MDS CONFIG REFERENCE

`mon force standby active`

Description: If `true` monitors force standby-replay to be active. Set under `[mon]` or `[global]`.
Type: Boolean
Default: `true`

`mds cache memory limit`

Description: The memory limit the MDS should enforce for its cache. Administrators should use this instead of `mds cache size`.
Type: 64-bit Integer Unsigned
Default: `1073741824`

`mds cache reservation`

Description: The cache reservation (memory or inodes) for the MDS cache to maintain. Once the MDS begins dipping into its reservation, it will recall client state until its cache size shrinks to restore the reservation.
Type: Float
Default: `0.05`

`mds cache size`

Description: The number of inodes to cache. A value of 0 indicates an unlimited number. It is recommended to use `mds_cache_memory_limit` to limit the amount of memory the MDS cache uses.
Type: 32-bit Integer
Default: `0`

`mds cache mid`

Description: The insertion point for new items in the cache LRU (from the top).
Type: Float
Default: `0.7`

`mds dir commit ratio`

Description: The fraction of directory that is dirty before Ceph commits using a full update (instead of partial update).
Type: Float
Default: `0.5`

`mds dir max commit size`

Description: The maximum size of a directory update before Ceph breaks it into smaller transactions) (MB).
Type: 32-bit Integer
Default: `90`

`mds decay halflife`

Description: The half-life of MDS cache temperature.
Type: Float
Default: `5`

`mds beacon interval`

Description: The frequency (in seconds) of beacon messages sent to the monitor.
Type: Float
Default: `4`

`mds beacon grace`

Description: The interval without beacons before Ceph declares an MDS laggy (and possibly replace it).

Type: Float
Default: 15

`mds blacklist interval`

Description: The blacklist duration for failed MDSs in the OSD map. Note, this controls how long failed MDS daemons will stay in the OSDMap blacklist. It has no effect on how long something is blacklisted when the administrator blacklists it manually. For example, `ceph osd blacklist add` will still use the default blacklist time.
Type: Float
Default: `24.0*60.0`

`mds reconnect timeout`

Description: The interval (in seconds) to wait for clients to reconnect during MDS restart.
Type: Float
Default: 45

`mds tick interval`

Description: How frequently the MDS performs internal periodic tasks.
Type: Float
Default: 5

`mds dirstat min interval`

Description: The minimum interval (in seconds) to try to avoid propagating recursive stats up the tree.
Type: Float
Default: 1

`mds scatter nudge interval`

Description: How quickly dirstat changes propagate up.
Type: Float
Default: 5

`mds client prealloc inos`

Description: The number of inode numbers to preallocate per client session.
Type: 32-bit Integer
Default: `1000`

`mds early reply`

Description: Determines whether the MDS should allow clients to see request results before they commit to the journal.
Type: Boolean
Default: `true`

`mds use tmap`

Description: Use trivialmap for directory updates.
Type: Boolean
Default: `true`

`mds default dir hash`

Description: The function to use for hashing files across directory fragments.
Type: 32-bit Integer
Default: 2 (i.e., rjenkins)

`mds log skip corrupt events`

Description: Determines whether the MDS should try to skip corrupt journal events during journal replay.
Type: Boolean

Default: `false`

`mds log max events`

Description: The maximum events in the journal before we initiate trimming. Set to `-1` to disable limits.
Type: 32-bit Integer
Default: `-1`

`mds log max segments`

Description: The maximum number of segments (objects) in the journal before we initiate trimming. Set to `-1` to disable limits.
Type: 32-bit Integer
Default: `30`

`mds log max expiring`

Description: The maximum number of segments to expire in parallels
Type: 32-bit Integer
Default: `20`

`mds log eopen size`

Description: The maximum number of inodes in an EOpen event.
Type: 32-bit Integer
Default: `100`

`mds bal sample interval`

Description: Determines how frequently to sample directory temperature (for fragmentation decisions).
Type: Float
Default: `3`

`mds bal replicate threshold`

Description: The maximum temperature before Ceph attempts to replicate metadata to other nodes.
Type: Float
Default: `8000`

`mds bal unreplicate threshold`

Description: The minimum temperature before Ceph stops replicating metadata to other nodes.
Type: Float
Default: `0`

`mds bal split size`

Description: The maximum directory size before the MDS will split a directory fragment into smaller bits.
Type: 32-bit Integer
Default: `10000`

`mds bal split rd`

Description: The maximum directory read temperature before Ceph splits a directory fragment.
Type: Float
Default: `25000`

`mds bal split wr`

Description: The maximum directory write temperature before Ceph splits a directory fragment.
Type: Float
Default: `10000`

`mds bal split bits`

Description: The number of bits by which to split a directory fragment.
Type: 32-bit Integer
Default: `3`

`mds bal merge size`

Description: The minimum directory size before Ceph tries to merge adjacent directory fragments.
Type: 32-bit Integer
Default: `50`

`mds bal interval`

Description: The frequency (in seconds) of workload exchanges between MDSs.
Type: 32-bit Integer
Default: `10`

`mds bal fragment interval`

Description: The delay (in seconds) between a fragment being elegible for split or merge and executing the fragmentation change.
Type: 32-bit Integer
Default: `5`

`mds bal fragment fast factor`

Description: The ratio by which frags may exceed the split size before a split is executed immediately (skipping the fragment interval)
Type: Float
Default: `1.5`

`mds bal fragment size max`

Description: The maximum size of a fragment before any new entries are rejected with ENOSPC.
Type: 32-bit Integer
Default: `100000`

`mds bal idle threshold`

Description: The minimum temperature before Ceph migrates a subtree back to its parent.
Type: Float
Default: `0`

`mds bal max`

Description: The number of iterations to run balancer before Ceph stops. (used for testing purposes only)
Type: 32-bit Integer
Default: `-1`

`mds bal max until`

Description: The number of seconds to run balancer before Ceph stops. (used for testing purposes only)
Type: 32-bit Integer
Default: `-1`

`mds bal mode`

Description: The method for calculating MDS load.

- `0` = Hybrid.
- `1` = Request rate and latency.
- `2` = CPU load.

Type: 32-bit Integer
Default: `0`

`mds bal min rebalance`

Description: The minimum subtree temperature before Ceph migrates.
Type: Float
Default: `0.1`

`mds bal min start`

Description: The minimum subtree temperature before Ceph searches a subtree.
Type: Float
Default: `0.2`

`mds bal need min`

Description: The minimum fraction of target subtree size to accept.
Type: Float
Default: `0.8`

`mds bal need max`

Description: The maximum fraction of target subtree size to accept.
Type: Float
Default: `1.2`

`mds bal midchunk`

Description: Ceph will migrate any subtree that is larger than this fraction of the target subtree size.
Type: Float
Default: `0.3`

`mds bal minchunk`

Description: Ceph will ignore any subtree that is smaller than this fraction of the target subtree size.
Type: Float
Default: `0.001`

`mds bal target removal min`

Description: The minimum number of balancer iterations before Ceph removes an old MDS target from the MDS map.
Type: 32-bit Integer
Default: `5`

`mds bal target removal max`

Description: The maximum number of balancer iteration before Ceph removes an old MDS target from the MDS map.
Type: 32-bit Integer
Default: `10`

`mds replay interval`

Description: The journal poll interval when in standby-replay mode. (“hot standby”)
Type: Float
Default: `1`

`mds shutdown check`

Description: The interval for polling the cache during MDS shutdown.
Type: 32-bit Integer
Default: `0`

`mds thrash exports`

Description: Ceph will randomly export subtrees between nodes (testing only).
Type: 32-bit Integer
Default: `0`

`mds thrash fragments`

Description: Ceph will randomly fragment or merge directories.
Type: 32-bit Integer
Default: `0`

`mds dump cache on map`

Description: Ceph will dump the MDS cache contents to a file on each MDSMap.
Type: Boolean
Default: `false`

`mds dump cache after rejoin`

Description: Ceph will dump MDS cache contents to a file after rejoining the cache (during recovery).
Type: Boolean
Default: `false`

`mds verify scatter`

Description: Ceph will assert that various scatter/gather invariants are `true` (developers only).
Type: Boolean
Default: `false`

`mds debug scatterstat`

Description: Ceph will assert that various recursive stat invariants are `true` (for developers only).
Type: Boolean
Default: `false`

`mds debug frag`

Description: Ceph will verify directory fragmentation invariants when convenient (developers only).
Type: Boolean
Default: `false`

`mds debug auth pins`

Description: The debug auth pin invariants (for developers only).
Type: Boolean
Default: `false`

`mds debug subtrees`

Description: The debug subtree invariants (for developers only).
Type: Boolean
Default: `false`

`mds kill mdstable at`

Description: Ceph will inject MDS failure in MDSTable code (for developers only).
Type: 32-bit Integer
Default: `0`

`mds kill export at`

Description: Ceph will inject MDS failure in the subtree export code (for developers only).
Type: 32-bit Integer
Default: `0`

`mds kill import at`

Description: Ceph will inject MDS failure in the subtree import code (for developers only).
Type: 32-bit Integer
Default: `0`

`mds kill link at`

Description: Ceph will inject MDS failure in hard link code (for developers only).
Type: 32-bit Integer
Default: `0`

`mds kill rename at`

Description: Ceph will inject MDS failure in the rename code (for developers only).
Type: 32-bit Integer
Default: `0`

`mds wipe sessions`

Description: Ceph will delete all client sessions on startup (for testing only).
Type: Boolean
Default: `false`

`mds wipe ino prealloc`

Description: Ceph will delete ino preallocation metadata on startup (for testing only).
Type: Boolean
Default: `false`

`mds skip ino`

Description: The number of inode numbers to skip on startup (for testing only).
Type: 32-bit Integer
Default: `0`

`mds standby for name`

Description: An MDS daemon will standby for another MDS daemon of the name specified in this setting.
Type: String
Default: N/A

`mds standby for rank`

Description: An MDS daemon will standby for an MDS daemon of this rank.
Type: 32-bit Integer
Default: `-1`

`mds standby replay`

Description: Determines whether a `ceph-mds` daemon should poll and replay the log of an active MDS (hot standby).
Type: Boolean
Default: `false`

`mds min caps per client`

Description: Set the minimum number of capabilities a client may hold.
Type: Integer
Default: `100`

`mds max ratio caps per client`

Description: Set the maximum ratio of current caps that may be recalled during MDS cache pressure.
Type: Float
Default: `0.8`