Hdfs federation

1. The namenodes are federated, that is, the namenodes are independent and don’t require coordination with each other. The datanodes are used as common storage for blocks by all the namenodes. Each datanode registers with all the namenodes in the cluster. Datanodes send periodic heartbeats and block reports and handles commands from the namenodes.

2. A **Block Pool** is a set of blocks that belong to a single namespace. Datanodes store blocks for all the block pools in the cluster. It is managed independently of other block pools. The failure of a namenode does not prevent the datanode from serving other namenodes in the cluster.

3. It is a self-contained unit of management. When a namenode/namespace is deleted, the corresponding block pool at the datanodes is deleted. Each namespace volume is upgraded as a unit, during cluster upgrade.

