

Nebula 异常情况记录

在测试中，Nebula (v1.0.1) 在 Twitter-2010 这样规模的数据集下无法稳定运行，出现了各种异常情况，本文对这些异常情况进行了记录和描述。

1. TProtocolException 异常

在测试 Twitter-2010 的 k-hop neighbor (2度) 时，首先抛出了该异常，详细错误细节可见日志文件 Twitter-2010/result/kNeighbor-2.txt。

```
[2020-12-17 12:17:19] [ERROR] There was an error executing item 66!
java.util.concurrent.ExecutionException: com.facebook.thrift.protocol.TProtocolException: Expected protocol id ffffffff82 but got ffffffff4
    at java.util.concurrent.FutureTask.report(FutureTask.java:122)
    at java.util.concurrent.FutureTask.get(FutureTask.java:192)
    at com.galaxybase.benchmark.common.test.AbstractTest.testFinish(AbstractTest.java:126)
    at com.galaxybase.benchmark.common.test.AbstractTest.startTest(AbstractTest.java:94)
    at com.galaxybase.benchmark.common.util.TestManager.doStartTest(TestManager.java:60)
    at com.galaxybase.benchmark.common.util.TestManager.startTest(TestManager.java:25)
    at com.galaxybase.benchmark.nebula.AutoMain.main(AutoMain.java:11)
Caused by: com.facebook.thrift.protocol.TProtocolException: Expected protocol id ffffffff82 but got ffffffff4
    at com.facebook.thrift.protocol.TCompactProtocol.readMessageBegin(TCompactProtocol.java:475)
    at com.vesoft.nebula.graph.GraphService$Client.recv_execute(GraphService.java:177)
    at com.vesoft.nebula.graph.GraphService$Client.execute(GraphService.java:153)
    at com.vesoft.nebula.client.graph.GraphClientImpl.executeQuery(GraphClientImpl.java:126)
    at com.galaxybase.benchmark.nebula.test.util.NebulaTest.onStartTest(NebulaTest.java:24)
    at com.galaxybase.benchmark.nebula.test.util.NebulaTest.onStartTest(NebulaTest.java:12)
    at com.galaxybase.benchmark.common.test.AbstractTest$1.run(AbstractTest.java:85)
    at com.galaxybase.benchmark.common.test.AbstractTest$TaskCallable.call(AbstractTest.java:236)
    at java.util.concurrent.FutureTask.run(FutureTask.java:266)
    at java.util.concurrent.ThreadPoolExecutor.runWorker(ThreadPoolExecutor.java:1149)
    at java.util.concurrent.ThreadPoolExecutor$Worker.run(ThreadPoolExecutor.java:624)
    at java.lang.Thread.run(Thread.java:748)
```

2. Get neighbors failed 异常

在测试 Twitter-2010 的 k-hop neighbor (2度) 时，先是出现了 TProtocolException 异常，之后继续正常运行了一段时间，然后全部抛出了 Get neighbors failed. 异常。我们猜测，此时 Nebula 数据库已经服务异常，因为之后我们进行了第三轮测试，此时前两轮可以正常进行的测试项也无法获得响应了。

```
[2020-12-17 12:46:59] [DEBUG] 84 Schedule: 84.00% Time: 157us 842ns Sample: [23994973, 20661714] Result Execute error.
ERROR [pool-10-thread-1] - Execute error: Get neighbors failed. Get neighbors failed.
[2020-12-17 12:46:59] [ERROR] There was an error executing item 85!
java.util.concurrent.ExecutionException: com.vesoft.nebula.client.graph.NGQLException
    at java.util.concurrent.FutureTask.report(FutureTask.java:122)
    at java.util.concurrent.FutureTask.get(FutureTask.java:192)
    at com.galaxybase.benchmark.common.test.AbstractTest.testFinish(AbstractTest.java:126)
    at com.galaxybase.benchmark.common.test.AbstractTest.startTest(AbstractTest.java:94)
    at com.galaxybase.benchmark.common.util.TestManager.doStartTest(TestManager.java:60)
    at com.galaxybase.benchmark.common.util.TestManager.startTest(TestManager.java:25)
    at com.galaxybase.benchmark.nebula.AutoMain.main(AutoMain.java:11)
Caused by: com.vesoft.nebula.client.graph.NGQLException
    at com.vesoft.nebula.client.graph.GraphClientImpl.executeQuery(GraphClientImpl.java:135)
    at com.galaxybase.benchmark.nebula.test.util.NebulaTest.onStartTest(NebulaTest.java:24)
    at com.galaxybase.benchmark.nebula.test.util.NebulaTest.onStartTest(NebulaTest.java:12)
    at com.galaxybase.benchmark.common.test.AbstractTest$1.run(AbstractTest.java:85)
    at com.galaxybase.benchmark.common.test.AbstractTest$TaskCallable.call(AbstractTest.java:236)
    at java.util.concurrent.FutureTask.run(FutureTask.java:266)
    at java.util.concurrent.ThreadPoolExecutor.runWorker(ThreadPoolExecutor.java:1149)
```

3. TTransportException 异常

在规模较小的 Graph500 数据集上测试 k-hop neighbor (5/6度) 时，也遇到了异常情况。

```

[2020-12-17 18:55:37] [INFO]    -- Start KNeighborTest - 6 Depth
[2020-12-17 20:00:51] [DEBUG]    1 Schedule: 10.00% Time: 1h 0m 0s 861ms 898us 139ns Sample: [3600312] Result Execute timeout
[2020-12-17 20:00:54] [ERROR]    There was an error executing item 2!
java.util.concurrent.ExecutionException: com.facebook.thrift.transport.TTransportException: java.net.SocketException: Connection reset
    at java.util.concurrent.FutureTask.report(FutureTask.java:122)
    at java.util.concurrent.FutureTask.get(FutureTask.java:192)
    at com.galaxybase.benchmark.common.test.AbstractTest.testFinish(AbstractTest.java:126)
    at com.galaxybase.benchmark.common.test.AbstractTest.startTest(AbstractTest.java:94)
    at com.galaxybase.benchmark.common.util.TestManager.doStartTest(TestManager.java:60)
    at com.galaxybase.benchmark.common.util.TestManager.startTest(TestManager.java:25)
    at com.galaxybase.benchmark.nebula.AutoMain.main(AutoMain.java:11)
Caused by: com.facebook.thrift.transport.TTransportException: java.net.SocketException: Connection reset
    at com.facebook.thrift.transport.TIOStreamTransport.read(TIOStreamTransport.java:129)
    at com.facebook.thrift.transport.TTransport.readAll(TTransport.java:84)
    at com.facebook.thrift.protocol.TCompactProtocol.readByte(TCompactProtocol.java:609)
    at com.facebook.thrift.protocol.TCompactProtocol.readMessageBegin(TCompactProtocol.java:473)
    at com.vesoft.nebula.graph.GraphService$Client.recv_execute(GraphService.java:177)
    at com.vesoft.nebula.graph.GraphService$Client.execute(GraphService.java:153)
    at com.vesoft.nebula.client.graph.GraphClientImpl.executeQuery(GraphClientImpl.java:126)
    at com.galaxybase.benchmark.nebula.test.util.NebulaTest.onStartTest(NebulaTest.java:24)
    at com.galaxybase.benchmark.nebula.test.util.NebulaTest.onStartTest(NebulaTest.java:12)
    at com.galaxybase.benchmark.common.test.AbstractTest$1.run(AbstractTest.java:85)
    at com.galaxybase.benchmark.common.test.AbstractTest$TaskCallable.call(AbstractTest.java:236)
    at java.util.concurrent.FutureTask.run(FutureTask.java:266)
    at java.util.concurrent.ThreadPoolExecutor.runWorker(ThreadPoolExecutor.java:1149)
    at java.util.concurrent.ThreadPoolExecutor$Worker.run(ThreadPoolExecutor.java:624)
    at java.lang.Thread.run(Thread.java:748)
Caused by: java.net.SocketException: Connection reset
    at java.net.SocketInputStream.read(SocketInputStream.java:210)
    at java.net.SocketInputStream.read(SocketInputStream.java:141)
    at java.io.BufferedInputStream.fill(BufferedInputStream.java:246)
    at java.io.BufferedInputStream.read1(BufferedInputStream.java:286)
    at java.io.BufferedInputStream.read(BufferedInputStream.java:345)
    at com.facebook.thrift.transport.TIOStreamTransport.read(TIOStreamTransport.java:127)

```

在异常中可以注意到 `java.net.SocketException: Connection reset` 信息，检查数据库状态后，发现 `nebula-graphd` 服务已经终止运行。

```

~/nebula_test$ sudo /usr/local/nebula/scripts/nebula.service status all
[INFO] nebula-metad: Running as 18839, Listening on 45500
[INFO] nebula-graphd: Exited
[INFO] nebula-storaged: Running as 18916, Listening on 44500

```