Restart Type	N (NDB 8.0.13)

If a data node has not completed its startup sequence within the time specified by this parameter, the node startup fails. Setting this parameter to 0 (the default value) means that no data node timeout is applied.

For nonzero values, this parameter is measured in milliseconds. For data nodes containing extremely large amounts of data, this parameter should be increased. For example, in the case of a data node containing several gigabytes of data, a period as long as 10−15 minutes (that is, 600000 to 1000000 milliseconds) might be required to perform a node restart.

- `StartNoNodeGroupTimeout`

Version (or later)	NDB 8.0.13
Type or units	milliseconds
Default	15000
Range	0 - 4294967039 (0xFFFFFEFF)
Restart Type	N (NDB 8.0.13)

When a data node is configured with `Nodegroup = 65536`, is regarded as not being assigned to any node group. When that is done, the cluster waits `StartNoNodegroupTimeout` milliseconds, then treats such nodes as though they had been added to the list passed to the `--nowait-nodes` option, and starts. The default value is `15000` (that is, the management server waits 15 seconds). Setting this parameter equal to `0` means that the cluster waits indefinitely.

`StartNoNodegroupTimeout` must be the same for all data nodes in the cluster; for this reason, you should always set it in the `[ndbd default]` section of the `config.ini` file, rather than for individual data nodes.

See Section 23.5.7, “Adding NDB Cluster Data Nodes Online”, for more information.

- `HeartbeatIntervalDbDb`

Version (or later)	NDB 8.0.13
Type or units	milliseconds
Default	5000
Range	10 - 4294967039 (0xFFFFFEFF)
Restart Type	N (NDB 8.0.13)

One of the primary methods of discovering failed nodes is by the use of heartbeats. This parameter states how often heartbeat signals are sent and how often to expect to receive them. Heartbeats cannot be disabled.

After missing four heartbeat intervals in a row, the node is declared dead. Thus, the maximum time for discovering a failure through the heartbeat mechanism is five times the heartbeat interval.

The default heartbeat interval is 5000 milliseconds (5 seconds). This parameter must not be changed drastically and should not vary widely between nodes. If one node uses 5000 milliseconds and the node