

Common Compaction options

1. `enabled` (default: `true`): This option determines whether minor compactions should run. When set to `true`, minor compactions are enabled. You can also use the `nodetool enableautocompaction` command to start running compactions.

2. `tombstone_threshold` (default: 0.2): This option specifies the threshold for tombstones in an SSTable. If more than 20% of the SSTable's content consists of tombstones (deleted data markers), Cassandra considers performing a single SSTable compaction for that SSTable. The purpose is to reclaim disk space by removing the tombstones.

3. `tombstone_compaction_interval` (default: 86400 seconds or 1 day): When a single SSTable compaction is unable to drop tombstones, this option defines how often Cassandra should attempt a compaction for the SSTable. The interval ensures that an SSTable is not constantly recomputed.

4. `log_all` (default: `false`): This option enables detailed compaction logging. When set to `true`, Cassandra provides more detailed logging information related to compactions.

5. `unchecked_tombstone_compaction` (default: `false`): By default, when performing a single SSTable compaction, Cassandra applies strict checks to determine if it is safe to drop tombstones. Enabling this option (`true`) disables those checks. However, tombstones are only dropped if it is safe to do so; otherwise, the compaction may still rewrite the SSTable without removing any tombstones.

6. `only_purge_repaired_tombstone` (default: `false`): This option ensures that tombstones are only dropped if the data has been repaired. When set to `true`, Cassandra provides an extra level of safety by removing tombstones only for repaired data.

7. `min_threshold` (default: 4): This option sets the lower limit for the number of SSTables before triggering a compaction. It specifies the minimum number of SSTables required in a level (excluding Level 0 in Size Tiered Compaction) for a compaction to be initiated. Note that this option is not used in the Leveled Compaction Strategy.

8. `max_threshold` (default: 32): This option sets the upper limit for the number of SSTables before triggering a compaction. It defines the maximum number of SSTables allowed in a level (excluding Level 0 in Size Tiered Compaction) before a compaction is triggered. Similar to the previous option, the `max_threshold` is not used in the Leveled Compaction Strategy.

These options provide flexibility and fine-grained control over how compactions are performed in Cassandra, allowing you to optimize space usage, tombstone removal, and the frequency of compaction.