

1852017 - Error rc=10061 when connecting SAP Instances to failed over HANA nodes

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| Component | HAN-DB (SAP HANA Database) | Released On | 10.11.2017 |

Please find the original document at <https://launchpad.support.sap.com/#/notes/1852017>

Symptom

After a failover of the master node was done, SAP application servers are no longer able to connect to the database. The trace files of the work processes contain the following error:

```
C Loading SQLDBC client runtime ... C SQLDBC Module : D:\usr\sap\TST\hdbclient\libSQLDBCHDB.dll C
SQLDBC Runtime : libSQLDBCHDB 1.00.52 Build 0374886-1510 C SQLDBC client runtime is
1.00.52.0374886 C C Try to connect via secure store (DEFAULT) on connection 0 ... C C Mon Apr 18
12:08:02 2013 C *** ERROR => Connect to database failed, rc=1, rcSQL=-10709 (Connection failed
(RTE:[89006] System call 'connect' failed, rc=10061:No connection could be made because the target
machine actively refused it)) [dbhdbsql.cpp 353] B ***LOG BV3=> severe db error -10709 ; work process is
stopped [dbsh 1241] B ***LOG BY2=> sql error -10709 performing CON [dblink 544] B ***LOG BY0=>
Connection failed (RTE:[89006] System call 'connect' failed, rc=10061:No connection could be made
because the target machine actively refused it) [dblink 544] M ***LOG R19=> ThInit, db_connect ( DB-
Connect 000256) [thxxhead.c 1483] M in_ThErrHandle: 1 M *** ERROR => ThInit: db_connect (step 1,
th_errno 13, action 3, level 1) [thxxhead.c 11334]
```

An SQLDBC trace would show the same error, but additionally also the hostname to which the workprocess tried to connect is displayed:

```
HOST LIST: node1:33315, CONNECT TO: node1:33315 >PhysicalConnection::open >PhysicalConnection::getConn
CONNECTION TO SERVER node1:33315 TCP/IP CONNECT DONE TO: node1:33315
tmpurl=ngdb:remote://node1:33315/?APPLICATION=CPC&COMPLETARRAYEXECUTION=1&CONNECTTYPE=C
DATAFORMATSUPPORT=1&DISTRIBUTION=STATEMENT&ISOLATIONLEVEL=0&KEY=DEFAULT&LARGENUM
T=1& OPTIMIZEDSTREAMS=1&PACKETSIZE=1048576&RECONNECT=1&SQLMODE=SAPR3&STATEMENTCA
UNICODE=1&VARCHARMODE=ABAP <=SQLDBC_OK >Error::setRuntimeError error=43 SQL ERROR : SQLCOD
Connection failed (RTE:[89006] System call 'connect' failed, rc=10061:No connection could be made because the tar
```

Hostname node1 is the former master node that is no longer running but has failed over to node2. An SQLDBC trace can be activated using the following commands:

```
hdbsqldbc_cons config trace filename C:\temp\SQLDBC_%p.log
hdbsqldbc_cons trace sql on
hdbsqldbc_cons trace packet on
hdbsqldbc_cons trace debug on
```

Command 'hdbsqldbc_cons trace off' can be used to switch off the trace again. In case of Windows systems, the following steps have to be taken into consideration:

1. The SAP workprocesses are running under the account of the SAPService<SID> user. In many installations, explicit logon with this user has been disabled. In order to nevertheless trace what the

workprocesses are doing, the username of this service user has to be passed to hdbsqldbc_cons:
 hdbuserstore -u <domain>\SAPService<SID>

2. The SAPService<SID> user might not have the authorization to write into all directories the <sid>adm has access to. Consequently, whenever the trace has been activated for the SAPService<SID> user and no trace files have been created, this user is most likely missing the required authorizations. In order to avoid this, the work directory of the SAP instance can be specified as trace directory:

```
hdbsqldbc_cons -u <domain>\SAPService<SID> config trace
filename<DRIVE>:\us\sap\<SID>\DVEBMGS<xx>\work\SQLDBC_%p.log
```

Environment

SAP HANA Database

Reproducing the Issue

Initiating failover of the master node while not maintaining the hostnames of all possible master nodes in the userstore.

Cause

1. The userstore is not correctly maintained. In a scale out scenario, the userstore should contain the hostnames of all possible master nodes, including the standby nodes that are not yet running.
2. The userstore is not maintained for the correct user. Each operating user that connects to the database uses his own, dedicated userstore. This is especially important for SAP instances running on Windows: All administrative activities are usually done with the user <sid>adm, while the instances use the SAPService<SID> to connect to the database. Therefore, maintaining the correct keys using hdbuserstore only for the <sid>adm will cause the 10061 error.

Resolution

1. Maintain the userstore so that it contains the correct hostnames. Multiple hosts/ports can be set for one key
 hdbuserstore SET DEFAULT <host1>:<port>;<host2>:<port>... <user> <pw>
2. In case of Windows instances, the correct keys have to be set for the SAPService<SID> user as well:
 hdbuserstore -u <domain>\SAPService<SID> SET DEFAULT <host1>:<port>;<host2>:<port>... <user> <pw>

Keywords

Scale Out; Failover; master node; userstore; hostnames; standby nodes; user <sid>adm; SAPService<SID>; 10061; No connection could be made because the target machine actively refused it; hdbuserstore; hdbuserstore SET DEFAULT;

Products

SAP HANA 1.0, platform edition

SAP HANA, platform edition 2.0