

HDFS16633

Issue link

<https://issues.apache.org/jira/browse/HDFS-16633>

Reproduce

Hadoop version: 3.1.2-RC1

Please make sure the version of hadoop source code is 3.1.2-RC1

Reproducing this bug need only one server, which will run namenode and datanode at the same time.

Then install these packages if they can't be found in your servers.

```
1 | sudo apt install git
2 | sudo apt install maven
3 | sudo apt-get install openjdk-8-jdk
4 | sudo apt install curl
5 | sudo apt install autoconf
6 | sudo apt-get install libtool
7 | sudo apt install make
8 | sudo apt install g++
```

Then change the permission of scripts:

```
1 | chmod -R 755 path_to_T2C/experiments/reproduce/HDFS-16633
```

Run `install_HDFS-16633.sh`. This script will apply the patch to modify source code and make the necessary configurations.

```
1 | experiments/reproduce/HDFS-16633/install_HDFS-16633.sh [path_to_T2C] [path_to_HADOOP]
```

If there is a problem about the version of `protobuf` like `'protoc --version did not return a version'`, please run the script `build_protoc.sh`. After running this script, there should be a folder at the same directory as `build_protoc.sh`. Add `protoc` to PATH:

```
1 | export PROTOC_HOME=/path_to_protoc/protoc/2.5.0
2 | export HADOOP_PROTOC_PATH=$PROTOC_HOME/dist/bin/protoc
3 | export PATH=$PROTOC_HOME/dist/bin/:$PATH
4 | source ~/.bashrc
```

Then there should be no error message when running `install_HDFS-16633.sh`.

Then run `trigger_HDFS-16633.sh`.

```
1 | experiments/reproduce/HDFS-16633/trigger_HDFS-16633.sh [path_to_HADOOP]
```

Now there should be some messages in `logs/hadoop-username-datanode-hostname.log` like this:

```
2023-07-28 07:58:39,593 ERROR org.apache.hadoop.hdfs.server.datanode.DataNode: ubuntu:9866:DataXceiver error processing WRITE_BLOCK
operation src: /127.0.0.1:36108 dst: /127.0.0.1:9866
java.io.IOException: CHANG: inject IOException!
    at org.apache.hadoop.hdfs.server.datanode.DataXceiver.writeBlock(DataXceiver.java:719)
    at org.apache.hadoop.hdfs.protocol.datatransfer.Receiver.opWriteBlock(Receiver.java:173)
    at org.apache.hadoop.hdfs.protocol.datatransfer.Receiver.processOp(Receiver.java:107)
    at org.apache.hadoop.hdfs.server.datanode.DataXceiver.run(DataXceiver.java:290)
    at java.lang.Thread.run(Thread.java:750)
```