statd Metrics

The following is a list of frequently used stats available from statd_metadata.name.

Statistics are available as either counters or gauges. Counters are additive whereas a gauge captures a statistic at a given point of time and can be used to graph movement of that statistic.

Use the REGEXP function to query the following statistics. This example queries transactions per second from the prior 24 hours:

```
sql> USE clustrix_statd;
sql> SELECT timestamp, value, name
     FROM clustrix_statd.statd_history
     NATURAL JOIN clustrix_statd.statd_metadata
     WHERE name REGEXP 'tps$'
     AND timestamp > now() - interval 1 day
     ORDER BY timestamp DESC;
```

Connections

Metric Name	REGEXP	Description	Measures	Graph as
clustrix.stats.connections	connections	Total number of connections to the cluster	Number of connections	counter

Diagnostic

Metric Name	REGEXP	Description	Measures	Graph as
clustrix.containers.count	containers.count	Number of containers in use by Xpand	Container Count	gauge
clustrix.cluster. nodes_in_quorum	nodes_in_quorum	Number of nodes currently online and in the cluster	Number of nodes online	gauge
clustrix.stats.bigc_value.node.*nn*	bigc_value.node.*	XID value through which garbage collection will clean up	BigC value by node	gauge
clustrix.stats.fc_wait_time.node. *nn*	fc_wait_time.*	Total time all queries spent waiting for flow control (inter-node communication)	Time waiting on flow control	counter
clustrix.stats. key_caches_updates.node.*nn*	key_caches_updates.node.	Number of times the PD Cache issued update keys. This statistic is sometimes useful for support.	PD Cache keys updated	counter
clustrix.stats. layer_merge_bytes.node.*nn*	layer_merge_bytes. node.	Size is bytes of layer merge operations by node	Layer merge bytes by node	counter
clustrix.stats. layer_merge_rows.node.*nn*	layer_merge_rows. node.	Number of rows merged by layer merge operations by node	Layer merge rows by node	counter
clustrix.stats.pdcache_fetches. node.*nn*	pdcache_fetches. node.	Number of times the PD Cache fetched new PDs	PD Cache fetches by node	counter
clustrix.stats.pdcache_loaded. node.*nn*	pdcache_loaded. node.	Number of times the PD Cache loaded new PDs	PD Cache loaded by node	counter
clustrix.stats.qpc_misses	qpc_misses	Number of times a query was missed by the QPC	Query Plan Cache, misses	counter
clustrix.stats.qpc_recompiles	qpc_recompiles	Number of times the QPC recompiled queries	Query Plan Cache, recompiles	counter
clustrix.stats. queries_not_using_indexes	queries_not_using_indexes	Number of queries on the cluster not using any index	Queries not using indexes	counter
clustrix.stats.walltime_ (read|write)_us	walltime_ (read|write)_us	Total wall time (elapsed) of read or write queries	Wall time of read or write queries	counter

Monitoring

Metric Name	REGEXP	Description	Measures	Graph as

clustrix.rebalancer_ (reprotects|deletes|rebalance| redistributes|request|reranks|splits)	rebalancer_ (reprotects|deletes|rebalance| redistributes|request|reranks|splits)$'	Metrics for various Rebalancer actions	Various Rebalancer actions.	counter
clustrix.cluster.total_nodes	cluster.total_nodes	The total number of nodes configured for your cluster (not just in quorum)	Total number of nodes	gauge

Networking

Metric Name	REGEXP	Description	Measures	Graph as
clustrix.io.network.latency_ms.avg.node*nn*.(network interface)	latency_ms.avg.node.	Network latency average per node	Network Latency avg by node	gauge
clustrix.io.network.latency_ms.(min|max|avg)	latency_ms....$	Network latency min/max/avg	Network latency min/max/avg	gauge

Performance

Metric Name	REGEXP	Description	Measures	Graph as
clustrix.activity.core0.node.*nn*	core0.node.*	TIL CPU core-0 utilization by node	Til CPU Core-0 by node	gauge
clustrix.activity.til_avg	til_avg$	Average core utilization for the cluster, excluding core-0	Average Til CPU	gauge
clustrix.activity.til_avg.node.*nn*	til_avg.node.*	Average TIL core (non core-0) utilization per node in a cluster	Average Til CPU by node	gauge
clustrix.activity.til_(min|max|avg). node.*nn*	til_(min|max|avg). node.	TIL CPU core (non core-0) utilization min/max/avg	Til CPU min/max/avg by node	gauge
clustrix.activity.til_max	til_max$	Max core utilization for the cluster, excluding core-0	Max Til CPU	gauge
clustrix.activity.til_max.node.*nn*	til_max.node.*	Average TIL core (non core-0) utilization per node in a cluster	Max Til CPU by node	gauge
clustrix.cpu.load_(min|max)	cpu.load_...$	CPU Core min/max database utilization only	Database CPU min/max	gauge
clustrix.cpu.load.node.*nn*.cpu.0	load.node.*.cpu.0	CPU Core-0 by node database utilization only	Database CPU Core only core-0 by node	gauge
clustrix.cpu.load.node.*nn*.cpu.*nn*	load.node.*.cpu. [^0]\d*	CPU Cores excluding core-0 by node database utilization only	Database CPU core excluding core-0 by node	gauge
clustrix.lockman.wait_ms. (min|max|avg)	lockman. wait_ms....$	Total time all queries spent waiting on locks	Time waiting on query locks	gauge
clustrix.qps	qps$	Cluster wide Queries per second	Cluster QPS	gauge
clustrix.response_time.read_us	response_time. read_us	Cluster query read latency, number of queries divided by runtime	Cluster read latency	gauge
clustrix.response_time.write_us	response_time. write_us	Cluster query write latency, number of queries divided by runtime	Cluster write latency	gauge
clustrix.stats.executing_sessions	executing_sessions	The number of sessions currently executing	Sessions currently executing	gauge
clustrix.stats.qps_total.node.*nn*	qps_total.node	Queries per second by node	QPS by node	counter
clustrix.stats.tm_cpu_waittime_us	tm_cpu_waittime	The total amount of time queries spent waiting due to the fair scheduler	Fair Scheduler wait time	counter
clustrix.stats.tps_total.node.*nn*	tps_total.node	Transactions per second by node	TPS by node	counter
clustrix.tps	tps$	Cluster wide Transactions per second	Cluster TPS	gauge

Queries

Metric Name	REGEXP	Description	Measures	Graph as
clustrix.stats.Com_(delete|insert|select|update)	Com_(delete|insert|select|update)$	Number of queries separated by query type	Queries by type	counter
clustrix.stats.Com_(delete|insert|select|update) _us	Com_(delete|insert|select|update) _us	Amount of run time by query type	Time per query type	gauge

clustrix.stats.runtime_read_us	runtime_read_us	Total runtime of read queries	Runtime of read queries	counter
clustrix.stats.runtime_write_us	runtime_write_us	Total runtime of write queries	Runtime of write queries	counter

Replication

Metric Name	REGEXP	Description	Measures	Graph as
clustrix.replication.slave.relay_log_bytes.(slave)	relay_log_bytes[^_]	Size in bytes of the relay logs for the replication slave	Relay log bytes for all slaves	gauge
clustrix.replication.slave.bytes_read.(slave)	slave.bytes_read	Bytes read by the replication slave	Bytes read by slave	counter
clustrix.replication.slave.events_read.(slave)	events_read	Number of events read by the replication slave	Events read by slave	counter
clustrix.replication.slave.seconds_behind_master.(slave)	seconds_behind_master	Seconds behind master value for all replication slaves	Slave seconds behind master	gauge

Rows

Metric Name	REGEXP	Description	Measures	Graph as
clustrix.containers.rows_read.node.*nn*	rows_read.node..$	Number of rows read by node at the container level	Rows read by node, container	counter
clustrix.containers.rows_written.node.*nn*	rows_written.node..$	Number of rows written by node at the container level	Rows written by node, container	counter
clustrix.containers.rows_(deleted|inserted|replaced)	rows_(deleted|inserted|replaced)$	Number of rows deleted, inserted and updated at the container level	Rows, deleted, inserted, updated	counter
clustrix.containers.rows_(read|written)	containers.rows_(read|written)$	Number of rows read and written at the container level	Rows read and written, container	counter
clustrix.containers.rows_deleted	rows_deleted$	Number of rows deletes at the container level	Rows deleted, container level	counter
clustrix.containers.rows_inserted	rows_inserted$	Number of rows inserted at the container level	Rows inserted, container level	counter
clustrix.containers.rows_read	containers.rows_read$	Number of rows read at the container level	Rows read, container level	counter
clustrix.containers.rows_replaced	rows_replaced$	Number of rows updated at the container level	Rows updated, container level	counter
clustrix.containers.rows_written	rows_written$	Number of rows written at the container level	Rows written, container level	counter
clustrix.stats.tm_rows_output	tm_rows_output	Number of rows written by queries	Rows written, transaction manager	counter
clustrix.stats.tm_rows_read	tm_rows_read	Number of rows read by queries	Rows read, transaction manager	counter

Storage

Metric Name	REGEXP	Description	Measures	Graph as
clustrix.capacity.disks.(avg|max|min)_used_percent	[avg|max|min]_used_percent	The min/max/avg disk capacity used	Percentage of disks in use	gauge
clustrix.io.disk.bytes_read.node.*nn*.disk.(disk segment)	disk.bytes_read.node.	Not applicable for virtual environments (i.e. i3s).	Bytes read at the kernel level	counter
clustrix.io.disk.bytes_written.node.*nn*.disk.(disk segment)	disk.bytes_written.node.	Not applicable for virtual environments (i.e. i3s).	Bytes written at the kernel level	counter
clustrix.io.disk.pct_utilization.node.*nn*.disk.(disk segment)	disk.pct_utilization.node	Disk utilization metric for individual physical disks hosting the vdev file (e.g. through an md RAID device)	Disk utilization	gauge
clustrix.io.disk.read_latency_ms.node.*nn*.disk.(disk segment)	read_latency_ms.node.	Average read latency from IO time over the same period	Storage read latency, kernel level by node	gauge

clustrix.io.disk.write_latency_ms.node.*nn*.disk.(disk segment)	write_latency_ms.node.	Average write latency from IO time over the same period	Storage write latency, kernel level by node	gauge
clustrix.io.vdevs.bytes_read	bytes_read$	Device1 bytes read, cluster level	Device1 bytes read, cluster level	counter
clustrix.io.vdev.bytes_read.node.*nn*.vdev.3	bytes_read.node.*.vdev.3	Device1 bytes read by node	Device1 bytes read by node	counter
clustrix.io.vdevs.bytes_read_per_sec	bytes_read_per_sec	Device1 bytes read per second	Device1 bytes read per second	gauge
clustrix.io.vdevs.bytes_writtten	bytes_written$	Device1 bytes written, cluster level	Device1 bytes written, cluster level	counter
clustrix.io.vdev.bytes_written.node.*nn*.vdev.3	bytes_written.node.*.vdev.3	Device1 bytes written by node	Device1 bytes written by node	counter
clustrix.io.vdevs.bytes_written_per_sec	bytes_written_per_sec	Device1 bytes written per second	Device1 bytes written per second	gauge
clustrix.io.vdev.read_latency_us.node.*nn*.vdev.3	read_latency_us.node.*.vdev.3	Device1 read latency by node	Device1 read latency by node	gauge
clustrix.io.vdev.sync_latency_us.node.*nn*.vdev.3	sync_latency_us.node.*.vdev.3	Device1 sync latency by node	Device1 sync latency by node	gauge
clustrix.io.vdev.write_latency_us.node.*nn*.vdev.3	write_latency_us.node.*.vdev.3	Device1 write latency by node	Device1 write latency by node	gauge