

Troubleshooting IM Message log when events recording has stopped

1. Too large message log / insufficient Oracle tablespace (**IM problem #1, all categories, all times**)

Use the IM Oracle Instance wizard to check the *History Runtime Data* and *History Runtime Indexes* tablespaces.

Table Space Description	Current Usage	File Size	Max File Size
History Runtime Data	1347 MB	1536 MB	10000 MB
History Runtime Indexes	2002 MB	2304 MB	11000 MB

If any bar is all red colored (=100% full), begin with ensuring *Auto Extend* is enabled and then increase the maximum permitted size (the figure to the far right) above current file size. A maxed out configuration (12 million events) may need significant space in Oracle and on the hard disk, possibly even over 32GB that is the limit for one data file. A second file may then be added to allow growth beyond 32GB. The tablespace free space must be monitored, at least until the logs have reached their capacity and wrapped. Changes in the configuration (length of strings, addition of new attributes, etc.) may require additional space, long after the log has wrapped.

The ALERT file may contain more information: C:\oracle\diag\rdbms\adva\adva\trace>alert_adva.log

2. A message is expected, but the category has been actively **excluded** by an IM message log collection filter

Check existence/configuration of: [\[Node Administration Structure\]Node Administration/All Nodes/IMnode/IM_Inform IT History_IMnode/Inform IT History Object: Inform IT Event Filter](#)

Ensure categories of interest are ticked. **Note:** Tracking events (a.k.a. audit events) cannot be filtered/blocked – an IM will always record events of this type, regardless of filter settings.

3. Event attributes have changed causing a mismatch with the previous known configuration

Examine: `%HS_LOG%\hsEventLogCollector.log`

AEClient.cpp @ 3137 UTC 2017/10/17 11:04:00 PID=7776 | MSG API returned Status Error Code = 13

AEClient.cpp @ 3137 UTC 2017/10/17 11:04:12 PID=7776 | MSG API returned Status Error Code = 13 for at least 1 of the 3 msgs sent.

Examine: `%HS_LOG%\HsMsgServer0.log`

a) Attribute count has changed

hsMsgHelpers.c @ 431 30-12:51:29 <7992>| HSMMSG_NO_MATCH - Vendor category found, but definition does not match - verification failed (Vendor '800xA', Category 'AuditEvent_OperatorAction'(3436112953) **had 21 attributes, but tried to verify with 22**)

b) Attribute datatype has changed

hsMsgHelpers.c @ 453 17-13:06:34 <10560>| HSMMSG_TYPE_MISMATCH - New data type declaration does not match old attribute definition (**Type VT_I2(2) expected** for Attribute 'ProcessSection' of Vendor '800xA 666371', **but VT_I4(3) received**)

c) Other type of mismatch

hsMsgVendor.cp @ 1142 30-12:51:30 <7992>| HSMMSG_NO_MATCH - Vendor category found, but definition does not match - verification failed (Vendor '800xA' Category (141775883) **has new category name** (AssetOptimizationMsg))

4. Examine configuration in Aspect Directory

- a) Examine all Alarm Collection Definition objects. Look for custom Event Attribute Definitions aspects or other customized aspects.

Name	Modified	Modified by	Desc...	Inherited	Category name	Version
Alarm Priority Mapping	5/3/2014 11:51:1...	SV51\800xaadmin	This ...	False	Alarm Priority Mapping	1
Alarm Responsibility Mapping	4/8/2013 8:51:00...	SV51\800xaadmin	This ...	False	Alarm Responsibility Mapping	1
CUSTOM SoftAlarm Category Defi...	6/8/2016 10:14:0...	SV51\800xaadmin		False	SoftAlarm Category Definition	1
Event Attributes Definitions - Clas...	11/28/2016 4:30:...	SV51\800xaadmin		False	Event Attributes Definitions	1
Process Event Category Definition	7/16/2014 12:43:...	SV51\800xaadmin		False	SoftAlarm Category Definition	1
Alarm Collection Definition Type R...	9/6/2005 2:51:40...	ABB 800xA Base		False	Alarm Collection Definition	1
Alarm Expressions Category Defini...	11/11/2005 1:57:...	ABB 800xA Base		False	SoftAlarm Category Definition	1
Category translations	2/6/2006 2:53:40...	ABB 800xA Base	Alar...	False	Alarm and Event Category translations	1
Library Structure	9/6/2005 2:51:40...	ABB 800xA Base	[Libr...	False	Library Structure	1
OPC_SERVER_ERROR Category D...	11/23/2005 1:46:...	ABB 800xA Base		False	Event Attributes Definitions	1
Process Alarm Category Definition	11/11/2005 1:58:...	ABB 800xA Base		False	SoftAlarm Category Definition	1
SoftAlarm Category Definition_CO...	11/11/2005 1:58:...	ABB 800xA Base		False	SoftAlarm Category Definition	1
SoftAlarm Category Definition_SI...	11/11/2005 1:58:...	ABB 800xA Base	This ...	False	SoftAlarm Category Definition	1
System Event Category Definition	11/11/2005 1:58:...	ABB 800xA Base		False	SoftAlarm Category Definition	1
System Alarm Category Definition	11/11/2005 1:58:...	{CE307F78-626...		False	SoftAlarm Category Definition	1
Name	5/24/2006 10:12:...	{C1401D99-55...	The ...	False	Name	1
Alarm Collection Definition	10/7/2006 11:29:...	{A33E5C5-9D...	This ...	False	Alarm Collection Definition	1
Message translations	10/20/2009 1:46:...	{100D4C6A-28...	This ...	False	Alarm and Event Translator	1

Verify configuration to be correct and as expected (e.g. shall this additional attribute be added or not?).

- b) Search for Event Attribute Object Extension aspects by category

- What extensions have been added?
- Do they match up with the extension definitions made in the Library Structure?
- Should something obsolete be cleaned up?

If needed, use Import/Export to *Locate...* (searching in AFW-files) and import the original settings from a known good backup or the System Extension's import files (C:\...\import\...\XXX.afw which are all on disk on every 800xA node)

A complete listing of Event Categories and their category IDs (needed in SQL commands later) can be found on this aspect: [\[Library Structure\]Alarm & Event/Alarm Collection Definitions:Category Information](#).

Collection definition	Category Group	Event Ty...	Category Name	Enabled	Extension	External Category Id	800xA Category Id
Advant Master OPC Event Server	System Events	Simple	SystemEvent(MB300)	TRUE	FALSE	300	1617746257
OPC AE Server for AC 800M	Process Alarms	Condition	Process Condition Event	TRUE	FALSE	2	666371
OPC AE Server for AC 800M	Process Events	Simple	Process Simple Event	TRUE	FALSE	1	3439269159
OPC AE Server for AC 800M	Process Events	Simple	Process Data To Simp...	TRUE	FALSE	6	2278531776
OPC AE Server for AC 800M	System Alarms	Condition	System Condition Event	TRUE	FALSE	4	2965087562
OPC AE Server for AC 800M	System Events	Simple	System Simple Event	TRUE	FALSE	3	2108851391
OPC AE Server for AC 800M	System Events	Simple	OPC_SERVER_ERR...	TRUE	FALSE	5	1120438464
OPC AE Server for AC 800M	Un-categorized ...	Simple	Process Condition Event	TRUE	TRUE	0	666371
OPC Event Server Sample	Un-categorized ...	Condition	Deviation	TRUE	FALSE	2	479006701

→ Remove or correct errors, restart IM services & verify. If needed, proceed with the database commands on next page.

There are several methods to resolve the mismatch between IM and 800xA's definitions. Some may require R&D support – do not rule out submitting a support case. Here below two methods are listed; a) correction of singular attribute types and b) wiping the entire MSGVENDORS table (to force a clean start). **Note:** take a backup of the IM first!

- **Correct the MSGVENDORS table (row by row) to match the present event attribute data type**

- a) Stop IM services (PASGUI.exe)

- b) Check & update the MSGVENDORS table's DATA_TYPE column with SQL*Plus

```
C:\Users\800xaadmin> sqlplus /
```

```
C:\Users\800xaadmin> sqlplus /@localhost [for 64-bit Oracle]
```

```
SQL*Plus: Release 11.2.0.2.0 Production on Tue Oct 17 13:54:59 2017
```

```
Copyright (c) 1982, 2010, Oracle. All rights reserved.
```

```
Connected to:
```

```
Oracle Database 11g Release 11.2.0.2.0 - Production
```

Note: This is a sample query matching a singular category and attribute.

```
SQL> select data_type from ops$ocshis.msgvendors where  
attr_name='ProcessSection' and glb_category=666371;
```

```
DATA_TYPE
```

```
-----
```

```
2
```

Note: The figure 2 (= VT_I2) is a hypothetical, but indicated as a problem in step 3b. To change the ProcessSection extension attribute for AC 800M's Process Condition Event category to type 3 (VT_I4), perform the following SQL commands:

```
SQL> update ops$ocshis.msgvendors set data_type=3 where  
attr_name='ProcessSection' and glb_category=666371;
```

```
1 row updated.
```

```
SQL> commit;
```

```
Commit complete.
```

- c) Restart IM services (PASGUI.exe)

- **Empty the MSGVENDORS table to force IM to adopt a complete new set of categories and attributes**

- a) Stop IM services (PASGUI.exe)

- b) Truncate (empty) the MSGVENDORS table with SQL*Plus

```
C:\Users\800xaadmin> sqlplus /
```

```
C:\Users\800xaadmin> sqlplus /@localhost [for 64-bit Oracle]
```

```
SQL*Plus: Release 11.2.0.2.0 Production on Tue Oct 17 13:54:59 2017
```

```
Copyright (c) 1982, 2010, Oracle. All rights reserved.
```

```
Connected to:
```

```
Oracle Database 11g Release 11.2.0.2.0 - Production
```

```
SQL> truncate table ops$ocshis.msgvendors;
```

```
Table truncated.
```

- c) Restart IM services (PASGUI.exe)