

Product	Version	Theme	Environment	Date	Department	Person	Language
SEE Electrical PLM	V3Rx	Application server	Windows	23/02/2017	After Sales	Technical Support	EN

**Subject:**

# How to analyze SEE Electrical PLM V3 service interruptions

**Description:**

This document describes how to analyze situations when all users seem to be blocked simultaneously on one product family. It is reserved to IT support having access to the SEE Electrical PLM application and database servers.

**Our proposed solution:**

**Method for problems analysis with SEE Electrical PLM V3 (application server and connected applications).**

## 1 - Characterize the problem at client level

### 1.1 - What is the problem at client level?

- the client session is alive, but all functions fail, typically with message "Transaction failed".  
This case is characteristic of a loss of the connection to the application server  
Check the problem at application server level (see below)
- the client is still working properly, but no new client can be started  
See below
- all clients are working properly, but extremely slow  
Check the problems at application and database server levels.
- does the same problem occur on different client computers?

### 1.2 - In case of problem to start a new client

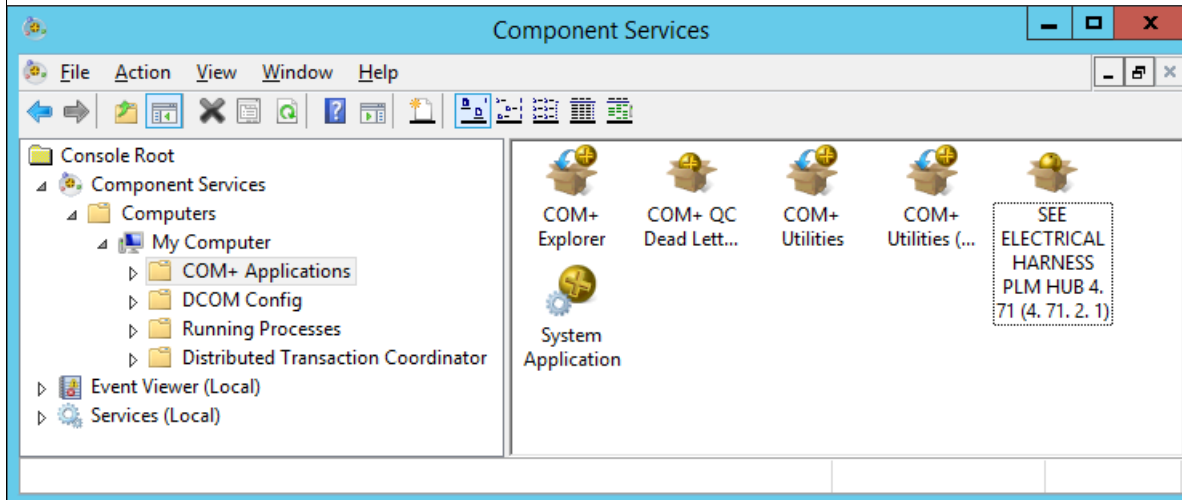
- What messages do you get:at client level (report the message displayed to the user)?
- Is the problem similar with Topology, Device Manager and Administration Tool?
- If messages suggest a problem to connect to the PLM Hub
  - check the network connection

## 2 - Characterize the problem at application server level

### 2.1 - Is the PLM Hub com+ component service still running?

To be checked on the PLM Hub A/S computer, under the component services (see Control Panel\All Control Panel Items\Administrative Tools and double click on Component Services icon).

Its name depends on the version, but is prefixed by "SEE ELECTRICAL HARNESS PLM HUB".



### 2.2 - if stopped

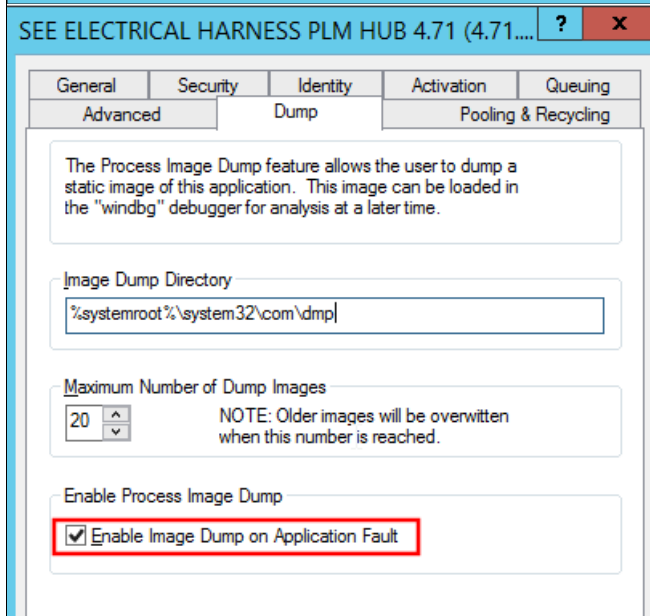
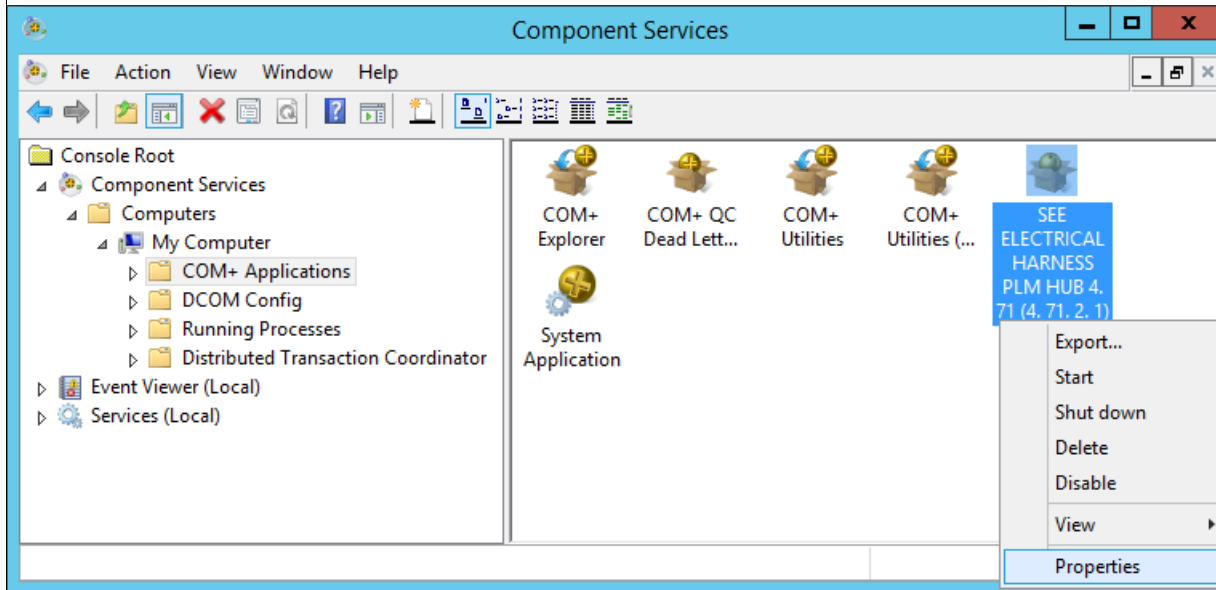
It means the application server service was stopped, probably unexpectedly.

#### 2.2.1 - Is there a dump at COM+ service level?

In case of crash of the application server service, it is possible to have a dump generated automatically.

There are 4 possibilities to find the dump file:

First, the dump could be found at the position defined by the parameter in the properties of the application server service. If necessary, enable this option at the COM+ service level, as shown below:



**Second, there could be a dump in the following directory:**

C:\ProgramData\Microsoft\Windows\WER\ReportQueue.

It may contain some sub-directories referring to the name of the process for which an event report has been generated.

In case of PLM Hub problems, it should refer to the "dllhost.exe" process.

Such a sub-directory may contain dump files suffixed by ".hdmp". Note that such a file may also be missing. It seems that it can be in case of very similar events already reported by the Windows Event Report system.

To avoid this case, it is possible to customize the Windows reporting mechanism, and force dumps whenever possible.

See the explanations in this discussion:

<https://blogs.msdn.microsoft.com/chaun/2013/11/12/steps-to-catch-a-simple-crash-dump-of-a-crashing-process/>

To apply this method to the case of PLM Hub, you need to update the registries of the PLM Hub computer to create this key:

**[HKEY\_LOCAL\_MACHINE\SOFTWARE\Microsoft\Windows\Windows Error Reporting\LocalDumps\dllhost.exe]**

**"DumpCount"=dword:00000005**

**"DumpType"=dword:00000002**

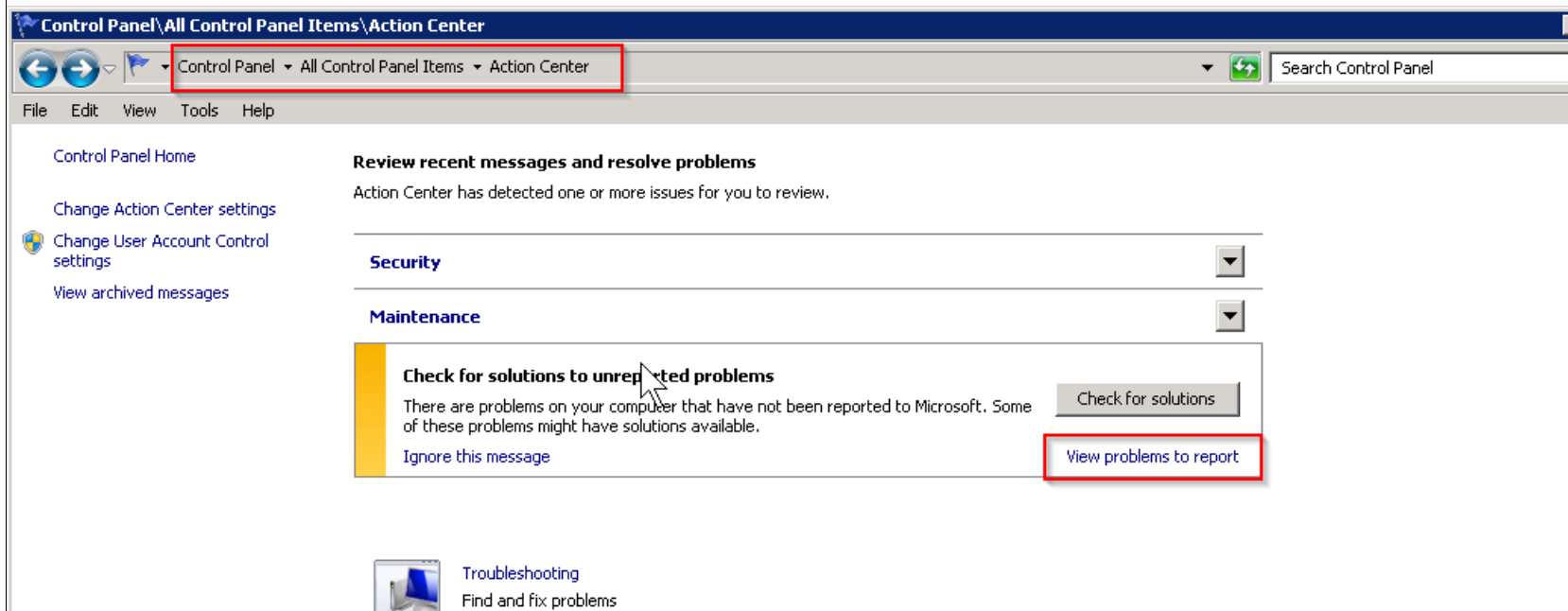
**"DumpFolder"=hex(2):44,00,3a,00,5c,00,54,00,65,00,6d,00,70,00,5c,00,43,00,72,\  
00,61,00,73,00,68,00,44,00,75,00,6d,00,70,00,73,00,00,00**

"Dumpfolder" represents the path to the folder where dump files should be created.

In case there is a dump, please provide the full ReportQueue sub-directory and the dump to IGE+XAO for analyze.

### Third, the dump could be found using the control panel

For this, open the Action Center in the control panel:



Click on the "View problems to report" link (not active if no interesting problems). The following window appears:

Control Panel\All Control Panel Items\Action Center\Check For Solutions

Control Panel > All Control Panel Items > Action Center > Check For Solutions

Search Control Panel

**Check for solutions to these problems**  
Windows will send a description of each problem to Microsoft and look for steps you can take to solve it. Sending information about problems also helps create solutions.

Select all

Source	Summary	Date	Details
<b>COM Surrogate</b>			
<input checked="" type="checkbox"/>	COM Surrogate	Stopped working	28/06/2013 12:18
			<a href="#">View technical det...</a>
<b>Diagnostics Troubleshooting Wizard (2)</b>			
<input checked="" type="checkbox"/>	Diagnostics Troubleshooting Wizard	Problem not fixed	08/04/2014 11:53
<input checked="" type="checkbox"/>	Diagnostics Troubleshooting Wizard	Problem not fixed	08/04/2014 11:53
			<a href="#">View technical det...</a>
			<a href="#">View technical det...</a>
<b>Driver software installation (4)</b>			
<input checked="" type="checkbox"/>	Driver software installation	Installed generic driver software	02/06/2014 15:05
<input checked="" type="checkbox"/>	Driver software installation	Installed generic driver software	02/06/2014 15:05
<input checked="" type="checkbox"/>	Driver software installation	Installed generic driver software	16/07/2015 12:25
			<a href="#">View technical det...</a>

Look at possible “COM surrogate” problems. If any corresponding to the date/time of the PLM Hub problem, click on the “View technical details” link. The following window opens:

The screenshot shows the Windows Control Panel window titled "Control Panel\All Control Panel Items\Action Center\Problem Details". The main content area displays information for a problem with the icon "COM Surrogate".

**Problem**  
 Stopped working

**Date**  
 28/06/2013 12:18

**Status**  
 Not reported

**Description**  
 Faulting Application Path: C:\Windows\System32\dllhost.exe

**Problem signature**

Problem Event Name:	BEX64
Application Name:	dllhost.exe
Application Version:	6.1.7600.16385
Application Timestamp:	4a5bca54
Fault Module Name:	StackHash_d6c3
Fault Module Version:	0.0.0.0
Fault Module Timestamp:	00000000
Exception Offset:	000000001ddf320
Exception Code:	c0000005
Exception Data:	0000000000000008
OS Version:	6.1.7601.2.1.0.274.10
Locale ID:	1036
Additional Information 1:	d6c3
Additional Information 2:	d6c36002700e9eaa969870233a4b45a9
Additional Information 3:	84ee
Additional Information 4:	84eec1698a4501dfd5179d017b295032

**Files that help describe the problem**

- AppCompat.txt
- WERInternalMetadata.xml
- memory.hdmp
- minidump.mdmp

[View a temporary copy of these files](#)

**Warning:** If a virus or other security threat caused the problem, opening

Learn how to report problems and check for solutions automatically.  
 Read our privacy statement online

[Copy to clipboard](#)

The File Explorer window is open to the path "C:\Users\ufrcTestSPMPLM\AppData\Local\Temp\2\WERD7BA.tmp". It shows a list of files:

Name	Date modified	Type	Size
AppCompat.txt	28/06/2013 12:18	Text Document	4
memory.hdmp	28/06/2013 12:18	HDMP File	172 132
minidump.mdmp	28/06/2013 12:18	MDMP File	12 693
WERInternalMetadata.xml	28/06/2013 12:18	XML Document	4

You can then see a number of information about the problem, especially if there is a dump or other files attached to the event. Click on the “See a temporary copy of these files” link. A dump file may be visible in the opened window.

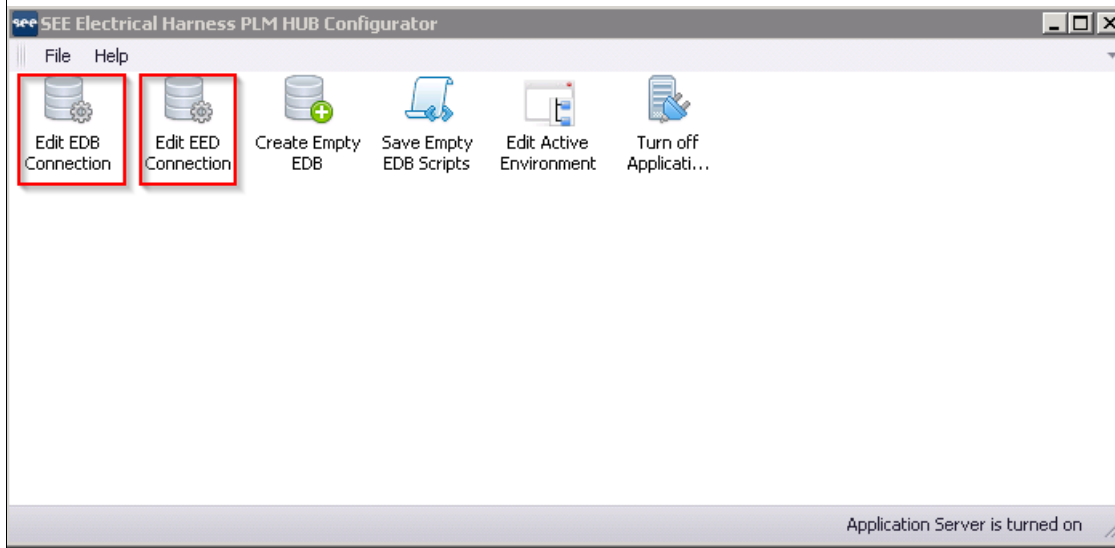
**Fourth, the dump could be at the position defined under the Microsoft Debugdiag tool, in case this tool has been started to monitor the crashes.**

Whatever the case, if there is a dump file, please provide it to IGE+XAO support, there has probably been an A/S crash.

## 2.2.2- Try to restart the service manually.

If the Windows COM+ component services application cannot be started:

- You may have a problem with database connection. Please test them under the Hub Configurator, to make sure the database is still accessible from the Hub.



In case of problem, see the part about the database server.

- You may have a problem at Windows level (some Windows service not running properly, typically).

You may need to restart the application server computer. You may also check the Windows events for some information about the problem.

If it can be restarted, maybe all is unblocked now. Check with the applicative users.



## **2.3 - If running**

### **2.3.1 - it is possible that Hub was stopped then restarted automatically.**

Like in the case of application server stopped above:

- Check if a dump was generated, as described in point 2.2.1.
- Check the memory allocated to the dllhost.exe process representing the PLM Hub. If the memory is very low, it is likely that the Hub has been restarted very recently.

### **2.3.2 - if you believe the Hub was not restarted automatically**

Two possible problems:

- Hub is running normally, but is waiting for processes to finish at database server level.

Maybe there is a performance problem at database level. See the part about the database server.

- Hub is running but more or less frozen (new clients cannot be started, already connected ones have no activity).

Then it is necessary to dump the application server service.

A full dump has to be generated under the Microsoft DebugDiag tool for instance (the dump from task manager is useless, because the PLM hub service is a 32bits process).



**Events:** important to select only those that are necessary, to avoid too big traces that can create a disk space problem. There can be the typical ones: Audit Login, Audit Logout, ExistingConnection  
But we are interested mostly in these ones:

Stored Procedures

- RPC Output Parameter
- RPC:Completed
- RPC:Starting
- SP:Completed
- SP:Recompile
- SP:Starting
- SP:StmtCompleted
- SP:StmtStarting

TSQL

- Exec Prepared SQL
- Prepare SQL
- SQL:BatchCompleted
- SQL:BatchStarting

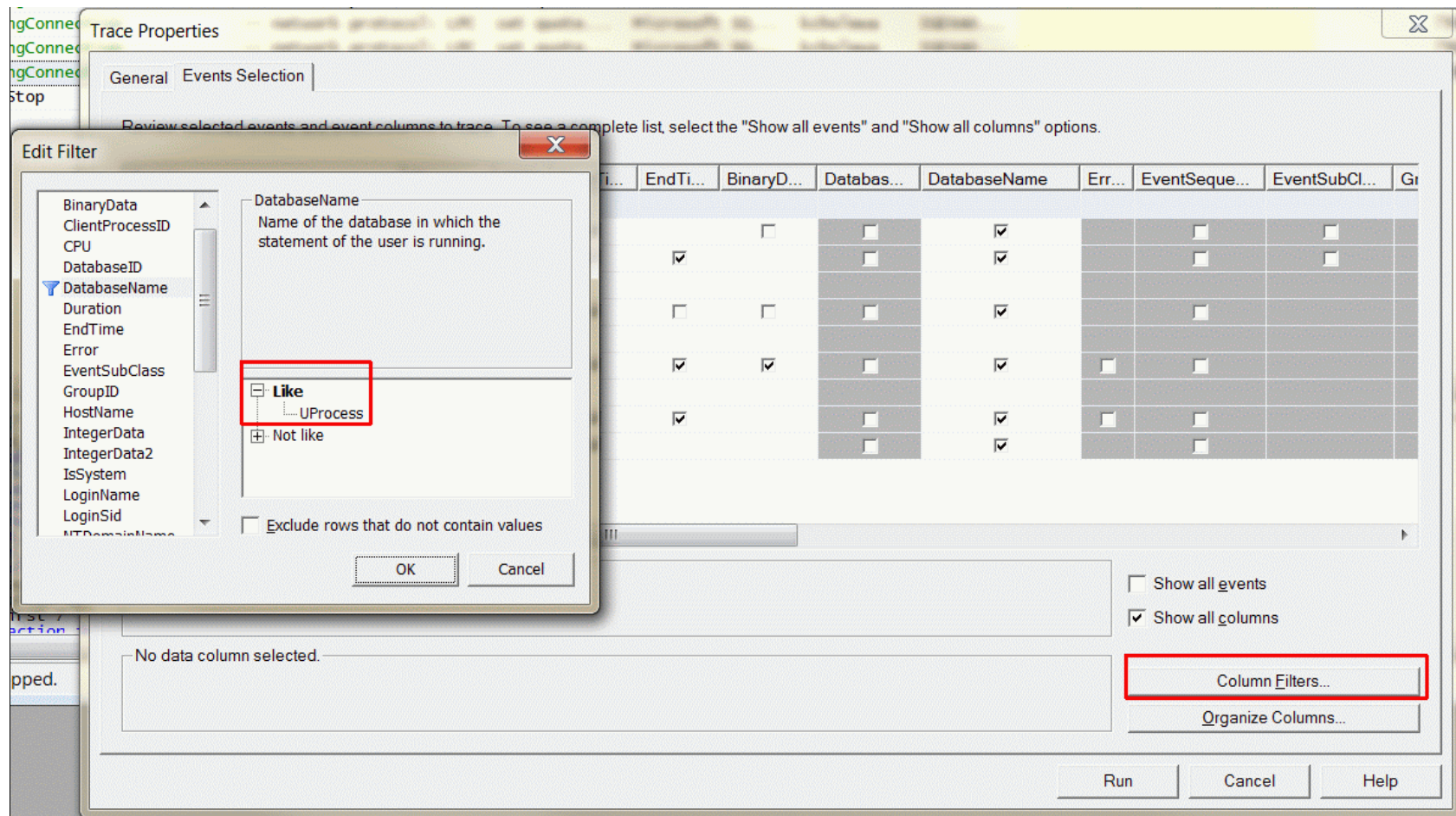
**Columns:**

Events	TextData	ApplicationName	NTUserName	LoginName	CPU	Reads	Writes	Duration	ClientProcessID	SPID	StartTime	EndTime	DatabaseName
<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Events	EndTime	DatabaseName	Error	RowCounts
<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>

**Filters:** to trace only the EDB database you are interested in, in case your server is managing others at the same time.



Send the trace to IGE+XAO support.

- if it seems no request is executed, there are several possibilities:

- There is no running query (A/S are maybe blocked and requested no task at DB/S level). See the part about A/S, a dump of the A/S is necessary in this case.

- There is one or several running queries that take a long time to execute (performance problem or some kind of deadlock). See the part about A/S, a dump of the A/S is necessary in this case.

### 3.3 – in case some client processes seem to be hanging, analyze the DB/S state

Start those 4 queries on the database:

--1. list of processes

```
SELECT w.wait_duration_ms
,w.wait_type
,w.blocking_session_id
,w.resource_description
,qry_text.text
,s.spid
,s.login_time
,s.last_batch
,s.status
,s.blocked
,s.cpu
,s.memusage
,s.program_name
,s.open_tran
,s.cmd
,s.stmt_start, s.stmt_end
,DB_NAME(s.dbid) as database_name
FROM sys.sysprocesses s
LEFT OUTER JOIN sys.dm_os_waiting_tasks w ON w.session_id = s.spid
CROSS APPLY sys.dm_exec_sql_text(s.sql_handle) qry_text
--WHERE s.dbid in case of security constraints this query can be limited to selected database
ORDER by s.dbid, w.blocking_session_id DESC
FOR XML PATH

GO
```

--2. List of exec and statements

```
SELECT
er.session_id
,er.blocking_session_id
,er.status
,er.wait_type
,er.last_wait_type
,er.wait_time
,er.wait_resource
,er.open_transaction_count
,er.transaction_isolation_level
```

```

,er.nest_level
,er.start_time
,DB_NAME(er.database_id) as database_name
,CASE
WHEN LEN(qry_text.text) > 0 AND er.statement_end_offset - er.statement_start_offset >0 THEN SUBSTRING(qry_text.text, er.statement_start_offset / 2,
(er.statement_end_offset - er.statement_start_offset) / 2)
WHEN LEN(qry_text.text) > 0 AND er.statement_start_offset > 0 THEN RIGHT(qry_text.text, er.statement_start_offset / 2)
END AS s_statement
,er.statement_start_offset
,er.statement_end_offset
,qry_text.text
FROM sys.dm_exec_requests er
CROSS APPLY sys.dm_exec_sql_text (er.plan_handle) qry_text
ORDER by er.database_id, er.blocking_session_id DESC
FOR XML PATH
GO

```

--3. Input buffers

```

--DROP TABLE #Inputbuffer
CREATE TABLE #Inputbuffer(
id INT IDENTITY,
spid INT NULL,
EventType NVARCHAR(100) NULL,
Parameters INT NULL,
EventInfo NVARCHAR(MAX) NULL
)
GO
DECLARE @spid INT
DECLARE @qry NVARCHAR(128)
DECLARE sysp CURSOR LOCAL STATIC FOR SELECT spid FROM sys.sysprocesses sp WHERE spid>=50
OPEN sysp
FETCH NEXT FROM sysp INTO @spid
WHILE (@@FETCH_STATUS =0)
BEGIN
    SET @qry = 'DBCC INPUTBUFFER (' + CAST(@spid AS NVARCHAR(50)) + ') WITH NO_INFOMSGS'
    INSERT INTO #Inputbuffer (EventType, Parameters, EventInfo)
    EXEC (@qry)
    UPDATE #Inputbuffer SET spid = @spid WHERE id = SCOPE_IDENTITY()

    FETCH NEXT FROM sysp INTO @spid
END
CLOSE sysp
DEALLOCATE sysp

```

```
SELECT * FROM #Inputbuffer FOR XML PATH
GO
DROP TABLE #Inputbuffer
GO
```

--4. Locks

```
SELECT tl.resource_type
,tl.resource_associated_entity_id
,p.object_id
,OBJECT_NAME(p.object_id) AS object_name_
,tl.request_status
,tl.request_mode
,tl.request_session_id
,tl.resource_description
,DB_NAME(tl.resource_database_id) as database_name
FROM sys.dm_tran_locks tl
LEFT JOIN sys.partitions p
ON p.hobt_id = tl.resource_associated_entity_id
WHERE request_status != 'GRANT'
ORDER BY tl.resource_database_id, tl.request_session_id DESC
FOR XML PATH
GO
```

And send the result to IGE+XAO support, **with:**

- **a dump of the application server service**, to compare the A/S and DB/S states.
- **The SQL server log**, to check if there is no unusual event reported

### 3.4 - If DB/S seems to work properly

- we can think there is no problem at DB/S level. See the part about A/S, a dump of the A/S is necessary