Item 185
git_comments:

1. Version below which we should turn off essential column family.
2. * Version below which we fall back on the generic KeyValueBuilder
3. Version below which we should disallow usage of mutable secondary indexing.

git_commits:

1. **summary:** PHOENIX-4759 During restart RS that hosts SYSTEM.CATALOG table may get stuck
   message: PHOENIX-4759 During restart RS that hosts SYSTEM.CATALOG table may get stuck

github_issues:

github_issues_comments:

github_pulls:

github_pulls_comments:

github_pulls_reviews:

jira_issues:

1. **summary:** During restart RS that hosts SYSTEM.CATALOG table may get stuck
   description: Sometimes when a cluster has restarted the regions that belong to SYSTEM.CATALOG and other system tables on the same RS may be stuck in RiT.

jira_issues_comments:

1. That's well reproduced on 5.x branch, but may (should) affect master branch under certain circumstances. The SYSTEM.CATALOG region get stuck during open operation because there are 2 concurrent open region threads that are trying to load system tables. Loading sequence: Thread 1: MetaDataEndpointImpl -> PhoenixDatabaseMetaData -- (trying to load QueryConstants) Thread 2: MetaDataRegionObserver -> QueryConstants -> TableProperty -> SQLExceptionCode -> (trying to load PhoenixDatabaseMetaData) Since only one thread is capable to load class and second thread is already loading QueryConstants and first thread is loading PhoenixDatabaseMetaData , we have a dead lock. We can break this by removing the dependency between SQLExceptionCode and PhoenixDatabaseMetaData.
2. [~rajeshbabu], [~elserj] the fix is even simpler than I expected. [~jamestaylor] can you please take a look. Actually, I think that we even may replace all those calls for MetaDataUtil.decodeHBaseVersionAsString(VersionUtil.encodeVersion(...)) with the string constants to eliminate calls of other classes and reduce dependencies between classes that have static initializers.
3. Thanks, [~sergey.soldatov]. I'd rather stick with the constants (as it ensures consistency - these are used in multiple places - and makes the code easier to read). But we should make sure we put them all in one place that doesn't have other dependencies. Maybe in MetaDataProtocol or QueryConstants?
4. {quote}But we should make sure we put them all in one place that doesn't have other dependencies. Maybe in MetaDataProtocol or QueryConstants? {quote} That sounds like a good idea. No strong feelings from me where they get put :)
5. Great find, [~sergey.soldatov]. Let's move all these version constants to MetaDataProtocol since that's where other version info is (and it won't have outside dependencies). Will you be working up a patch?
6. [~jamestaylor] sounds reasonable. Will do it shortly.
7. +1. Thanks, [~sergey.soldatov]!
8. [~jamestaylor] Thanks! Committed to 4.x, 5x. branches.
9. SUCCESS: Integrated in Jenkins build Phoenix-4.x-HBase-1.3 #147 (See [https://builds.apache.org/job/Phoenix-4.x-HBase-1.3/147/]) PHOENIX-4759 During restart RS that hosts SYSTEM.CATALOG table may get (ssa: rev 24af1040591e088a9b4722ae825762d331d102c2) * (edit) phoenix-core/src/main/java/org/apache/phoenix/hbase/index/write/TrackingParallelWriterIndexCommitter.java * (edit) phoenix-core/src/main/java/org/apache/phoenix/hbase/index/write/ParallelWriterIndexCommitter.java * (edit)

phoenix-core/src/main/java/org/apache/phoenix/index/PhoenixTransactionalIndexer.java * (edit) phoenix-core/src/main/java/org/apache/phoenix/schema/MetaDataClient.java * (edit) phoenix-core/src/main/java/org/apache/phoenix/query/ConnectionQueryServicesImpl.java * (edit) phoenix-core/src/main/java/org/apache/phoenix/exception/SQLExceptionCode.java * (edit) phoenix-core/src/main/java/org/apache/phoenix/util/ScanUtil.java * (edit) phoenix-core/src/main/java/org/apache/phoenix/coprocessor/MetaDataProtocol.java * (edit) phoenix-core/src/main/java/org/apache/phoenix/coprocessor/MetaDataEndpointImpl.java * (edit) phoenix-core/src/main/java/org/apache/phoenix/jdbc/PhoenixDatabaseMetaData.java

10. ABORTED: Integrated in Jenkins build Phoenix-4.x-HBase-0.98 #1908 (See [https://builds.apache.org/job/Phoenix-4.x-HBase-0.98/1908/]) PHOENIX-4759 During restart RS that hosts SYSTEM.CATALOG table may get (ssa: rev e6f9ce0352dbf4f5b1a2d086c1c6068426afc1ac) * (edit) phoenix-core/src/main/java/org/apache/phoenix/hbase/index/write/TrackingParallelWriterIndexCommitter.java * (edit) phoenix-core/src/main/java/org/apache/phoenix/hbase/index/write/ParallelWriterIndexCommitter.java * (edit) phoenix-core/src/main/java/org/apache/phoenix/coprocessor/MetaDataProtocol.java * (edit) phoenix-core/src/main/java/org/apache/phoenix/coprocessor/MetaDataEndpointImpl.java * (edit) phoenix-core/src/main/java/org/apache/phoenix/exception/SQLExceptionCode.java * (edit) phoenix-core/src/main/java/org/apache/phoenix/query/ConnectionQueryServicesImpl.java * (edit) phoenix-core/src/main/java/org/apache/phoenix/jdbc/PhoenixDatabaseMetaData.java * (edit) phoenix-core/src/main/java/org/apache/phoenix/index/PhoenixTransactionalIndexer.java * (edit) phoenix-core/src/main/java/org/apache/phoenix/util/ScanUtil.java * (edit) phoenix-core/src/main/java/org/apache/phoenix/schema/MetaDataClient.java

11. FAILURE: Integrated in Jenkins build PreCommit-PHOENIX-Build #1892 (See [https://builds.apache.org/job/PreCommit-PHOENIX-Build/1892/]) PHOENIX-4759 During restart RS that hosts SYSTEM.CATALOG table may get (ssa: rev 614c57d91ba11bd8109dac769860e0186c8752bf) * (edit) phoenix-core/src/main/java/org/apache/phoenix/index/PhoenixTransactionalIndexer.java * (edit) phoenix-core/src/main/java/org/apache/phoenix/schema/MetaDataClient.java * (edit) phoenix-core/src/main/java/org/apache/phoenix/exception/SQLExceptionCode.java * (edit) phoenix-core/src/main/java/org/apache/phoenix/hbase/index/write/TrackingParallelWriterIndexCommitter.java * (edit) phoenix-core/src/main/java/org/apache/phoenix/coprocessor/MetaDataProtocol.java * (edit) phoenix-core/src/main/java/org/apache/phoenix/jdbc/PhoenixDatabaseMetaData.java * (edit) phoenix-core/src/main/java/org/apache/phoenix/hbase/index/write/ParallelWriterIndexCommitter.java * (edit) phoenix-core/src/main/java/org/apache/phoenix/query/ConnectionQueryServicesImpl.java * (edit) phoenix-core/src/main/java/org/apache/phoenix/coprocessor/MetaDataEndpointImpl.java * (edit) phoenix-core/src/main/java/org/apache/phoenix/util/ScanUtil.java

12. FAILURE: Integrated in Jenkins build PreCommit-PHOENIX-Build #1930 (See [https://builds.apache.org/job/PreCommit-PHOENIX-Build/1930/]) PHOENIX-4759 During restart RS that hosts SYSTEM.CATALOG table may get (ssa: rev d79c30023af47f32e2dac9d871aa75265cebc34f) * (edit) phoenix-core/src/main/java/org/apache/phoenix/coprocessor/MetaDataEndpointImpl.java * (edit) phoenix-core/src/main/java/org/apache/phoenix/query/ConnectionQueryServicesImpl.java * (edit) phoenix-core/src/main/java/org/apache/phoenix/exception/SQLExceptionCode.java * (edit) phoenix-core/src/main/java/org/apache/phoenix/hbase/index/write/TrackingParallelWriterIndexCommitter.java * (edit) phoenix-core/src/main/java/org/apache/phoenix/util/ScanUtil.java * (edit) phoenix-core/src/main/java/org/apache/phoenix/jdbc/PhoenixDatabaseMetaData.java * (edit) phoenix-core/src/main/java/org/apache/phoenix/index/PhoenixTransactionalIndexer.java * (edit) phoenix-core/src/main/java/org/apache/phoenix/coprocessor/MetaDataProtocol.java * (edit) phoenix-core/src/main/java/org/apache/phoenix/schema/MetaDataClient.java * (edit) phoenix-core/src/main/java/org/apache/phoenix/hbase/index/write/ParallelWriterIndexCommitter.java