

## HBase Monitoring

### How do I enable JMX in HBase

Please see HBase Metrics page for instructions.

### Do I need to add a separate SPM Application for each HBase server/node I want to monitor

No, one Application is enough. Think of an SPM “Application” as a “HBase Cluster”. Thus, to monitor N HBase servers that belong to the same cluster you would create just a single SPM Application and use its Token in SPM configuration file on all HBase servers that are a part of this cluster.

### Why don't some HBase metrics graphs have any data

There could be 2 possible reasons:

1. Some metrics are for RegionServers (HBase slaves), some for HBase Master. Thus, if you select the Master node in the UI, graphs that contain Slave-specific metrics will be blank and vice-versa.
2. Different versions of HBase provide different metrics. Thus, if you have an older version of HBase, it may not be providing all metrics that SPM collects and graphs.

### Which versions of HBase does SPM support

SPM has been tested with HBase 0.90, 0.92, 0.94, and 0.98, but will work for newer versions, including all CDH versions.

## Metrics

Metric				
Name	Key	Agg	Type	Description
total max	jvm.memory.heap max	Max	Double	Hadoop:service=HBase,name=JvmMetrics#MemMaxM
info	jvm.logSize	Info	Long	Hadoop:service=HBase,name=JvmMetrics#LogInfo

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Metric				
Name	Key	Agg	Type	Description
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non heap used	jvm.nonheapused	avg	Double	Hadoop:service=HBase,name=JvmMetrics#MemNonHeapUsed
error	jvm.logerror	sum	Long	Hadoop:service=HBase,name=JvmMetrics#LogError
heap committed	jvm.heapcommitted	avg	Double	Hadoop:service=HBase,name=JvmMetrics#MemHeapCommitted
heap max	jvm.heapmax	max	Double	Hadoop:service=HBase,name=JvmMetrics#MemHeapMax
blocked	jvm.threadsblocked	avg	Long	Hadoop:service=HBase,name=JvmMetrics#ThreadsBlocked
terminated	jvm.threadsterminated	avg	Long	Hadoop:service=HBase,name=JvmMetrics#ThreadsTerminated
warn	jvm.logwarn	sum	Long	Hadoop:service=HBase,name=JvmMetrics#LogWarn
timed waiting	jvm.threadsawaiting	avg	Long	Hadoop:service=HBase,name=JvmMetrics#ThreadsTimedWaiting
heap used	jvm.heapused	avg	Double	Hadoop:service=HBase,name=JvmMetrics#MemHeapUsed
fatal	jvm.logfatal	sum	Long	Hadoop:service=HBase,name=JvmMetrics#LogFatal
non heap max	jvm.nonheapmax	avg	Double	Hadoop:service=HBase,name=JvmMetrics#MemNonHeapMax
waiting	jvm.threadsawaiting	avg	Long	Hadoop:service=HBase,name=JvmMetrics#ThreadsWaiting
new	jvm.threadsnew	avg	Long	Hadoop:service=HBase,name=JvmMetrics#ThreadsNew

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Metric				
Name	Key	Agg	Type	Description
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non heap committed	jvm.nonheap-committed	avg	Double	Hadoop:service=HBase,name=JvmMetrics#MemNonHeap
runnable threads	jvm.thread- count	avg	Long	Hadoop:service=HBase,name=JvmMetrics#ThreadsRunna
ops	hbase.ugi- groups	sum	Long	Hadoop:service=HBase,name=UgiMetrics#GetGroupsNum
failure time	hbase.ugi- login-fail- time	sum	Double	Hadoop:service=HBase,name=UgiMetrics#LoginFailureAv *
				Login- Fail- ureNu- mOps
success time	hbase.ugi- login-suc- cess-time	sum	Double	Hadoop:service=HBase,name=UgiMetrics#LoginSuccessAv *
				Lo- gin- Suc- cess- Nu- mOps
success ops	hbase.ugi- login-suc- cess-ops	sum	Long	Hadoop:service=HBase,name=UgiMetrics#LoginSuccessNu
failure ops	hbase.ugi- login-fail- ops	sum	Long	Hadoop:service=HBase,name=UgiMetrics#LoginFailureNu
time	hbase.ugi- groups- time	sum	Double	Hadoop:service=HBase,name=UgiMetrics#v *
				Get- Group- sNu- mOps

Metric				
Name	Key	Agg	Type	Description
syncs	hbase.	Sum	Long	Count of syncs the HLog to HDFS.Hadoop:service=HBase,name=RegionServer,sub=WAL#A
appendbase.time	hbase.	Sum	Double	Time an append to the log took.Hadoop:service=HBase,name=RegionServer,sub=WAL#A*Ap-pend-Time__mean
appendbase.max time	hbase.	Max	Double	Time an append to the log took.Hadoop:service=HBase,name=RegionServer,sub=WAL#A
sync time	hbase.	Sum	Double	Time it took to sync the HLog to HDFS.Hadoop:service=HBase,name=RegionServer,sub=WAL#A*Sync-Time__mean

Metric				
Name	Key	Agg	Type	Description
appendbase.	Sumal.append	Count		Count of appends to the log.Hadoop:service=HBase,name=RegionServer,sub=WAL
appendbase.	Sumal.append	Size		Size (in bytes) of the data appended to the HLog.Hadoop:service=HBase,name=RegionServer,sub=WAL
size				*
				Ap-pend-Size_mean
appendbase.	Maxal.append	Size		Size of the largest append.Hadoop:service=HBase,name=RegionServer,sub=WAL#A
max				
size				
appendbase.	Minal.append	Size		Size of the smallest append.Hadoop:service=HBase,name=RegionServer,sub=WAL#A
min				
time				
appendbase.	Sumal.append	Count		Count of appends to the log.Hadoop:service=HBase,name=RegionServer,sub=WAL

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Metric				
Name	Key	Agg	Type	Description
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sync max time	hbase.1	Max	Long	Hadoop:service=HBase,name=RegionServer,sub=WAL#SyncTime
append base	hbase.1	Sum	Long	Count of appends to the log.Hadoop:service=HBase,name=RegionServer,sub=WAL#AppendBase
append min size	hbase.1	Min	Long	Size of append.Hadoop:service=HBase,name=RegionServer,sub=WAL#AppendMinSize
sync min time	hbase.1	Min	Long	Hadoop:service=HBase,name=RegionServer,sub=WAL#SyncMinTime
slow ap- pend	hbase.1	Sum	Long	Number of appends that were slow.Hadoop:service=HBase,name=RegionServer,sub=WAL#SlowAppend

Metric				
Name	Key	Agg	Type	Description
compaction.queue	hbase.regionserver.compaction.queue	Avg	Long	Current depth of the compaction request queue. If increasing, we are falling behind with store-file compaction.Hadoop:service=HBase,name=RegionServer,sub=Server
compaction.cells.size	hbase.regionserver.compaction.cells.size	Sum	Long	File size total amount of data processed during minor compactions, in bytes.Hadoop:service=HBase,name=RegionServer,sub=Server

Metric				
Name	Key	Agg	Type	Description
updates blocked time	hbase.regionserver.updatesBlockedTime	Sum	Long	Number of updates have been blocked so that the mem-store can be flushed. Hadoop:service=HBase,name=RegionServer,sub=Sum
major compacted cells	hbase.regionserver.majorCompactedCells	Sum	Long	The number of cells processed during major compactions. Hadoop:service=HBase,name=RegionServer,sub=Sum



Metric				
Name	Key	Agg	Type	Description
flush queue	hbase.regionserver.flush.queue	Avg	Long	Length of the queue for region flushes.If increasing, we are falling behind with clearing mem-stores out to HDFS.Hadoop:service=HBase,name=RegionServer,sub=Se
compact cells	hbase.regionserver.compaction	Sum	Long	Tells number of cells processed during minor com-pactions.Hadoop:service=HBase,name=RegionServer,sub=

Metric				
Name	Key	Agg	Type	Description
flushed cells	hbase.regionserver	sum	long	The number of cells flushed to disk.Hadoop:service=HBase,name=RegionServer,sub=Server
flushed cells size	hbase.regionserver	sum	long	The total amount of data flushed to disk, in bytes.Hadoop:service=HBase,name=RegionServer,sub=Server
major compacted cells size	hbase.master	sum	long	The major cells.size to-tal amount of data pro-cessed dur-ing ma-jor com-pactions, in bytes.Hadoop:service=HBase,name=RegionServer,sub=Server
assign min time	hbase.master	min	float	The time taken by the master to assign HBase regions.Hadoop:service=HBase,name=Master,sub=AssignmentManager

Metric				
Name	Key	Agg	Type	Description
rit count over thresh-old	hbase.master.hi	Long	Long	The number of regions that have been in transition longer than a threshold time (default: 60 seconds).Hadoop:service=HBase,name=Master,sub=AssignmentManager
rit count	hbase.master.hi	Long	Long	The number of regions in transition.Hadoop:service=HBase,name=Master,sub=AssignmentManager
assignshbase.master.hi	Long	Long	Long	Hadoop:service=HBase,name=Master,sub=AssignmentManager

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Metric				
Name	Key	Agg	Type	Description
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assign time	hbase.Master.DaemonHadoop	sum	double	Hadoop:service=HBase,name=Master,sub=AssignmentManager.*
			As-	
			sign_num_ops	
bulk as-sign time	hbase.Master.DaemonHadoop	sum	double	Hadoop:service=HBase,name=Master,sub=AssignmentManager.*
			BulkA-	
			s-	
			sign_num_ops	
rit old-est age	hbase.Master.Longs	max	long	The age of the longest region in transition.Hadoop:service=HBase,name=Master,sub=AssignmentManager
bulk as-sign max time	hbase.Master.Longs	max	long	Hadoop:service=HBase,name=Master,sub=AssignmentManager
assign max time	hbase.Master.Longs	max	long	Hadoop:service=HBase,name=Master,sub=AssignmentManager
bulk as-sign min time	hbase.Master.Longs	min	long	Hadoop:service=HBase,name=Master,sub=AssignmentManager

Metric				
Name	Key	Agg	Type	Description
bulk as- signs	hbase.master.hbase.as-signs	Sum	Double	Hadoop:service=HBase,name=Master,sub=AssignmentManager
incremental time	hbase.regionserver.incremental	Sum	Double	Hadoop:service=HBase,name=RegionServer,sub=Server#ID
			*	
			In- cre- ment__mean	
slow_puts	hbase.regionserver.puts	Sum	Double	Hadoop:service=HBase,name=RegionServer,sub=Server#ID
			The num- ber of of Puts that took over 1000ms to com- plete.	Hadoop:service=HBase,name=RegionServer,sub=Server#ID
get max time	hbase.regionserver.get	Max	Double	Hadoop:service=HBase,name=RegionServer,sub=Server#ID
append time	hbase.regionserver.append	Sum	Double	Hadoop:service=HBase,name=RegionServer,sub=Server#ID
			*	
			Ap- pend__mean	
deletes	hbase.regionserver.delete	Sum	Double	Hadoop:service=HBase,name=RegionServer,sub=Server#ID
replay min time	hbase.regionserver.replay	Min	Double	Hadoop:service=HBase,name=RegionServer,sub=Server#ID
mutate min time	hbase.regionserver.mutate	Min	Double	Hadoop:service=HBase,name=RegionServer,sub=Server#ID

Metric				
Name	Key	Agg	Type	Description
get time	hbase.	Sum	Double	Hadoop:service=HBase,name=RegionServer,sub=Server#C * Get__mean
incremental max time	hbase.	Max	Long	Hadoop:service=HBase,name=RegionServer,sub=Server#I
slow ap- pend	hbase.	Sum	Long	slow ap- pend num- ber of Ap- pend that took over 1000ms to com- plete.Hadoop:service=HBase,name=RegionServer,sub=Ser
mutate max time	hbase.	Max	Long	Hadoop:service=HBase,name=RegionServer,sub=Server#M
get min time	hbase.	Min	Long	Hadoop:service=HBase,name=RegionServer,sub=Server#C
incremental	hbase.	Sum	Long	Hadoop:service=HBase,name=RegionServer,sub=Server#I
replay max time	hbase.	Max	Long	Hadoop:service=HBase,name=RegionServer,sub=Server#I
delete time	hbase.	Sum	Double	Hadoop:service=HBase,name=RegionServer,sub=Server#I * Delete__mean

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Metric				
Name	Key	Agg	Type	Description
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slow deletes	hbase.1	Sum	Deletes	Low number of Deletes that took over 1000ms to complete.Hadoop:service=HBase,name=RegionServer,sub=Server#1
delete max time	hbase.1	Max	Deletes	Hadoop:service=HBase,name=RegionServer,sub=Server#1
append	hbase.1	Sum	Appends	Hadoop:service=HBase,name=RegionServer,sub=Server#1
append max time	hbase.1	Max	Appends	Hadoop:service=HBase,name=RegionServer,sub=Server#1
delete min time	hbase.1	Min	Deletes	Hadoop:service=HBase,name=RegionServer,sub=Server#1
mutates	hbase.1	Sum	Mutates	Hadoop:service=HBase,name=RegionServer,sub=Server#1
increment min time	hbase.1	Min	Increments	Hadoop:service=HBase,name=RegionServer,sub=Server#1
append min time	hbase.1	Min	Appends	Hadoop:service=HBase,name=RegionServer,sub=Server#1
replay time	hbase.1	Sum	Replays	Hadoop:service=HBase,name=RegionServer,sub=Server#1
			*	Re-play__mean

Metric				
Name	Key	Agg	Type	Description
slow in-crements	hbase.incr	slow	Long	The slow number of In-crements that took over 1000ms to complete.Hadoop:service=HBase,name=RegionServer,sub=Server#I
replay	hbase.replay	slow	Long	Hadoop:service=HBase,name=RegionServer,sub=Server#I
gets	hbase.get	slow	Long	Hadoop:service=HBase,name=RegionServer,sub=Server#C
slow gets	hbase.get	slow	Long	The number of Gets that took over 1000ms to complete.Hadoop:service=HBase,name=RegionServer,sub=Ser
mutate time	hbase.mutate	slow	Long	Hadoop:service=HBase,name=RegionServer,sub=Server#M
			*	Mu-tate_mean
restore max time	hbase.restore	slow	Long	Hadoop:service=HBase,name=Master,sub=Snapshots#Sna



Metric				
Name	Key	Agg	Type	Description
snapshot.time	hbase.Snapshots	DOUBLE	Time	Time it takes to finish snapshot().Hadoop:service=HBase,name=Master,sub=Snapshots#Snapshot-time__mean
snapshot.time.max	hbase.Snapshots	LONG	Time	Maximum time Hadoop:service=HBase,name=Master,sub=Snapshots#Snapshot-time
clone.time	hbase.Snapshots	DOUBLE	Time	Time it takes to finish cloneSnapshot().Hadoop:service=HBase,name=Master,sub=Snapshots#Snapshot-Clone-time__mean
snapshot.count	hbase.Snapshots	LONG	Count	Count of snapshot() invocations.Hadoop:service=HBase,name=Master,sub=Snapshots#Snapshot-count

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Metric				
Name	Key	Agg	Type	Description
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restorehbase.Snapshots	hbase.Snapshots	longest	Count	Count of re-storeSnapshot() in-vo-cations.Hadoop:service=HBase,name=Master,sub=Snapshots
clone min time	hbase.Snapshots	longest	Hadoop:service=HBase,name=Master,sub=Snapshots#Snapshots	
clones	hbase.Snapshots	longest	Count	Count of cloneSnapshot() in-vo-cations.Hadoop:service=HBase,name=Master,sub=Snapshots
snapshot min time	hbase.Snapshots	longest	Hadoop:service=HBase,name=Master,sub=Snapshots#Snapshots	
clone max time	hbase.Snapshots	longest	Hadoop:service=HBase,name=Master,sub=Snapshots#Snapshots	

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Metric				
Name	Key	Agg	Type	Description
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restorehbase.snapshot.restoreTime	hbase.snapshot.restoreTime	DOUBLE	Time	it takes to finish restoreSnapshot().Hadoop:service=HBase,name=Master,sub=Snapshots#SnapshotRestoreTime_mean
restorehbase.snapshot.restoreTimeMin	hbase.snapshot.restoreTime	DOUBLE	Time	it takes to finish restoreSnapshot().Hadoop:service=HBase,name=Master,sub=Snapshots#SnapshotRestoreTime_min
meta_hlog_split_max_size	hbase.Master.hlogSplitSize	LONG	Size	max size of HLog files being split.Hadoop:service=HBase,name=Master,sub=FileSystem#MasterHlogSplitSize_max
hlog_split_size	hbase.Master.hlogSplitSize	DOUBLE	Size	size of HLog files being split.Hadoop:service=HBase,name=Master,sub=FileSystem#MasterHlogSplitSize_mean
hlog_split_min_time	hbase.Master.hlogSplitSize	DOUBLE	Time	min time to split HLog files.Hadoop:service=HBase,name=Master,sub=FileSystem#MasterHlogSplitSize_min

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Metric				
Name	Key	Agg	Type	Description
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hlog split max size	hbase.Master.hlogsplitmaxsize	MAX	DOUBLE	Hadoop:service=HBase,name=Master,sub=FileSystem#HLogSplitMaxSize
hlog splits	hbase.Master.hlogsplitcount	SUM	DOUBLE	Count of HLog.splitLog() invocations.Hadoop:service=HBase,name=Master,sub=FileSystem#HLogSplitCount
meta hlog split time	hbase.Master.MetaHlogSplitTime	DOUBLE	DOUBLE	Time it takes to finish split-MetaLog().Hadoop:service=HBase,name=Master,sub=FileSystem#MetaHlogSplitTime_mean
meta hlog split max time	hbase.Master.hlogsplitmaxtime	MAX	DOUBLE	Hadoop:service=HBase,name=Master,sub=FileSystem#MetaHlogSplitMaxTime

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Name	Key	Agg	Type	Description
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hlog split time	hbase.master.logsplit	sum	Double	Time it takes to fin- ish HLog.splitLog().Hadoop:service=HBase,name=Master,sub= * HlogSplit- Time_mean
hlog split min size	hbase.master.logsplit	min	Long	File size.Hadoop:service=HBase,name=Master,sub=FileSystem#H
meta hlog splits	hbase.master.logmeta	sum	Long	Count of split- Met- a- Log() in- vo- ca- tions.Hadoop:service=HBase,name=Master,sub=FileSystem
meta hlog split min size	hbase.master.logmeta	min	Long	File size.Hadoop:service=HBase,name=Master,sub=FileSystem#M
meta hlog split min time	hbase.master.logmeta	min	Long	File size.Hadoop:service=HBase,name=Master,sub=FileSystem#M

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Metric				
Name	Key	Agg	Type	Description
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meta hlog splits	hbase:master:hlogmeta	sum	Long	Count of split-Log() in-volume of splits. tions.Hadoop:service=HBase,name=Master,sub=FileSystem
hlog split max time	hbase:master:hlogsplit	max	Long	Maximum time of split. tions.Hadoop:service=HBase,name=Master,sub=FileSystem#HLog
hlog splits	hbase:master:hlogsplit	count	Long	Count of HLog.splitLog() in-volume of splits. tions.Hadoop:service=HBase,name=Master,sub=FileSystem
meta hlog split size	hbase:master:hlogsplit	avg	Double	Average size of hbase:meta HLog files being split. split.Hadoop:service=HBase,name=Master,sub=FileSystem* MetaHlogSplit-Size_mean
lower limit	hbase:regionserver	avg	Long	Average size of regionserver lower limit. 'hbase.regionserver.global.memstore.lowerLimit' value.

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Metric				
Name	Key	Agg	Type	Description
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static bloom size	hbase.rstatic.bloom.size	Avg	Long	Size of the static bloom filters. Hadoop:service=HBase,name=RegionServer,sub=Server
store files	hbase.rstore.files	Avg	Long	Number of Store Files. Hadoop:service=HBase,name=RegionServer,sub=Server
store file index size	hbase.rstore.files.index.size	Avg	Long	Size of indexes in store-files on disk. Hadoop:service=HBase,name=RegionServer,sub=Server
store file size	hbase.rstore.files.size	Avg	Long	Size of store-files being served. Hadoop:service=HBase,name=RegionServer,sub=Server
mem store size	hbase.rmemstore.size	Avg	Long	Size of the mem-store. Hadoop:service=HBase,name=RegionServer,sub=Server

Metric				
Name	Key	Agg	Type	Description
static index size	hbase.regionserver.staticindexsize	Avg	Long	Size of the static indexes.Hadoop:service=HBase,name=RegionServer,sub=Server
upper limit	hbase.regionserver.global.memstore.upperLimit	Max	Long	Upper limit of the memstore value.
stores	hbase.regionserver.stores	Avg	Long	Number of Stores.Hadoop:service=HBase,name=RegionServer,sub=Server
regions	hbase.regionserver.regs	Avg	Long	Number of regions.Hadoop:service=HBase,name=RegionServer,sub=Server
active handlers	hbase.ipc.handler.active	Avg	Long	Number of active rpc handlers.Hadoop:service=HBase,name=IPC,sub=IPC#numActive
process call time	hbase.ipc.process.call.time	Sum	Double	Sum of process call time.Hadoop:service=HBase,name=IPC,sub=IPC#ProcessCallTime
process call min time	hbase.ipc.process.call.time	Min	Double	Min of process call time.Hadoop:service=HBase,name=IPC,sub=IPC#ProcessCallTime



Metric				
Name	Key	Agg	Type	Description
calls in priority queue	hbase.ipc.queue.length	avg	Long	The size number of currently enqueued priority (internal house-keeping) requests. Hadoop:service=HBase,name=IPC,sub=IPC#numC
authorization successes	hbase.ipc.authorization.successes	sum	Long	Number of authorization successes. Hadoop:service=HBase,name=IPC,sub=IPC#autho
received bytes	hbase.ipc.bytesReceived	sum	Long	Number of bytes received. Hadoop:service=HBase,name=IPC,sub=IPC#receiv
sent bytes	hbase.ipc.bytesSent	sum	Long	Number of bytes sent. Hadoop:service=HBase,name=IPC,sub=IPC#sentByt

Metric				
Name	Key	Agg	Type	Description
authorization failures	hbase.ipc.authz.failures	Sum	Long	The number of authorization failures. Hadoop:service=HBase,name=IPC,sub=IPC#authorization failures
process call max time	hbase.ipc.processing.maxtime	Max	Long	The maximum time taken by a process call. Hadoop:service=HBase,name=IPC,sub=IPC#ProcessCallTime
calls in replication queue	hbase.ipc.replication.queue.calls	Agg	Long	The number of calls in the replication queue. Hadoop:service=HBase,name=IPC,sub=IPC#numCallsInReplicationQueue
process calls	hbase.ipc.process.calls	Sum	Long	The number of process calls. Hadoop:service=HBase,name=IPC,sub=IPC#ProcessCalls
calls in general queue	hbase.ipc.queue.calls	Agg	Long	The number of calls in the general queue. Hadoop:service=HBase,name=IPC,sub=IPC#numCallsInGeneralQueue

Metric				
Name	Key	Agg	Type	Description
queue call time	hbase.ipc.queue.call.time	Sum	Double	Hadoop:service=HBase,name=IPC,sub=IPC#QueueCallTime_num_ops
queue call min time	hbase.ipc.queue.call.min.time	Min	Long	Hadoop:service=HBase,name=IPC,sub=IPC#QueueCallTime_min_ops
queue call max time	hbase.ipc.queue.call.max.time	Max	Long	Hadoop:service=HBase,name=IPC,sub=IPC#QueueCallTime_max_ops
queue size	hbase.ipc.queue.size	Avg	Long	Number of bytes in the call queues.Hadoop:service=HBase,name=IPC,sub=IPC#queue_size
authentication failures	hbase.rpc.authentication.failures	Sum	Long	Number of authentication failures.Hadoop:service=HBase,name=IPC,sub=IPC#authentication_failures
queue calls	hbase.ipc.queue.calls	Sum	Long	Hadoop:service=HBase,name=IPC,sub=IPC#QueueCallTime_num_ops

Metric				
Name	Key	Agg	Type	Description
open con- nec- tions	hbase.ipc	avg	connections	Number of open connections at the RPC layer. Hadoop:service=HBase,name=IPC,sub=IPC#numOpenConnections
authentication suc- cesses	hbase.ipc	sum	authentication successes	Number of authentication successes. Hadoop:service=HBase,name=IPC,sub=IPC#authenticationSuccesses
total re- quests	hbase.regionserver	sum	requests	Total number of requests this RegionServer has answered. Hadoop:service=HBase,name=RegionServer,sub=Server#totalRequests
read re- quests	hbase.regionserver	sum	read requests	Number of read requests. Hadoop:service=HBase,name=RegionServer,sub=Server#readRequests

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Metric				
Name	Key	Agg	Type	Description
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write re-requests	hbase.summary.requests	sum	double	Hadoop:service=HBase,name=RegionServer,sub=Server#v
applied ops	hbase.summary.ops.applied	sum	double	Hadoop:service=HBase,name=RegionServer,sub=Replicati
applied batches	hbase.summary.batches.applied	sum	double	Hadoop:service=HBase,name=RegionServer,sub=Replicati
balance min time	hbase.master.balance.min	min	double	Hadoop:service=HBase,name=Master,sub=Balancer#Bala
ops	hbase.master.balance.ops	avg	double	Hadoop:service=HBase,name=Master,sub=Balancer#Bala
time	hbase.master.balance.time	sum	double	Hadoop:service=HBase,name=Master,sub=Balancer#Bala
			*	
			Bal-	
			ancer-	
			Clus-	
			ter_mean	
misc in-vo-cations	hbase.summary.misc	sum	double	Hadoop:service=HBase,name=Master,sub=Balancer#misc
balance max time	hbase.master.balance.max	max	double	Hadoop:service=HBase,name=Master,sub=Balancer#Bala

Metric				
Name	Key	Agg	Type	Description
flushed cells	hbase.r	Sum	Long	Number of mob cells flushed to disk. Hadoop:service=HBase,name=RegionServer,sub=Server
scan cells size	hbase.r	Sum	Long	Total amount of scanned mob cells, in bytes. Hadoop:service=HBase,name=RegionServer,sub=Server
file cache hits	hbase.r	Avg	Float	Percentage of mob file cache hits. Hadoop:service=HBase,name=RegionServer,sub=Server
file caches	hbase.r	Avg	Long	Count of cached mob files. Hadoop:service=HBase,name=RegionServer,sub=Server

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Metric				
Name	Key	Agg	Type	Description
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compactmobcells	hbase.mob	Sum	Long	The number of cells moved to mob during compaction. Hadoop:service=HBase,name=RegionServer,sub=Server
filecacheaccesses	hbase.mob	Sum	Long	The count of accesses to the mob file cache. Hadoop:service=HBase,name=RegionServer,sub=Server
scanmobcells	hbase.mob	Sum	Long	The number of scanned mob cells. Hadoop:service=HBase,name=RegionServer,sub=Server
filecachemisses	hbase.mob	Sum	Long	The count of misses to the mob file cache. Hadoop:service=HBase,name=RegionServer,sub=Server





Metric				
Name	Key	Agg	Type	Description
compactmobcellsfromsize	hbase.mob	Sum	Long	The amount of cells moved from mob during compaction, in bytes.Hadoop:service=HBase,name=RegionServer,sub=Server
filecacheevictions	hbase.mob	Sum	Long	The number of items evicted from the mob file cache.Hadoop:service=HBase,name=RegionServer,sub=Server
flusheshbase.mob	hbase.mob	Sum	Long	The number of the flushes in mob-enabled stores.Hadoop:service=HBase,name=RegionServer,sub=Server

Metric				
Name	Key	Agg	Type	Description
flushed cells size	hbase.rmob.files.size	Sum	Long	The total amount of mob cells flushed to disk, in bytes.Hadoop:service=HBase,name=RegionServer,sub=Server
local files	hbase.rmob.files.local	Avg	Long	The percent of HFiles that are stored on the local hdfs data node.Hadoop:service=HBase,name=RegionServer,sub=Server
hlog files	hbase.rmob.files.hlog	Avg	Long	The number of write ahead logs not yet archived.Hadoop:service=HBase,name=RegionServer,sub=Server

Metric				
Name	Key	Agg	Type	Description
hlog files size	hbase.regionserver. hlog. files. size	Avg	Long	Size of all HLog Files.Hadoop:service=HBase,name=RegionServer,sub=Server
cluster re- quests	hbase.master. cluster. re- quests	Sum	Long	Hadoop:service=HBase,name=Master,sub=Server#cluster
dead re- gion servers	hbase.master. dead. re- gion. servers	Avg	Double	Hadoop:service=HBase,name=Master,sub=Server#numDe
region servers	hbase.master. region. servers	Avg	Double	Hadoop:service=HBase,name=Master,sub=Server#numRe
average load	hbase.master. average. load	Avg	Double	Hadoop:service=HBase,name=Master,sub=Server#average
mutati- on with- out wal	hbase.regionserver. mutation. with- out wal	Sum	Long	Number of mu- ta- tions that have been sent by clients with the write ahead log- ging turned off.Hadoop:service=HBase,name=RegionServer,sub=Server

Metric				
Name	Key	Agg	Type	Description
mutatehbase.ops.failed	ops	sum	Long	Number of Check and Mutate calls that failed the checks.Hadoop:service=HBase,name=RegionServer,sub=Server
mutatehbase.ops.passed	ops	sum	Long	Number of Check and Mutate calls that passed the checks.Hadoop:service=HBase,name=RegionServer,sub=Server
mutatehbase.ops.withoutwal.size	ops	sum	Long	Size of data that has been sent by clients with the write ahead logging turned off.Hadoop:service=HBase,name=RegionServer,sub=Server

Metric				
Name	Key	Agg	Type	Description
hits	hbase.cache.hits	sum	long	Count of the hit on the block cache.Hadoop:service=HBase,name=RegionServer,sub=Server
expresshit%	hbase.cache.hits	avg	float	The rate per-cent of the time that re-quests with the cache turned on hit the cache.Hadoop:service=HBase,name=RegionServer,sub=Server
hit%	hbase.cache.hits	avg	float	Percent of block cache re-quests that are hits.Hadoop:service=HBase,name=RegionServer,sub=Server

Metric				
Name	Key	Agg	Type	Description
cache free size	hbase.cache.free.size	Avg	Long	Size of the block cache that is not occupied.Hadoop:service=HBase,name=RegionServer,sub=Server
block cache size	hbase.block.cache.size	Avg	Long	Size of the block cache.Hadoop:service=HBase,name=RegionServer,sub=Server
miss	hbase.cache.misses	Sum	Long	Number of re-quests for a block that missed the block cache.Hadoop:service=HBase,name=RegionServer,sub=Server
cache count	hbase.cache.count	Avg	Long	Number of block in the block cache.Hadoop:service=HBase,name=RegionServer,sub=Server

Metric				
Name	Key	Agg	Type	Description
evictions	hbase.cache.evictions	Count		Count of the number of blocks evicted from the block cache.Hadoop:service=HBase,name=RegionServer,sub=Server
shipped batches	hbase.replication.hadoopshipped	Sum		HBase,name=RegionServer,sub=Replication
shipped ops	hbase.replication.hadoopshipped	Sum		HBase,name=RegionServer,sub=Replication
log ed-its read	hbase.replication.hadoopsend	Sum		HBase,name=RegionServer,sub=Replication
log queue	hbase.replication.hadoopsend	Sum		HBase,name=RegionServer,sub=Replication
shipped bytes	hbase.replication.hadoopshipped	Sum		HBase,name=RegionServer,sub=Replication
log ed-its fil-tered	hbase.replication.hadoopfilter	Sum		HBase,name=RegionServer,sub=Replication
log read bytes	hbase.replication.hadoopsend	Sum		HBase,name=RegionServer,sub=Replication

Metric				
Name	Key	Agg	Type	Description
hedge	hbase.srvs.hedge	Long	The	
read			num-	
wins			ber	
			of	
			times	
			we	
			started	
			a	
			hedged	
			read	
			and	
			a	
			hedged	
			read	
			won.	Hadoop:service=HBase,name=RegionServer,sub=Serv
hedge	hbase.srvs.hedge	Long	The	
reads			num-	
			ber	
			of	
			times	
			we	
			started	
			a	
			hedged	
			read.	Hadoop:service=HBase,name=RegionServer,sub=Serv
stores	hbase.srvs	Long		
flushes	hbase.flushes	Long		
compactions	hbase.compactions	Long		
store	hbase.srvs	Long		
files	hbase.srvs	Long		
store	hbase.srvs	Long		
file	hbase.srvs	Long		
in-				
dex				
size				



Metric				
Name	Key	Agg	Type	Description
sync	hbase.hsync.latency	Max	Latency	max
read	hbase.hread.latency	Max	Latency	max
write	hbase.hwrite.latency	Max	Latency	max
sync	hbase.hsync.latency	Min	Latency	min
read	hbase.hread.latency	Min	Latency	min
write	hbase.hwrite.latency	Min	Latency	min
flush	hbase.hflush.queue	Avg	Double	size
max	hbase.hflush.time	Max	Time	max
min	hbase.hflush.time	Min	Time	min
flushes	hbase.hflush	Sum	Count	
max	hbase.hflush	Max	Count	
memstore	hbase.memstore	Avg	Size	
min	hbase.memstore	Min	Size	
min	hbase.compaction	Min	Time	
max	hbase.compaction	Max	Time	
max	hbase.compaction	Max	Size	
compactions	hbase.compaction	Sum	Count	
compaction	hbase.compaction	Avg	Double	size
min	hbase.compaction	Min	Size	

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Metric				
Name	Key	Agg	Type	Description
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cache size	hbase.cache.size	Avg	Long	Block size
miss count	hbase.cache.miss.count	Sum	Long	Block misses
cache free	hbase.cache.free	Avg	Long	Block free
hit count	hbase.cache.hit.count	Sum	Long	Block hits
block cache count	hbase.block.cache.count	Avg	Long	Block count
block cache hits ratio	hbase.block.cache.hits.ratio	Avg	Double	Block hits ratio
evicted count	hbase.cache.evicted.count	Sum	Long	Block evictions
block cache hits ratio	hbase.block.cache.hits.ratio	Avg	Double	Block hits ratio
max splits	hbase.splits.max	Max	Long	Max splits
splits	hbase.splits	Sum	Long	Splits
max splits size	hbase.splits.size.max	Max	Long	Max splits size
min splits size	hbase.splits.size.min	Min	Long	Min splits size
splits	hbase.splits	Sum	Long	Splits
regions	hbase.regions	Avg	Long	Regions
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Metric				
Name	Key	Agg	Type	Description
total memory max	jvm.mem. Max	Sum	Double	Hadoop:service=HBase,name=JvmMetrics#MemMaxMemory
info	jvm.log. Info	Sum	Long	Hadoop:service=HBase,name=JvmMetrics#LogInfo
non heap used	jvm.mem. NonHeapUsed	Sum	Double	Hadoop:service=HBase,name=JvmMetrics#MemNonHeapUsed
error	jvm.log. Error	Sum	Long	Hadoop:service=HBase,name=JvmMetrics#LogError
heap com- mit- ted	jvm.mem. HeapCommitted	Sum	Double	Hadoop:service=HBase,name=JvmMetrics#MemHeapCommitted
heap max	jvm.mem. HeapMax	Sum	Double	Hadoop:service=HBase,name=JvmMetrics#MemHeapMax
blocked	jvm.threads. Blocked	Avg	Long	Hadoop:service=HBase,name=JvmMetrics#ThreadsBlocked
terminated	jvm.threads. Terminated	Avg	Long	Hadoop:service=HBase,name=JvmMetrics#ThreadsTerminated
warn	jvm.log. Warn	Sum	Long	Hadoop:service=HBase,name=JvmMetrics#LogWarn
timed wait- ing	jvm.threads. WaitingTimed	Avg	Long	Hadoop:service=HBase,name=JvmMetrics#ThreadsWaitingTimed
heap used	jvm.mem. HeapUsed	Sum	Double	Hadoop:service=HBase,name=JvmMetrics#MemHeapUsed
fatal	jvm.log. Fatal	Sum	Long	Hadoop:service=HBase,name=JvmMetrics#LogFatal
non heap max	jvm.mem. NonHeapMax	Sum	Double	Hadoop:service=HBase,name=JvmMetrics#MemNonHeapMax
waiting	jvm.threads. Waiting	Avg	Long	Hadoop:service=HBase,name=JvmMetrics#ThreadsWaiting
new	jvm.threads. New	Avg	Long	Hadoop:service=HBase,name=JvmMetrics#ThreadsNew

Metric				
Name	Key	Agg	Type	Description
non heap committed	jvm.nonheap-committed	AvGp	Double	Hadoop:service=HBase,name=JvmMetrics#MemNonHeap
runnable	jvm.thread- runnable	AvGp	Long	Hadoop:service=HBase,name=JvmMetrics#ThreadsRunna
ops	hbase.ugi- group-get	Sum	Long	Hadoop:service=HBase,name=UgiMetrics#GetGroupsNum
failure time	hbase.ugi- login-fail	Sum	Double	Hadoop:service=HBase,name=UgiMetrics#LoginFailureAv *
				Login- Fail- ureNu- mOps
success time	hbase.ugi- login-suc	Sum	Double	Hadoop:service=HBase,name=UgiMetrics#LoginSuccessAv *
				Lo- gin- Suc- cess- Nu- mOps
success ops	hbase.ugi- login-suc	Sum	Long	Hadoop:service=HBase,name=UgiMetrics#LoginSuccessN
failure ops	hbase.ugi- login-fail	Sum	Long	Hadoop:service=HBase,name=UgiMetrics#LoginFailureN
time	hbase.ugi- group-get	Sum	Double	Hadoop:service=HBase,name=UgiMetrics#v *
				Get- Group- sNu- mOps

Metric				
Name	Key	Agg	Type	Description
syncs	hbase.	Sum	Long	Count of syncs the HLog to HDFS.Hadoop:service=HBase,name=RegionServer,sub=WAL#A
appendbase.time	hbase.	Sum	Double	Time an append to the log took.Hadoop:service=HBase,name=RegionServer,sub=WAL#A * Append-Time__mean
appendbase.max time	hbase.	Max	Double	Time an append to the log took.Hadoop:service=HBase,name=RegionServer,sub=WAL#A
sync time	hbase.	Sum	Double	Time it took to sync the HLog to HDFS.Hadoop:service=HBase,name=RegionServer,sub=WAL#A * Sync-Time__mean

Metric				
Name	Key	Agg	Type	Description
appendbase.	Sumal.append	Count		Count of appends to the log.Hadoop:service=HBase,name=RegionServer,sub=WAL
appendbase.	Sumal.append	Size		Size (in bytes) of the data appended to the HLog.Hadoop:service=HBase,name=RegionServer,sub=WAL
size				*
				Ap-pend-Size_mean
appendbase.	Maxal.append	Size		Size of the largest append.Hadoop:service=HBase,name=RegionServer,sub=WAL#A
max				
size				
appendbase.	Minal.append	Time		Time taken for the smallest append.Hadoop:service=HBase,name=RegionServer,sub=WAL#A
min				
time				
appendbase.	Sumal.append	Count		Count of appends to the log.Hadoop:service=HBase,name=RegionServer,sub=WAL

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Metric				
Name	Key	Agg	Type	Description
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sync max time	hbase.wal.syncTime	Max	Long	Hadoop:service=HBase,name=RegionServer,sub=WAL#SyncTime
append base min size	hbase.wal.appendSize	Sum	Long	Count of appends to the log.Hadoop:service=HBase,name=RegionServer,sub=WAL#AppendSize
sync min time	hbase.wal.syncTime	Min	Long	Hadoop:service=HBase,name=RegionServer,sub=WAL#SyncTime
slow ap- pend	hbase.wal.appendSlow	Sum	Long	Number of appends that were slow.Hadoop:service=HBase,name=RegionServer,sub=WAL#AppendSlow

Metric				
Name	Key	Agg	Type	Description
compaction.queue	hbase.regionserver	Avg	Compaction	Current depth of the compaction request queue. If increasing, we are falling behind with store-file compaction.Hadoop:service=HBase,name=RegionServer,sub=Server
compaction.cells.size	hbase.regionserver	Sum	Compaction	File size total amount of data processed during minor compactions, in bytes.Hadoop:service=HBase,name=RegionServer,sub=Server



Metric				
Name	Key	Agg	Type	Description
updates blocked time	hbase.regionserver.updatesBlockedTime	Sum	Long	Number of updates have been blocked so that the mem-store can be flushed. Hadoop:service=HBase,name=RegionServer,sub=S
major compacted cells	hbase.regionserver.majorCompactedCells	Sum	Long	The number of cells processed during major compactions. Hadoop:service=HBase,name=RegionServer,sub=S

Metric				
Name	Key	Agg	Type	Description
flush queue	hbase.regionserver.flush	Avg	Long	Length of the queue for region flushes. If increasing, we are falling behind with clearing mem-stores out to HDFS. Hadoop:service=HBase,name=RegionServer,sub=Se
compact cells	hbase.regionserver.compaction	Sum	Long	Tells number of cells processed during minor com-pactions. Hadoop:service=HBase,name=RegionServer,sub=

Metric				
Name	Key	Agg	Type	Description
flushed cells	hbase.regionserver	sum	long	The number of cells flushed to disk. Hadoop:service=HBase,name=RegionServer,sub=Server
flushed cells size	hbase.regionserver	sum	long	The total amount of data flushed to disk, in bytes. Hadoop:service=HBase,name=RegionServer,sub=Server
major compacted cells size	hbase.master	sum	long	The total amount of data processed during major compacted, in bytes. Hadoop:service=HBase,name=RegionServer,sub=Server
assign min time	hbase.master	min	float	The minimum time taken by the master to assign a region to a server. Hadoop:service=HBase,name=Master,sub=AssignmentManager

Metric				
Name	Key	Agg	Type	Description
rit count over thresh-old	hbase.master.hi	avg	Long	The number of regions that have been in transition longer than a threshold time (default: 60 seconds).Hadoop:service=HBase,name=Master,sub=AssignmentManager
rit count	hbase.master.hi	avg	Long	The number of regions in transition.Hadoop:service=HBase,name=Master,sub=AssignmentManager
assignshbase.master.hi	sum	avg	Long	Hadoop:service=HBase,name=Master,sub=AssignmentManager

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Metric				
Name	Key	Agg	Type	Description
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assign time	hbase.Master.DaemonHadoop	sum	double	Hadoop:service=HBase,name=Master,sub=AssignmentManager.*
			As-	
			sign_num_ops	
bulk as-sign time	hbase.Master.DaemonHadoop	sum	double	Hadoop:service=HBase,name=Master,sub=AssignmentManager.*
			BulkA-	
			s-	
			sign_num_ops	
rit old-est age	hbase.Master.LongestTime	max	long	The age of the longest region in transition.Hadoop:service=HBase,name=Master,sub=AssignmentManager
bulk as-sign max time	hbase.Master.DaemonHadoop	sum	double	Hadoop:service=HBase,name=Master,sub=AssignmentManager
assign max time	hbase.Master.DaemonHadoop	sum	double	Hadoop:service=HBase,name=Master,sub=AssignmentManager
bulk as-sign min time	hbase.Master.DaemonHadoop	sum	double	Hadoop:service=HBase,name=Master,sub=AssignmentManager

Metric				
Name	Key	Agg	Type	Description
bulk as- signs	hbase.master.hbase.as-signs	Sum	Double	Hadoop:service=HBase,name=Master,sub=AssignmentManager
incremental time	hbase.regionserver.incremental_time	Sum	Double	Hadoop:service=HBase,name=RegionServer,sub=Server#ID
slow_puts	hbase.regionserver.slow_puts	Sum	Double	The number of Puts that took over 1000ms to complete.Hadoop:service=HBase,name=RegionServer,sub=Server#ID
get max time	hbase.regionserver.get_max_time	Max	Double	Hadoop:service=HBase,name=RegionServer,sub=Server#ID
append time	hbase.regionserver.append_time	Sum	Double	Hadoop:service=HBase,name=RegionServer,sub=Server#ID
deletes	hbase.regionserver.deletes	Sum	Double	Hadoop:service=HBase,name=RegionServer,sub=Server#ID
replay min time	hbase.regionserver.replay_min_time	Min	Double	Hadoop:service=HBase,name=RegionServer,sub=Server#ID
mutate min time	hbase.regionserver.mutate_min_time	Min	Double	Hadoop:service=HBase,name=RegionServer,sub=Server#ID

Metric				
Name	Key	Agg	Type	Description
get time	hbase. table. ops. get	Sum	Double	Hadoop:service=HBase,name=RegionServer,sub=Server#C * Get_mean
incremental max time	hbase. table. ops. incrmax	Max	Long	Hadoop:service=HBase,name=RegionServer,sub=Server#I
slow ap- pend	hbase. table. ops. append	Sum	Long	slow num- ber of Ap- pend that took over 1000ms to com- plete.Hadoop:service=HBase,name=RegionServer,sub=Ser
mutate max time	hbase. table. ops. mutate	Max	Long	Hadoop:service=HBase,name=RegionServer,sub=Server#M
get min time	hbase. table. ops. getmin	Min	Long	Hadoop:service=HBase,name=RegionServer,sub=Server#C
incremental	hbase. table. ops. incr	Sum	Long	Hadoop:service=HBase,name=RegionServer,sub=Server#I
replay max time	hbase. table. ops. replay	Max	Long	Hadoop:service=HBase,name=RegionServer,sub=Server#I
delete time	hbase. table. ops. delete	Sum	Double	Hadoop:service=HBase,name=RegionServer,sub=Server#I * Delete_mean

Metric				
Name	Key	Agg	Type	Description
slow deletes	hbase.1	Sum	Deletes	Deletes that took over 1000ms to complete.Hadoop:service=HBase,name=RegionServer,sub=Server#1
delete max time	hbase.1	Max	Deletes	Deletes.Hadoop:service=HBase,name=RegionServer,sub=Server#1
append min time	hbase.1	Min	Appends	Appends.Hadoop:service=HBase,name=RegionServer,sub=Server#1
append max time	hbase.1	Max	Appends	Appends.Hadoop:service=HBase,name=RegionServer,sub=Server#1
delete min time	hbase.1	Min	Deletes	Deletes.Hadoop:service=HBase,name=RegionServer,sub=Server#1
mutate min time	hbase.1	Min	Mutates	Mutates.Hadoop:service=HBase,name=RegionServer,sub=Server#1
increment min time	hbase.1	Min	Increments	Increments.Hadoop:service=HBase,name=RegionServer,sub=Server#1
append min time	hbase.1	Min	Appends	Appends.Hadoop:service=HBase,name=RegionServer,sub=Server#1
replay time	hbase.1	Sum	Replays	Replays.Hadoop:service=HBase,name=RegionServer,sub=Server#1
			*	Re-play__mean



Metric				
Name	Key	Agg	Type	Description
slow in- cre- ments	hbase.incr	slow	Long	The slow number of In-cre-ments that took over 1000ms to complete.Hadoop:service=HBase,name=RegionServer,sub=Server#I
replay	hbase.replay	slow	Long	Hadoop:service=HBase,name=RegionServer,sub=Server#I
gets	hbase.get	slow	Long	Hadoop:service=HBase,name=RegionServer,sub=Server#C
slow gets	hbase.get	slow	Long	The number of Gets that took over 1000ms to complete.Hadoop:service=HBase,name=RegionServer,sub=Ser
mutate time	hbase.mutate	slow	Long	Hadoop:service=HBase,name=RegionServer,sub=Server#M
restore max time	hbase.restore	slow	Long	Hadoop:service=HBase,name=Master,sub=Snapshots#Sna

Metric				
Name	Key	Agg	Type	Description
snapshot.time	hbase.Snapshots	DOUBLE	Time	it takes to finish snapshot().Hadoop:service=HBase,name=Master,sub=Snapshots#Snapshot-time__mean
snapshot.max time	hbase.Snapshots	LONG	Time	Hadoop:service=HBase,name=Master,sub=Snapshots#Snapshot-time__max
clone time	hbase.Snapshots	DOUBLE	Time	it takes to finish cloneSnapshot().Hadoop:service=HBase,name=Master,sub=Snapshots#Snapshot-Clone-time__mean
snapshot.count	hbase.Snapshots	LONG	Count	Count of snapshot() invocations.Hadoop:service=HBase,name=Master,sub=Snapshots#Snapshot-count

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Metric				
Name	Key	Agg	Type	Description
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restorehbase.snapshot.longestClone	hbase.snapshot.longestClone	max	Count	of re- storeS- nap- shot() in- vo- ca- tions.Hadoop:service=HBase,name=Master,sub=Snapshots#Snapshots
clone min time	hbase.snapshot.longestClone	min	Count	of cloneS- nap- shot() in- vo- ca- tions.Hadoop:service=HBase,name=Master,sub=Snapshots#Snapshots
clones	hbase.snapshot.longestClone	max	Count	of cloneS- nap- shot() in- vo- ca- tions.Hadoop:service=HBase,name=Master,sub=Snapshots#Snapshots
snapshot min time	hbase.snapshot.longestClone	min	Count	of cloneS- nap- shot() in- vo- ca- tions.Hadoop:service=HBase,name=Master,sub=Snapshots#Snapshots
clone max time	hbase.snapshot.longestClone	max	Count	of cloneS- nap- shot() in- vo- ca- tions.Hadoop:service=HBase,name=Master,sub=Snapshots#Snapshots

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Metric				
Name	Key	Agg	Type	Description
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restorehbase.snapshot.restore.time	hbase.snapshot.restore.time	sum	Double	Time it takes to finish restoreSnapshot().Hadoop:service=HBase,name=Master,sub=Snapshots#SnapshotRestoreTime_mean
restorehbase.snapshot.restore.min time	hbase.snapshot.restore.time	min	Double	Time it takes to finish restoreSnapshot().Hadoop:service=HBase,name=Master,sub=Snapshots#SnapshotRestoreTime_min
meta hlog split max size	hbase.master.hlog.split.size	max	Long	Maximum size of HLog split.Hadoop:service=HBase,name=Master,sub=FileSystem#MasterHlogSplitSize_max
hlog split size	hbase.master.hlog.split.size	sum	Double	Size of HLog files being split.Hadoop:service=HBase,name=Master,sub=FileSystem#MasterHlogSplitSize_mean
hlog split min time	hbase.master.hlog.split.time	min	Double	Minimum time to split HLog files.Hadoop:service=HBase,name=Master,sub=FileSystem#MasterHlogSplitTime_min

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Metric				
Name	Key	Agg	Type	Description
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hlog split time	hbase.master.logsplit	sum	Double	Time it takes to fin- ish HLog.splitLog().Hadoop:service=HBase,name=Master,sub= * HlogSplit- Time_mean
hlog split min size	hbase.master.logsplit	min	Long	File size.Hadoop:service=HBase,name=Master,sub=FileSystem#H
meta hlog splits	hbase.master.logmeta	sum	Long	Count of split- Met- a- Log() in- vo- ca- tions.Hadoop:service=HBase,name=Master,sub=FileSystem
meta hlog split min size	hbase.master.logmeta	min	Long	File size.Hadoop:service=HBase,name=Master,sub=FileSystem#M
meta hlog split min time	hbase.master.logmeta	min	Long	File size.Hadoop:service=HBase,name=Master,sub=FileSystem#M

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Metric				
Name	Key	Agg	Type	Description
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meta hlog splits	hbase:meta	sum	Long	Count of split-Log() in-volume of splits. tions.Hadoop:service=HBase,name=Master,sub=FileSystem
hlog split max time	hbase:master	max	Long	Maximum time to split a log. tions.Hadoop:service=HBase,name=Master,sub=FileSystem#HLogSplitMaxTime
hlog splits	hbase:master	sum	Long	Count of HLog.splitLog() in-volume of splits. tions.Hadoop:service=HBase,name=Master,sub=FileSystem
meta hlog split size	hbase:meta	avg	Double	Size of hbase:meta HLog files being split. split.Hadoop:service=HBase,name=Master,sub=FileSystem * MetaHlogSplit-Size_mean
lower limit	hbase:regionserver	avg	Long	Lower limit of region server memstore size. 'hbase.regionserver.global.memstore.lowerLimit' value.

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Metric				
Name	Key	Agg	Type	Description
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static bloom size	hbase.rstatic.bloom.size	avg	Long	Size of the static bloom filters. Hadoop:service=HBase,name=RegionServer,sub=Server
store files	hbase.rstore.files	avg	Long	Number of Store Files. Hadoop:service=HBase,name=RegionServer,sub=Server
store file in-dex size	hbase.rstore.index.size	avg	Long	Size of in-dexes in store-files on disk. Hadoop:service=HBase,name=RegionServer,sub=Server
store file size	hbase.rstore.files.size	avg	Long	Size of store-files being served. Hadoop:service=HBase,name=RegionServer,sub=Server
mem store size	hbase.rmemstore.size	avg	Long	Size of the mem-store. Hadoop:service=HBase,name=RegionServer,sub=Server



Metric				
Name	Key	Agg	Type	Description
static index size	hbase.regionserver.staticindexsize	Avg	Long	Size of the static indexes.Hadoop:service=HBase,name=RegionServer,sub=Server
upper limit	hbase.regionserver.global.memstore.upperLimit	Max	Long	Upper limit of the memstore value.Hadoop:service=HBase,name=RegionServer,sub=Server
stores	hbase.regionserver.stores	Avg	Long	Number of Stores.Hadoop:service=HBase,name=RegionServer,sub=Server
regions	hbase.regionserver.regs	Avg	Long	Number of regions.Hadoop:service=HBase,name=RegionServer,sub=Server
active handlers	hbase.ipc.handler.active	Avg	Long	Number of active rpc handlers.Hadoop:service=HBase,name=IPC,sub=IPC#numActiveHandlers
process call time	hbase.ipc.processCallTime	Sum	Double	Sum of process call time.Hadoop:service=HBase,name=IPC,sub=IPC#ProcessCallTime
process call min time	hbase.ipc.processCallTime	Min	Double	Min of process call time.Hadoop:service=HBase,name=IPC,sub=IPC#ProcessCallTime

Metric				
Name	Key	Agg	Type	Description
calls in priority queue	hbase.ipc.queue.length	avg	Long	The size number of currently enqueued priority (internal house-keeping) requests. Hadoop:service=HBase,name=IPC,sub=IPC#numC
authorization successes	hbase.ipc.authorization.successes	sum	Long	Number of authorization successes. Hadoop:service=HBase,name=IPC,sub=IPC#autho
received bytes	hbase.ipc.bytesReceived	sum	Long	Number of bytes received. Hadoop:service=HBase,name=IPC,sub=IPC#receiv
sent bytes	hbase.ipc.bytesSent	sum	Long	Number of bytes sent. Hadoop:service=HBase,name=IPC,sub=IPC#sentByt

Metric				
Name	Key	Agg	Type	Description
authorization failures	hbase.ipc.authz.failures	Sum	Long	The number of authorization failures. Hadoop:service=HBase,name=IPC,sub=IPC#authorization failures
process call max time	hbase.ipc.processing.maxtime	Max	Long	The maximum time taken by a process call. Hadoop:service=HBase,name=IPC,sub=IPC#ProcessCallTime
calls in replication queue	hbase.ipc.replication.queue.calls	Agg	Long	The number of calls in the replication queue. Hadoop:service=HBase,name=IPC,sub=IPC#numCallsInReplicationQueue
process calls	hbase.ipc.process.calls	Sum	Long	The number of process calls. Hadoop:service=HBase,name=IPC,sub=IPC#ProcessCalls
calls in general queue	hbase.ipc.queue.calls	Agg	Long	The number of calls in the general queue. Hadoop:service=HBase,name=IPC,sub=IPC#numCallsInGeneralQueue

Metric				
Name	Key	Agg	Type	Description
queue call time	hbase.ipc.queue.call.time	Sum	Double	Hadoop calls service=HBase,name=IPC,sub=IPC#QueueCallTime_num_ops
queue call min time	hbase.ipc.queue.call.min.time	Min	Long	Hadoop calls service=HBase,name=IPC,sub=IPC#QueueCallTime_min_ops
queue call max time	hbase.ipc.queue.call.max.time	Max	Long	Hadoop calls service=HBase,name=IPC,sub=IPC#QueueCallTime_max_ops
queue size	hbase.ipc.queue.size	Avg	Long	Number of bytes in the call queues.Hadoop:service=HBase,name=IPC,sub=IPC#queue_size
authentication failures	hbase.rpc.authentication.failures	Sum	Long	Number of authentication failures.Hadoop:service=HBase,name=IPC,sub=IPC#authentication_failures
queue calls	hbase.ipc.queue.calls	Sum	Long	Hadoop calls service=HBase,name=IPC,sub=IPC#QueueCallTime_calls

Metric				
Name	Key	Agg	Type	Description
open con- nec- tions	hbase.ipc	avg	connections	Number of open connections at the RPC layer. Hadoop:service=HBase,name=IPC,sub=IPC#numOpenConnections
authentication suc- cesses	hbase.ipc	sum	authentication successes	Number of authentication successes. Hadoop:service=HBase,name=IPC,sub=IPC#authenticationSuccesses
total re- quests	hbase.regionserver	sum	requests	Total number of requests this RegionServer has answered. Hadoop:service=HBase,name=RegionServer,sub=Server#totalRequests
read re- quests	hbase.regionserver	sum	read requests	Number of read requests. Hadoop:service=HBase,name=RegionServer,sub=Server#readRequests

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Metric				
Name	Key	Agg	Type	Description
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write re-requests	hbase.summary.requests	sum	double	Hadoop:service=HBase,name=RegionServer,sub=Server#v
applied ops	hbase.summary.replication.ops	sum	double	Hadoop:service=HBase,name=RegionServer,sub=Replicati
applied batches	hbase.summary.replication.batches	sum	double	Hadoop:service=HBase,name=RegionServer,sub=Replicati
balanced min time	hbase.master.balancer.hbaseops	avg	double	Hadoop:service=HBase,name=Master,sub=Balancer#Bala
ops	hbase.master.balancer.hbaseops	avg	double	Hadoop:service=HBase,name=Master,sub=Balancer#Bala
time	hbase.master.balancer.hbaseops	sum	double	Hadoop:service=HBase,name=Master,sub=Balancer#Bala
			*	
			Bal-	
			ancer-	
			Clus-	
			ter_mean	
misc in-vo-cations	hbase.summary.hbaseops	sum	double	Hadoop:service=HBase,name=Master,sub=Balancer#misc
balanced max time	hbase.master.balancer.hbaseops	avg	double	Hadoop:service=HBase,name=Master,sub=Balancer#Bala

Metric				
Name	Key	Agg	Type	Description
flushed cells	hbase.r	Sum	Long	Number of mob cells flushed to disk. Hadoop:service=HBase,name=RegionServer,sub=Server
scan cells size	hbase.r	Sum	Long	Total amount of scanned mob cells, in bytes. Hadoop:service=HBase,name=RegionServer,sub=Server
file cache hits	hbase.r	Avg	Float	Percentage of the mob file cache hits. Hadoop:service=HBase,name=RegionServer,sub=Server
file caches	hbase.r	Avg	Long	Count of cached mob files. Hadoop:service=HBase,name=RegionServer,sub=Server

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Metric				
Name	Key	Agg	Type	Description
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compactmobcells	hbase.mob	Sum	Long	The number of cells moved to mob during compaction. Hadoop:service=HBase,name=RegionServer,sub=Server
filecacheaccesses	hbase.mob	Sum	Long	The count of accesses to the mob file cache. Hadoop:service=HBase,name=RegionServer,sub=Server
scanmobcells	hbase.mob	Sum	Long	The number of scanned mob cells. Hadoop:service=HBase,name=RegionServer,sub=Server
filecachemisses	hbase.mob	Sum	Long	The count of misses to the mob file cache. Hadoop:service=HBase,name=RegionServer,sub=Server



Metric	Name	Key	Agg	Type	Description
compactHbase.Sunmob.CompactHbase	compactHbase.Sunmob.CompactHbase	from mob cells	Sum	Long	The number of cells moved from mob during compaction.Hadoop:service=HBase,name=RegionServer,sub=Server
compactHbase.Sunmob.CompactHbase	compactHbase.Sunmob.CompactHbase	into mob cells size	Sum	Long	The total amount of cells move to mob during compaction, in bytes.Hadoop:service=HBase,name=RegionServer,sub=Server

Metric				
Name	Key	Agg	Type	Description
compactmobcellsfromsize	hbase.mob	Sum	Long	The amount of cells moved from mob during compaction, in bytes.Hadoop:service=HBase,name=RegionServer,sub=Server
filecacheevictions	hbase.mob	Sum	Long	The number of items evicted from the mob file cache.Hadoop:service=HBase,name=RegionServer,sub=Server
flusheshbase.mob	hbase.mob	Sum	Long	The number of the flushes in mob-enabled stores.Hadoop:service=HBase,name=RegionServer,sub=Server

Metric				
Name	Key	Agg	Type	Description
flushed cells size	hbase.rmob.files.size	Sum	Long	The total amount of mob cells flushed to disk, in bytes.Hadoop:service=HBase,name=RegionServer,sub=Server
local files	hbase.rmob.local.files	Avg	Long	The percent of HFiles that are stored on the local hdfs data node.Hadoop:service=HBase,name=RegionServer,sub=Server
hlog files	hbase.rmob.hlog.files	Avg	Long	The number of write ahead logs not yet archived.Hadoop:service=HBase,name=RegionServer,sub=Server

Metric				
Name	Key	Agg	Type	Description
hlog files size	hbase.regionserver. hlog.size	Avg	Long	Size of all HLog Files.Hadoop:service=HBase,name=RegionServer,sub=Server
cluster re- quests	hbase.master. cluster.requests	Sum	Long	Hadoop:service=HBase,name=Master,sub=Server#cluster
dead re- gion servers	hbase.master. dead.servers	Avg	Double	Hadoop:service=HBase,name=Master,sub=Server#numDe
region servers	hbase.master. region.servers	Avg	Double	Hadoop:service=HBase,name=Master,sub=Server#numRe
average load	hbase.master. average.load	Avg	Double	Hadoop:service=HBase,name=Master,sub=Server#average
mutatio- n with- out wal	hbase.regionserver. mutations.without.wal	Sum	Long	Number of mu- ta- tions that have been sent by clients with the write ahead log- ging turned off.Hadoop:service=HBase,name=RegionServer,sub=Server

Metric				
Name	Key	Agg	Type	Description
mutatehbase.ops.failed	hbase.operations	sum	Long	Number of Check and Mutate calls that failed the checks.Hadoop:service=HBase,name=RegionServer,sub=Server
mutatehbase.ops.passed	hbase.operations	sum	Long	Number of Check and Mutate calls that passed the checks.Hadoop:service=HBase,name=RegionServer,sub=Server
mutatehbase.ops.withoutwal.size	hbase.operations	sum	Long	Size of data that has been sent by clients with the write ahead logging turned off.Hadoop:service=HBase,name=RegionServer,sub=Server

Metric				
Name	Key	Agg	Type	Description
hits	hbase.cache.hits	sum	long	Count of the hit on the block cache.Hadoop:service=HBase,name=RegionServer,sub=Server
expresshit%	hbase.cache.hit%	avg	float	The rate per-cent of the time that re-quests with the cache turned on hit the cache.Hadoop:service=HBase,name=RegionServer,sub=Server
hit%	hbase.cache.hit%	avg	float	Percent of block cache re-quests that are hits.Hadoop:service=HBase,name=RegionServer,sub=Server

Metric				
Name	Key	Agg	Type	Description
cache free size	hbase.cache.free.size	Avg	Long	Size of the block cache that is not occupied.Hadoop:service=HBase,name=RegionServer,sub=Server
block cache size	hbase.cache.block.size	Avg	Long	Size of the block cache.Hadoop:service=HBase,name=RegionServer,sub=Server
miss	hbase.cache.misses	Sum	Long	Number of re-quests for a block that missed the block cache.Hadoop:service=HBase,name=RegionServer,sub=Server
cache count	hbase.cache.blockcount	Avg	Long	Number of block in the block cache.Hadoop:service=HBase,name=RegionServer,sub=Server

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Metric				
Name	Key	Agg	Type	Description
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evictions	hbase.cache.evictions	Count		Count of the number of blocks evicted from the block cache. Hadoop:service=HBase,name=RegionServer,sub=Server
shipped batches	hbase.replication.hadoops shipped	Sum		HBase,name=RegionServer,sub=Replication
shipped ops	hbase.replication.hadoops shipped	Sum		HBase,name=RegionServer,sub=Replication
log ed-its read	hbase.replication.hadoops send	Sum		HBase,name=RegionServer,sub=Replication
log queue	hbase.replication.hadoops	Sum		HBase,name=RegionServer,sub=Replication
shipped bytes	hbase.replication.hadoops shipped	Sum		HBase,name=RegionServer,sub=Replication
log ed-its fil-tered	hbase.replication.hadoops filter	Sum		HBase,name=RegionServer,sub=Replication
log read bytes	hbase.replication.hadoops send	Sum		HBase,name=RegionServer,sub=Replication



Metric				
Name	Key	Agg	Type	Description
hedgehbase.readwins	hbase.subs.hedgehbase.readwins	Sum	Long	The number of times we started a hedged read and a hedged read won.
hedgehbase.reads	hbase.subs.hedgehbase.reads	Sum	Long	The number of times we started a hedged read.

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Metric Name	Key	Agg	Type	Description
stores	hbase.stores	Avg	Long	
flushes	hbase.flushes	Sum	Long	
compactions	hbase.compactions	Sum	Long	
store files	hbase.store.files	Avg	Long	
store file index size	hbase.store.index.size	Avg	Long	
sync	hbase.fs.sync.latency.max	Max	Long	
read	hbase.fs.read.latency.max	Max	Long	
write	hbase.fs.write.latency.max	Max	Long	
sync	hbase.fs.sync.latency.min	Min	Long	

Metric Name	Key	Agg	Type	Description
read	hbase.fs.read.latency.min	Min	Long	
write	hbase.fs.write.latency.min	Min	Long	
flush queue	hbase.flushes.queue.size	Avg	Double	
max	hbase.memstore.flushes.time.max	Max	Long	
min	hbase.flushes.size.min	Min	Long	
flushes	hbase.memstore.flushes	Sum	Long	
max	hbase.flushes.size.max	Max	Long	
memstore size	hbase.memstore.size	Avg	Long	
min	hbase.memstore.flushes.time.min	Min	Long	
min	hbase.compactions.time.min	Min	Long	
max	hbase.compactions.time.max	Max	Long	
max	hbase.compactions.size.max	Max	Long	
compactions	hbase.compactions	Sum	Long	
compaction queue	hbase.compactions.queue.size	Avg	Double	
min	hbase.compactions.size.min	Min	Long	
cache size	hbase.cache.block.size	Avg	Long	
miss count	hbase.cache.block.misses	Sum	Long	
cache free	hbase.cache.block.free	Avg	Long	
hit count	hbase.cache.block.hits	Sum	Long	
block cache count	hbase.cache.block.count	Avg	Long	
blockCacheHitRatio	hbase.cache.block.hits.ratio	Avg	Long	
evicted count	hbase.cache.block.evictions	Sum	Long	
blockCacheHitCachingRatio	hbase.cache.block.caching.hits.ratio	Avg	Long	
max	hbase.splits.time.max	Max	Long	
splits	hbase.splits	Sum	Long	
max	hbase.splits.size.max	Max	Long	
min	hbase.splits.size.min	Min	Long	
splits	hbase.splits	Sum	Long	
regions	hbase.regions	Avg	Long	