[HDFS-4458](https://www.google.com/url?q=https://issues.apache.org/jira/browse/HDFS-4458&sa=D&source=editors&ust=1751359154644892&usg=AOvVaw0w70AiRPLwqwWdf5_PpNG5)

start balancer failed with "Failed to create file [/system/balancer.id]" if configure IP on fs.defaultFS

**(1)  Log information**

**(1.1) Roles in this case**

 DFSClient (client-side)           NameNode (server-side)

**(1.2) Symptoms**

The logs are from NameNode. For description convenience, we refer the two HDFS Clients as follows:

DFSClient\_NONMAPREDUCE\_-732728704\_1: DFSClient\_A (who creates the file “/system/balancer.id” first)

DFSClient\_NONMAPREDUCE\_413051464\_1: DFSClient\_B

2013-01-28 01:21:49,550 WARN org.apache.hadoop.hdfs.StateChange: DIR\* NameSystem.startFile: Failed to create file[/system/balancer.id] for [DFSClient\_NONMAPREDUCE\_413051464\_1] on client [10.111.57.222], because this file is already being created by [DFSClient\_NONMAPREDUCE\_-732728704\_1] on [10.111.57.222]

DFSClient\_A fails to create file “/system/balancer.id”, since this this file is already created by DFSClient\_B. This also indicates that a balancer is already started. We notice that both these two DFSClients are on “10.111.57.222”.

2013-01-28 01:21:49,550 ERROR org.apache.hadoop.security.UserGroupInformation: PriviledgedActionException as:root (auth:SIMPLE) cause:org.apache.hadoop.hdfs.protocol.AlreadyBeingCreatedException: Failed to create file [/system/balancer.id] for[DFSClient\_NONMAPREDUCE\_413051464\_1] on client [10.111.57.222], because this file is already being created by[DFSClient\_NONMAPREDUCE\_-732728704\_1] on [10.111.57.222]

The detailed information for “AlreadyBeingCreatedException” in this ERROR log is the same with the last log.

2013-01-28 01:21:49,551 INFO org.apache.hadoop.ipc.Server: IPC Server handler 2 on 8020, call org.apache.hadoop.hdfs.protocol.ClientProtocol.create from 10.111.57.222:41630: error: org.apache.hadoop.hdfs.protocol.AlreadyBeingCreatedException: Failed to create file [/system/balancer.id] for[DFSClient\_NONMAPREDUCE\_413051464\_1] on client [10.111.57.222], because this file is already being created by[DFSClient\_NONMAPREDUCE\_-732728704\_1] on [10.111.57.222]

org.apache.hadoop.hdfs.protocol.AlreadyBeingCreatedException: Failed to create file [/system/balancer.id] for[DFSClient\_NONMAPREDUCE\_413051464\_1] on client [10.111.57.222], because this file is already being created by[DFSClient\_NONMAPREDUCE\_-732728704\_1] on [10.111.57.222]

at org.apache.hadoop.hdfs.server.namenode.FSNamesystem.recoverLeaseInternal(FSNamesystem.java:2175)

at org.apache.hadoop.hdfs.server.namenode.FSNamesystem.startFileInternal(FSNamesystem.java:1965)

at org.apache.hadoop.hdfs.server.namenode.FSNamesystem.startFileInt(FSNamesystem.java:1878)

at org.apache.hadoop.hdfs.server.namenode.FSNamesystem.startFile(FSNamesystem.java:1857)

at org.apache.hadoop.hdfs.server.namenode.NameNodeRpcServer.create(NameNodeRpcServer.java:407)

at org.apache.hadoop.hdfs.protocolPB.ClientNamenodeProtocolServerSideTranslatorPB.create(ClientNamenodeProtocolServerSideTranslatorPB.java:208)                  this class is used on the server side

at org.apache.hadoop.hdfs.protocol.proto.ClientNamenodeProtocolProtos$ClientNamenodeProtocol$2.callBlockingMethod(ClientNamenodeProtocolProtos.java:45831)

at org.apache.hadoop.ipc.ProtobufRpcEngine$Server$ProtoBufRpcInvoker.call(ProtobufRpcEngine.java:454)

at org.apache.hadoop.ipc.RPC$Server.call(RPC.java:910)

at org.apache.hadoop.ipc.Server$Handler$1.run(Server.java:1694)

at org.apache.hadoop.ipc.Server$Handler$1.run(Server.java:1690)

at java.security.AccessController.doPrivileged(Native Method)

at javax.security.auth.Subject.doAs(Subject.java:396)

at org.apache.hadoop.security.UserGroupInformation.doAs(UserGroupInformation.java:1367)

at org.apache.hadoop.ipc.Server$Handler.run(Server.java:1688)

One of the handlers in NameNode handles the RPC call of “create()” from the DFSClient through the RPC protocol ClientProtocol, but fails due to the “AlreadyBeingCreatedException”.

The call-stack contained in this log can help us get the place where the exception occurs.

2013-01-28 01:21:49,567 INFO org.apache.hadoop.hdfs.StateChange: BLOCK\* NameSystem.allocateBlock: /system/balancer.id. BP-986428099-10.111.57.222-1359353997106 blk\_-2102764247427435122\_1002

{blockUCState=UNDER\_CONSTRUCTION, primaryNodeIndex=-1, replicas=[ReplicaUnderConstruction[10.111.57.223:50010|RBW], ReplicaUnderConstruction[10.111.57.225:50010|RBW], ReplicaUnderConstruction[10.111.57.224:50010|RBW]]}

NameNode allocates three blocks for file “/system/balancer.id”, since the default replica factor is three for each block. They are located in “10.111.57.223/225/224”, respectively.

2013-01-28 01:21:49,865 INFO org.apache.hadoop.hdfs.StateChange: BLOCK\* addStoredBlock: blockMap updated: 10.111.57.224:50010 is added to blk\_-2102764247427435122\_1002

{blockUCState=UNDER\_CONSTRUCTION, primaryNodeIndex=-1, replicas=[ReplicaUnderConstruction[10.111.57.223:50010|RBW], ReplicaUnderConstruction[10.111.57.225:50010|RBW], ReplicaUnderConstruction[10.111.57.224:50010|RBW]]}

size 0

2013-01-28 01:21:49,868 INFO org.apache.hadoop.hdfs.StateChange: BLOCK\* addStoredBlock: blockMap updated: 10.111.57.225:50010 is added to blk\_-2102764247427435122\_1002

{blockUCState=UNDER\_CONSTRUCTION, primaryNodeIndex=-1, replicas=[ReplicaUnderConstruction[10.111.57.223:50010|RBW], ReplicaUnderConstruction[10.111.57.225:50010|RBW], ReplicaUnderConstruction[10.111.57.224:50010|RBW]]}

size 0

2013-01-28 01:21:49,871 INFO org.apache.hadoop.hdfs.StateChange: BLOCK\* addStoredBlock: blockMap updated: 10.111.57.223:50010 is added to blk\_-2102764247427435122\_1002

{blockUCState=UNDER\_CONSTRUCTION, primaryNodeIndex=-1, replicas=[ReplicaUnderConstruction[10.111.57.223:50010|RBW], ReplicaUnderConstruction[10.111.57.225:50010|RBW], ReplicaUnderConstruction[10.111.57.224:50010|RBW]]}

size 0

The new allocated blocks are added to the blockMap in NameNode. Currently, no data has been written, so the size is 0.

2013-01-28 01:21:49,874 INFO org.apache.hadoop.hdfs.StateChange: DIR\* NameSystem.completeFile: file /system/balancer.id is closed by DFSClient\_NONMAPREDUCE\_-732728704\_1

DFSClient\_A closes the file, which indicates that the balancer exits.