Hadoop DFS Name Space Quotas Administrator Guide

HDFS allows the administrator to set quotas on individual directories. Newly created directories have no associated quota. The largest quota is Long.Max_Value. A quota of one forces a directory to remain empty.

The directory quota is a hard limit on the number of names in the tree rooted at that directory. File/directory creations fault if the quota would be exceeded. Quotas stick to renamed directories; the rename operation faults if operation would result in a quota violation. The attempt to set a quota faults if the directory would be in violation of the new quota.

Quotas are persistent with the fsimage. When starting, if the fsimage is immediately in violation of aquota (perhaps the fsimage was surreptitiously modified), startup operation fails with an error report. Setting/removing a quota creates a journal entry.

The following new commands or new options are added to support quotas. The first two are administration commands.

- *dfsadmin -setquota <N> <directory>...<directory>*
  Set the quota for each directory. Best effort for each directory, with faults reported if N is not a positive long integer, the directory does not exist or it is a file, or the directory would immediately exceed the new quota.
- *dfsadmin -clrquota <directory>...<director>*
  Remove any quota for each directory. Best effort for each directory, with faults reported if the directory does not exist or it is a file. It is not a fault if the directory has no quota.
- *fs -count -q <directory>...<directory>*
  With the *-q* option, also report the quota value set for each directory, and the available quota remaining. If the directory does not have a quota set, the reported values are *none* and *inf*.