Item 220
git_comments:

git_commits:

1. **summary:** ZOOKEEPER-3479: Logging false leader election times
   message: ZOOKEEPER-3479: Logging false leader election times See
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   00:57:31,853 [myid:1] - INFO [QuorumPeer[myid=1](plain=/0.0.0.0:2791)
   (secure=disabled):QuorumPeer1193] - LOOKING 2019-07-31 00:57:31,853 [myid:1] - INFO
   [QuorumPeer[myid=1](plain=/0.0.0.0:2791)(secure=disabled):FastLeaderElection885] - New election.
   My id = 1, proposed zxid=0x100000001 [...] 2019-07-31 00:57:32,272 [myid:1] - INFO
   [QuorumPeer[myid=1](plain=/0.0.0.0:2791)(secure=disabled):Follower69] - FOLLOWING - LEADER
   ELECTION TOOK - 1 MS ``` Leader election took more than 400ms, not 1ms! The reason this logging
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   foo bar <karolos@gmail.com> Reviewers: Michael Han <hanm@apache.org>, Allan Lyu
   <fangmin@apache.org> Closes #1031 from insumity/ZOOKEEPER-3479
   label: code-design

github_issues:

github_issues_comments:

github_pulls:

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   body: See https://issues.apache.org/jira/browse/ZOOKEEPER-3479 here for the issue. The problem is that the logged leader election times are much smaller than in reality. For example, we have log files that contain the following lines: ``` 2019-07-31 00:57:31,852 [myid:1] - WARN [QuorumPeer[myid=1] (plain=/0.0.0.0:2791)(secure=disabled):QuorumPeer@1318] - PeerState set to LOOKING 2019-07-31 00:57:31,853 [myid:1] - INFO [QuorumPeer[myid=1](plain=/0.0.0.0:2791) (secure=disabled):QuorumPeer@1193] - LOOKING 2019-07-31 00:57:31,853 [myid:1] - INFO [QuorumPeer[myid=1](plain=/0.0.0.0:2791)(secure=disabled):FastLeaderElection@885] - New election. My id = 1, proposed zxid=0x100000001 [...] 2019-07-31 00:57:32,272 [myid:1] - INFO [QuorumPeer[myid=1](plain=/0.0.0.0:2791)(secure=disabled):Follower@69] - FOLLOWING - LEADER ELECTION TOOK - 1 MS ``` Leader election took more than 400ms, not 1ms! The reason this logging bug exists has to do with this [line](https://github.com/apache/zookeeper/blob/master/zookeeper-server/src/main/java/org/apache/zookeeper/server/quorum/QuorumPeer.java#L1402) in `QuorumPeer`. The computation of the leader election time starts inside [`FastLeaderElection.lookForLeader`] (https://github.com/apache/zookeeper/blob/master/zookeeper-server/src/main/java/org/apache/zookeeper/server/quorum/FastLeaderElection.java#L915) where `start_fle` is set. After a server has found a leader, it repeats the `QuorumPeer` [loop] (https://github.com/apache/zookeeper/blob/master/zookeeper-server/src/main/java/org/apache/zookeeper/server/quorum/QuorumPeer.java#L1288) and resets the `start_fle` value. Hence, when, for example, a follower [logs] (https://github.com/apache/zookeeper/blob/master/zookeeper-server/src/main/java/org/apache/zookeeper/server/quorum/Follower.java#L75) how much time it took for

the leader election, it logs a much smaller time than it actually took for the leader election to complete. To be precise, it just logs the time it took to loop inside [`QuorumPeer`] (https://github.com/apache/zookeeper/blob/master/zookeeper-server/src/main/java/org/apache/zookeeper/server/quorum/QuorumPeer.java#L1288). Furthermore, if we remove the problematic [line](https://github.com/apache/zookeeper/blob/master/zookeeper-server/src/main/java/org/apache/zookeeper/server/quorum/QuorumPeer.java#L1402), then there is no reason to check whether `start_fle == 0` in [`FastLeaderElection`] (https://github.com/apache/zookeeper/blob/master/zookeeper-server/src/main/java/org/apache/zookeeper/server/quorum/FastLeaderElection.java#L914), since `start_fle` is always `0` at that point. I'm not sure if this `if` statement is needed in the first place.

9. **title:** ZOOKEEPER-3479: Logging false leader election times
   body: See https://issues.apache.org/jira/browse/ZOOKEEPER-3479 here for the issue. The problem is that the logged leader election times are much smaller than in reality. For example, we have log files that contain the following lines: ``` 2019-07-31 00:57:31,852 [myid:1] - WARN [QuorumPeer[myid=1] (plain=/0.0.0.0:2791)(secure=disabled):QuorumPeer@1318] - PeerState set to LOOKING 2019-07-31 00:57:31,853 [myid:1] - INFO [QuorumPeer[myid=1](plain=/0.0.0.0:2791) (secure=disabled):QuorumPeer@1193] - LOOKING 2019-07-31 00:57:31,853 [myid:1] - INFO [QuorumPeer[myid=1](plain=/0.0.0.0:2791)(secure=disabled):FastLeaderElection@885] - New election. My id = 1, proposed zxid=0x100000001 [...] 2019-07-31 00:57:32,272 [myid:1] - INFO [QuorumPeer[myid=1](plain=/0.0.0.0:2791)(secure=disabled):Follower@69] - FOLLOWING - LEADER ELECTION TOOK - 1 MS ``` Leader election took more than 400ms, not 1ms! The reason this logging bug exists has to do with this [line](https://github.com/apache/zookeeper/blob/master/zookeeper-server/src/main/java/org/apache/zookeeper/server/quorum/QuorumPeer.java#L1402) in `QuorumPeer`. The computation of the leader election time starts inside [`FastLeaderElection.lookForLeader`] (https://github.com/apache/zookeeper/blob/master/zookeeper-server/src/main/java/org/apache/zookeeper/server/quorum/FastLeaderElection.java#L915) where `start_fle` is set. After a server has found a leader, it repeats the `QuorumPeer` [loop] (https://github.com/apache/zookeeper/blob/master/zookeeper-server/src/main/java/org/apache/zookeeper/server/quorum/QuorumPeer.java#L1288) and resets the `start_fle` value. Hence, when, for example, a follower [logs] (https://github.com/apache/zookeeper/blob/master/zookeeper-server/src/main/java/org/apache/zookeeper/server/quorum/Follower.java#L75) how much time it took for the leader election, it logs a much smaller time than it actually took for the leader election to complete. To be precise, it just logs the time it took to loop inside [`QuorumPeer`] (https://github.com/apache/zookeeper/blob/master/zookeeper-server/src/main/java/org/apache/zookeeper/server/quorum/QuorumPeer.java#L1288). Furthermore, if we remove the problematic [line](https://github.com/apache/zookeeper/blob/master/zookeeper-server/src/main/java/org/apache/zookeeper/server/quorum/QuorumPeer.java#L1402), then there is no reason to check whether `start_fle == 0` in [`FastLeaderElection`] (https://github.com/apache/zookeeper/blob/master/zookeeper-server/src/main/java/org/apache/zookeeper/server/quorum/FastLeaderElection.java#L914), since `start_fle` is always `0` at that point. I'm not sure if this `if` statement is needed in the first place.

10. **title:** ZOOKEEPER-3479: Logging false leader election times
    body: See https://issues.apache.org/jira/browse/ZOOKEEPER-3479 here for the issue. The problem is that the logged leader election times are much smaller than in reality. For example, we have log files that contain the following lines: ``` 2019-07-31 00:57:31,852 [myid:1] - WARN [QuorumPeer[myid=1] (plain=/0.0.0.0:2791)(secure=disabled):QuorumPeer@1318] - PeerState set to LOOKING 2019-07-31 00:57:31,853 [myid:1] - INFO [QuorumPeer[myid=1](plain=/0.0.0.0:2791) (secure=disabled):QuorumPeer@1193] - LOOKING 2019-07-31 00:57:31,853 [myid:1] - INFO [QuorumPeer[myid=1](plain=/0.0.0.0:2791)(secure=disabled):FastLeaderElection@885] - New election. My id = 1, proposed zxid=0x100000001 [...] 2019-07-31 00:57:32,272 [myid:1] - INFO [QuorumPeer[myid=1](plain=/0.0.0.0:2791)(secure=disabled):Follower@69] - FOLLOWING - LEADER ELECTION TOOK - 1 MS ``` Leader election took more than 400ms, not 1ms! The reason this logging bug exists has to do with this [line](https://github.com/apache/zookeeper/blob/master/zookeeper-server/src/main/java/org/apache/zookeeper/server/quorum/QuorumPeer.java#L1402) in `QuorumPeer`. The computation of the leader election time starts inside [`FastLeaderElection.lookForLeader`] (https://github.com/apache/zookeeper/blob/master/zookeeper-server/src/main/java/org/apache/zookeeper/server/quorum/FastLeaderElection.java#L915) where `start_fle` is set. After a server has found a leader, it repeats the `QuorumPeer` [loop]

(https://github.com/apache/zookeeper/blob/master/zookeeper-server/src/main/java/org/apache/zookeeper/server/quorum/QuorumPeer.java#L1288) and resets the `start_fle` value. Hence, when, for example, a follower [logs] (https://github.com/apache/zookeeper/blob/master/zookeeper-server/src/main/java/org/apache/zookeeper/server/quorum/Follower.java#L75) how much time it took for the leader election, it logs a much smaller time than it actually took for the leader election to complete. To be precise, it just logs the time it took to loop inside [`QuorumPeer`] (https://github.com/apache/zookeeper/blob/master/zookeeper-server/src/main/java/org/apache/zookeeper/server/quorum/QuorumPeer.java#L1288). Furthermore, if we remove the problematic [line](https://github.com/apache/zookeeper/blob/master/zookeeper-server/src/main/java/org/apache/zookeeper/server/quorum/QuorumPeer.java#L1402), then there is no reason to check whether `start_fle == 0` in [`FastLeaderElection`] (https://github.com/apache/zookeeper/blob/master/zookeeper-server/src/main/java/org/apache/zookeeper/server/quorum/FastLeaderElection.java#L914), since `start_fle` is always `0` at that point. I'm not sure if this `if` statement is needed in the first place.

11. **title:** ZOOKEEPER-3479: Logging false leader election times
    body: See https://issues.apache.org/jira/browse/ZOOKEEPER-3479 here for the issue. The problem is that the logged leader election times are much smaller than in reality. For example, we have log files that contain the following lines: ``` 2019-07-31 00:57:31,852 [myid:1] - WARN [QuorumPeer[myid=1](plain=/0.0.0.0:2791)(secure=disabled):QuorumPeer@1318] - PeerState set to LOOKING 2019-07-31 00:57:31,853 [myid:1] - INFO [QuorumPeer[myid=1](plain=/0.0.0.0:2791)(secure=disabled):QuorumPeer@1193] - LOOKING 2019-07-31 00:57:31,853 [myid:1] - INFO [QuorumPeer[myid=1](plain=/0.0.0.0:2791)(secure=disabled):FastLeaderElection@885] - New election. My id = 1, proposed zxid=0x100000001 [...] 2019-07-31 00:57:32,272 [myid:1] - INFO [QuorumPeer[myid=1](plain=/0.0.0.0:2791)(secure=disabled):Follower@69] - FOLLOWING - LEADER ELECTION TOOK - 1 MS ``` Leader election took more than 400ms, not 1ms! The reason this logging bug exists has to do with this [line](https://github.com/apache/zookeeper/blob/master/zookeeper-server/src/main/java/org/apache/zookeeper/server/quorum/QuorumPeer.java#L1402) in `QuorumPeer`. The computation of the leader election time starts inside [`FastLeaderElection.lookForLeader`] (https://github.com/apache/zookeeper/blob/master/zookeeper-server/src/main/java/org/apache/zookeeper/server/quorum/FastLeaderElection.java#L915) where `start_fle` is set. After a server has found a leader, it repeats the `QuorumPeer` [loop] (https://github.com/apache/zookeeper/blob/master/zookeeper-server/src/main/java/org/apache/zookeeper/server/quorum/QuorumPeer.java#L1288) and resets the `start_fle` value. Hence, when, for example, a follower [logs] (https://github.com/apache/zookeeper/blob/master/zookeeper-server/src/main/java/org/apache/zookeeper/server/quorum/Follower.java#L75) how much time it took for the leader election, it logs a much smaller time than it actually took for the leader election to complete. To be precise, it just logs the time it took to loop inside [`QuorumPeer`] (https://github.com/apache/zookeeper/blob/master/zookeeper-server/src/main/java/org/apache/zookeeper/server/quorum/QuorumPeer.java#L1288). Furthermore, if we remove the problematic [line](https://github.com/apache/zookeeper/blob/master/zookeeper-server/src/main/java/org/apache/zookeeper/server/quorum/QuorumPeer.java#L1402), then there is no reason to check whether `start_fle == 0` in [`FastLeaderElection`] (https://github.com/apache/zookeeper/blob/master/zookeeper-server/src/main/java/org/apache/zookeeper/server/quorum/FastLeaderElection.java#L914), since `start_fle` is always `0` at that point. I'm not sure if this `if` statement is needed in the first place.

12. **title:** ZOOKEEPER-3479: Logging false leader election times
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server/src/main/java/org/apache/zookeeper/server/quorum/QuorumPeer.java#L1402) in `QuorumPeer`. The computation of the leader election time starts inside [`FastLeaderElection.lookForLeader`] (https://github.com/apache/zookeeper/blob/master/zookeeper-server/src/main/java/org/apache/zookeeper/server/quorum/FastLeaderElection.java#L915) where `start_fle` is set. After a server has found a leader, it repeats the `QuorumPeer` [loop] (https://github.com/apache/zookeeper/blob/master/zookeeper-server/src/main/java/org/apache/zookeeper/server/quorum/QuorumPeer.java#L1288) and resets the `start_fle` value. Hence, when, for example, a follower [logs] (https://github.com/apache/zookeeper/blob/master/zookeeper-server/src/main/java/org/apache/zookeeper/server/quorum/Follower.java#L75) how much time it took for the leader election, it logs a much smaller time than it actually took for the leader election to complete. To be precise, it just logs the time it took to loop inside [`QuorumPeer`] (https://github.com/apache/zookeeper/blob/master/zookeeper-server/src/main/java/org/apache/zookeeper/server/quorum/QuorumPeer.java#L1288). Furthermore, if we remove the problematic [line](https://github.com/apache/zookeeper/blob/master/zookeeper-server/src/main/java/org/apache/zookeeper/server/quorum/QuorumPeer.java#L1402), then there is no reason to check whether `start_fle == 0` in [`FastLeaderElection`] (https://github.com/apache/zookeeper/blob/master/zookeeper-server/src/main/java/org/apache/zookeeper/server/quorum/FastLeaderElection.java#L914), since `start_fle` is always `0` at that point. I'm not sure if this `if` statement is needed in the first place.

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    body: See https://issues.apache.org/jira/browse/ZOOKEEPER-3479 here for the issue. The problem is that the logged leader election times are much smaller than in reality. For example, we have log files that contain the following lines: ``` 2019-07-31 00:57:31,852 [myid:1] - WARN [QuorumPeer[myid=1] (plain=/0.0.0.0:2791)(secure=disabled):QuorumPeer@1318] - PeerState set to LOOKING 2019-07-31 00:57:31,853 [myid:1] - INFO [QuorumPeer[myid=1](plain=/0.0.0.0:2791) (secure=disabled):QuorumPeer@1193] - LOOKING 2019-07-31 00:57:31,853 [myid:1] - INFO [QuorumPeer[myid=1](plain=/0.0.0.0:2791)(secure=disabled):FastLeaderElection@885] - New election. My id = 1, proposed zxid=0x100000001 [...] 2019-07-31 00:57:32,272 [myid:1] - INFO [QuorumPeer[myid=1](plain=/0.0.0.0:2791)(secure=disabled):Follower@69] - FOLLOWING - LEADER ELECTION TOOK - 1 MS ``` Leader election took more than 400ms, not 1ms! The reason this logging bug exists has to do with this [line](https://github.com/apache/zookeeper/blob/master/zookeeper-server/src/main/java/org/apache/zookeeper/server/quorum/QuorumPeer.java#L1402) in `QuorumPeer`. The computation of the leader election time starts inside [`FastLeaderElection.lookForLeader`] (https://github.com/apache/zookeeper/blob/master/zookeeper-server/src/main/java/org/apache/zookeeper/server/quorum/FastLeaderElection.java#L915) where `start_fle` is set. After a server has found a leader, it repeats the `QuorumPeer` [loop] (https://github.com/apache/zookeeper/blob/master/zookeeper-server/src/main/java/org/apache/zookeeper/server/quorum/QuorumPeer.java#L1288) and resets the `start_fle` value. Hence, when, for example, a follower [logs] (https://github.com/apache/zookeeper/blob/master/zookeeper-server/src/main/java/org/apache/zookeeper/server/quorum/Follower.java#L75) how much time it took for the leader election, it logs a much smaller time than it actually took for the leader election to complete. To be precise, it just logs the time it took to loop inside [`QuorumPeer`] (https://github.com/apache/zookeeper/blob/master/zookeeper-server/src/main/java/org/apache/zookeeper/server/quorum/QuorumPeer.java#L1288). Furthermore, if we remove the problematic [line](https://github.com/apache/zookeeper/blob/master/zookeeper-server/src/main/java/org/apache/zookeeper/server/quorum/QuorumPeer.java#L1402), then there is no reason to check whether `start_fle == 0` in [`FastLeaderElection`] (https://github.com/apache/zookeeper/blob/master/zookeeper-server/src/main/java/org/apache/zookeeper/server/quorum/FastLeaderElection.java#L914), since `start_fle` is always `0` at that point. I'm not sure if this `if` statement is needed in the first place.

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    body: See https://issues.apache.org/jira/browse/ZOOKEEPER-3479 here for the issue. The problem is that the logged leader election times are much smaller than in reality. For example, we have log files that contain the following lines: ``` 2019-07-31 00:57:31,852 [myid:1] - WARN [QuorumPeer[myid=1] (plain=/0.0.0.0:2791)(secure=disabled):QuorumPeer@1318] - PeerState set to LOOKING 2019-07-31 00:57:31,853 [myid:1] - INFO [QuorumPeer[myid=1](plain=/0.0.0.0:2791) (secure=disabled):QuorumPeer@1193] - LOOKING 2019-07-31 00:57:31,853 [myid:1] - INFO

[QuorumPeer[myid=1](plain=/0.0.0.0:2791)(secure=disabled):FastLeaderElection@885] - New election. My id = 1, proposed zxid=0x100000001 [...] 2019-07-31 00:57:32,272 [myid:1] - INFO [QuorumPeer[myid=1](plain=/0.0.0.0:2791)(secure=disabled):Follower@69] - FOLLOWING - LEADER ELECTION TOOK - 1 MS ``` Leader election took more than 400ms, not 1ms! The reason this logging bug exists has to do with this [line](https://github.com/apache/zookeeper/blob/master/zookeeper-server/src/main/java/org/apache/zookeeper/server/quorum/QuorumPeer.java#L1402) in `QuorumPeer`. The computation of the leader election time starts inside [`FastLeaderElection.lookForLeader`] (https://github.com/apache/zookeeper/blob/master/zookeeper-server/src/main/java/org/apache/zookeeper/server/quorum/FastLeaderElection.java#L915) where `start_fle` is set. After a server has found a leader, it repeats the `QuorumPeer` [loop] (https://github.com/apache/zookeeper/blob/master/zookeeper-server/src/main/java/org/apache/zookeeper/server/quorum/QuorumPeer.java#L1288) and resets the `start_fle` value. Hence, when, for example, a follower [logs] (https://github.com/apache/zookeeper/blob/master/zookeeper-server/src/main/java/org/apache/zookeeper/server/quorum/Follower.java#L75) how much time it took for the leader election, it logs a much smaller time than it actually took for the leader election to complete. To be precise, it just logs the time it took to loop inside [`QuorumPeer`] (https://github.com/apache/zookeeper/blob/master/zookeeper-server/src/main/java/org/apache/zookeeper/server/quorum/QuorumPeer.java#L1288). Furthermore, if we remove the problematic [line](https://github.com/apache/zookeeper/blob/master/zookeeper-server/src/main/java/org/apache/zookeeper/server/quorum/QuorumPeer.java#L1402), then there is no reason to check whether `start_fle == 0` in [`FastLeaderElection`] (https://github.com/apache/zookeeper/blob/master/zookeeper-server/src/main/java/org/apache/zookeeper/server/quorum/FastLeaderElection.java#L914), since `start_fle` is always `0` at that point. I'm not sure if this `if` statement is needed in the first place.

15. **title:** ZOOKEEPER-3479: Logging false leader election times
body: See https://issues.apache.org/jira/browse/ZOOKEEPER-3479 here for the issue. The problem is that the logged leader election times are much smaller than in reality. For example, we have log files that contain the following lines: ``` 2019-07-31 00:57:31,852 [myid:1] - WARN [QuorumPeer[myid=1](plain=/0.0.0.0:2791)(secure=disabled):QuorumPeer@1318] - PeerState set to LOOKING 2019-07-31 00:57:31,853 [myid:1] - INFO [QuorumPeer[myid=1](plain=/0.0.0.0:2791)(secure=disabled):QuorumPeer@1193] - LOOKING 2019-07-31 00:57:31,853 [myid:1] - INFO [QuorumPeer[myid=1](plain=/0.0.0.0:2791)(secure=disabled):FastLeaderElection@885] - New election. My id = 1, proposed zxid=0x100000001 [...] 2019-07-31 00:57:32,272 [myid:1] - INFO [QuorumPeer[myid=1](plain=/0.0.0.0:2791)(secure=disabled):Follower@69] - FOLLOWING - LEADER ELECTION TOOK - 1 MS ``` Leader election took more than 400ms, not 1ms! The reason this logging bug exists has to do with this [line](https://github.com/apache/zookeeper/blob/master/zookeeper-server/src/main/java/org/apache/zookeeper/server/quorum/QuorumPeer.java#L1402) in `QuorumPeer`. The computation of the leader election time starts inside [`FastLeaderElection.lookForLeader`] (https://github.com/apache/zookeeper/blob/master/zookeeper-server/src/main/java/org/apache/zookeeper/server/quorum/FastLeaderElection.java#L915) where `start_fle` is set. After a server has found a leader, it repeats the `QuorumPeer` [loop] (https://github.com/apache/zookeeper/blob/master/zookeeper-server/src/main/java/org/apache/zookeeper/server/quorum/QuorumPeer.java#L1288) and resets the `start_fle` value. Hence, when, for example, a follower [logs] (https://github.com/apache/zookeeper/blob/master/zookeeper-server/src/main/java/org/apache/zookeeper/server/quorum/Follower.java#L75) how much time it took for the leader election, it logs a much smaller time than it actually took for the leader election to complete. To be precise, it just logs the time it took to loop inside [`QuorumPeer`] (https://github.com/apache/zookeeper/blob/master/zookeeper-server/src/main/java/org/apache/zookeeper/server/quorum/QuorumPeer.java#L1288). Furthermore, if we remove the problematic [line](https://github.com/apache/zookeeper/blob/master/zookeeper-server/src/main/java/org/apache/zookeeper/server/quorum/QuorumPeer.java#L1402), then there is no reason to check whether `start_fle == 0` in [`FastLeaderElection`] (https://github.com/apache/zookeeper/blob/master/zookeeper-server/src/main/java/org/apache/zookeeper/server/quorum/FastLeaderElection.java#L914), since `start_fle` is always `0` at that point. I'm not sure if this `if` statement is needed in the first place.

github_pulls_comments:

1. LGTM. @lvfangmin Any feedback for this patch? I am curious if you guys use something different internally to measure LE time, as the current LE metrics is not very reliable.
2. @hanm internally, we're tracking the quorum unavailable time, which is the time between server first went to LOOKING state and set ZAB state to leading broadcast state. This is close to real quorum unavailable time in general, which includes leader election time + leader activation time (syncing with majority). This metric is more useful than the leader election itself, and we're using this instead of the leader election metric, we'll contribute that back as well.
3. **body:** Jenkins failed due to flaky test in CommitProcessorMetricsTest, tracked in JIRA ZOOKEEPER-3480.
   label: test
4. retest maven build
5. retest maven build
6. thanks @lvfangmin. >> which includes leader election time + leader activation time Agree. Since this also include LE time, unless you guys are using something different to measure LE, this patch should improve your metrics accuracy as well, though it probably would not make a big difference if the leader activation time costs a lot more than LE.
7. test maven build
8. retest maven build
9. retest maven build
10. retest maven build
11. retest maven build
12. Thanks @insumity , the build is green now, and I am landing this patch.
13. > This metric is more useful than the leader election itself, and we're using this instead of the leader election metric, we'll contribute that back as well. @lvfangmin Your point makes sense. Did you contribute that metric back? I am interested in it.

github_pulls_reviews:

jira_issues:

1. **summary:** Logging false leader election times
   description: There seems to be a problem with the logging of leader election times: the logged times are much smaller than the actual time it took for the leader election to complete. This bug can be easily reproduced by following these steps: 1) Run a ZK cluster of 3 servers 2) Kill the server that is currently the leader 3) The log files of the remaining 2 servers contain false leader election times   In the attached files you can see the log files of the remaining 2 serve. For brevity, I removed the parts before and after the leader election from the log files. For example, in {{server1.txt}} we can see that: {code:java} 2019-07-31 00:57:31,852 [myid:1] - WARN [QuorumPeer[myid=1](plain=/0.0.0.0:2791)(secure=disabled):QuorumPeer@1318] - PeerState set to LOOKING 2019-07-31 00:57:31,853 [myid:1] - INFO [QuorumPeer[myid=1](plain=/0.0.0.0:2791)(secure=disabled):QuorumPeer@1193] - LOOKING 2019-07-31 00:57:31,853 [myid:1] - INFO [QuorumPeer[myid=1](plain=/0.0.0.0:2791)(secure=disabled):FastLeaderElection@885] - New election. My id = 1, proposed zxid=0x100000001 [...] 2019-07-31 00:57:32,272 [myid:1] - INFO [QuorumPeer[myid=1](plain=/0.0.0.0:2791)(secure=disabled):Follower@69] - FOLLOWING - LEADER ELECTION TOOK - 1 MS{code} Leader election supposedly took only 1ms, but in reality it took (32,272 - 31,853) = 419ms! The reason for this bug seems to be the introduction of this line {code:java} start_fle = Time.currentElapsedTime();{code} (seen here [https://github.com/apache/zookeeper/blob/master/zookeeper-server/src/main/java/org/apache/zookeeper/server/quorum/QuorumPeer.java#L1402]) back in this commit [https://github.com/apache/zookeeper/commit/5428cd4bc963c2e653a260c458a8a8edf3fa08ef].

2. **summary:** Logging false leader election times
   description: There seems to be a problem with the logging of leader election times: the logged times are much smaller than the actual time it took for the leader election to complete. This bug can be easily reproduced by following these steps: 1) Run a ZK cluster of 3 servers 2) Kill the server that is currently the leader 3) The log files of the remaining 2 servers contain false leader election times   In the attached files you can see the log files of the remaining 2 serve. For brevity, I removed the parts before and after the leader election from the log files. For example, in {{server1.txt}} we can see that: {code:java} 2019-07-31 00:57:31,852 [myid:1] - WARN [QuorumPeer[myid=1](plain=/0.0.0.0:2791)(secure=disabled):QuorumPeer@1318] - PeerState set to LOOKING 2019-07-31 00:57:31,853 [myid:1] -

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3. **summary:** Logging false leader election times
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jira_issues_comments:

1. Issue resolved by pull request 1031 [https://github.com/apache/zookeeper/pull/1031]
2. FAILURE: Integrated in Jenkins build ZooKeeper-trunk #643 (See [https://builds.apache.org/job/ZooKeeper-trunk/643/]) ZOOKEEPER-3479: Logging false leader election times (hanm: rev 3882a0171f91280bf1adbbd4ffaeb17cb5131316) * (edit) zookeeper-server/src/main/java/org/apache/zookeeper/server/quorum/FastLeaderElection.java * (edit) zookeeper-server/src/main/java/org/apache/zookeeper/server/quorum/QuorumPeer.java
3. SUCCESS: Integrated in Jenkins build Zookeeper-trunk-single-thread #479 (See [https://builds.apache.org/job/Zookeeper-trunk-single-thread/479/]) ZOOKEEPER-3479: Logging false leader election times (hanm: rev 3882a0171f91280bf1adbbd4ffaeb17cb5131316) * (edit) zookeeper-server/src/main/java/org/apache/zookeeper/server/quorum/FastLeaderElection.java * (edit) zookeeper-server/src/main/java/org/apache/zookeeper/server/quorum/QuorumPeer.java