

Recoverable OPC Drop Outs

Recoverable OPC drop outs are a long standing problem that has been experienced by a number of customers over the past 2-3 years. The symptoms of the problem are a disconnection occurring between OPC server(s) and the Exaquantum server. To help recognise this problem, the error messages that are logged are reproduced later in this FAQ.

To minimise the loss of data that used to occur when the disconnection took place, Exaquantum was modified to recognise that the disconnection had occurred and to immediately re-establish the connection automatically. This interim solution has been successful in alleviating the problem until a permanent solution to the problem could be found.

Now, after intensive investigation by Yokogawa companies in conjunction with Microsoft, the cause of the problem has been identified.

Cause

Microsoft Management Console (MMC) is used to host tools that manage the hardware, software and network components of the Windows system. MMC is also used to host the Exaquantum Administration Tools.

The cause of the problem has been identified as running the Exaquantum Administration Tools with another snap-in (for example SQL Server Enterprise Manager) inside the same session.

After browsing Exaquantum Administration Tools and the other snap-in (SQL Server Enterprise Manager) on closing the MMC session, the process (mmc.exe) does not disappear from the process list. After 15 minutes to 1 hour recoverable OPC drop outs will occur.

Workaround

The workaround is to run the Exaquantum Administration tools with no other snap-in added. Under these conditions, mmc.exe will close down successfully.

Permanent Solution

The solution to this problem is still under investigation by Microsoft.

How to identify recoverable OPC drop outs

The following sequence of messages can be seen repeating in the Exaquantum server application event log.

Recoverable OPC drop outs can be experienced for both DA and AE data either simultaneously or individually. The error messages are different depending on which type of drop out is occurring.

DA Data Drop Out Error Messages

Event Viewer (Local) - Saved Application Log - 20,914 event(s)

Type	Date	Time	Source	Category	Event	User	Computer
Information	15/05/2003	08:37:01	Quantum	QOPCAEPump	62208	S-1-5-21-1644...	EQAQUANT...
Information	15/05/2003	08:37:01	Quantum	QOPCAEPump	62208	S-1-5-21-1644...	EQAQUANT...
Information	15/05/2003	08:37:01	Quantum	QOPCAEPump	62208	S-1-5-21-1644...	EQAQUANT...
Information	14/05/2003	21:24:37	Quantum	QHistorian	62096	S-1-5-21-1644...	EQAQUANT...
Error	14/05/2003	18:11:40	Quantum	QHistorian	62093	S-1-5-21-1644...	EQAQUANT...
Error	14/05/2003	18:11:26	Quantum	QHistorian	62093	S-1-5-21-1644...	EQAQUANT...
Information	14/05/2003	16:54:41	Quantum	QHistorian	62116	S-1-5-21-1644...	EQAQUANT...
Error	14/05/2003	16:54:31	Quantum	QHistorian	62096	S-1-5-21-1644...	EQAQUANT...
Error	14/05/2003	16:54:31	Quantum	QHistorian	62096	S-1-5-21-1644...	EQAQUANT...
Error	14/05/2003	16:39:42	Quantum	QHistorian	62115	S-1-5-21-1644...	EQAQUANT...
Error	14/05/2003	16:30:39	Quantum	QHistorian	62096	S-1-5-21-1644...	EQAQUANT...

Event Properties - Event ID: 62913

Date: 15/05/2003 Source: Quantum
 Time: 08:37 Category: QOPCDAManager
 Type: Information Event ID: 62913
 User: S-1-5-21-1644253230-936333090-4547331-1010
 Computer: EQAQUANTUM01

Description:
 OPC server status information D:\Eqaquantum\QOPcdManager\QOPCDAManager\QOPProcessor.cpp Line 774 : OPC server status information : Server Status: RECOVER ErrCode=0x00000000
 NodeName=STN0224_ProgID=Yokogawa.ExsopcDACS1_ : 2003/05/15 07:37:01

Data: Bytes Words
 0000: c1 e5 00 00 Å8 .

Event Viewer (Local) - Saved Application Log - 20,914 event(s)

Type	Date	Time	Source	Category	Event	User	Computer
Information	15/05/2003	08:37:01	Quantum	QOPCAEPump	62208	S-1-5-21-1644...	EQAQUANT...
Information	15/05/2003	08:37:01	Quantum	QOPCAEPump	62208	S-1-5-21-1644...	EQAQUANT...
Information	15/05/2003	08:37:01	Quantum	QOPCAEPump	62208	S-1-5-21-1644...	EQAQUANT...
Information	14/05/2003	21:24:37	Quantum	QHistorian	62096	S-1-5-21-1644...	EQAQUANT...
Error	14/05/2003	18:11:40	Quantum	QHistorian	62093	S-1-5-21-1644...	EQAQUANT...
Error	14/05/2003	18:11:26	Quantum	QHistorian	62093	S-1-5-21-1644...	EQAQUANT...
Information	14/05/2003	16:54:41	Quantum	QHistorian	62116	S-1-5-21-1644...	EQAQUANT...
Error	14/05/2003	16:54:31	Quantum	QHistorian	62096	S-1-5-21-1644...	EQAQUANT...
Error	14/05/2003	16:54:31	Quantum	QHistorian	62096	S-1-5-21-1644...	EQAQUANT...
Error	14/05/2003	16:39:42	Quantum	QHistorian	62115	S-1-5-21-1644...	EQAQUANT...
Error	14/05/2003	16:30:39	Quantum	QHistorian	62096	S-1-5-21-1644...	EQAQUANT...

Event Properties - Event ID: 62913

Date: 15/05/2003 Source: Quantum
 Time: 08:37 Category: QOPCDAManager
 Type: Information Event ID: 62913
 User: S-1-5-21-1644253230-936333090-4547331-1010
 Computer: EQAQUANTUM01

Description:
 OPC server status information D:\Eqaquantum\QOPcdManager\QOPCDAManager\QOPProcessor.cpp Line 774 : OPC server status information : Server Status: ONLINE ErrCode=0x00000000
 NodeName=STN0224_ProgID=Yokogawa.ExsopcDACS1_ : 2003/05/15 07:37:01

Data: Bytes Words
 0000: c1 e5 00 00 Å8 .

AE Data Drop Out Error Messages

Event Properties

Date: 15/05/2003 Source: Quantum
 Time: 08:37 Category: QOPCAEPump
 Type: Error Event ID: 62213
 User: S-1-5-21-1644253230-936333080-4547331-1010
 Computer: EXAQUANTUM01

Description:
 Exceptional error occurred D:\Exaquantum\QOPCAEPump\YOPCServerOnline.cpp Line 217: Exceptional error occurred: QOPCServerOnline: GetStateFromOPC[] - [OPC] GetStatus() failed! H = 0x0010108 (Host STN0224, ProgD\Yokogawa ExaopcAECs1): 2003/05/15 07:37:01

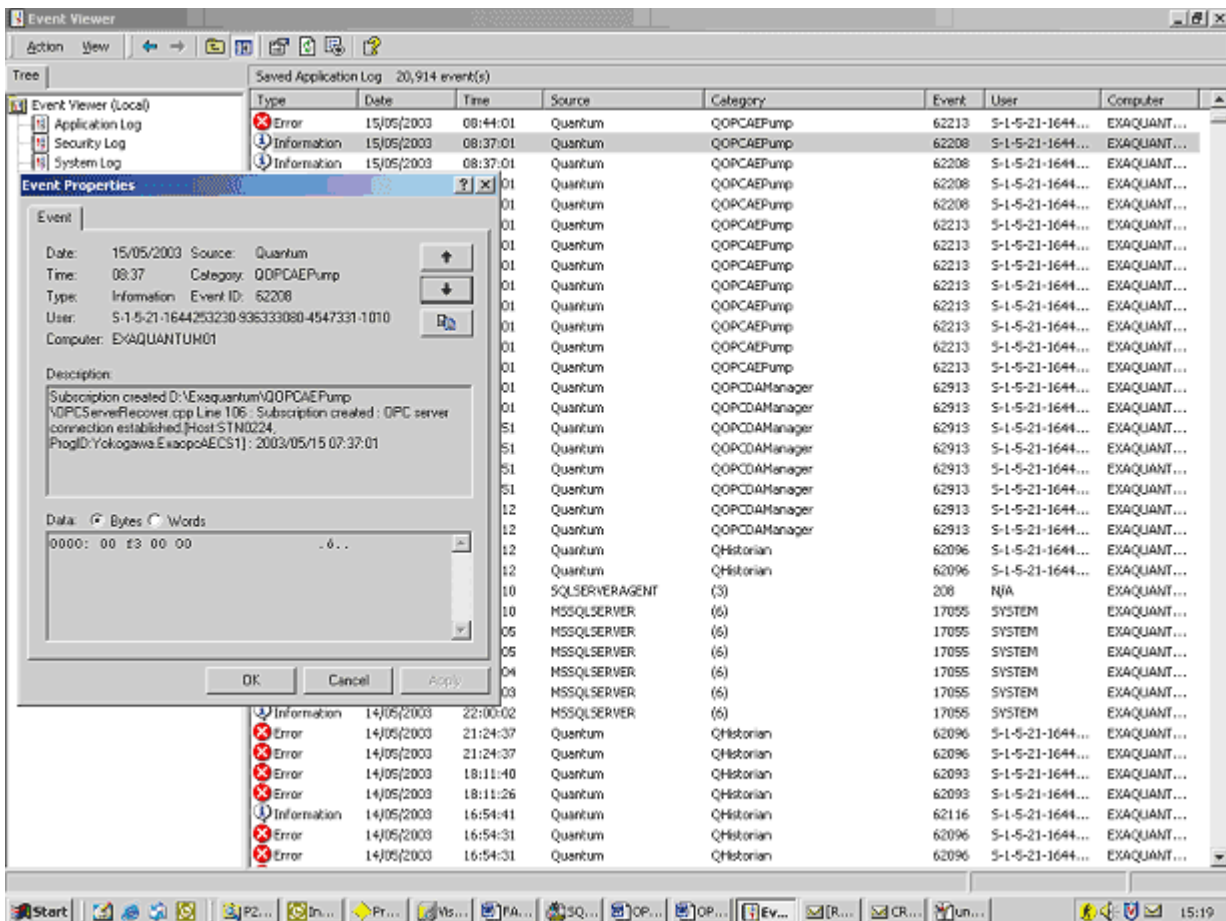
Type	Date	Time	Source	Category	Event	User	Computer
Information	15/05/2003	08:37:01	Quantum	QOPCAEPump	62208	S-1-5-21-1644...	EXAQUANT...
Information	15/05/2003	08:37:01	Quantum	QOPCAEPump	62208	S-1-5-21-1644...	EXAQUANT...
Information	15/05/2003	08:37:01	Quantum	QOPCAEPump	62208	S-1-5-21-1644...	EXAQUANT...
Error	14/05/2003	21:24:37	Quantum	QHistorian	62096	S-1-5-21-1644...	EXAQUANT...
Error	14/05/2003	18:11:40	Quantum	QHistorian	62096	S-1-5-21-1644...	EXAQUANT...
Error	14/05/2003	18:11:26	Quantum	QHistorian	62093	S-1-5-21-1644...	EXAQUANT...
Information	14/05/2003	16:54:41	Quantum	QHistorian	62116	S-1-5-21-1644...	EXAQUANT...
Error	14/05/2003	16:54:31	Quantum	QHistorian	62096	S-1-5-21-1644...	EXAQUANT...
Error	14/05/2003	16:54:31	Quantum	QHistorian	62096	S-1-5-21-1644...	EXAQUANT...
Error	14/05/2003	16:39:42	Quantum	QHistorian	62115	S-1-5-21-1644...	EXAQUANT...
Error	14/05/2003	16:30:39	Quantum	QHistorian	62096	S-1-5-21-1644...	EXAQUANT...

Event Properties

Date: 15/05/2003 Source: Quantum
 Time: 08:37 Category: QOPCAEPump
 Type: Error Event ID: 62213
 User: S-1-5-21-1644253230-936333080-4547331-1010
 Computer: EXAQUANTUM01

Description:
 Exceptional error occurred D:\Exaquantum\QOPCAEPump\YOPCServerOnline.cpp Line 61: Exceptional error occurred: Abnormal network disconnection to OPC server (Host STN0224, ProgD\Yokogawa ExaopcAECs1): 2003/05/15 07:37:01

Type	Date	Time	Source	Category	Event	User	Computer
Information	15/05/2003	08:37:01	Quantum	QOPCAEPump	62208	S-1-5-21-1644...	EXAQUANT...
Information	15/05/2003	08:37:01	Quantum	QOPCAEPump	62208	S-1-5-21-1644...	EXAQUANT...
Information	15/05/2003	08:37:01	Quantum	QOPCAEPump	62208	S-1-5-21-1644...	EXAQUANT...
Error	14/05/2003	21:24:37	Quantum	QHistorian	62096	S-1-5-21-1644...	EXAQUANT...
Error	14/05/2003	18:11:40	Quantum	QHistorian	62096	S-1-5-21-1644...	EXAQUANT...
Error	14/05/2003	18:11:26	Quantum	QHistorian	62093	S-1-5-21-1644...	EXAQUANT...
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Error	14/05/2003	16:54:31	Quantum	QHistorian	62096	S-1-5-21-1644...	EXAQUANT...
Error	14/05/2003	16:54:31	Quantum	QHistorian	62096	S-1-5-21-1644...	EXAQUANT...
Error	14/05/2003	16:39:42	Quantum	QHistorian	62115	S-1-5-21-1644...	EXAQUANT...
Error	14/05/2003	16:30:39	Quantum	QHistorian	62096	S-1-5-21-1644...	EXAQUANT...



Clients Drop Outs

It is also possible of the OPC drop out condition to affect clients. There are two errors that have been encountered on clients as a result of the OPC drop out problem:

Get Dates Failed

This error can be displayed on the UI when the condition occurs:

"Get Dates Failed"

"Error Number: 2147219497 (Get Dates Failed)"

Failed to create Server Session Object

This error appears in the client Application Event Log when the condition occurs:

Failed to create Server Session Object:<server name>hr=0x80010108

This is the same error code that is seen for OPC drop outs on the Exaquantum Server.