

# Cassandra Monitoring Cheatsheet

**Note:**

- Depending on how you install Cassandra, binaries may be located in the install directory (e.g. `~/apache-cassandra-3.9/bin/nodetool`) or in your `/usr` directory (e.g. `/usr/bin/nodetool`). For simplicity, the following commands assume that your binaries are in a directory in your `$PATH`.
- For more info, visit [dtdg.co/monitoring-cassandra](https://dtdg.co/monitoring-cassandra)



## Nodetool commands

General monitoring commands	
METRIC DESCRIPTION	COMMAND
High-level status of cluster	<code>nodetool status</code>
Stats from a specific node	<code>nodetool --host &lt;ip_address&gt; info</code>
Stats on all keyspaces and column families	<code>nodetool cfstats</code>
Stats from a specific keyspace	<code>nodetool cfstats &lt;keyspace_name&gt;</code>
Stats from a specific column family	<code>nodetool cfstats &lt;keyspace_name&gt;.&lt;cf_name&gt;</code>

Garbage collection metrics—more info	
METRIC DESCRIPTION	COMMAND
Garbage collections (count and elapsed time)	<code>nodetool gcstats</code>

## JMX metrics via JConsole

**Note:** The JConsole graphical utility can be found in `<jdk_install_dir>/bin`. You can open it simply by running `jconsole` if that directory is in your `$PATH`.

Query performance—more info		
METRIC DESCRIPTION	JMX PATH	ATTRIBUTE
Reads per second (avg over previous min)	<code>org.apache.cassandra.metrics:type=ClientRequest,scope=Read,name=Latency</code>	OneMinuteRate
Writes per second (avg over previous min)	<code>org.apache.cassandra.metrics:type=ClientRequest,scope=Write,name=Latency</code>	OneMinuteRate
Reads (total count)	<code>org.apache.cassandra.metrics:type=ClientRequest,scope=Read,name=Latency</code>	Count
Writes (total count)	<code>org.apache.cassandra.metrics:type=ClientRequest,scope=Write,name=Latency</code>	Count
Read latency (total elapsed time in µs)	<code>org.apache.cassandra.metrics:type=ClientRequest,scope=Read,name=TotalLatency</code>	Count
Write latency (total elapsed time in µs)	<code>org.apache.cassandra.metrics:type=ClientRequest,scope=Write,name=TotalLatency</code>	Count
Key cache (hits)	<code>org.apache.cassandra.metrics:type=Cache,scope=KeyCache,name=Hits</code>	Count
Key cache (total requests)	<code>org.apache.cassandra.metrics:type=Cache,scope=KeyCache,name=Requests</code>	Count

Disk usage—more info		
METRIC DESCRIPTION	JMX PATH	ATTRIBUTE
Disk used on a node (bytes)	<code>org.apache.cassandra.metrics:type=Storage,name=Load</code>	Count
Disk used by a column family (bytes)	<code>org.apache.cassandra.metrics:type=ColumnFamily,keyspace=&lt;keyspace_name&gt;,scope=&lt;cf_name&gt;,name=TotalDiskSpaceUsed</code>	Count
Completed compaction tasks	<code>org.apache.cassandra.metrics:type=Compaction,name=CompletedTasks</code>	Value
Pending compaction tasks	<code>org.apache.cassandra.metrics:type=Compaction,name=PendingTasks</code>	Value

Compaction metrics—more info	
METRIC DESCRIPTION	COMMAND
Compactions in progress, pending compaction tasks	<code>nodetool compactionstats</code>

Thread pool metrics—more info	
METRIC DESCRIPTION	COMMAND
Thread pool statistics, including pending tasks and blocked tasks	<code>nodetool tpstats</code>

Garbage collections—more info		
METRIC DESCRIPTION	JMX PATH	ATTRIBUTE
ParNew GCs (count)	<code>java.lang:type=GarbageCollector,name=ParNew</code>	CollectionCount
ParNew GCs (total elapsed time in ms)	<code>java.lang:type=GarbageCollector,name=ParNew</code>	CollectionTime
CMS GCs (count)	<code>java.lang:type=GarbageCollector,name=ConcurrentMarkSweep</code>	CollectionCount
CMS GCs (total elapsed time in ms)	<code>java.lang:type=GarbageCollector,name=ConcurrentMarkSweep</code>	CollectionTime

Exceptions—more info		
METRIC DESCRIPTION	JMX PATH	ATTRIBUTE
Total exceptions	<code>org.apache.cassandra.metrics:type=Storage,name=Exceptions</code>	Count
Timeouts (reads)	<code>org.apache.cassandra.metrics:type=ClientRequest,scope=Read,name=Timeouts</code>	Count
Timeouts (writes)	<code>org.apache.cassandra.metrics:type=ClientRequest,scope=Write,name=Timeouts</code>	Count
Unavailable exceptions (reads)	<code>org.apache.cassandra.metrics:type=ClientRequest,scope=Read,name=Unavailables</code>	Count
Unavailable exceptions (writes)	<code>org.apache.cassandra.metrics:type=ClientRequest,scope=Write,name=Unavailables</code>	Count

Default directories		
	PACKAGE INSTALL	TARBALL INSTALL
Configuration files	<code>/etc/cassandra</code>	<code>&lt;install_dir&gt;/conf</code>
<code>cassandra.in.sh</code> (sets environment variables)	<code>/usr/share/cassandra</code>	<code>&lt;install_dir&gt;/bin</code>
Logs	<code>/var/log/cassandra</code>	<code>&lt;install_dir&gt;/logs</code>
Data and commit log	<code>/var/lib/cassandra</code>	<code>&lt;install_dir&gt;/data</code>