

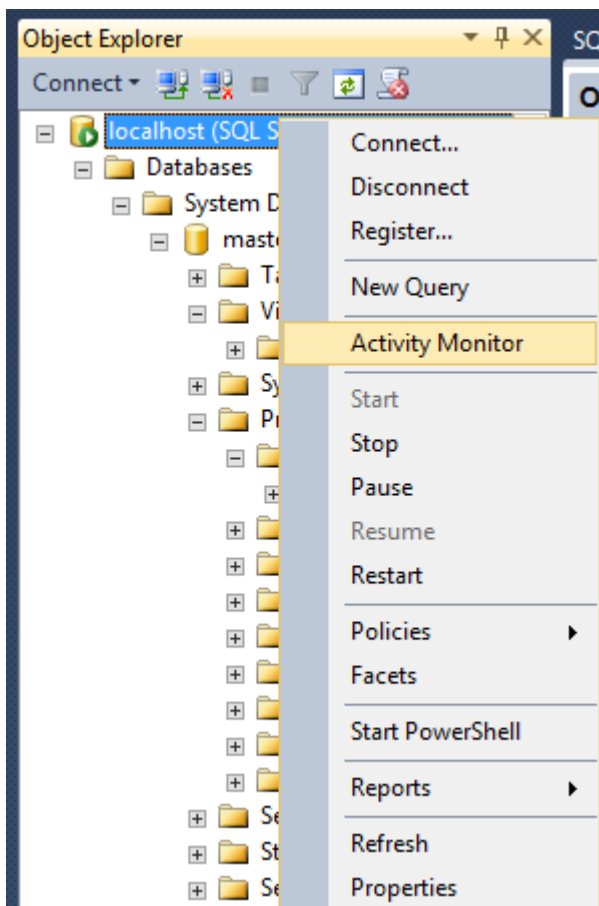
PLCSQL Link

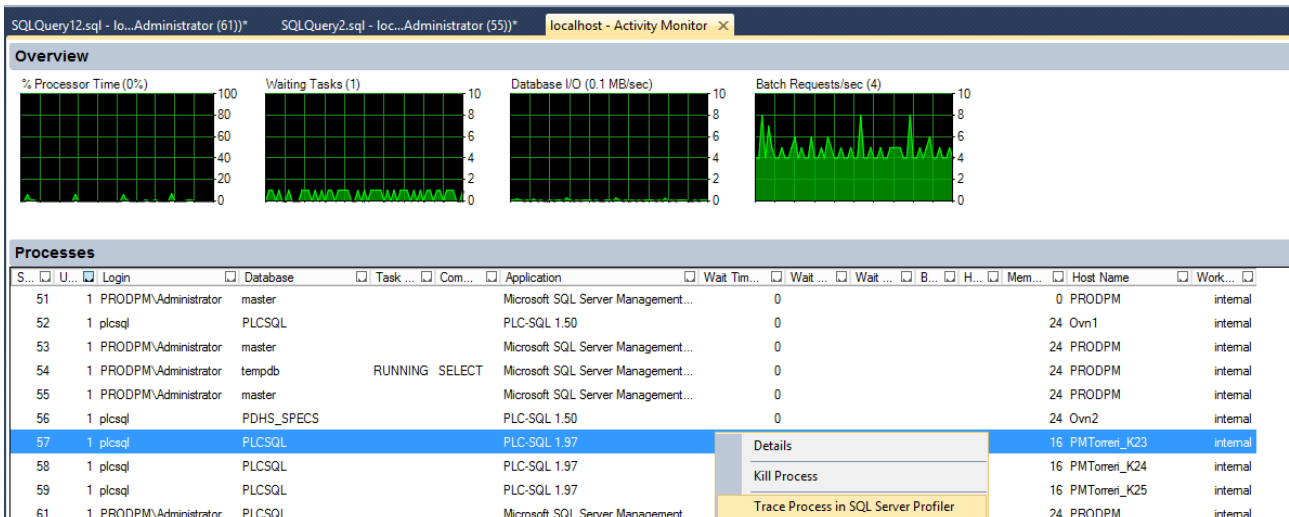
Handling the error code 3104: Error converting data type nvarchar to real

Kmr23.SQLSQL_Ready	Bool	FALSE
Kmr23.SQLSQL_StatusCode	DEC+/-	3104
Kmr23.SQLSQL_StatusValue	DEC	170
Kmr23.SQLSQL_Msg	String	'Error converting data type nvarchar to real.'

You may lookup the actual SQL Query causing the error with SQL Server Profiler:

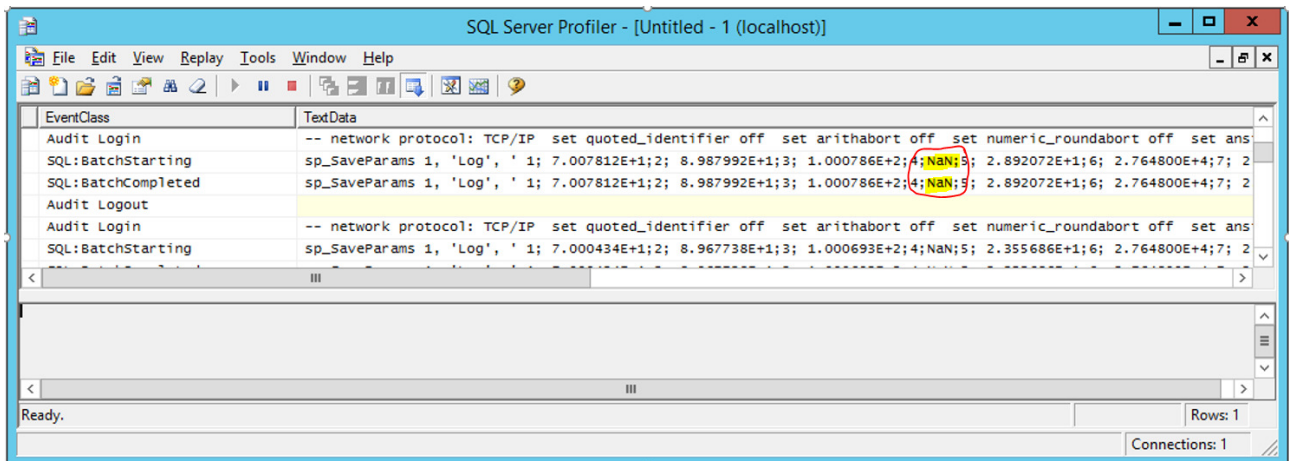
In SQL Management Studio, right-click on your SQL Server and select Activity Monitor





Find the connection with the problem and right-click and select Trace Process in SQL Server Profiler.

The Profiler will show all queries sent by this connection.

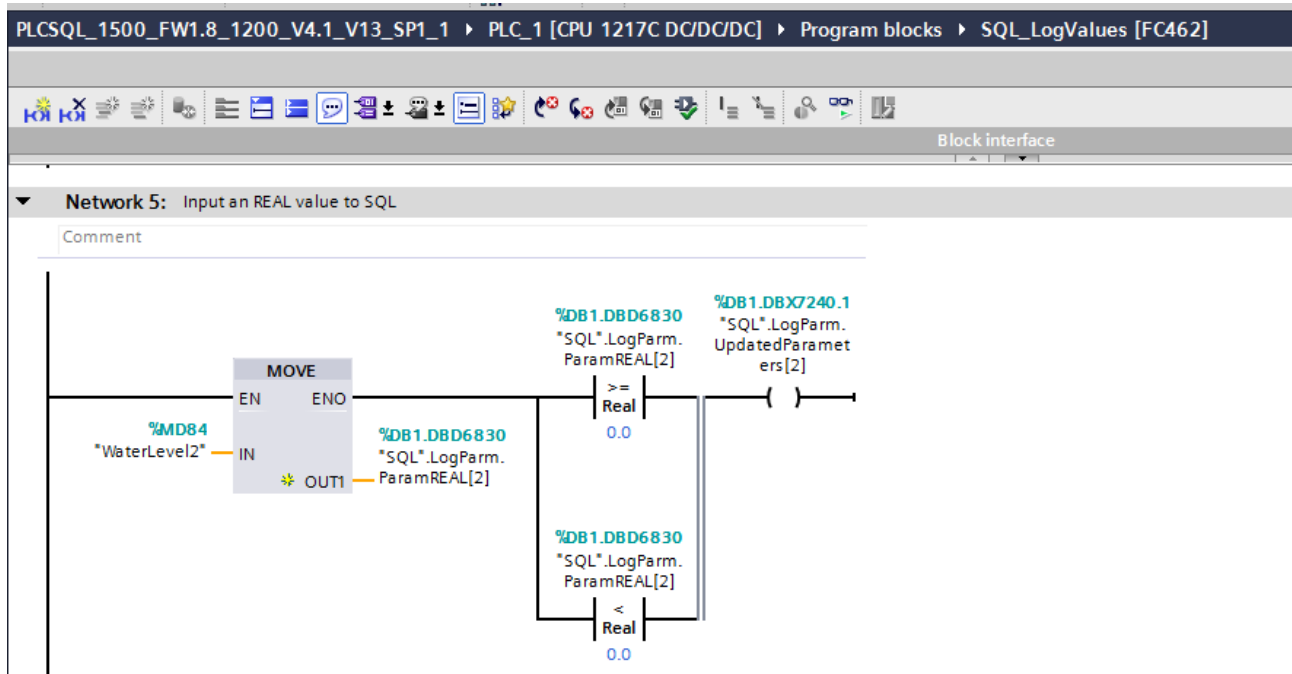


As we can see in the above example, we have Parameter ID 4 giving a NaN value: Not A Number. This value cannot be converted by the SQL Server to REAL, and therefore not saved by the SQL-server.

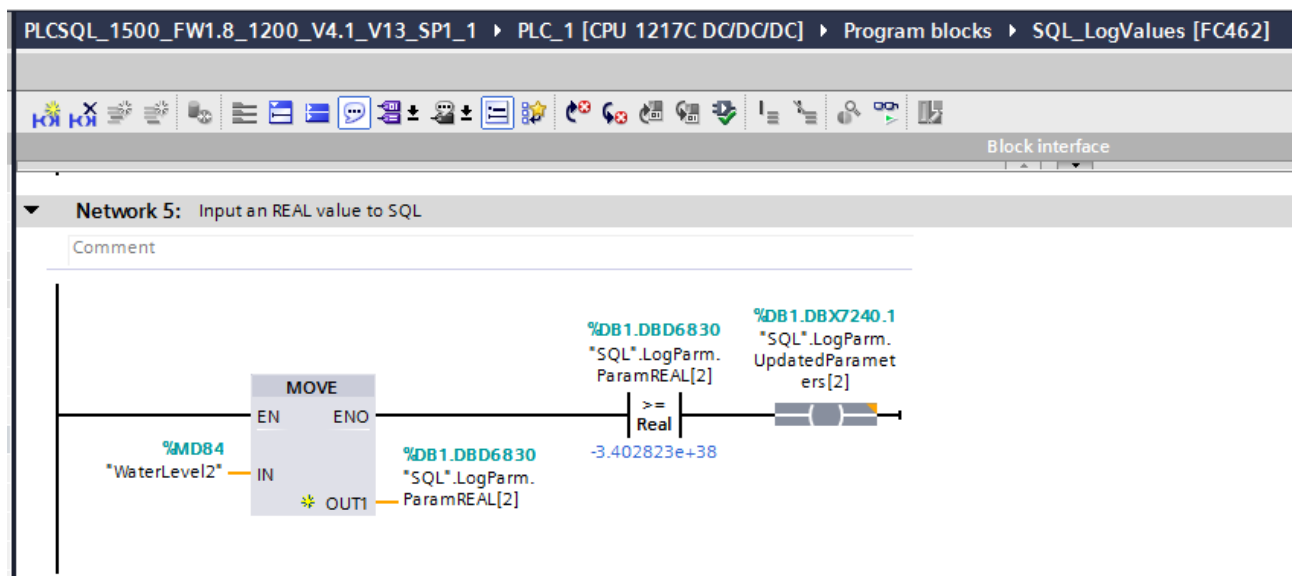
Solution

Make a check in your PLC program for your values to see if they are a valid number. You may accomplish this by checking if you can compare with them. Only if the :

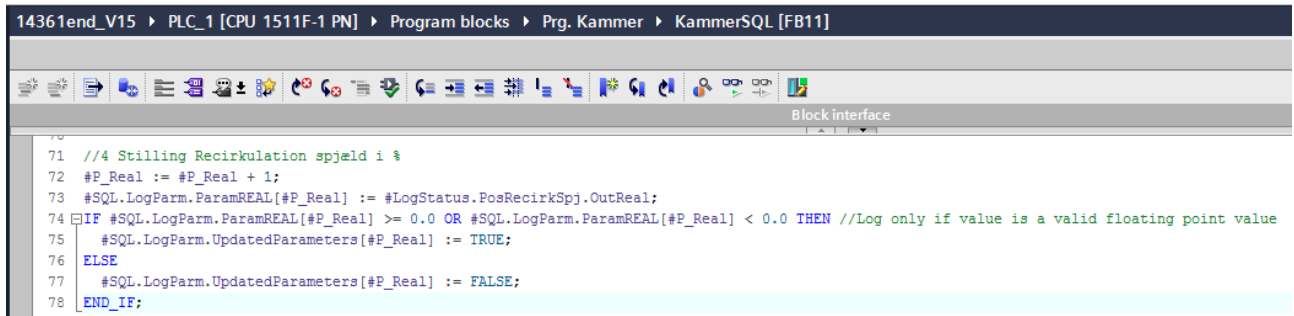
Ladder solution



You could even do it with a single compare instruction by supplying the smallest possible REAL value: `-3.402823e+38`



SCL Solution example



The screenshot shows the SIMATIC Manager interface for a function block named 'KammerSQL [FB11]'. The breadcrumb navigation at the top indicates the path: '14361end_V15 > PLC_1 [CPU 1511F-1 PN] > Program blocks > Prg. Kammer > KammerSQL [FB11]'. Below the navigation is a toolbar with various icons for editing and execution. The main area displays SCL code for lines 71 through 78. Line 74 is highlighted with a light blue background. The code includes comments and logic for updating parameters based on log status and value validity.

```
70
71 //4 Stilling Recirkulation spjæld i §
72 #P_Real := #P_Real + 1;
73 #SQL.LogParm.ParamREAL[#P_Real] := #LogStatus.PosRecirkSpj.OutReal;
74 IF #SQL.LogParm.ParamREAL[#P_Real] >= 0.0 OR #SQL.LogParm.ParamREAL[#P_Real] < 0.0 THEN //Log only if value is a valid floating point value
75     #SQL.LogParm.UpdatedParameters[#P_Real] := TRUE;
76 ELSE
77     #SQL.LogParm.UpdatedParameters[#P_Real] := FALSE;
78 END_IF;
```