**High availability**

Hadoop 1.x NameNode had a single point of Failure (SPOF) problem which meant that if the NameNode fails, then that Hadoop Cluster will become unusable i.e goes into downtime unless and until an Admin restarts the namenode.

In Hadoop 2.x overcomes this SPOF shortcoming by providing support for multiple NameNodes. It introduces Hadoop 2.x High Availabilty feature that brings in an extra NameNode(Stand by Namenode) to the Hadoop Architecture which is configured for automatic failure.

The Main purpose of High Availabilty is to render availbilty to big data application 24 x 7 by deploying 2 hadoop NameNodes –One in active configuration and the other is the Stand by Node.

Main features –

1. No Data Loss on Failure,No Job Failure,No Downtime.
2. Self Recovery from a failure.

**Check pointing**

Check pointing is an essential part of maintaining and persisting filesystem metadata in HDFS. It’s crucial for efficient namenode recovery and restart.