors	
magent_local_sw_gen_cache_cache_SM_object_cache_store_io_occurred	1	3	Directors	
magent_local_sw_gen_cache_cache_pan_id_user_info_cache_get_count	1	15	All nodes	
magent_local_sw_gen_cache_cache_pan_id_user_info_cache_get_occurred	1	15	All nodes	
magent_local_sw_gen_cache_cache_pan_id_user_info_cache_insert_io_count	1	15	All nodes	
magent_local_sw_gen_cache_cache_pan_id_user_info_cache_insert_io_lifetime	1	15	All nodes	
magent_local_sw_gen_cache_cache_pan_id_user_info_cache_insert_io_occurred	1	15	All nodes	
magent_local_sw_gen_cache_cache_pan_id_user_info_cache_load_io_count	1	15	All nodes	
magent_local_sw_gen_cache_cache_pan_id_user_info_cache_load_io_lifetime	1	15	All nodes	
magent_local_sw_gen_cache_cache_pan_id_user_info_cache_load_io_occurred	1	15	All nodes	
magent_local_sw_gen_cache_cache_pan_id_user_info_cache_lookup_count	1	15	All nodes	
magent_local_sw_gen_cache_cache_pan_id_user_info_cache_lookup_occurred	1	15	All nodes	
magent_local_sw_gen_cache_cache_pan_id_user_info_cache_miss_count	1	15	All nodes	
magent_local_sw_gen_cache_cache_pan_id_user_info_cache_miss_occurred	1	15	All nodes	

Family	Names	Series	Scope	Extra labels
magent_local_sw_gen_cache_cache_pan_id_user_info_cache_reload_io_count	1	15	All nodes	
magent_local_sw_gen_cache_cache_pan_id_user_info_cache_reload_io_lifetime	1	15	All nodes	
magent_local_sw_gen_cache_cache_pan_id_user_info_cache_reload_io_occurred	1	15	All nodes	
magent_local_sw_gen_cache_cache_pan_id_user_info_cache_store_io_count	1	15	All nodes	
magent_local_sw_gen_cache_cache_pan_id_user_info_cache_store_io_lifetime	1	15	All nodes	
magent_local_sw_gen_cache_cache_pan_id_user_info_cache_store_io_occurred	1	15	All nodes	
magent_local_sw_gen_cache_partition_default_bytes_cur	1	15	All nodes	
magent_local_sw_gen_cache_partition_default_bytes_hiwat	1	15	All nodes	
magent_local_sw_gen_cache_partition_default_bytes_limit	1	15	All nodes	
magent_local_sw_gen_cache_partition_default_ents_cur	1	15	All nodes	
magent_local_sw_gen_cache_partition_default_ents_hiwat	1	15	All nodes	
magent_local_sw_gen_cache_partition_default_evicted_ent_count	1	15	All nodes	
magent_local_sw_gen_cache_partition_default_eviction_event_count	1	15	All nodes	
magent_local_sw_gen_cache_partition_default_eviction_event_occurred	1	15	All nodes	
magent_local_sw_gen_cache_partition_fm_attr_bytes_cur	1	3	Directors	
magent_local_sw_gen_cache_partition_fm_attr_bytes_hiwat	1	3	Directors	
magent_local_sw_gen_cache_partition_fm_attr_bytes_limit	1	3	Directors	
magent_local_sw_gen_cache_partition_fm_attr_ents_cur	1	3	Directors	
magent_local_sw_gen_cache_partition_fm_attr_ents_hiwat	1	3	Directors	
magent_local_sw_gen_cache_partition_fm_attr_evicted_ent_count	1	3	Directors	

Family	Names	Series	Scope	Extra labels
magent_local_sw_gen_cache_partition_fm_attr_eviction_event_count	1	3	Directors	
magent_local_sw_gen_cache_partition_fm_attr_eviction_event_occurred	1	3	Directors	
magent_local_sw_gen_cache_partition_fm_dir_bytes_cur	1	3	Directors	
magent_local_sw_gen_cache_partition_fm_dir_bytes_hiwat	1	3	Directors	
magent_local_sw_gen_cache_partition_fm_dir_bytes_limit	1	3	Directors	
magent_local_sw_gen_cache_partition_fm_dir_ents_cur	1	3	Directors	
magent_local_sw_gen_cache_partition_fm_dir_ents_hiwat	1	3	Directors	
magent_local_sw_gen_cache_partition_fm_dir_evicted_ent_count	1	3	Directors	
magent_local_sw_gen_cache_partition_fm_dir_eviction_event_count	1	3	Directors	
magent_local_sw_gen_cache_partition_fm_dir_eviction_event_occurred	1	3	Directors	
magent_local_sw_gen_cache_partition_fm_ogroup_bytes_cur	1	3	Directors	
magent_local_sw_gen_cache_partition_fm_ogroup_bytes_hiwat	1	3	Directors	
magent_local_sw_gen_cache_partition_fm_ogroup_bytes_limit	1	3	Directors	
magent_local_sw_gen_cache_partition_fm_ogroup_ents_cur	1	3	Directors	
magent_local_sw_gen_cache_partition_fm_ogroup_ents_hiwat	1	3	Directors	
magent_local_sw_gen_cache_partition_fm_ogroup_evicted_ent_count	1	3	Directors	
magent_local_sw_gen_cache_partition_fm_ogroup_eviction_event_count	1	3	Directors	
magent_local_sw_gen_cache_partition_fm_ogroup_eviction_event_occurred	1	3	Directors	
magent_local_sw_gen_cache_partition_sm_obj_bytes_cur	1	3	Directors	
magent_local_sw_gen_cache_partition_sm_obj_bytes_hiwat	1	3	Directors	

Family	Names	Series	Scope	Extra labels
magent_local_sw_gen_cache_partition_sm_obj_bytes_limit	1	3	Directors	
magent_local_sw_gen_cache_partition_sm_obj_ents_cur	1	3	Directors	
magent_local_sw_gen_cache_partition_sm_obj_ents_hiwat	1	3	Directors	
magent_local_sw_gen_cache_partition_sm_obj_evicted_ent_count	1	3	Directors	
magent_local_sw_gen_cache_partition_sm_obj_eviction_event_count	1	3	Directors	
magent_local_sw_gen_cache_partition_sm_obj_eviction_event_occurred	1	3	Directors	
magent_local_sw_hagent_hwserial	1	15	All nodes	value
magent_local_sw_hagent_shelf_master	1	15	All nodes	
magent_local_sw_hagent_slot_id	1	15	All nodes	
magent_local_sw_hagent_version	1	15	All nodes	value
magent_local_sw_iopath_counts_N	38	456	Storage	
magent_local_sw_iopath_durationactive_N	38	456	Storage	
magent_local_sw_iopath_durationall_N	38	456	Storage	
magent_local_sw_iopath_durationosdfs_N	38	456	Storage	
magent_local_sw_iopath_durationqueue_N	38	456	Storage	
magent_local_sw_iopath_durationwire_N	38	456	Storage	
magent_local_sw_iopath_fsN_data_capacity	3	36	Storage	
magent_local_sw_iopath_fsN_free_capacity	3	36	Storage	
magent_local_sw_iopath_fsN_metadata_capacity	3	36	Storage	
magent_local_sw_iopath_fsN_purpose	3	36	Storage	value
magent_local_sw_iopath_fsN_total_inodes	3	36	Storage	
magent_local_sw_iopath_hdN_fs	15	180	Storage	
magent_local_sw_iopath_info_iopath_state	1	12	Storage	
magent_local_sw_iopath_iscsi_config_rcv_buf_size	1	12	Storage	

Family	Names	Series	Scope	Extra labels
magent_local_sw_iopath_iscsi_config_snd_buf_size	1	12	Storage	
magent_local_sw_iopath_iscsi_num_cur_conns	1	12	Storage	
magent_local_sw_iopath_measure_bucket0_capacity_bytes	1	12	Storage	
magent_local_sw_iopath_measure_bucket0_remaining_capacity_bytes	1	12	Storage	
magent_local_sw_iopath_measure_bucket1_capacity_bytes	1	12	Storage	
magent_local_sw_iopath_measure_bucket1_remaining_capacity_bytes	1	12	Storage	
magent_local_sw_iopath_measure_bytes_in	1	12	Storage	
magent_local_sw_iopath_measure_bytes_out	1	12	Storage	
magent_local_sw_iopath_measure_capacity_bytes	1	12	Storage	
magent_local_sw_iopath_measure_client_times_ip_addr_N	35	420	Storage	value
magent_local_sw_iopath_measure_client_times_read_active_times_N	35	420	Storage	
magent_local_sw_iopath_measure_client_times_read_wire_times_N	35	420	Storage	
magent_local_sw_iopath_measure_client_times_write_active_times_N	35	420	Storage	
magent_local_sw_iopath_measure_client_times_write_wire_times_N	35	420	Storage	
magent_local_sw_iopath_measure_cur_bytes_transferred	1	12	Storage	
magent_local_sw_iopath_measure_df_bytes_in	1	12	Storage	
magent_local_sw_iopath_measure_df_bytes_out	1	12	Storage	
magent_local_sw_iopath_measure_df_io_duration_usec	1	12	Storage	
magent_local_sw_iopath_measure_df_io_occured	1	12	Storage	
magent_local_sw_iopath_measure_io_duration_usec	1	12	Storage	
magent_local_sw_iopath_measure_io_occured	1	12	Storage	
magent_local_sw_iopath_measure_lowpri_count	1	12	Storage	
magent_local_sw_iopath_measure_num_failed_allocations	1	12	Storage	

Family	Names	Series	Scope	Extra labels
magent_local_sw_iopath_measure_num_timeout_cmds	1	12	Storage	
magent_local_sw_iopath_measure_num_timeout_sessions	1	12	Storage	
magent_local_sw_iopath_measure_op_count_non_write	1	12	Storage	
magent_local_sw_iopath_measure_op_count_write	1	12	Storage	
magent_local_sw_iopath_measure_ra_duration_usec	1	12	Storage	
magent_local_sw_iopath_measure_rd_duration_usec	1	12	Storage	
magent_local_sw_iopath_measure_read_size	1	12	Storage	
magent_local_sw_iopath_measure_remaining_capacity_bytes	1	12	Storage	
magent_local_sw_iopath_measure_rw_duration_usec	1	12	Storage	
magent_local_sw_iopath_measure_sol_data_non_write	1	12	Storage	
magent_local_sw_iopath_measure_sol_data_write	1	12	Storage	
magent_local_sw_iopath_measure_task_queue_depth	1	12	Storage	
magent_local_sw_iopath_measure_wr_duration_usec	1	12	Storage	
magent_local_sw_iopath_measure_write_size	1	12	Storage	
magent_local_sw_iopath_success_counts_N	38	456	Storage	
magent_local_sw_iopath_timings_active_time_N	38	456	Storage	
magent_local_sw_iopath_timings_diskreads_N	38	456	Storage	
magent_local_sw_iopath_timings_inactive_time_N	38	456	Storage	
magent_local_sw_iopath_timings_lifetime_N	38	456	Storage	
magent_local_sw_iopath_timings_wire_time_N	38	456	Storage	
magent_local_sw_mcproxy_nic_warning_disabled	1	15	All nodes	
magent_local_sw_mcproxy_primary_lagg_config_flags	1	15	All nodes	
magent_local_sw_mcproxy_primary_lagg_config_link_count	1	15	All nodes	

Family	Names	Series	Scope	Extra labels
magent_local_sw_mcproxy_primary_lagg_config_mode	1	15	All nodes	
magent_local_sw_mcproxy_secondary_lagg_config_flags	1	15	All nodes	
magent_local_sw_mcproxy_secondary_lagg_config_link_count	1	15	All nodes	
magent_local_sw_mcproxy_secondary_lagg_config_mode	1	15	All nodes	
magent_local_sw_monitor_brick_property	1	15	All nodes	
magent_local_sw_monitor_brick_property_clr	1	15	All nodes	
magent_local_sw_monitor_brick_property_set	1	15	All nodes	
magent_local_sw_monitor_checkmodule	1	15	All nodes	value
magent_local_sw_monitor_corefile	1	15	All nodes	value
magent_local_sw_monitor_ledstate	1	15	All nodes	
magent_local_sw_monitor_restartmodule	1	15	All nodes	value
magent_local_sw_monitor_runevent	1	15	All nodes	value
magent_local_sw_monitor_runlevel	1	15	All nodes	value
magent_local_sw_monitor_startmodule	1	15	All nodes	value
magent_local_sw_monitor_stopmodule	1	15	All nodes	value
magent_local_sw_pm_cpty_size	1	15	All nodes	
magent_local_sw_pm_cpty_used	1	15	All nodes	
magent_local_sw_pm_disk_util	1	15	All nodes	
magent_local_sw_pm_pm_status	1	15	All nodes	
magent_local_sw_pm_proc_util	1	15	All nodes	
magent_local_sw_pm_text_info	1	15	All nodes	
magent_shelf_sn	1	15	All nodes	
magent_shelf_version	1	15	All nodes	
mem_active	1	15	All nodes	
mem_available	1	15	All nodes	
mem_available_percent	1	15	All nodes	
mem_buffered	1	15	All nodes	
mem_cached	1	15	All nodes	
mem_commit_limit	1	15	All nodes	
mem_committed_as	1	15	All nodes	
mem_dirty	1	15	All nodes	

Family	Names	Series	Scope	Extra labels
mem_free	1	15	All nodes	
mem_high_free	1	15	All nodes	
mem_high_total	1	15	All nodes	
mem_huge_page_size	1	15	All nodes	
mem_huge_pages_free	1	15	All nodes	
mem_huge_pages_total	1	15	All nodes	
mem_inactive	1	15	All nodes	
mem_low_free	1	15	All nodes	
mem_low_total	1	15	All nodes	
mem_mapped	1	15	All nodes	
mem_page_tables	1	15	All nodes	
mem_shared	1	15	All nodes	
mem_slab	1	15	All nodes	
mem_sreclaimable	1	15	All nodes	
mem_sunreclaim	1	15	All nodes	
mem_swap_cached	1	15	All nodes	
mem_swap_free	1	15	All nodes	
mem_swap_total	1	15	All nodes	
mem_total	1	15	All nodes	
mem_used	1	15	All nodes	
mem_used_percent	1	15	All nodes	
mem_vmalloc_chunk	1	15	All nodes	
mem_vmalloc_total	1	15	All nodes	
mem_vmalloc_used	1	15	All nodes	
mem_write_back	1	15	All nodes	
mem_write_back_tmp	1	15	All nodes	
net_bytes_recv	1	15	All nodes	interface
net_bytes_sent	1	15	All nodes	interface
net_drop_in	1	15	All nodes	interface
net_drop_out	1	15	All nodes	interface
net_err_in	1	15	All nodes	interface
net_err_out	1	15	All nodes	interface
net_packets_recv	1	15	All nodes	interface
net_packets_sent	1	15	All nodes	interface
net_speed	1	15	All nodes	interface
netstat_tcp_close	1	15	All nodes	
netstat_tcp_close_wait	1	15	All nodes	
netstat_tcp_closing	1	15	All nodes	

Family	Names	Series	Scope	Extra labels
netstat_tcp_established	1	15	All nodes	
netstat_tcp_fin_wait1	1	15	All nodes	
netstat_tcp_fin_wait2	1	15	All nodes	
netstat_tcp_last_ack	1	15	All nodes	
netstat_tcp_listen	1	15	All nodes	
netstat_tcp_none	1	15	All nodes	
netstat_tcp_syn_recv	1	15	All nodes	
netstat_tcp_syn_sent	1	15	All nodes	
netstat_tcp_time_wait	1	15	All nodes	
netstat_udp_socket	1	15	All nodes	
nstat_Icmp6InDestUnreachs	1	15	All nodes	name
nstat_Icmp6InMsgs	1	15	All nodes	name
nstat_Icmp6InType1	1	15	All nodes	name
nstat_Icmp6OutDestUnreachs	1	15	All nodes	name
nstat_Icmp6OutMLDv2Reports	1	15	All nodes	name
nstat_Icmp6OutMsgs	1	15	All nodes	name
nstat_Icmp6OutNeighborSolicits	1	15	All nodes	name
nstat_Icmp6OutRouterSolicits	1	15	All nodes	name
nstat_Icmp6OutType1	1	15	All nodes	name
nstat_Icmp6OutType133	1	15	All nodes	name
nstat_Icmp6OutType135	1	15	All nodes	name
nstat_Icmp6OutType143	1	15	All nodes	name
nstat_IcmpInAddrMasks	1	1	Realm	name
nstat_IcmpInCsumErrors	1	1	Realm	name
nstat_IcmpInDestUnreachs	1	15	All nodes	name
nstat_IcmpInEchoReps	1	3	Directors	name
nstat_IcmpInEchos	1	15	All nodes	name
nstat_IcmpInErrors	1	12	Storage	name
nstat_IcmpInMsgs	1	15	All nodes	name
nstat_IcmpInRedirects	1	2	2 series	name
nstat_IcmpInTimeExcds	1	3	Directors	name
nstat_IcmpInTimestamps	1	1	Realm	name
nstat_IcmpMsgInType0	1	3	Directors	name
nstat_IcmpMsgInType11	1	3	Directors	name
nstat_IcmpMsgInType13	1	1	Realm	name
nstat_IcmpMsgInType17	1	1	Realm	name
nstat_IcmpMsgInType3	1	15	All nodes	name
nstat_IcmpMsgInType5	1	2	2 series	name

Family	Names	Series	Scope	Extra labels
nstat_IcmpMsgInType8	1	15	All nodes	name
nstat_IcmpMsgOutType0	1	15	All nodes	name
nstat_IcmpMsgOutType3	1	15	All nodes	name
nstat_IcmpMsgOutType8	1	3	Directors	name
nstat_IcmpOutDestUnreachs	1	15	All nodes	name
nstat_IcmpOutEchoReps	1	15	All nodes	name
nstat_IcmpOutEchos	1	3	Directors	name
nstat_IcmpOutMsgs	1	15	All nodes	name
nstat_Ip6InDelivers	1	15	All nodes	name
nstat_Ip6InNoECTPkts	1	15	All nodes	name
nstat_Ip6InOctets	1	15	All nodes	name
nstat_Ip6InReceives	1	15	All nodes	name
nstat_Ip6OutMcastOctets	1	15	All nodes	name
nstat_Ip6OutMcastPkts	1	15	All nodes	name
nstat_Ip6OutNoRoutes	1	15	All nodes	name
nstat_Ip6OutOctets	1	15	All nodes	name
nstat_Ip6OutRequests	1	15	All nodes	name
nstat_IpDefaultTTL	1	15	All nodes	name
nstat_IpExtInNoECTPkts	1	15	All nodes	name
nstat_IpExtInOctets	1	15	All nodes	name
nstat_IpExtOutOctets	1	15	All nodes	name
nstat_IpForwarding	1	15	All nodes	name
nstat_IpFragCreates	1	6	6 series	name
nstat_IpFragOKs	1	6	6 series	name
nstat_IpInAddrErrors	1	15	All nodes	name
nstat_IpInDelivers	1	15	All nodes	name
nstat_IpInHdrErrors	1	1	Realm	name
nstat_IpInReceives	1	15	All nodes	name
nstat_IpOutNoRoutes	1	15	All nodes	name
nstat_IpOutRequests	1	15	All nodes	name
nstat_IpReasmFails	1	6	6 series	name
nstat_IpReasmReqds	1	6	6 series	name
nstat_IpReasmTimeout	1	6	6 series	name
nstat_ MPTcpExtMPCapableFallbackACK	1	15	All nodes	name
nstat_TcpActiveOpens	1	15	All nodes	name
nstat_TcpAttemptFails	1	15	All nodes	name
nstat_TcpCurrEstab	1	15	All nodes	name
nstat_TcpEstabResets	1	15	All nodes	name

Family	Names	Series	Scope	Extra labels
nstat_TcpExtDelayedACKLocked	1	9	9 series	name
nstat_TcpExtDelayedACKLost	1	15	All nodes	name
nstat_TcpExtDelayedACKs	1	15	All nodes	name
nstat_TcpExtEmbryonicRsts	1	15	All nodes	name
nstat_TcpExtListenDrops	1	2	2 series	name
nstat_TcpExtOutOfWindowIcmps	1	1	Realm	name
nstat_TcpExtPAWSEstab	1	15	All nodes	name
nstat_ TcpExtTCPACKSkippedChallenge	1	1	Realm	name
nstat_TcpExtTCPACKSkippedPAWS	1	13	13 series	name
nstat_TcpExtTCPACKSkippedSeq	1	10	10 series	name
nstat_ TcpExtTCPACKSkippedSynRecv	1	1	Realm	name
nstat_TcpExtTCPAbortOnClose	1	15	All nodes	name
nstat_TcpExtTCPAbortOnData	1	15	All nodes	name
nstat_TcpExtTCPAbortOnTimeout	1	15	All nodes	name
nstat_TcpExtTCPAckCompressed	1	2	2 series	name
nstat_TcpExtTCPAutoCorking	1	15	All nodes	name
nstat_TcpExtTCPBacklogCoalesce	1	15	All nodes	name
nstat_TcpExtTCPChallengeACK	1	12	Storage	name
nstat_ TcpExtTCPDSACKIgnoredNoUndo	1	15	All nodes	name
nstat_TcpExtTCPDSACKOfoSent	1	11	11 series	name
nstat_TcpExtTCPDSACKOldSent	1	15	All nodes	name
nstat_TcpExtTCPDSACKRecv	1	15	All nodes	name
nstat_TcpExtTCPDSACKRecvSegs	1	15	All nodes	name
nstat_TcpExtTCPDSACKUndo	1	15	All nodes	name
nstat_TcpExtTCPDelivered	1	15	All nodes	name
nstat_TcpExtTCPFastRetrans	1	15	All nodes	name
nstat_ TcpExtTCPFromZeroWindowAdv	1	14	14 series	name
nstat_TcpExtTCPFullUndo	1	15	All nodes	name
nstat_TcpExtTCPHPAcks	1	15	All nodes	name
nstat_TcpExtTCPHPHits	1	15	All nodes	name
nstat_TcpExtTCPHystartTrainCwnd	1	15	All nodes	name
nstat_TcpExtTCPHystartTrainDetect	1	15	All nodes	name
nstat_TcpExtTCPKeepAlive	1	15	All nodes	name
nstat_TcpExtTCPLossFailures	1	6	6 series	name
nstat_TcpExtTCPLossProbeRecovery	1	15	All nodes	name
nstat_TcpExtTCPLossProbes	1	15	All nodes	name

Family	Names	Series	Scope	Extra labels
nstat_TcpExtTCPLossUndo	1	15	All nodes	name
nstat_TcpExtTCPLostRetransmit	1	15	All nodes	name
nstat_TcpExtTCPOFOMerge	1	11	11 series	name
nstat_TcpExtTCPOFOQueue	1	15	All nodes	name
nstat_TcpExtTCPOrigDataSent	1	15	All nodes	name
nstat_TcpExtTCPPartialUndo	1	13	13 series	name
nstat_TcpExtTCPPureAcks	1	15	All nodes	name
nstat_TcpExtTCPRcvCoalesce	1	15	All nodes	name
nstat_TcpExtTCPRenoReorder	1	2	2 series	name
nstat_TcpExtTCPSACKReorder	1	14	14 series	name
nstat_TcpExtTCPSYNChallenge	1	10	10 series	name
nstat_TcpExtTCPSackFailures	1	1	Realm	name
nstat_TcpExtTCPSackMerged	1	13	13 series	name
nstat_TcpExtTCPSackRecovery	1	15	All nodes	name
nstat_TcpExtTCPSackRecoveryFail	1	13	13 series	name
nstat_TcpExtTCPSackShiftFallback	1	15	All nodes	name
nstat_TcpExtTCPSackShifted	1	11	11 series	name
nstat_TcpExtTCPSlowStartRetrans	1	9	9 series	name
nstat_TcpExtTCPSpuriousRTOs	1	2	2 series	name
nstat_ TcpExtTCPSpuriousRtxHostQueues	1	3	Directors	name
nstat_TcpExtTCPSynRetrans	1	15	All nodes	name
nstat_TcpExtTCPTSReorder	1	13	13 series	name
nstat_TcpExtTCPTimeouts	1	15	All nodes	name
nstat_TcpExtTCPToZeroWindowAdv	1	14	14 series	name
nstat_ TcpExtTCPWantZeroWindowAdv	1	3	Directors	name
nstat_TcpExtTW	1	15	All nodes	name
nstat_TcpExtTWRecycled	1	15	All nodes	name
nstat_ TcpExtTcpDuplicateDataRehash	1	15	All nodes	name
nstat_TcpExtTcpTimeoutRehash	1	15	All nodes	name
nstat_TcpInErrs	1	10	10 series	name
nstat_TcpInSegs	1	15	All nodes	name
nstat_TcpMaxConn	1	15	All nodes	name
nstat_TcpOutRsts	1	15	All nodes	name
nstat_TcpOutSegs	1	15	All nodes	name
nstat_TcpPassiveOpens	1	15	All nodes	name
nstat_TcpRetransSegs	1	15	All nodes	name

Family	Names	Series	Scope	Extra labels
nstat_TcpRtoAlgorithm	1	15	All nodes	name
nstat_TcpRtoMax	1	15	All nodes	name
nstat_TcpRtoMin	1	15	All nodes	name
nstat_Udp6InDatagrams	1	15	All nodes	name
nstat_Udp6NoPorts	1	15	All nodes	name
nstat_Udp6OutDatagrams	1	15	All nodes	name
nstat_UdpInDatagrams	1	15	All nodes	name
nstat_UdpInErrors	1	15	All nodes	name
nstat_UdpNoPorts	1	15	All nodes	name
nstat_UdpOutDatagrams	1	15	All nodes	name
nstat_UdpRcvbufErrors	1	15	All nodes	name
observability_node_type	1	15	All nodes	role
panfs_alert_occurrences	1	1	Realm	alert_code, category, message, severity
panfs_alert_occurrences_scrape_success	1	1	Realm	
panfs_alerts_active_scrape_success	1	1	Realm	
panfs_alerts_info	1	703	703 series	action_message, alert_code, alert_name, category, error_level_name, is_manually_
panfs_alerts_info_scrape_success	1	1	Realm	
panfs_drive_bytes_read_scrape_success	1	1	Realm	
panfs_drive_bytes_written_scrape_success	1	1	Realm	
panfs_drive_scrape_success	1	1	Realm	
panfs_events_dropped_total	1	15	All nodes	
panfs_fan_scrape_success	1	1	Realm	
panfs_ipmi_scrape_success	1	1	Realm	
panfs_master_mserver_up	1	15	All nodes	master_ip
panfs_nic	1	12	Storage	active, device, firmware, in_use, interface, mode_of_operation, nic_type, node_d
panfs_nic_scrape_success	1	1	Realm	
panfs_node	1	15	All nodes	activated, bios_date, bios_revision, bladeset_id, cpu_active_cores, cpu_hw_cores
panfs_node_repset	1	15	All nodes	activated, model_number, node_data_serial, node_ip_address
panfs_node_repset_scrape_success	1	1	Realm	
panfs_node_scrape_success	1	1	Realm	
panfs_power_supply_scrape_success	1	1	Realm	
panfs_president	1	15	All nodes	datasn, president_slot, slot
panfs_storageset	1	3	Directors	balancing_rate_bytes_per_second, blade_imbalance_bytes, brickset_flags, capacity

Family	Names	Series	Scope	Extra labels
panfs_storageset_scrape_success	1	1	Realm	
panfs_switch_scrape_success	1	1	Realm	
panfs_sysstat_error_event	1	382	382 series	action_message, alert_code, alert_details, alert_name, category, error_level_nam
panfs_sysstat_error_event_scrape_success	1	1	Realm	
panfs_volume	1	3	Directors	aggregate_layout, bladeset_id, compression, compression_type, corrupt_log_count,
panfs_volume_scrape_success	1	1	Realm	
processes_blocked	1	15	All nodes	
processes_dead	1	15	All nodes	
processes_idle	1	15	All nodes	
processes_paging	1	15	All nodes	
processes_running	1	15	All nodes	
processes_sleeping	1	15	All nodes	
processes_stopped	1	15	All nodes	
processes_total	1	15	All nodes	
processes_total_threads	1	15	All nodes	
processes_unknown	1	15	All nodes	
processes_zombies	1	15	All nodes	
procstat_cpu_usage	1	3088	3088 series	pattern, pid, process_name
procstat_created_at	1	15487	15487 series	pattern, pid, process_name
procstat_memory_rss	1	15485	15485 series	pattern, pid, process_name
procstat_memory_vms	1	15485	15485 series	pattern, pid, process_name
procstat_num_fds	1	15487	15487 series	pattern, pid, process_name
procstat_num_threads	1	15487	15487 series	pattern, pid, process_name
system_load1	1	15	All nodes	
system_load15	1	15	All nodes	
system_load5	1	15	All nodes	
system_n_cpus	1	15	All nodes	
system_n_physical_cpus	1	15	All nodes	
system_n_unique_users	1	15	All nodes	
system_n_users	1	15	All nodes	
system_uptime	1	15	All nodes	
versitygw_bytes_read_value	1	1	1 series	action, api, bucket, method, metric_type, service, status, tenant_id
versitygw_bytes_written_value	1	1	1 series	action, api, bucket, method, metric_type, service, status, tenant_id
versitygw_failed_count_value	1	1	1 series	action, api, bucket, method, metric_type, service, status, tenant_id

Family	Names	Series	Scope	Extra labels
versitygw_object_created_count_value	1	1	1 series	action, api, bucket, method, metric_type, service, status, tenant_id
versitygw_object_removed_count_value	1	1	1 series	action, api, bucket, method, metric_type, service, status, tenant_id
versitygw_success_count_value	1	4	4 series	action, api, bucket, method, metric_type, service, status, tenant_id

Appendix C. VictoriaLogs Fields and Sources

The logs datasource holds file logs and journald entries from every node. The logs datasource contains the fields listed below; the audit and event fields are structured (JSON) log lines from the API service and the realm event system.

Field group	Fields
Stream identity	_time, _msg, _stream, _stream_id, job, host_id, node_name, dataserial, hwserial, shelfserial, version, platform, role
File logs	filename (for example /pan/var/log/net_mon.log, /pan/var/log/cpu_mon.log, /pan/var/log/mem_mon.log, /pan/var/log/sysstat.log, /var/log/panapi-audit.log), level, severity, logger
journald	unit (pan_monitor2.service, pan_network_setup.service, vdura-log-agent.service, vdura-metrics-agent.service, sshd.service ...), priority, syslog_id, transport
API audit (panapi-audit.log)	client_ip, method, request_id, result, status_code, action, resource, target_id, tenant_id, user_id
Realm events	event_id, event_code, event_name, event_category, event_delivered, component_type, blade_serial, hw_serial, node_data_serial, node_ip_address, shelf_serial, slot_id