HANDLING FAILURES WHILE WRITING DATA IN HDFS

1. When writing data in the blocks of the data nodes , an acknowledgement signal is generated after each completed block.

A ack queue is created and each ack signal is added in front of the data block. So if all the data blocks are written successfully the ack of the alst data block is the front of the data node.

Hence , it is easy to determine failures if a block is not written on a data node.

1. If a data node allows to write data to it it is a good data node, else it is a bad data node.

So , as instructed by the name node ,if the data node accepts the data written to it, a suggestion is sent to the name node to write all the data in the same data node as it is a good data node.

1. If a data node does not accept the request to write data into it then a request is sent for two good data nodes closer so data can be written into them.
2. The data is always written in the good data nodes of the pipeline.
3. If no replications are created the name node notices it and replicas are created for the data blocks.
4. The minimum number of replicas is 1. Atleast 1 replica of the data is present .

dfs.namenode.replication.min(default value=1)

7.If a target replication value is set then the block is replicated asynchronously till the value is reached.

dfs.replication,( default value = 3)