

Desperate for help on serious TCP/IP connectivity problem

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I have posted a detailed discussion of the problem on microsoft.public.ado. However I am cross-posting this now because we are very keen to determine if anyone else has had this problem. Actually desperate might be a more accurate term.

Basically we have discovered that connecting to SQL Server 2000 (or MSDE either SP2 or SP3a) via TCP/IP under ADO results in queries being pre-emptable by Windows events under certain circumstances.

This has resulted in random failures in a large VB6 application because a routine in VB containing an ADO query can be randomly interrupted by an event, such as a focus change – you can imagine the consequences of this, because VB code is normally written on the assumption that unless you yield (i.e call `Doevents`), then your routine will execute to completion before any event will be processed.

We have established that ADO queries under both the ODBC (MSDASQL) and OLEDB drivers are subject to this problem, and that the problem occurs with various ADO commands e.g opening a recordset or performing an execute command, for example. We tested under MDAC 2.6 but we believe the problem also occurs with later releases, and probably lies somewhere deep in the TCP/IP stack.

The problems do not appear under named pipes, as far as we can determine. In fact, we are desperately hoping they won't, because there is no workaround for this issue other than switching to named pipes that we can think of (after all, if your queries can randomly get interrupted, you'll need gate flags everywhere – a nightmare!)

The problem will occur if

- (a) the target database is on the client machine
- (b) the connection to the database is made via TCP/IP
- (c) the database needs to perform disk I/O to satisfy the query (using `DBCC DROPCLEANBUFFERS` will often provoke the problem, therefore).

We suspect the problem is specific to XP (currently testing on SP1) but

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cannot at this stage confirm that it does not occur on Win2K.

The problem has been reproduced on multiple machines and databases, so we know it is not a specific hardware glitch.

We have observed that a variety of windows messages can interrupt queries under these circumstances, WM_TIMER and WM_FOCUS messages in particular.

We suspect that deep in the TCP/IP stack something is pumping messages, in effect causing the query to 'yield'.

The problem is reproducible both in compiled code and in the VB6 development environment, but we believe VB is only showing the problem, not responsible for it.

To clarify

..... some code

```
oConnection.execute sSql
>>>> this may yield, causing an event to be processed when you don't want it to
..... more code, which you normally would expect to complete
end sub
```

note that almost any query-invoking command is prone to this problem so this code will also fail

```
dim rs as new adodb.recordset
set rs.activeconnection = oConn
rs.open sSql
>>>> can be pre-empted at this point, before the open actually returns to VB
..... more code
end sub
```

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