Node Tool Informational Commands

Command	Description	Syntax	Example
nodetool status	Shows cluster node status (Up/Down, load, ownership).	nodetool status [-r] [keyspace_name] (-r resolves IPs to hostnames)	nodetool status Output: ```Datacenter:disable-run
nodetool ring	Displays token ring information for nodes.	nodetool ring [-r] [keyspace_name]	nodetool ring Output: Datacenter: datacenter1 ====================== Address Rack Status State Load Owns Token 127.0.0.1 rack1 Up Normal 119.67 KiB 100.00% -9223372036854775808 127.0.0.2 rack1 Up Normal 124.56 KiB 100.00% 0
nodetool info	Shows node details like load, uptime, and heap usage.	nodetool info	N/A (output includes: Disk Total: 1.0 TB, Disk Used: 500 GB, etc.)
nodetool describecluster	Returns cluster name, snitch, partitioner, and schema version.	nodetool describecluster	N/A
nodetool version	Shows DSE and Cassandra versions.	nodetool version	N/A
nodetool describering <keyspace>	Lists token ranges for a keyspace.	nodetool describering <keyspace>	N/A
nodetool getendpoints <keyspace> <table> <key>	Returns endpoints owning a partition key.	nodetool getendpoints <keyspace> <table> <key>	N/A

Node Management Commands

Command	Description	Syntax	Example
nodetool decommission	Gracefully removes a node from the ring, streaming data to others.	nodetool decommission	N/A (use on a live node; blocks until complete)
nodetool drain	Flushes memtables and stops accepting writes (for shutdown).	nodetool drain	N/A
nodetool join	Joins a node to the cluster ring.	nodetool join	N/A (run after starting the node)
nodetool removenode <node_id>	Removes a node (use if decommission fails).	nodetool removenode <node_id>	N/A
nodetool assassinate <endpoint>	Force-removes a dead node (last resort; no data replication).	nodetool assassinate <endpoint>	N/A
nodetool move <new_token>	Moves node to a new token on the ring.	nodetool move <new_token>	N/A
nodetool rebuild	Rebuilds data by streaming from other nodes (e.g., after adding DC).	nodetool rebuild [-dc <dc_name>]	N/A

Data Consistency and Repair Commands

Command	Description	Syntax	Example
nodetool repair	Repairs data replicas across nodes (anti-entropy). Defaults to full sequential repair.	nodetool repair [-full | -inc] [-local | -dc <dc>] [-seq | -dcpar] [keyspace [table...]]	nodetool repair -seq (Sequential full repair of all keyspaces) nodetool repair -pr (Partitioner range repair) nodetool repair -dc DC1 (Local DC repair)
nodetool cleanup <keyspace> [table...]	Removes data no longer owned by the node.	nodetool cleanup <keyspace> [table...]	N/A (run after decommission)
nodetool flush <keyspace> [table...]	Flushes memtables to disk SSTables.	nodetool flush <keyspace> [table...]	N/A

Command	Description	Syntax	Example
nodetool scrub <keyspace> [table...]	Discards corrupted SSTables and snapshots/rewrites others.	nodetool scrub <keyspace> [table...]	N/A
nodetool verify <keyspace> [table...]	Checks data checksums against replicas.	nodetool verify <keyspace> [table...]	N/A
nodetool mark_unrepaired <keyspace> [table...]	Marks SSTables as unrepaired (resets for next repair).	nodetool mark_unrepaired <keyspace> [table...]	N/A

Compaction Commands

Command	Description	Syntax	Example
nodetool compact	Forces major compaction on tables or SSTables.	nodetool compact [-s] [keyspace [table...]] | <sstable...> (-s splits output)	nodetool compact cycling cyclist (Compacts all SSTables in table)
nodetool compactionstats	Shows compaction progress and stats.	nodetool compactionstats [-A] (-A for hierarchy details)	N/A (output: Compaction pending tasks: 1, Completed: 50%)
nodetool setcompactionthroughput <value>	Sets compaction throughput (MB/s; 0 disables).	nodetool setcompactionthroughput <value>	nodetool setcompactionthroughput 32
nodetool disableautocompaction <keyspace> [table...]	Pauses automatic compaction.	nodetool disableautocompaction <keyspace> [table...]	N/A
nodetool enableautocompaction <keyspace> [table...]	Resumes automatic compaction.	nodetool enableautocompaction <keyspace> [table...]	N/A

Adjust Settings Commands

Command	Description	Syntax	Example
nodetool setstreamthroughput <value>	Sets streaming throughput (Mb/s).	nodetool setstreamthroughput <value>	nodetool setstreamthroughput 400
nodetool settraceprobability <value>	Sets request tracing probability (0.0-1.0).	nodetool settraceprobability <value>	nodetool settraceprobability 0.1
nodetool gettimeout	Shows current timeout values.	nodetool gettimeout	N/A
nodetool settimeout <type> <value>	Sets a timeout temporarily (ms).	nodetool settimeout <type> <value>	nodetool settimeout read 5000

Diagnose Issues Commands

Command	Description	Syntax	Example
nodetool tpstats	Shows thread pool statistics.	nodetool tpstats	N/A (output: ReadStage: 2 active, 0 pending)
nodetool failuredetector	Shows phi values for node health.	nodetool failuredetector	N/A
nodetool gossipinfo	Displays gossip protocol info.	nodetool gossipinfo	N/A