Importance of NameNode:

\*The NameNode is the centre piece of an HDFS file system.

\*Contains details about which blocks are stored in which Data node.

\*Contains the Hadoop FileSystem Tree and other metadata information about files and directories.

\*It contains two important file in its hard disk such as

I)FsImage ( File System Image )

II)Edits

1. fsimage

( File system image )

\*It contains the complete state of the file system at a point in time.

\*It represents state of the file system after all modifications are made up to specific transaction ID.

It contains:

•All directory structure of HDFS.

•Replication level of file.

•Modification and access times of files.

•Access permissions of files and directories.

•Block size of files.

•The blocks constituting a file.

2. Edits:

\*An edits file is a log that lists each file system change such as file creation, deletion or modification that was made after the most recent fsimage.

\*When any write operation takes place in HDFS, the directory structure gets modified.

\*This modified structure is stored in the edit.

\*By merging edits with the existing fsimage we will get updated fsimage.

\*We merge it because fsimage contains the HDFS metadata and edits contain the changes in the HDFS metadata. To get the exact view of the HDFS structure, both must be merged.