HighQSoft

Technical Reference Sheet

Version 1.5

Translator AVL3

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Contents

Chapter 1

Introduction

Athos is a toolkit to build ASAM-ODS products from basic components. Today the name Athos is also very often used to refer to our ASAM-ODS Server (Athos Server) or even our entire ASAM-ODS product line (Athos System).

Based on our flexible Athos Toolkit HighQSoft has developed a wide variety of products for managing your test data on Linux and MS-Windows based operating systems.

Higher efficiency

By using our software products you have the possibility to work with all the data stored anywhere within your enterprise. Even old data, possibly no longer accessible due to migration to new hard- and/or software, may now be used and do not have to be recreated with great effort.

Distinct saving of time

The products of HighQSoft GmbH (or LLC) are based on standards and make development of often very time-consuming and risky individual solutions unnecessary.

Reduced costs

Due to many years of experience and close co-operation with our customers, we achieve safe results within a short time. These results are "on the point" and assure reduced costs in the future.

1.1 Introduction Athos Runtime System

The Athos Runtime System is the backbone and the working engine of all Athos based products. The runtime system provides basic ASAM ODS functionality, which is the same on all supported operating systems (single source). The Athos Runtime System is written in plain ANSI-C for maximum portability. The provided functionality is utilized within Athos-based client and server applications.
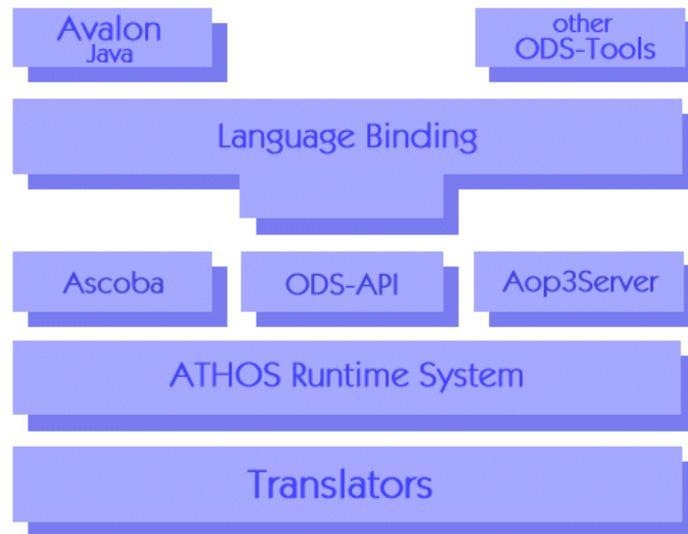
Figure 1.1: The Athos Runtime System

1.2 Introduction Translator AVL3

The Athos Toolkit design pattern follows a driver concept to access different data sources like relational databases, ASAM Transport Files (ATF), ASAM-ODS servers or other existing data storage and retrieval systems (mostly proprietary, file-based).

The drivers are also referred to as translators which describes their purpose very well. Drivers translate the information from the data sources to ASAM-ODS compliant objects and vice versa. Depending on the data source the translation process may be a simple mapping task or a sophisticated data conversion process.

The translator implementation is based on the Athos Runtime System. This translator is written in plain ANSI-C for maximum portability.

Chapter 2

Requirements

No special software products are required. About 50 MB of free disk space is needed for a normal Athos installation. Volatile memory consumption of the Athos Runtime System depends on the application data volume plus approx. 1MB for the runtime system code. The required disk space for compilation and linking of the complete Athos System is 400 MB for all source, temporary and output files.

2.1 Requirements Athos Runtime System

There are no special requirements for the Athos Runtime System.

If the Athos Runtime System should run in multithreaded mode, only Microsoft Windows NT, Microsoft Windows 2000, Microsoft Windows XP, Microsoft Windows 2003 and Linux are supported.

2.2 Requirements Translator AVL3

Besides the Athos Runtime System a remote procedure call (RPC) implementation of your choice is required. The disk space and volatile memory requirements of this translator do not add a significant amount to the Athos Runtime System (appr. 100 kByte only).

Chapter 3

Installation

The installation of the Athos Toolkit depends on the installation of the used components. The installation of the Athos Runtime System is required before the other components can be installed.

3.1 Installation Athos Runtime System

3.1.1 Win32

Normally the Athos Runtime System and the corresponding products are delivered with an installer, follow the directives of the installer.

However when the installer doesn't work, you can do the installation manually.

Copy the directory `athos` from the CD to your hard drive. Then go into the directory `athos` on your hard drive and execute the following command:

```
setupathos.bat 'drive and directory'\athos
```

This command will extend the path with the directory `athos\bin\win32`. The environment variable `ATHOS_ROOT` will be set. An entry in the registry for the eventlog will be added. The Windows registry key "HKEY_LOCAL_MACHINE\\SYSTEM\\CurrentControl-Set\\Services\\Eventlog\\Application\\Athos" is added.

3.1.2 Unix

Unpack the `asamtools_<unix>_bin_x-xx` from the respective Unix directory of the ASAMTools CD. Set the environment variable `ATHOS_ROOT` and extend the `PATH` with `bin/unix` directory.

3.2 Installation Translator AVL3

The installation of this translator is an integral part of the Athos Runtime System installation. Due to the compact size of this translator we decided not to set up a separate installation procedure. All required components are available when the Athos Runtime System has been installed. This is valid for all supported operating systems.

Chapter 4

Configuration

The configuration of the components of the Athos toolkit is generally done by setting environment variables and usage of an INI-File. Before the components are configured, the configuration of the Athos Runtime System must be done first. See: **Configuration Athos Runtime System**(p. 7).

4.1 Configuration Athos Runtime System

The Athos Runtime System is highly configurable and adaptable for a multitude of different requirements. The configuration may be done via environment variables and via definitions in initialization files. For most cases the built-in defaults of the Athos Runtime System will be sufficient. However, for special cases it may be necessary to configure some options for your requirements.

The environment variable `ATHOS_ROOT` is used to define the root directory of the Athos system. If this environment variable is not defined, the definition of `ATHOS_ROOT` in the INI-File is used as default. See: **Athos Runtime System Configuration variables**(p. 25).

The name of the INI-File or the name of the environment variable containing the INI-File name may be passed to the Athos Runtime System at time of initialization. This allows Athos-based applications to specify their own application initialization filename environment variable (e.g. `MYAPP_INI` instead of `ATHOS_INI`) to avoid collisions with other applications environment variables.

If no `ATHOS_ROOT` is defined, no INI-File name and no environment variable containing an INI-File name can be found, the Athos Runtime System tries to open the file `athos.ini` in the current working directory as default. If this also fails, a corresponding message is written to the Event Log on Win32 or the default log file `ATHOS_ROOT/log/asam_err`.log. If the log directory can not be located (e.g. because of missing `ATHOS_ROOT` definition) the log file `asam_err.log` is written to the current working directory. If the log file cannot be opened for any reason, the Athos messages are lost.

The table in this document shows all supported configuration variables including their names, descriptions, default values and source. The source of a configuration variable may be the system environment or the Athos INI-File. The global keyword denotes variables that may be defined in the global section of the Athos INI-File. The global section in the INI-File is marked by the string [ATHOS].

The configuration variables of the Athos Runtime System are given in **Athos Runtime System Configuration variables**(p. 25).

AthosConfig is a tool which helps you to edit the INI-File. You can start the tool with the following

command:

```
java -jar\AthosConfig.jar
```

Note:
    The tool will reoragnize the INI-File.

4.2   Configuration of the Athos Runtime System on Linux

The Athos Runtime System switch automatically into mutilthreaded mode on Windows system. On Linux system there is no automatic switch into the multithreaded mode, so the configuration of the Athos Runtime System must explicit force the multithreaded mode.

The global INI-File variable `MULTITHREADABLE` = yes must be used to force the multithreaded mode and do the required initialization. The Athos Runtime System will probably crashes when multithreaded access is done without the initialization.

4.3   Configuration of the security in the Athos Runtime System

There are two configuration variables available for the security configuration. The two variables, `IGNORE_SECURITY` and `NOSECURITYACTIVE`, have the same meaning, but `IGNORE_SECURITY` tells the 'server' (AVALON or Aop3Server) to ignore the security and `NOSECURITYACTIVE` tells the Athos Runtime System not to check the objects added from the translators.

Disabling security is done by setting both variables to YES in the INI-File. Normally a server is available for the security, so the variable **NOSECURTYACTIVE = YES** will not change and the security will be activated by comment out of the variable `IGNORE_SECURTY`.

4.4   Configuration Translator AVL3

This translator is highly configurable and adaptable to a multitude of different requirements. T he configuration may be done via an initialization file as described in the Athos Runtime System Technical Reference Sheet.

The table in this document shows all supported configuration variables including their names, descriptions, default values and source. All Athos Runtime System configuration variables are also considered since this translator is written as a driver for the Athos Runtime System. This translator extensively supports and uses the features of the Athos Runtime System.

The translator AVL3 is used from the client, the client is not reponsable for the security, this is done by the server (eg. Aop3Server). The security must also be turned off, this means **IGNORE_- SECURITY = YES** and **NOSECURTYACTIVE = YES**. The Translator AVL3 also don't load the security information, because they are normally not required at the client. To force the client to load the security information the INI-variable `LOAD_SECURITY` must be set to YES. This is required for example when you like to administrate the security information with the OdsSecurity-Admin plugin from the AsamCommander. Therefor the INI-File variables should be configured to administrate the security information the following way:

```
IGNORE_SECURITY = YES
NOSECURTYACTIVE = YES
LOAD_SECURITY = YES
```

In **Translator AVL3 Configuration variables**(p. 32) is the explanation of all configuration variables of the translator AVL3 given.

4.5   The convertfile in Translator AVL3

The Translator AVL3 supports converting none ASAM ODS definitions into ASAM ODS definitions. The conversion is only use at the reading of the application model from the server.

The following definitions can be converted by the server:

- BASEELEMENT converts the base element Id, like 99 into 0 for AoAny.

- BASEATTRIBUTE converts base attribute definitions from the ATF-File into ASAM ODS base attributes, like AODT into DATATYPE.

- DATATYPE converts datatype number, like 10 to 12 for DT_BLOB

An example of a convertfile:

```
[BASEELEMENT]
DATATYPE = Int4 : Int4
0    : 99       ; AoAny
[BASEATTRIBUTE]
DATATYPE = STRING  : STRING
; Datatype in measurement quantity.
datatype           : AODT
; Relation between AoSubTest and AoMeasurement.
test               : TSTID
; Relation between AoTest and AoSubTest.
parent_test        : TSTID
; Relation between AoMeasurement and AoMeasurementQuantity.
measurement        : MEAID
; Relation from AoMeasurementQuantity to AoQuantity.
quantity           : DNAID
; Relation from AoMeasurementQuantity to AoUnit.
unit               : DUNID
; Relation from AoQuantity to AoUnit.
default_unit       : DUNID
; Relation between AoUnit and AoPhysicalDimension
phys_dimension     : DIMID
; Scale factor
factor             : GAIN
; reference between AoTest and AoEnvironment
environment        : ENVID
; Description of environment
description        : ENVDESCR
```

For more details about the `CONVERTFILE` variable see **Translator AVL3 Configuration variables**(p. 32).

4.6   Write with the Translator AVL3

The ASAM ODS RPC-API has no functions defined to write the application structure. Write the appliction structure with the ASAM ODS OO-API in concection to the AVL3-Translator will not work.

Write of instances will work, only important the AVL3-Translator is not able to get the Id of the next instances, so set in the INI-File the configuration variable `LOAD_NEXT_ID` to the word `NO`.

For more details about the `LOAD_NEXT_ID` variable see **Athos Runtime System Configuration variables**(p. 25).

4.7 Configuration with old PUMA securtiy

ASAM ODS defines the authentication of the user with the variables `USER` and `PASSWORD`. The AVL3-Translator get these information from the Athos Runtime System and send the information at the OpenEnv request to the server. The old PUMA security expects for the authentication also a project specification. The INI-File variable `PROJECT` can be used to specifiy the PUMA security project. The AVL3-Translator gets the information from the Athos Runtime System and send the information to the server together with the USER authentication.

An ODS API client can give the `PROJECT` to the Athos Runtime System in the parameter `auth` of the method `newSession` of the interface `AoFactory`. The Athos Runtime System will gives this information to the AVL3-Translator.

```
AoSession s = f.newSession("USER=guest, PASSWORD=secret, PROJECT=puma");
```

The PUMA security has additional a shared project with access rights for the catalogs (AoUnit etc.), to access these instances also you need to set the INI-File variable `USE_PROJECTVIEW`. It is not posible to add this variable at the login, the variable must be in the INI-File.

For more details about the variables see **Translator AVL3 Configuration variables**(p. 32).

4.8 Configuration with Santorin.

The client can ask for the ASAM ODS defined the context variable `ODSVERSION` for the version the server is running. The Santorin server is running in the version 3.2 but answer an undefined string. To force the translator using the ODS 3.2 API calls set the INI-File variable `FORCE_ODS32`.

For more details about the variables see **Translator AVL3 Configuration variables**(p. 32).

Chapter 5

Initialization File Format

The Syntax of the INI-File is for all components of the Athos Toolkit identical. The configuration variables are given for each component and should be combined in one section.

5.1 Initialization File Format Athos Runtime System

An example of an INI-File is given below, this example will only show the syntax of the INI-File, the services given in this example are not complete and they might not work with the configuration given in this example.

```
[ATHOS]    ; Global Athos Runtime System definitions.
ATHOS_ROOT = "/users/xenon1/conv/athos"     ; Fallback if not in environment.
BASE_MODEL_URL = "///$(ATHOS_ROOT)/etc/ao_base.htm"

; Debug Level.
;    0          No debug output at all.
;    1          Entry calls and error messages.
;    2          As level 1 plus "in" and "out" parameters.
;    3          As level 2 plus all further information.
DEBUGLEVEL = 3

; Definition of a service.
[SERVICE "Test"]
DESCRIPTION = "ODBC access to a standard ASAM ODS relational database."
TYPE = "ASAM-ODS"
DRIVER = aod1
DIRECTORY = "///$(ATHOS_ROOT)/bin/$(OSTYPE)/"
ENVNAME = Test
DSN_NAME = LocalServer
DATABASE = ASAM
DB_USERNAME = sa
DB_PASSWORD =
WILDONE = _
WILDALL = %
DEPENDS_ON = DEP_LIST

; List with dependecies.
[LIST "DEP_LIST"]
portmap
MSSQLServer
SQLExecutive

; Definition of another service.
[SERVICE "Tire Testbed"]
```

```
DESCRIPTION = "Tire Testbed accessed via ASAM ODS 3"
DRIVER = avl3
DIRECTORY = "///$(ATHOS_ROOT)/bin/$(OSTYPE)/"
RPCNUMBER = 553652252
NODENAME = Jeannie
ENVNAME = TireTest
RPCTIMEOUT = 60
```

5.1.1 Athos Initialization File Syntax

The Athos Runtime System uses an INI-File for initialization. The INI-File may be different for each Athos-based client application. The client application and the Athos translators (drivers) both use the values of the INI-File. The INI-File has the following syntax conventions:

- Semicolon is the comment sign. The comment ends at the end of the line.

- Strings may optionally be enclosed in double quotes. If the double quotes are omitted, leading and trailing whitespaces are removed.

- German Umlauts (mutated vowels) and non-printable characters follow the ASAM Tranport Format (ATF) conventions for maximum portability in heterogeneous environments.

- Only one entry per line is allowed.

- Variables may be constructed by using variables that are already defined. Substitutions are indicated by (similar to Unix make). Beware of recursive definitions. No respective checks are done in the actual code. Recursive substitutions will result in an infinite memory allocation loop.

- The first part of definitions marked by the keyword [ATHOS] are global and may be used by each service.

- Each service has its own section. A new service is defined by [SERVICE <servicename>].

- The name of the service must be unique within a configuration file.

- There are sections for lists. A section for list definitions is defined by [LIST <listname>].

- The entries in a list are only names, and not name value pairs such as a variable of a service sections.

- The value of a parameter can be a readonly value. You can define the readonly parameter by adding the string "readonly" to the parameter. E.g. DRIVER = "aod1 readonly". The value must be delimited by double quotes (").

- The value of a parameter can have another datatype as the default datatype DT_STRING. You can define the datatype of the parameter at the end of the value before the readonly attribute. E.g. SECURITY = "2 DT_LONG" or the read only variant SECURITY = "2 DT_LONG READONLY"

- The name of the variable is not case sensitive.

```
[SERVICE "AOP3Server"]
DESCRIPTION  = "ASAM ODS Protocol Level (AVL)"
DRIVER       = avl3
DIRECTORY    = "file:///$(ATHOS_ROOT)/bin/$(OSTYPE)/"
RPCNUMBER    = 12345678
NODENAME     = LocalHost
```

```
ENVNAME     = Umfeld
RPCTIMEOUT  = 300
```

Chapter 6

Usage

The usage of the component of the Athos Toolkit depends on the component. The usage of one component will have influence on the usage of the other components.

6.1 Usage Athos Runtime System

The Athos Runtime System is used always with the respective Athos Toolkit Component. No additional user interaction is required. Direct usage of the Athos Runtime System applies only to programmers who write their own translators (drivers). A separate Programmers Guide and appropriate training sessions are available for this special and sophisticated task.

6.2 Datatype of Id's in Athos Runtime System.

ASAM ODS has defined that the Id's of the application and instance elements are of the type `T_LONGLONG`, a 64 Bit integer. Until the version 3.3 in Athos all Id's were of the type `T_LONG`, a 32 Bit integer, there was a defined type `AO_Id` which was used for the Id.

Since the version 3.3 Athos have changed the type of the AO_Id to an `__int64` on Windows an 64 Bit integer. The printf functions and also the decaration of the Id could be `long` or `Int4` which will not metsch anymore.

Therefor the following definitions are made in Athos since the version 3.3.

AO_ApplElem, application element
The Id of the application element stays a 32 Bit Id of the type `Int4`. The prototype of the functions `AE_GetId` and `AE_SetId` are changed from `AO_Id` to `Int4`. We do not expect Id's of the application elements outside the 32 bit range.

AO_BaseElem, base element
The Id of the base element stays a 32 Bit Id of the type `AO_BE_Id`. Notthing is changed.

AO_ApplAttr, application attribute
The application attribute have only the Id of the unit, this Id is the Id of an instances element and is changed to an 64 Bit integer. The prototype of the functions still use the AO_Id. Although we use now the 64 Bit we don't expect that the range will be outside the 32 bit range.

AccessControlList
> The Id's of the application elements are changed to `Int4`, the Id's of the instances element stays `AO_Id`. See also the structures `ACLEntry`, `InitialRightEntry`, `KeyEntry` will use the usergroup Id as an `AO_Id`. Although we use now the 64 Bit, we don't expect that the range will be outside the 32 bit range.

AO_InstAttr, instance attribute
> The instance attribute have only the Id of the unit, this Id is the Id of an instances element and is changed to an 64 Bit integer. The prototype of the functions still use the AO_Id. Although we use now the 64 Bit we don't expect that the range will be outside the 32 bit range.

AO_InstElem, instance element
> The Id of the instances element is of type `AO_Id`, this is a 64 Bit integer. The functions take care for the datatype of the `Id` baseattribute and the reference attributes. There are new functions added for handling the Id. The functions `IE_GetIdLow` and `IE_SetIdLow` handle only with the low part of the Id, these are equivalent with the functions `IE_GetId` and `IE_-SetId` incase the type of `AO_Id` was 32 bit integer. The function `IE_GetIdString` returns the Id as a string.

AO_SubMat, submatrix
> The type of Id and unique Id is an `AO_Id`, this is a 64 Bit integer. The functions `SM_GetIdLow`, `SM_GetUniqueIdLow`, `SM_SetIdLow` and `SM_SetUniqueIdLow` handle only with the low part of the Id, these are equivalent with the functions `SM_GetId`, `SM_GetUniqueId`, `SM_SetId` and `SM_SetUniqueId` incase the type of `AO_Id` was 32 bit integer.

AO_LocalColumn, localcolumn
> The type of Id and unique Id is an `AO_Id`, this is a 64 Bit integer. The functions `LC_GetId-Low` and `LC_SetIdLow` handle only with the low part of the Id, these are equivalent with the functions `LC_GetId` and `LC_SetId` incase the type of `AO_Id` was 32 bit integer.

There are new helper functions to convert between the ASAM ODS type , the Athos type `AO_Id` and `Int4`

- `LongLongToAO_Id`, converts from `T_LONGLONG` to `AO_Id`.

- `AO_IdToLongLong`, converts from `AO_Id` to `T_LONGLONG`.

- `AO_IdToInt4`, converts from `AO_Id` to `Int4`, low part.

- `Int4ToAO_Id`, converts from `Int4` to `AO_Id`, low part.

- `AO_IdToString`, converts from `AO_Id` to `String`.

- `LongLongToString`, converts from `T_LONGLONG` to `String`.

- `StringToAO_Id`, converts from `String` to `AO_Id`.

- `StringToLongLong`, converts from `String` to `T_LONGLONG`.

6.3   Usage Translator AVL3

This translator is used by the Athos Runtime System by simply specifying its name and directory in the SERVICE section of an INI-File as follows:

```
DRIVER = avl3

DIRECTORY = "///$(ATHOS_ROOT)/bin/$(OSTYPE)/"
```

Translators are designed as runtime loadable dynamic link libraries, shared objects, shared libraries or shared images, depending on the actual operating system. The Athos Runtime System knows for all supported operating systems how to load translators on request at runtime. Except the INI-File entry, no additional user interaction is required. The loading process is very efficient (operating system feature), fully automated and transparent to the users of the Athos Toolkit.

Chapter 7

Error reporting and Logging

The error reporting in the Athos Toolkit is a fixed program. With configuration variables you can set the level of logging in the Athos Toolkit. The higher the level the more will be logged to the logging device, this logging device is normally standard output.

7.1 Error reporting Athos Runtime System

The error reporting on Win32 and Unix systems are different. On Win32 systems the event viewer of the system will be used, this event viewer is not available on the other operating systems, they use a file for the error reporting

7.1.1 Error reporting on Win32 system

The Athos Toolkit implements its own event log system. The Athos event viewer uses the Windows NT event viewer **How to use the event log**(p. 21) on Win32 systems by default. On all other operating systems the Athos event logger writes the messages into a file. See also `ERR_DEVICE` in the configuration variable description of **Athos Runtime System Configuration variables**(p. 25).

Messages are written in the Application Protocol of the Windows NT event viewer and can be browsed with the default Windows NT event viewer. For Windows systems without an event viewer (Windows 95/98) refer to the entry `ERR_DEVICE` in the configuration variable description `ERR_DEVICE`.

On all other operating systems the messages are written to the file `asam_err.log`. At startup the file `asam_err.log` will be opened. If the file exists it is copied to `asam_err.bak`, the existing file `asam_err.bak` will be deleted. If a server and client are running on the same system, the last started program deletes the error output file of the earlier started programs. Use the environment variable `ERR_PATH` to set the path of the error output device. For more details refer to the entry `ERR_PATH` in the configuration variable description **Athos Runtime System Configuration variables**(p. 25).

The first message of the Athos Toolkit is the message with the ID 1000. (AO_CONNECT_-EVENTLOG) which will be written as soon as the event viewer is activated. The last message is the message with the ID 1001 (AO_CLOSE_EVENTLOG), which will be automatically written before the event viewer is closed.

If the maximum number of identical error messages is detected, the error messages are suppressed and not reported. The start and end of suppression are reported with the messages with ID 1002

(AO_SUPPRESS_REPORT) and ID 1003 (AO_REPORT_ALL_EVENT). The total number of and the last identical messages are reported at the end.

The usages of the event viewer is explained in **How to use the event log**(p. 21).

The `DEBUGLEVEL` defines which kinds of events are reported to event viewer, this protects the event log-file from getting filled to fast, so the events of other applications are not found anymore. The events which are `ERROR` will always be reported. The events which are `WARNING` will be reported when the `DEBUGLEVEL` is above the definition `DBG_ERROR_WARING_LEVEL`. The events which are `INFORMATIONAL` will be reported when the `DEBUGLEVEL` is above the definition `DBG_ERROR_INFO_-LEVEL`. The events are always reported in the log-file.

You can configure the Athos Runtime System to write the events also in the Athos-logging device, see logging_kerenl. The configuration variable `LOG_EVENTS` sets which type of events will be reported in the logging system. This has the advantage that the direct relation between the events and the logging messages will be available in the log device. The INI-File variable `LOG_EVENTS` is a service variable so the last open service defines if the event is logged in the Athos-logging system.

7.1.2   Error reporting on none Win32 system

On none Win32 systems or when the Environment variable `ERR_DEVICE=FILE` is set, the file `asam_-err.log` will be created. All lines in this file with the error messages have the same format. The field of the line are comma-separated.

The fields are:

- The severity, **I** means information, **W** means warning and **E** means error.

- Date and time.

- The name of the program.

- The error number.

- The name of the computer.

- The name of the user.

- The version of the program.

- The identification of the source location where the event is reported. The source file, the revision of the source file and the line in the source file.

- The parameter of the event. This parameter fits at the %4 place of the error message (**Athos Error Messages**(p. 58)).

The following line is an example, split just before the parameter.

```
I,"2003-07-21 16:44:26","OdsApi",00905,"ODIN","karst","V3.0", "ac_loadinitfile.c $Revision: 1.14 $ 265",
"Inifile "D:\athos.ini"."
```

7.1.3   Control the size of the files.

The files, log-file or error-file can grow fast. Depending of the usage of the software, running as server or client development the size of the files must be controlled. Next to the `DEBUGLEVEL` the 2 other main core variables used to control the behavior of the error-logging-process are `LOG_MAX_-LINES` and `ERR_LMAX_LINES`. `LOG_MAX_LINES` controls the size of the logfile. Setting this value to 0 forces new log entries to append at the end of the logfile.

BEWARE: If not handled properly, this can lead to a very large logfile. If set to a value >0, the logfile will be closed when reaching the defined amount of lines and a new logfile will be created.

`ERR_MAX_LINES` behaves similar to the `LOG_MAX_LINES`. When set to `0`, the errorfile will grow until deleted or moved. Otherwise the errorfile will be closed at the specified amount of lines and a successor file will be created.

7.1.4   Logging

Normally the Athos Runtime System does not report any messages except the error, warning and information messages into the eventlog (**Error reporting on Win32 system**(p. 19)). However you can force the Athos Runtime System to report messages to the standard output or for some applications redirect the standard output into a file. The number and kind of messages of the Athos Runtime System depends on the configuration variable DEBUGLEVEL.

If there is no file opened by the application the 'standard output' will be used.

The values of the `DEBUGLEVEL` is documented in the online documentation "ODS definition" - "Modules" - "The debuglevel definitions" and in the appendix of this document.

An example of the log file content is given below

```
20080507 17:09:56 diff: 15 Thread 9b0 ApplicationElement_GetName()
20080507 17:09:56 diff: 0  Thread 9b0 Application Element: CommitTest (1AAEC950)
20080507 17:09:56 diff: 0  Thread 9b0 Return ApplicationElement_GetName(): CommitTest
20080507 17:09:56 diff: 16 Thread ac0 ApplicationElement_GetRelatedElementsByRelationship()
20080507 17:09:56 diff: 0  Thread ac0 Application Element: CommitTest (1AAEC950)
20080507 17:09:56 diff: 0  Thread ac0 relShip: 0
20080507 17:09:56 diff: 0  Thread ac0 Return ApplicationElement_GetRelatedElementsByRelationship():
20080507 17:09:56 diff: 0  Thread ac0 Number of objects in list: 0
```

- The date E.g. 20080507.

- The time E.g 17:09:56.

- The number following the term 'diff' is the time difference to the previous line in milliseconds. In this example it took 16 milliseconds after the return of the method `Application-Element_GetName` until the new request `ApplicationElement_GetRelatedElementsBy-Relationship` was recieved at the server.

- The number following the term "Thread" is the thread Id in the server, to synchronize the messages of each thread or request.

- The message is given E.g. 'ApplicationElement_GetName()' or 'Return Application-Element_GetName(): CommitTest' which logs the start and return of the method `ApplicationElement_GetName()`. The lines following the start of a method are normally the parameters of the method, in this example 'Application Element: CommitTest (1AAEC950)' which shows it is an application element with the name "CommitTest" and an interal memory adres of 1AAEC950. The Oracle SQL Commands and the file access is also logged as messages.

7.2   How to use the event log

The Athos event logger uses the Windows NT event logger on Win32 systems by default. The Windows event viewer can be found in the 'Manage'-tab of the 'My Computer'-icon (context-menu). The Windows event viewer with a detailed message display is shown below:
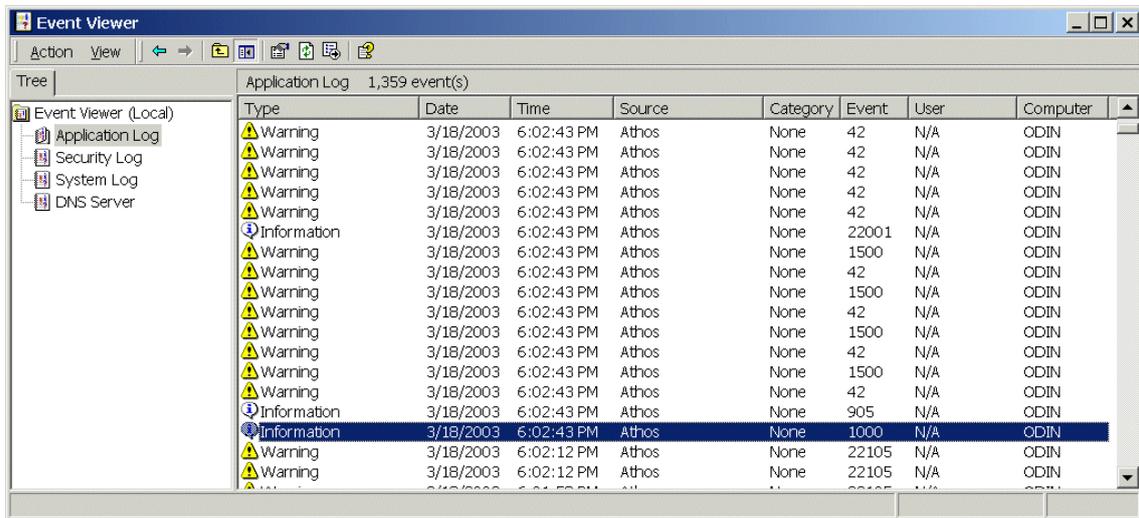
Figure 7.1: Windows Event viewer
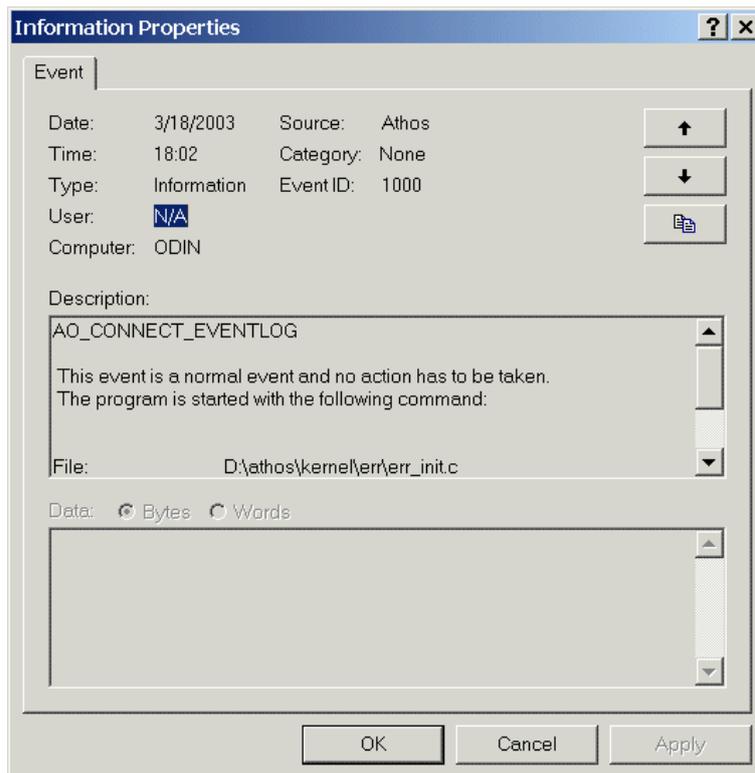
Figure 7.2: Detail of eventviewer

To analyze the Athos behavior it is very important for HighQSoft to receive the event log with the interesting logs. If an error can be reproduced, please clear the event log, reproduce the error, save the event log in a file (∗.evt) and send the event log to HighQSoft. The way how to clear and save the event log is shown below.
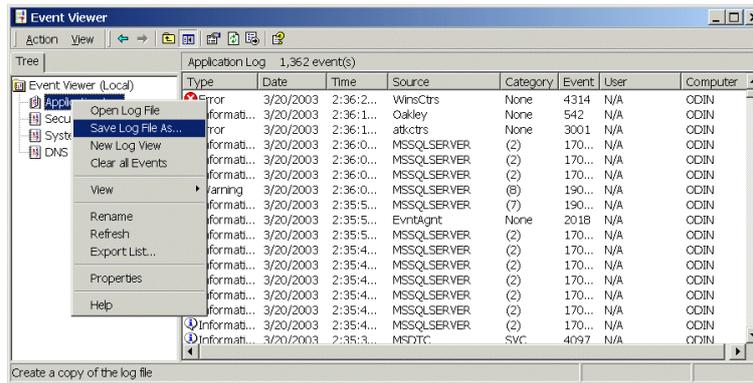
Figure 7.3: Eventviewer save

Using the event logger in the default configuration will sooner or later result in the following message:

```
The Application Log File is full.
```

This message indicates that the application log-file is full and no more messages can be stored. It has no consequences for the Athos functionality, but tracking down errors may be very complicated or even impossible without this information. Change the Log Settings of the application protocol and the newest messages will always be stored. A recommended log setting is shown below:
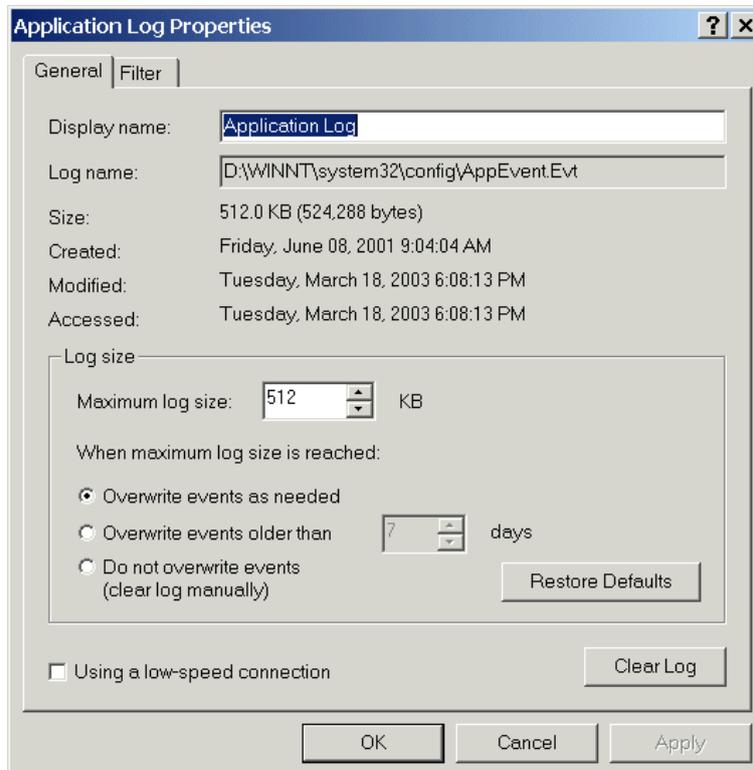
Figure 7.4: Eventviewer protocol properties

7.3   LogViewer

On none windows systemer there is no event log and the event viewer can not be used to look at the event. The Athos Runtime System writes the event normally in the directory `$ATHOS_ROOT/log`, if the directory not exist in the current directory.

LogViewer is a tool which help you to examine the log files. The tool is started with the following command

```
java -jar jar/LogViewer.jar
```

The tool is able to show the file `asam_err.log` and the normal log-file.

7.4   Error reporting and logging Translator AVL3

Chapter 8

Configuration Variables

Configuration variables

8.1 Athos Runtime System Configuration variables

ATHOS_CHARACTERSET

An environment variable which defined the character set used in ATHOS. Only 8-bit chracter sets are supported. The character set must match with the character set of the storage (Oracle chracter set). The character set must be supported by iconv. The names of the character set must match the names of the character set supported by iconv.

Default:	ISO-8859-1
Source:	INI-File

ATHOS_DELETE_THREAD_COUNTER

The current counter value of the delete Thread. Each time the delete thread runs, the counter is increased. The delete thread cleans the object sto delete from the Athos Runtime System. This variable is a READONLY variable.

Default:	No default
Source:	INI-File

ATHOS_NUMBER_OF_OBJECTS_TO_DELETE

The number of objects currenty waiting to be deleted from the memory of the ATHOS Runtime System. This number is only an indication wether the ATHOS Runtime System is able to cleanup the internal memory. The number of objects are the objects used in the ATHOS Runtime System but not the number of objects to delete from the storage. This variable is a READONLY variable.

Default:	No default
Source:	INI-File

ATHOS_ROOT

The root directory of the Athos System. If ATHOS_ROOT is not an environment variable, the entry in the INI-File is used. The name of the INI-File can be passed to the Athos Runtime System at the time of creation. The ATHOS_ROOT definition in the INI-File is used as a fallback in case the environment variable is not defined.

Default:	No default
Source:	Environment or INI-File, global

ATHOS_VERSION

The version of the ATHOS Runtime system. This variable is a READONLY variable.

Default:	No default
Source:	INI-File

BASE_MODEL_URL

The URL where the ASAM ODS base model definition of the Athos Runtime System is located. The flexible design pattern of Athos allows that the internal object engine parameters are provided by a configuration file. The base model has been designed as an HTML-File. This allows easy navigation through the defined objects via any HTML browser. The object engine disregards the HTML tags. This file is intended to be modified by the developers only. Modifications in this file should be done only with great care and detailed knowledge about the Athos object engine.

Default:	`file:///$(ATHOS_ROOT)`/etc/ao_-base50.htm
Source:	INI-File, global

CHECK_ID_ALWAYS

This variable tells the Athos Runtime System always to check the ID of the instance elements, because the ID of the datastorage is not unique. The check will reduce the performance. If this variable is set to YES the check will be performed for every new added instance element.

Default:	No
Source:	INI-File

CHECKDATEFORMAT

Activate the check of the date format of the input parameter. When the check is activated the server checks the date format during the input otherwise the date format is checked at the commit transaction by the database engine.

Default:	NO
Source:	INI-File

DEBUGLEVEL

The trace level of the server. The higher the level the more details are printed out - lowering the performance of the server.
0 = No output at all.
1 = Entry calls and error messages.
2 = Like 1 plus "in" and "out" parameter.
3 = Like 2 plus other available information.
4 = Like 3 plus all other available information. This level gives also search and compare information.
5 = Like 4 plus the error messages also in the log output device.
On Windows NT: The server or operating system will allocate memory for the file buffers. When the value is high a lot of messages will be produced and the requested memory will grow.
More details about the different levels is given in a separate section.

Default:	0
Source:	INI-File, global

DIRECTORY

The directory where the executable of the driver is located. For system and installation independent directory definitions use c: and win32 in the directory name string.

Default:	`file:///$(ATHOS_ROOT)`/bin/win32
Source:	INI-File

DRIVER

The name of the Athos driver (translator) to be loaded for this service. The name of the executable will be built from the driver name and the executable extensions which depend on the operating system. After the driver has been loaded, a symbol with the same name is used to determine the driver entry points.

Default:	No default
Source:	INI-File

DRIVER_FACTOR

The maximum factor of volatile memory the driver needs to load a localcolumn. This factor is used by the Athos Runtime System to estimate the amount of memory a driver needs to load a localcolumn.

Default:	1
Source:	INI-File

ERR_DEVICE

On the Windows NT operating systems the system environment variable ERR_DEVICE is used to redirect the Athos messages to the log file. If this variable is set to the string "FILE" the Athos messages are written to the file asam_err.log.
The default is that teh messages are written to the event viewer.

Default:	
Source:	Environment

ERR_MAX_LINES

The maximum number of lines of the error messages output file. If this value is 0 there is no maximum and all messages will be appended to the same file. This file can grow to a huge file. If the maximum number of lines is reached, the asam_err.log file will be copied to the asam_err.bak file and the file will be reopened. There will be always twice the number of error messages available.

Default:	100000
Source:	INI-File, global

ERR_PATH

The directory path of the file asam_err.log. This variable is only used when the error messages are written to a file. If the Athos Runtime System is not able to write to the given directory, the file asam_err.log will be written in the current working directory. This variable is an environment variable.

Default:	$(ATHOS_ROOT)\log</td>
Source:	Environment

FILE_MODE

The mode how the files are stored. Possible strings are ABSOLUTE or SINGLE_VOLUME or MULTI_VOLUME.
ABSOLUTE each file location is stored with an absolute path.
SINGLE_VOLUME the absolute path has to be created by concatenating the file prefixwith the stored file location information. The file prefix information is not stored in the database. For BaseAttributes of AoExternalComponent the file prefix information is stored with the context variables FILE_ROOT. For BaseAttributes externals_references.location the file prefix information is stored with the context variable FILE_ROOT_EXTREF.
MULTI_VOLUME the absolute path has to be created by substituting the symbol name with it's value. The symbol name is stored within the file location in the database, and is enclosed within $(symbol name). Example: (in case of UNC_WIN) filename_url=data.xls MyVolume_1=c:
This variable is defined by ASAM ODS. **Don't modify this variable during life time ot the storage**

Default:	ABSOLUTE
Source:	INI-File

FILE_NOTATION

defines in which notation the file locations are stored, shortly it's an issue of / vs. \. Possible strings are UNC_WIN or UNC_UNIX or URL.
UNC_WIN (Universal Naming Convention): uses Windows UNC format with windows specific "\" backslash delimiters; \hostname
UNC_UNIX uses Unix UNC format with unix specific "/" slash delimiters; //hostname/path
URL (Uniform Resource Locator) protocol://hostname/path Currently only 'file' is supported as protocol
This variable is defined by ASAM ODS. Use the file notation according to the operating system.

Default:	URL
Source:	INI-File

FILE_ROOT

define the root path for external component file Urls (filename_url, flags_filename_url). This is the root path for writing (no matter whether single or multi volume mode) any file of external components and also the root path for reading them in single volume mode.
This variable is defined by ASAM ODS.

Default:	No default
Source:	INI-File

FILE_ROOT_EXTREF

define the root path for external references location attribute e.g. "d:\data\externalreferences".). This is the root path for writing (no matter whether single or multi volume mode) any file of external references and also the root path for reading them in single volume mode.
This variable is defined by ASAM ODS.

Default:	No default
Source:	INI-File

FILE_SYMBOLS

returns a list of comma-separated symbol names. In case of SINGLE_VOLUME, there are two symbols predefined : FILE_ROOT, FILE_ROOT_EXTREF The symbol names must be maintainted by the user in the INI-File, each time the FILE_ROOT is modified add the new symbol used in the FILE_ROOT to this list.
This variable is defined by ASAM ODS.

Default:	No default
Source:	INI-File

FILTER_VARIABLES

The name of the attribute or variable or list of variable which should be filtered out. The variables given overhere are not reported to the client with the context variables functions.

Default:	DB_PASSWORD
Source:	INI-File

FREE_NUMBER_LC

The number of localcolumn which will be unloaded if the number of localcolumn exceeds the maximum number of localcolumns, see also MAX_NUMBER_LC. This variable is an Athos global variable.

The default is MAX_LC_NUMBER/2.

Default:	No default
Source:	INI-File

GUESS_FOR_INV_REF

Guess for the inverse reference. If this variable is set to 'YES' ATHOS will guess which reference is the inverse reference of a refernce. When an inverse reference names is given or the base reference is given, these information is used to find the inverse reference. When both informations are not available, ATHOS searches at the target application element for a reference to the own application element the first reference without a base reference and no no inverse reference name will be used.

Default:	NO
Source:	INI-File

KNOWN_RELATIONS_FILE

Filename with the known relations and corresponding inverse relations. ATHOS tries to find the inverse relation, normally the inverse relation is given in the application model, the are some storage (ATF/CLA) or RPC-API whic don't support this information. In this file the information can be added to the application model. Each line in the file is one relation. There are two element / attribute name pairs in each line. The first element / attribute name pair is the reference, the second element / attribute name pair is the inverse reference. The element and attribute names are combind with a dot (.). The element name can also be a basetype. E.g
AoUnit.reference AoQuantity.invReference

Default:	No default
Source:	INI-File

LOAD_NEXT_ID

Load the next ID for a new instance element. If the ID cannot be supported by the translator, such as avl3 or atf13, Athos tries to load all the instances and determine the maximum current ID and the next ID will add one. If the client does not need the ID of the instance element until the commit of the transaction. It is not required to load the next ID, which can save the loading time of all instances.

Default:	YES
Source:	INI-File

LOAD_SUBMATRIX

Set this configuration variable to "Yes" if the driver is not able to load one single localcolumn alone. The Athos Runtime System is informed by this variable that the driver always loads an entire submatrix if one localcolumn is requested.

Default:	No
Source:	INI-File

LOG_EVENTS

Log the events which can be errors, warnings or information messages also to the Athos logging system. If one service sets the level, the level will be globally set until a next service modifies the level again. The level will be only modified if this variable is available in the service.
0 - No messages in log system.
1 - Error messages in log system.
2 - Error and Warnings messages in log system.
3 - All messages in log system.
The default is leave the actual level, the default level = 0.

Default:	
Source:	INI-File

LOG_MAX_LINES

The maximum number of lines of the messages output file. If this value is 0 there is no maximum and all messages will be appended to the same file. This file can grow to a huge file. If the maximum number of lines is reached, a new file with the same name will be created.

Default:	32000
Source:	INI-File, global

LOGFILE

Name of log file. In this log file the message for special logging, independent of the debuglevel will be stored. This file is only used for tracking special effects by messages in the code. If no file is given the messages will not printed out, this is the default.

Normaly the developers send a special version of the code, otherwise this variable should not be used.

Default:	No default
Source:	INI-File

MAX_LC_MEMORY

The maximum memory available for the values and flags of the localcolumn values in Megabytes. If no value is set, the check if the available memory is turned off,it is left to the system resources how much memory is available. Was MAX_LOCALCOLOMN_MEMORY in Athos 1.40.

Default:	0
Source:	INI-File, global

MAX_NUMBER_LC

The maximum number of localcolumns in the localcolumn cache. If no value is set there is no check for the maximum number of localcoumns. If the number of localcolumns exceed the maximum number, only a certain number of localcolumns will be unloaded and not that amount of column that the number of column is below the maximum, see also FREE_NUMBER_-LC. Be careful that the maximum number is higher than the number of localcolumns of a measurement, otherwise the cache of the localcolumn will have no advantage. This variable is an Athos global variable.

Default:	0
Source:	INI-File

MAXBLOBLEN

Maxmium size of a blob element in byte. See also the driver specific explanation.

Default:	254
Source:	INI-File

MAXBYTESTRLEN

Maximum size of a bytestream element in byte. See also the driver specific explanation.

Default:	254
Source:	INI-File

MAXDATELEN

Maximum size of the date string element in byte. See also the driver specific explanation.

Default:	24
Source:	INI-File

MAXSTRLEN

Maxmium size of a string element in byte. See also the driver specific explanation.

Default:	254
Source:	INI-File

MULTITHREADABLE

Run the Athos Runtime System in the multithreaded mode. This flag has only influence on Win32 systems . On other operating systems the flag is not checked and the Athos Runtime System will run always in a singlethreaded mode. Use this flag only if the server runs in the singlethread mode and the translator needs the Athos Runtime System as a multithreaded object storage.

The default is 'NO' for Win32 systems, 'NO' for all other operatring systems.

Default:	NO
Source:	INI-File

NOSECURITYACTIVE

Deactivate the security. There are some drivers, such as AVL3, which always deactivate the security. The driver expects that the security will be done by the server to which it is connected as a client. If this server does not support security the driver is not able to load the needed security information from there. Was NOSECURITYACTIV in Athos 1.40

This variable switch the security check between the translator and the Athos Runtime System, normally the security is done at the server side so there is no security check required at this level, even when the security is active at the server level this variable must be "YES".

Default:	YES
Source:	INI-File

OSTYPE

The name of the operating system. This variable is expected to be defined in the environment. It is used to properly react to operating system dependencies at run time. This variable is necessary because it is not desirable to handle all operating system dependencies at compile time. OSTYPE cannot be overwritten by the INI-File. Attempts to do this are ignored by the Athos Runtime System. This variable can be used for system independent INI-File writing. If the expression win32 is found in the INI-File it will be substituted by the content of this variable.

Default:	No default
Source:	Environment

PASSWORD

ASAM ODS user password.

Default:	No default
Source:	INI-File

RUN_SINGLETHREADED

Suppress the automatic change of the Athos Runtime System into the multithreaded mode. The performance of the singlethreaded mode is better then the multithreaded mode. Use this parameter only for singlethreaded applications like ASCOBA. There are some drivers that start a second thread, this thread never use the Athos Runitme System but let the system change into multithreaded mode. When this variable is available the system stays in the single threaded mode. The avl3 driver on Windows 2000 starts in Windows Socket software a second thread and there are also some Oracle ODBC drivers that start a second thread.

The default is not set, starts the Athos Runtime System automatic in multithreaded mode.

Default:	
Source:	INI-File

SEARCH_FOR_BASE_REF

Search for the base relations if no base relation is given. If this variable has the value 'NO' there is no automatic search for base relations. The relations between two elements, without a base relation which have in the base model a relation becomes that base realtion. Set this variable to 'NO' when all the relations of the model are correctly assigned to a base relation. The model in the early days of ASAM ODS did not have the relations assigned to a base relation so athos can search for these base relations and upgrade the relations.

Default:	YES
Source:	INI-File

USE_UNIQUE_REFNAME

Create an unique attribute name for N:M references. The refname of an N:M reference is not always unique at an application element. The physical storage don't force this uniqueness. When this variable is set to name of the target application element and the refname are combined with '@' to create an unique attribute name. If the model guarantees that the refnames are unique at the application element only the refname can be used.

Default:	YES
Source:	INI-File

USER

ASAM ODS user.

Default:	No default
Source:	INI-File

8.2 Translator AVL3 Configuration variables

CONVERTFILE

Name of the convert file. The name of the file can be an URL. The convert file may contain the mapping of constant values of the Server to the ATHOS definitions. The sections Base-Element, BaseAttribute and Datatype may be used. The first element is the Athos definition, the second element is used in the server. Example of a convert file:

[BASEELEMENT]
DATATYPE = Int4 : Int4
100 : 0 ; Any
101 : 1 ; Environment
102 : 2 ; Test
[BASEATTRIBUTE]
DATATYPE = STRING : STRING
Datatype : AODT ; Datatype in MEQ
[DATATYPE]
DATATYPE = Int4 : Int4
12 : 10 ; DT_Date

Default:	
Source:	INI-File

ENVNAME

Name of the environment. Will be overwritten as soon as the server reports an element of the type environment.

Default:	avl3
Source:	INI-File

FORCE_ODS32
FOrce the translator to use ODS 3.2 version, otherwise do the request on the server.

Default:	No
Source:	INI-File

IGNORE_DT_MISMATCH
If this variable is set to "YES" the datatype mismatch between the definition of the base attributes and the declaration of the application attributes are ignored. This can leads to errors even breakdown of the ATHOS software.

Default:	No
Source:	INI-File

IGNORE_FLAGS
If this variable is set to "YES" the value flags are ignored and not transfered to the server.

Default:	No
Source:	INI-File

IGNORE_WILDESC
Ignore the wildcard escape character given with WILDESC. This flag is used for the Puma server. If this flag is available, is the flag set.

Default:	No
Source:	INI-File

LOAD_INSTANCE_ATTRIBUTES
Load the instance attributes for the instance elements. Instance attributes are attributes of an instance element without a corresponding attribute at the appication element. If this flag is set, the server must be of the version 3.2 otherwise the server will no support the request. If this flag is set the load of the instances can take much longer. The driver support the load on demand of the instance attributes, when this variable is not set there will be more interactions between the Athos Runtime System and the driver, but there will be no big performance disadvantage when the instance attributes are loaded separated.
The default is no set.

Default:	No default
Source:	INI-File

LOAD_SECURITY
Load the security information from the server. If this variable is set the driver will load for each element the security information, this will take a lot of time.
Set this variable only for the security administrator.
The default is not set, so no security information will be loaded.

Default:	
Source:	INI-File

MAXDATELEN
Maximum length of the strings allocated in the database for attributes of type <DT_Date>. This value is used to load the date streams.

Default:	24
Source:	INI-File

NODENAME
Name of node where the server runs. The IP address is also accepted.

Default:	No default
Source:	INI-File

ODSVERSION

The driver ask this parameter at the server. If the server answer the driver with an string "3.2" driver knows, it can use the new commands of the ASAM ODS Version 3.2. This variable is not used by the server but required for the client so the client can recognize the server has implemented the ASAM ODS version 3.2 The keyword ODSVERSION has higher priority to the keyword VERSION. The keyword ODSVERSION is the ASAM-ODS defined keyword and should be used.

Default:	No default
Source:	INI-File

PROJECT

Name of Project for Santorin server running with AVL security. Only instances belonging to this project are seen in AVL security mode!

Default:	No default
Source:	INI-File

RELOAD_AFTER_PUT

If this variable is set to "YES" the driver will reload the instance element with the returned instanc element id. So the server can modify any attribute by his own. The client get these modification automatically. This will reduce the write performance.

Default:	No
Source:	INI-File

RPCNUMBER

RPC number of the RPC service to connect to.

Default:	No default
Source:	INI-File

RPCTIMEOUT

Time out for each rpc-request to the server in seconds.

Default:	10
Source:	INI-File

USE_PROJECTVIEW

If this control is found the shared projects are seen in AVL security mode. Otherwise shared projects are are not exposed by the santorin server and cannot be seen from the client. The control must always be used together with "PROJECT".

Default:	No default
Source:	INI-File

VERSION

Do not set this value in the service block. The driver ask this parameter at the server. If the server answer the driver with an string "3.2" driver knows, it can use the new commands of the the ASAM ODS version 3.2 See also the keyword ODSVERSION.

Default:	No default
Source:	INI-File

WILDALL

Wildcard character for zero or more characters . match.

Default:	*
Source:	INI-File

WILDESC

    Wildcard escape character. Special for database patterns, the database pattern has no escape character, to fullfill the pattern matching of database set the escape character to '[' and one of the pattern maching character will be put between "[]" so the database will find a correct syntax and will produce the correct result. When the escape character is '[' an escape sequence "[]" is expected and converted.

Default:	</td>
Source:	INI-File

WILDONE

    Wildcard character for one character.

Default:	?
Source:	INI-File

Chapter 9

Athos version

9.1   How to determine the Athos version

The compile-time versions of the current shared libraries of the Athos Toolkit are shown with the command. You can give more then one name of the shared library. This program can also be used to determine which other shared libraries or executables of third parties will be used.

```
athosversion <name or path of the shared library>
```

Example of the odsapi.dll for Win32:

```
athosversion odsapi.dll
Load shared library 'odsapi.dll'
        odsapi with version 3.0
        athos with version 3.0
        Name of file <d:\athos\bin\win32\odsapi.dll>
        The internal name is <odsapi Release>
```

The example for Win32 shows that the odsapi.dll is compiled and linked in the release mode. An alternative of the release mode is the debug mode. If there is a mixture of files with release mode and debug mode, the system will crash.

Example of the libodsapi.so for Linux:

```
athosversion libodsapi.so
Load shared library 'libodsapi.so'
        odsapi with version 3.3
        athos with version 3.3
```

Chapter 10

Compiling

The compiler settings are for all the modules of Athos identical. Some times an additional library or include files are required. The compiler settings differ for the different operating systems. The settings for the Win32 and Linux operating system are supported by HighQSoft, for other operating system it might be required to build up separate makefiles.

10.1 Compiler settings for Visual C/C++ 6.0

The development is done with the Visual C/C++ compiler of the Microsoft Visual Studio 6.0. This version of the Visual C/C++ compiler is also known as the version Visual C/C++ 6.0. There are to many different workspaces for a one-button compilation, so there is a command which compiles the total Athos source tree. The project files (∗.dsp) are part of the Athos source deliverable.

The description in this Chapter is only for Windows NT and the Visual C/C++ compiler, for other operating systems and with other compilers a separate setting is required.

10.1.1 Including path setting

The include files of the Athos system are given in the directory "\%ATHOS_ROOT\%\\include". If you use RPC another include path "\%ATHOS_ROOT\%\\tools\\rpcgen" must be added. This setting is found at the menu 'tools' the entry 'options'.
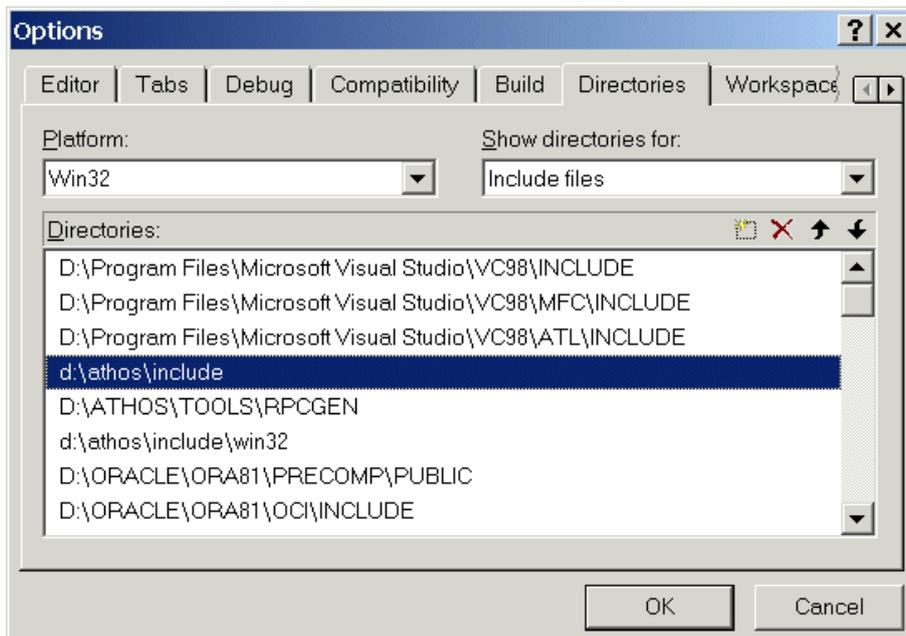
Figure 10.1: MSVC Options

10.1.2   Project specific compiler settings for Visual C/C++ 6.0

The following settings are project specific, open an existing project or create a new project and go to the ŚSettingsŠ of the project. For all code using the Athos Runtime System the project settings are required to prevent Mircosoft specific runtime errors.

10.1.3   C/C++ settings

The code of the Athos system must be compiled as:

```
'(DEBUG) Multithreaded DLL'
```

This setting is found in the menu 'project' the entry 'settings'. The precompiler setting "WIN32" is also required. We have only seen that the compiler option 'code generation' is changed in the new Visual C/C++ Version 6.0 project files, so check after the conversion of the projects from Visual C/C++ 5.0 to Visual C/C++ 6.0 that the "code generation" is installed correctly.
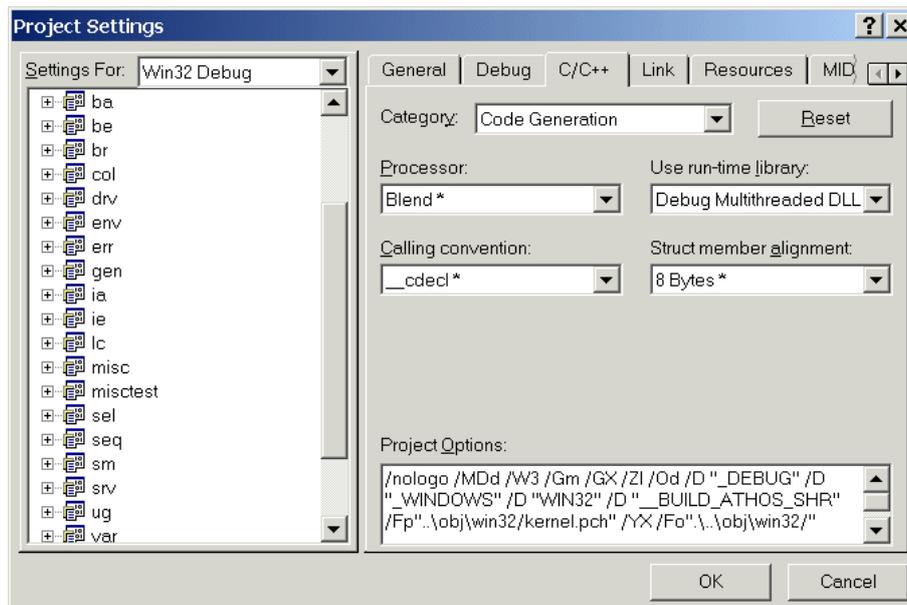
Figure 10.2: MSVC Compiler options

For Microsoft Visual Studio 2005 an additional setting is required. This version of the compiler has another way of handling the POSIX functions. Add the preprocessor definition

`_CRT_SECURE_NO_DEPRECATE`

to the settings the POSIX functions are handle as they where in the Microsoft Visual Studio 6 (Visual C/C++ 6.0). This definition must be added for the **Debug** and **Release** configuraton.

10.1.4   Add Athos Library to sources

There are several ways in the Visual C/C++ compiler of the Microsoft Visual Studio 97 to add a library. We decided the Athos libraries to be part of the projects and added the files to the project. The library files of the Athos system are always added to the source files as show below.
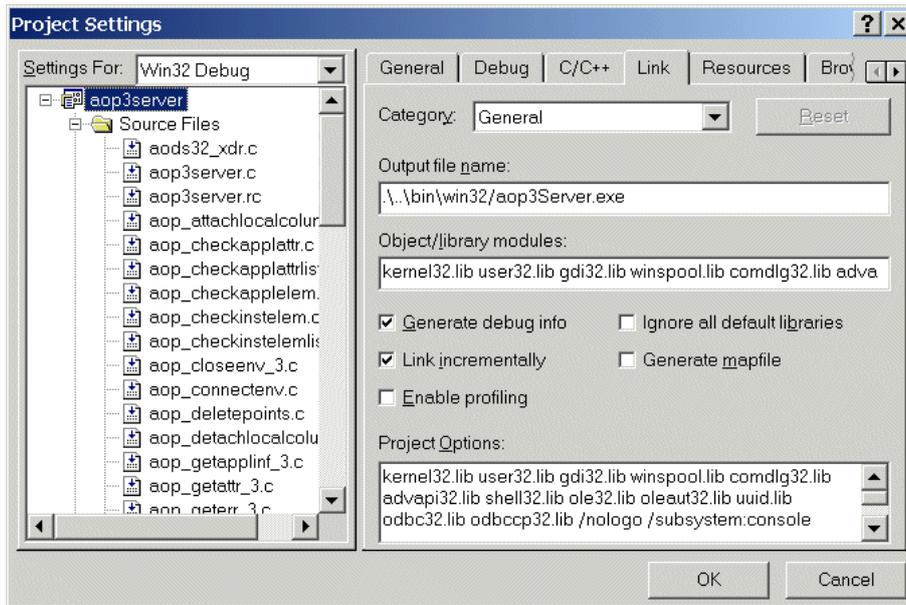
Figure 10.3: MSVC Link options

10.1.5 Set the output directory

The output directories of the "Debug" and "Release" are both in the same directory. Be careful that the directory has to start with '.\' as the current directory.
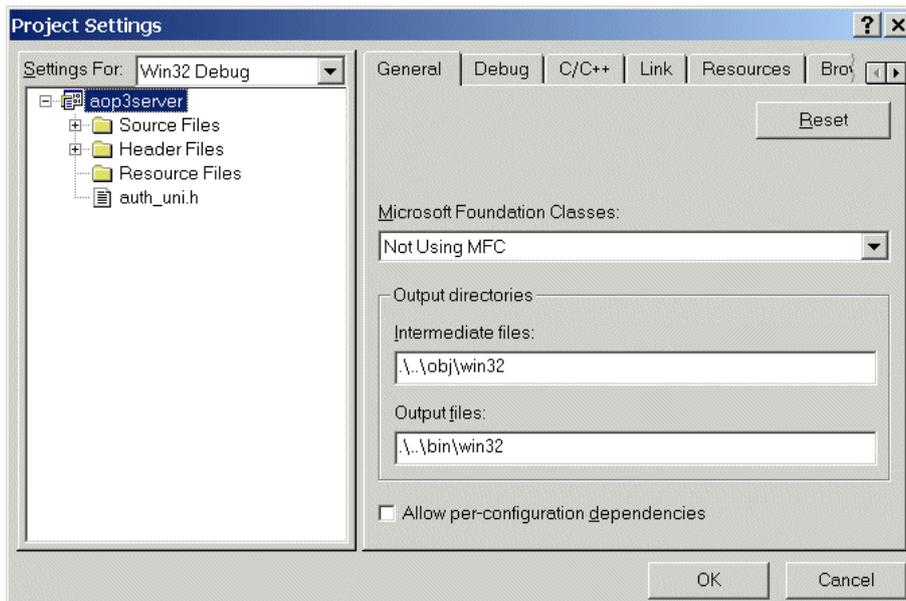
Figure 10.4: MSVC General options

10.1.6 Add additional system libraries

To add additional system libraries like wsock32.lib.
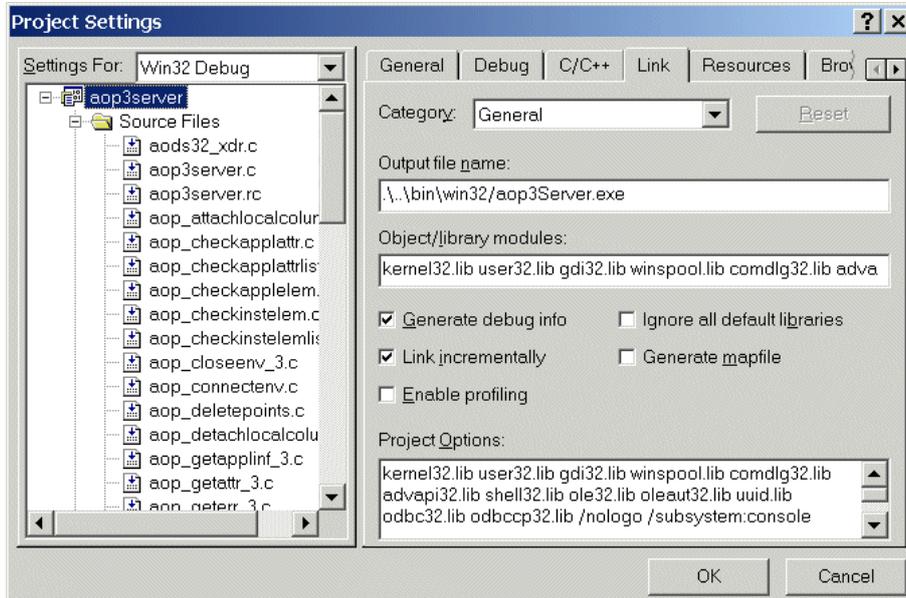
Figure 10.5: MSVC Link options

10.1.7 Athos Runtime System

The Athos Runtime System contains a lot of different projects, the compiling order of the projects is important. For the different operating systems there are files available that allow you to compile and link the total Athos Runtime System in the correct order.

10.1.8 Using the compile command "abuild"

There is a batch file called `abuild.bat` that will compile all the projects started from the current directory. When this command is started in the directory %ATHOS_ROOT% all projects will be compiled. This command uses the Project dependencies and makefiles of the visual studio projects.

Export the makefiles. Write the dependencies in the makefile at Microsoft Visual Studio 6.0.

Set the environment variables MSVCDIR, INCLUDE and LIB. Be careful that the PATH environment variable has the '%ATHOS_ROOT%\bin\win32' and for the C-Compiler `cl.exe` everything set. The best you can do is to register the environment variables during the installation of the Microsoft Visual Studio.

- The environment variable MSVCDIR must be set the to the root of the C/C++ compiler. The Installation of Microsoft Visual Studio 6.0 sets the variable MSVCDIR to the common directory, this will cause the `win32.mak` to not be found.

An example of the environment variables MSVCDIR, LIB and INCLUDE are given below, Visual Studio is installed in the directory "C:\\Programme\\Microsoft Visual Studio". A part of the

environment variable PATH is also given for this location.

- `MSVCDIR=C:\Programme\Microsoft Visual Studio\vc98`
- `PATH=C:\Programme\Microsoft Visual Studio\Common\MSDev98\Bin;C:\Programme\`
  `Microsoft Visual Studio\VC98\bin;d:\athos\bin\win32`
- `LIB= C:\Programme\Microsoft Visual Studio\vc98\lib`
- `INCLUDE= C:\Programme\Microsoft Visual Studio\vc98\include`

Call 'abuild' in the directory %ATHOS_ROOT% and the total ATHOS system will be compiled.
Abuild has three possible different parameters:

- Debug (Default) compile / link in debug mode.
- Release compile / link in release mode.
- Clean cleans the projects.

Example of the `Makefile.NT` file:

`!include etc\Win32\machinedep.mk`

Debug:

`aCheck $(ATHOS_ROOT)\util Debug`

Release:

`aCheck $(ATHOS_ROOT)\util Release`

Clean:

`aCheck $(ATHOS_ROOT)\util Clean`

Another example of the `Makefile.NT`:

`!include ..\etc\Win32\machinedep.mk`

Debug:

`$(MAKE) /NOLOGO /F util.mak CFG="util - Win32 Debug"`

Release:

`$(MAKE) /NOLOGO /F util.mak CFG="util - Win32 Release"`

clean:

`$(MAKE) /NOLOGO /F util.mak CFG="util - Win32 Release" clean`

The file ' `util.mak` ' is the exported makefile from the Visual C/C++ developer studio. You can
export a makefile at the menu 'project' the entry 'export makefile'.

10.1.9   Compiling on UNIX systems

On the UNIX-operating systems we have also the command 'abuild' to compile the whole Athos software products. Before the command can be called some environment settings are required. These setting will be done by the script 'setupathos'. This script must be called differently depending on the type of shell. The call is shown in the following table.

```
Shell Command
Sh source setupathos
Csh source setupathos.csh
```

The command can change for each operating system, ask your system administrator for the correct command to execute the command shell.

On the operating systems with the GNU C/C++ compiler the 'abuild' command works fine to compile the complete source system.

There are some operating systems installed with there own C compiler, on these operating systems we don't guarantee the 'abuild' command will work properly. There is a special command created for the HP-UX operating system with the HP C compiler called 'hpbuild'. There are no special dependencies for the HP-UX so if the 'abuild' command does not work, you can always try the command 'hpbuild'.

Chapter 11

Appendices

11.1 Athos Error Link List

- 0 AO_UNKNOWN_ERROR
- 1 AO_ACCESS_DENIED
- 2 AO_BAD_OPERATION
- 3 AO_BAD_PARAMETER
- 4 AO_CONNECT_FAILED
- 5 AO_CONNECT_REFUSED
- 6 AO_CONNECTION_LOST
- 7 AO_DUPLICATE_BASE_ATTRIBUTE
- 8 AO_DUPLICATE_NAME
- 9 AO_DUPLICATE_VALUE
- 10 AO_HAS_INSTANCES
- 11 AO_HAS_REFERENCES
- 12 AO_IMPLEMENTATION_PROBLEM
- 13 AO_INCOMPATIBLE_UNITS
- 14 AO_INVALID_ASAM_PATH
- 15 AO_INVALID_ATTRIBUTE_TYPE
- 16 AO_INVALID_BASE_ELEMENT
- 17 AO_INVALID_BASETYPE
- 18 AO_INVALID_BUILDUP_FUNCTION
- 19 AO_INVALID_COLUMN
- 20 AO_INVALID_COUNT

- 21 AO_INVALID_DATATYPE

- 22 AO_INVALID_ELEMENT

- 23 AO_INVALID_LENGTH

- 24 AO_INVALID_ORDINALNUMBER

- 25 AO_INVALID_RELATION

- 26 AO_INVALID_RELATION_RANGE

- 27 AO_INVALID_RELATION_TYPE

- 28 AO_INVALID_RELATIONSHIP

- 29 AO_INVALID_SET_TYPE

- 30 AO_INVALID_SMATLINK

- 31 AO_INVALID_SUBMATRIX

- 32 AO_IS_BASE_ATTRIBUTE

- 33 AO_IS_BASE_RELATION

- 34 AO_IS_MEASUREMENT_MATRIX

- 35 AO_MATH_ERROR

- 36 AO_MISSING_APPLICATION_ELEMENT

- 37 AO_MISSING_ATTRIBUTE

- 38 AO_MISSING_RELATION

- 39 AO_MISSING_VALUE

- 40 AO_NO_MEMORY

- 41 AO_NO_PATH_TO_ELEMENT

- 42 AO_NOT_FOUND

- 43 AO_NOT_IMPLEMENTED

- 44 AO_NOT_UNIQUE

- 45 AO_OPEN_MODE_NOT_SUPPORTED

- 46 AO_SESSION_LIMIT_REACHED

- 47 AO_SESSION_NOT_ACTIVE

- 48 AO_TRANSACTION_ALREADY_ACTIVE

- 49 AO_TRANSACTION_NOT_ACTIVE

- 50 AO_HAS_BASE_RELATION

- 51 AO_HAS_BASE_ATTRIBUTE

- 52 AO_UNKNOWN_UNIT

- 53 AO_NO_SCALING_COLUMN

- 54 AO_QUERY_TYPE_INVALID

- 55 AO_QUERY_INVALID

- 56 AO_QUERY_PROCESSING_ERROR

- 57 AO_QUERY_TIMEOUT_EXCEEDED

- 58 AO_QUERY_INCOMPLETE

- 59 AO_QUERY_INVALID_RESULTTYPE

- 60 AO_INVALID_VALUEMATRIX_STRUCTURE

- 100 AO_LAST_ODS_ERROR

- 902 AO_HAS_ELEMENTS

- 903 AO_SYNTAX_ERROR_IN_ASAMPATH

- 904 AO_UNABLE_OPEN_FILE

- 905 AO_FILE_OPEN

- 1000 AO_CONNECT_EVENTLOG

- 1001 AO_CLOSE_EVENTLOG

- 1002 AO_SUPPRESS_REPORT

- 1003 AO_REPORT_ALL_EVENT

- 1004 AO_THREAD_START

- 1005 AO_THREAD_STOP

- 1006 AO_ERROR_THREAD_CREATE

- 1100 AO_DRIVER_LOAD_SUCCESSFUL

- 1500 AO_EVENT

- 2500 AO_UNKNOWN_UNICODE_CHAR

- 2501 AO_UNKNOWN_KEYWORD_VALUE

- 3000 AO_NO_OBJECT

- 3001 AO_WRONG_OBJECT

- 3002 AO_UNKNOWN_DATATYPE

- 3003 AO_NO_ARRAY

- 3004 AO_ARRAY_ERROR

- 3005 AO_NO_VALUES_ARRAY

- 3006 AO_NO_COPY_FUNCTION

- 3007 AO_NO_VALUE

- 3008 AO_IS_READONLY

- 3009 AO_NO_NAME

- [3010](#) AO_NO_PUT_OBJECT

- [3011](#) AO_NO_DISCONNECT

- [3013](#) AO_NO_OPENENV

- [3014](#) AO_NO_GET_OBJECT

- [3015](#) AO_NO_DRIVERNAME

- [3016](#) AO_NO_SHAREOBJECT

- [3017](#) AO_LOAD_DRIVER

- [3018](#) AO_ERROR_MSG

- [3019](#) AO_NO_VALUE_SIZE

- [3020](#) AO_OUT_OF_RANGE

- [3021](#) AO_NO_DRIVER

- [3022](#) AO_NO_ENVIRONMENT

- [3023](#) AO_UNABLE_LOAD_DRIVER

- [3025](#) AO_IS_SAME_POINTER

- [3026](#) AO_NO_BASEREF

- [3027](#) AO_NO_BASEATTR

- [3028](#) AO_NO_ATTROBJ

- [3029](#) AO_NO_REFOBJECT

- [3030](#) AO_NO_APPLELEM

- [3031](#) AO_ONLY_ONE_ENV

- [3032](#) AO_NO_BASEELEM

- [3033](#) AO_WRONG_BA_DATATYPE

- [3034](#) AO_NO_SERVICE

- [3035](#) AO_NO_SRV_FOUND

- [3036](#) AO_NO_DESTRUCTION

- [3038](#) AO_UNABLE_WRITE_FILE

- [3039](#) AO_NO_INIT_FILE

- [3040](#) AO_DIM_ALREADY_SET

- [3041](#) AO_NO_MATRIX

- [3042](#) AO_NO_SEQUENCE

- [3043](#) AO_NO_COLLECTION

- [3044](#) AO_WRONG_NUMBER_IN_COLUMN

- [3045](#) AO_NO_SUBMAT

- 3046 AO_NO_MEA_BASEELEM
- 3047 AO_NO_ID
- 3048 AO_NO_INSTELEM
- 3049 AO_NO_REFERENCE_FOUND
- 3050 AO_ALREADY_IN_LIST
- 3051 AO_WRONG_DATE
- 3053 AO_NO_LC_FOUND
- 3054 AO_NO_TARGET_FOUND
- 3055 AO_UNABLE_INIT_SOCKET
- 3056 AO_WRONG_ASAMPATH
- 3057 AO_NO_UNIQUE_ASAMPATH
- 3058 AO_NO_DATATYPE
- 3059 AO_NO_LC_FOR_MEQ
- 3060 AO_NOTHING_TO_SET
- 3061 AO_WRONG_ENVIRONMENT
- 3062 AO_NO_RELATION_FOUND
- 3063 AO_INVALID_REQUEST
- 3064 AO_WRONG_DATATYPE
- 3065 AO_ORPHAN_APPLICATION_ELEMENTS
- 3066 AO_NO_FATHER
- 3067 AO_NO_UNIQUE_INSTANCE
- 3068 AO_NO_SUB_BASEELEM
- 3069 AO_NO_LCC_BASEELEM
- 3070 AO_WRONG_BASEELEM
- 3071 AO_NOT_IN_SAME_STRUCTURE
- 3072 AO_NO_LOCALCOLUMN
- 3073 AO_NO_COLUMN
- 3076 AO_NO_APPLELEMS
- 3077 AO_NO_SMATLINK
- 3078 AO_MORE_INDEP_CHANNEL
- 3080 AO_NO_INSTANCE_ATTRIBUTE
- 3081 AO_RELATED_INST_LEFT
- 3082 AO_WRONG_APPLELEM

- 3083 AO_FOUND_DIFFERENCE

- 3084 AO_NO_TARGET

- 3085 AO_UNKNOWN_RELATIONSHIP

- 3086 AO_NO_INVERSE_REFERENCE

- 3087 AO_TO_MUCH_FATHER

- 3088 AO_NO_SPACE_LEFT

- 3089 AO_NO_PASSWORD

- 3090 AO_WRONG_PASSWORD

- 3091 AO_WITHOUT_PASSWORD

- 3092 AO_UNKNOWN_NUMBER_OF_VALUES

- 3093 AO_TO_MUCH_ELEMENTS

- 3094 AO_WRONG_USERNAME

- 3095 AO_NOT_IN_USERGROUP

- 3096 AO_UNSUPPORTED_MODE

- 3097 AO_WRONG_NAME

- 3098 AO_DIFFERENT_ENV_NAMES

- 3099 AO_OLD_BASE_MODEL

- 3100 AO_NO_STRUCTURE

- 3101 AO_WRONG_STRUCTURE

- 3102 AO_WRONG_LENGTH

- 3103 AO_WRONG_CONFIG

- 3104 AO_WIN32_ERROR

- 3105 AO_SVCTABLE_ERROR

- 3106 AO_BASE_ATTRIBUTE_REQUIRED

- 3107 AO_ATTRIBUTE_AUTO_GENERATED

- 3108 AO_NO_INV_REFERENCE

- 3109 AO_NO_BASE_REFERENCE

- 3110 AO_DEADLOCK_DETECT

- 3111 AO_WRONG_ATTRIBUTE

- 3112 AO_DIVISION_BY_ZERO

- 3200 AO_NULL_POINTER

- 3300 AO_WRONG_FILETYPE

- 3500 AO_NO_BASEELEMENT

- 3501 AO_WRONG_BASEATTR
- 3600 AO_NO_TIMESTAMP
- 4000 AOP_UNEXPECTED_STATE
- 4001 AOP_RETVAL_ZERO
- 4002 AOP_DELETE_NOTHING
- 4003 AOP_DT_MISMATCH
- 4004 AOP_NO_ENVIRONMENT
- 4005 AOP_NO_LOCALCOLUMN
- 4006 AOP_UNKNOWN_DATATYPE
- 4007 AO_FILEVERSION_NOT_SUPPORTED
- 4008 AO_FILETYPE_NOT_SUPPORTED
- 4010 AOP_SVC_ERROR
- 4011 AO_NOT_CLOSED
- 4500 AO_DRIVER_CRASHED
- 5000 AO_UNKNOWN_CLIENT
- 5050 AO_NO_CLASS
- 5051 AO_NO_FIELDID
- 5052 AO_NO_METHODID
- 6000 AO_NO_ENV_ELEM
- 6001 AO_SYNTAX_NAME
- 6002 AO_SYNTAX_BAN
- 6003 AO_SYNTAX_BADT
- 6004 AO_SYNTAX_BASK
- 6005 AO_SYNTAX_BRFN
- 6006 AO_SYNTAX_BRCN
- 6007 AO_SYNTAX_BRIN
- 6010 AO_ORPHAN_BASE_ELEMENTS
- 7000 AO_NO_DRIVER_INFO
- 7003 AO_OPEN_ENV
- 7004 AO_ENV_NOT_OPEN
- 7005 AO_NO_CARD
- 7006 AO_CLOSE_ENV
- 7500 WINNT_SERVICE_CONTROL

- 7501 WINNT_UNABLE_REGISTER

- 7502 WINNT_OPEN_SERVICECONTROLMANAGER

- 7503 WINNT_OPEN_SERVICE

- 7504 WINNT_START_SERVICE_ERROR

- 7505 WINNT_START_SERVICE

- 7506 WINNT_CONTROL_SERVICE_ERROR

- 7507 WINNT_SERVICE_WRONG_STATE

- 7508 WINNT_SERVICE_STATE

- 7509 WINNT_SERVICE_STATE_ERROR

- 8000 ATF_MISSING_QUOTE

- 8001 ATF_TOKEN_TOO_LONG

- 8002 ATF_NO_ATF_FILE

- 8003 ATF_WRONG_ATF_VERSION

- 8004 ATF_NO_TERMINATOR

- 8005 ATF_WRONG_TOKEN

- 8006 ATF_MISSING_IDENTIFIER

- 8007 ATF_ALREADY_DEFINED

- 8008 ATF_SEEK_ERROR

- 8500 XATF_ERROR_FOUND

- 8501 XATF_ERROR_REPORT

- 8502 XATF_WARNING_FOUND

- 9000 AO_NO_ENVNAME

- 9002 AO_NO_APPLELEMS_LOAD

- 9003 AO_NO_APPLATTRS_LOAD

- 9004 AO_WRONG_ARGUMENTS

- 9005 AO_NO_INSTATTR_LOAD

- 9006 AO_NO_SUBMAT_LOAD

- 9007 AO_NO_LOCALCOLUMN_LOAD

- 9008 AO_NO_VALUES_LOAD

- 9009 AO_UNKNOWN_SAVE_MODE

- 9050 AO_SQL_ERROR_STATE

- 9051 AO_SQL_NATIVE_ERROR

- 9052 AO_SQL_ERROR_MSG

- 9053 AO_USE_DATABASE

- 9055 AO_ERROR_IN_SQL

- 9056 AO_SQL_INFORMATION

- 9060 AOD_UNABLE_PUT_APPLELEM

- 9061 AOD_UNABLE_CREATE_TABLE

- 9062 AOD_UNABLE_CHANGE_APPLELEM

- 9063 AOD_NO_MEQ

- 9064 AOD_UNABLE_TO_INSERT

- 9065 AOD_NO_APPLELEM

- 9066 AO_STMT_TO_LONG

- 9070 AO_ORACLE_ERROR_STATEMENT

- 9071 AO_ORACLE_NATIVE_ERROR

- 9072 AO_ORACLEL_ERROR_MSG

- 9073 AO_NOT_ALL_INSTANCE_LOADED

- 9999 AO_SUPERUSER_LOGIN

- 10000 AOC_WRITE_DENY

- 10001 AOC_UNKNOWN_MODE

- 21000 P3D_CANNOT_LOAD_VIEW

- 21001 P3D_CANNOT_LOAD_MODEL

- 21002 P3D_CANNOT_LOAD_CONTROL

- 21003 P3D_CANNOT_UPDATE_VIEW

- 21004 P3D_CANNOT_UPDATE_MODEL

- 21005 P3D_CANNOT_UPDATE_CONTROL

- 21006 P3D_COMPONENT_IS_NOT_REGISTERED

- 21050 P3D_NO_PARENT_NODE

- 21051 P3D_ILLEGAL_SHARING

- 21100 P3D_CAPABILITY_NOT_SET

- 21150 P3D_COMPONENT_ARRAY_INDEX_OUT_OF_BOUNDS

- 21200 P3D_WRONG_AXIS_TYPE_VALUE

- 21201 P3D_CANNOT_SET_AXIS_DEFAULTS

- 21202 P3D_CANNOT_SET_CHANNEL_DEFAULTS

- 21203 P3D_CANNOT_SET_TEXT_DEFAULTS

- 21204 P3D_CANNOT_SET_LINE_DEFAULTS

- 21205 P3D_CANNOT_SET_PLOT_DEFAULTS

- 21300 P3D_INVALID_CHANNEL_NAME

- 21400 P3D_CANNOT_CAST_TO_AXIS

- 21401 P3D_CANNOT_CAST_TO_CHANNEL

- 22001 FWK_CLASS_INSTANTIATION_SUCCESSFUL

- 22002 FWK_SERVICE_CONTROL_MANAGER_START_SUCCESSFUL

- 22003 FWK_ASAM_ODS_SERVICE_CREATION_SUCCESSFUL

- 22004 FWK_ASAM_ODS_FACTORY_CREATION_SUCCESSFUL

- 22005 FWK_ORB_CREATION_SUCCESSFUL

- 22006 FWK_NAME_SERVICE_CREATION_SUCCESSFUL

- 22007 FWK_NAME_SERVICE_FOUND

- 22008 FWK_BIND_TO_NAME_SERVICE_SUCCESSFUL

- 22009 FWK_NAME_SERVER_UP

- 22010 FWK_NO_ROOT_NAMING_CONTEXT

- 22011 FWK_NO_NAMING_CONTEXT

- 22050 FWK_SERVICE_STATE_REPORT

- 22101 FWK_CLASS_INSTANTIATION_FAILED

- 22102 FWK_CLASS_NOT_FOUND

- 22103 FWK_CONSTRUCTOR_NOT_FOUND

- 22104 FWK_DOCUMENT_NODE_UNKNOWN

- 22105 FWK_INPUT_FAILED

- 22106 FWK_METHOD_INVOCATION_FAILED

- 22107 FWK_METHOD_NOT_FOUND

- 22108 FWK_OUTPUT_FAILED

- 22109 FWK_XML_PARSER_PROBLEM

- 22110 FWK_UNKNOWN_HOST

- 22111 FWK_UNABLE_TO_JOIN_INFOBUS

- 22112 FWK_WRONG_LISTENER_CONTROLLER_TYPE

- 22113 FWK_CANNOT_CREATE_DATAFLAVOR

- 22114 FWK_ARRAY_INDEX_OUT_OF_BOUNDS

- 22115 FWK_HELPSET_NOT_FOUND

- 22116 FWK_PROPERTY_VETO

- 22117 FWK_IS_ETERNAL_AND_ALREADY_REGISTERED

- 22118 FWK_CANNOT_START_FRAME

- 22119 FWK_WRONG_STRING_FORMAT

- 22120 FWK_PROPERTY_CAST_FAILED

- 22121 FWK_NO_AUTOSTART

- 22501 FWK_LOAD_LIBRARY_NOT_FOUND

- 22502 FWK_SERVICE_CONTROL_MANAGER_START_FAILED

- 22503 FWK_UNABLE_START_VM

- 22504 FWK_ASAM_ODS_SERVICE_CREATION_FAILED

- 22505 FWK_ASAM_ODS_FACTORY_CREATION_FAILED

- 22506 FWK_ORB_CREATION_FAILED

- 22507 FWK_NAME_SERVICE_CREATION_FAILED

- 22508 FWK_NAME_SERVICE_NOT_FOUND

- 22509 FWK_BIND_TO_NAME_SERVICE_FAILED

- 22510 FWK_PORT_ADDRESS_IN_USE

- 23000 INFOBUS_REJECTED_JOIN

- 23001 INFOBUS_INVALID_NAME

- 23002 INFOBUS_MISSING_SEPARATOR_IN_NAME

- 23003 INFOBUS_UNABLE_TO_LEAVE

- 23004 INFOBUS_UNABLE_TO_CREATE_DATAFLAVOR

- 30000 PUMA_INVALID_HOSTNAME

- 30001 PUMA_INVALID_PORT

- 30002 PUMA_NO_SESSION_FOUND

- 30003 PUMA_WRONG_MSG_TYPE

- 30004 PUMA_WRONG_STATUS

- 30005 PUMA_WRONG_ERROR

- 30006 PUMA_WRONG_SEVERITY

- 30007 PUMA_WRONG_DESTINATIONBITS

- 30008 PUMA_ENGINE_FAILURE

- 31000 CONVERTER_UNABLE_OPEN_FILE

- 65535 EXTERNAL_ERROR

- 65535 EXTERNAL_INFO

- 65535 EXTERNAL_WARNING

11.2   Athos Error Messages

AO_UNKNOWN_ERROR
> This error should not occur. If it does, it shows that there is a problem in the implementation.
> Use 0 as unknown error to avoid confusing error messages if no error code set.

Event number	0
Event synopsis	No error code.
Event type	Error

AO_ACCESS_DENIED
> Access denied.
> Access deny for %4

Event number	1
Event synopsis	Access denied.
Event type	Error

AO_BAD_OPERATION
> A method is invalid in a marshalling operation.

Event number	2
Event synopsis	Method invalid in marshalling operation.
Event type	Error

AO_BAD_PARAMETER
> A bad parameter was passed to the called method.
> The bad parameter is: %4

Event number	3
Event synopsis	Bad parameter passed as an argument.
Event type	Error

AO_CONNECT_FAILED
> The connection failed. With the following information the system tried to make the connect:
> %4

Event number	4
Event synopsis	Connect failed.
Event type	Error

AO_CONNECT_REFUSED
> The connection is refused.

Event number	5
Event synopsis	Connect refused.
Event type	Error

AO_CONNECTION_LOST
> The connection to the server was lost.

Event number	6
Event synopsis	Connection lost.
Event type	Error

AO_DUPLICATE_BASE_ATTRIBUTE
> The application structure check has detected two application attributes within an application
> element that are derived from the same base attribute.

Event number	7
Event synopsis	Duplicate base attribute.
Event type	Error

AO_DUPLICATE_NAME

Duplicate name is not allowed. The name must be unique.

The duplicate name is found:

%4

Event number	8
Event synopsis	Duplicate name
Event type	Error

AO_DUPLICATE_VALUE

Duplicate attribute names are not allowed.

The duplicate value found at:

%4

Event number	9
Event synopsis	Duplicate attribute names are not allowed.
Event type	Error

AO_HAS_INSTANCES

The current application element has instances and the requested operation cannot be performed when instances are present.

Event number	10
Event synopsis	Application element has instances.
Event type	Error

AO_HAS_REFERENCES

The current element has relations and the requested operation cannot be performed when relations are present.

Event number	11
Event synopsis	Element has relations.
Event type	Error

AO_IMPLEMENTATION_PROBLEM

The implementation encountered a none ASAM ODS problem. Please see the following description for details.

Detailled description of the implementation problem: %4

Event number	12
Event synopsis	Implementation problem encountered.
Event type	Error

AO_INCOMPATIBLE_UNITS

The units are incompatible. No conversion rules known.

Event number	13
Event synopsis	Incompatible units. No conversion rules known.
Event type	Warning

AO_INVALID_ASAM_PATH

The specified ASAM path is invalid.

The given ASAM path is: %4

Event number	14
Event synopsis	Invalid ASAM path.
Event type	Warning

AO_INVALID_ATTRIBUTE_TYPE
The requested attribute type is invalid.

Event number	15
Event synopsis	Invalid attribute type.
Event type	Warning

AO_INVALID_BASE_ELEMENT
The application structure check has detected an application element that is derived from an invalid base element.

Event number	16
Event synopsis	Invalid base element.
Event type	Error

AO_INVALID_BASETYPE
The specified base type is invalid. The invalid base type is found at:
%4

Event number	17
Event synopsis	Invalid base type.
Event type	Warning

AO_INVALID_BUILDUP_FUNCTION
The specified build-up function is invalid.

Event number	18
Event synopsis	Invalid build-up function.
Event type	Warning

AO_INVALID_COLUMN
The specified column is invalid.

Event number	19
Event synopsis	Invalid column.
Event type	Warning

AO_INVALID_COUNT
The specified number of points is invalid.

Event number	20
Event synopsis	Invalid number of points.
Event type	Warning

AO_INVALID_DATATYPE
The specified datatype is invalid.
The invalid datatype is:
%4

Event number	21
Event synopsis	Invalid datatype.
Event type	Warning

AO_INVALID_ELEMENT
The element is not valid in this context.

Event number	22
Event synopsis	Invalid element.
Event type	Error

AO_INVALID_LENGTH
The given length is invalid. More details are:
%4

Event number	23
Event synopsis	Invalid length.
Event type	Warning

AO_INVALID_ORDINALNUMBER
The ordinal number is either already used or less than zero.

Event number	24
Event synopsis	Invalid ordinal number.
Event type	Warning

AO_INVALID_RELATION
The found relation between two elements is unknown. There is no description about this relation in the ASAM base model. The base ID of the application elements can be wrong or an application defined relation is found.
Relation found from:%t%4
The relation is ignored.

Event number	25
Event synopsis	Invalid type.
Event type	Warning

AO_INVALID_RELATION_RANGE
The specified relation range is invalid.

Event number	26
Event synopsis	Invalid relation range.
Event type	Warning

AO_INVALID_RELATION_TYPE
Invalid relation type.

Event number	27
Event synopsis	Invalid relation type.
Event type	Error

AO_INVALID_RELATIONSHIP
The specified relationship is invalid.

Event number	28
Event synopsis	Invalid relationship.
Event type	Warning

AO_INVALID_SET_TYPE
The specified set-type is invalid.

Event number	29
Event synopsis	Invalid set-type.
Event type	Warning

AO_INVALID_SMATLINK
The submatrix link is invalid.

Event number	30
Event synopsis	Invalid submatrix link.
Event type	Warning

AO_INVALID_SUBMATRIX
The specified submatrix is invalid.
More details: %4

Event number	31
Event synopsis	Invalid submatrix.
Event type	Warning

AO_IS_BASE_ATTRIBUTE
The attribute is an base attribute.

Event number	32
Event synopsis	Attribute is base attribute.
Event type	Error

AO_IS_BASE_RELATION
Properties of base relations may not be changed.

Event number	33
Event synopsis	Unable to modify base relation properties.
Event type	Warning

AO_IS_MEASUREMENT_MATRIX
It is not allowed to modify composed measurement matrixes.

Event number	34
Event synopsis	Unable to modify composed measurement matrixes.
Event type	Warning

AO_MATH_ERROR
A computation error occurred.

Event number	35
Event synopsis	Computation error.
Event type	Warning

AO_MISSING_APPLICATION_ELEMENT
The application element is missing.

Event number	36
Event synopsis	Missing application element.
Event type	Error

AO_MISSING_ATTRIBUTE
The application structure check has detected an application element that does not have all attributes required by the base structure.
The missing attribute is: %4

Event number	37
Event synopsis	Missing application attribute.
Event type	Error

AO_MISSING_RELATION
The application structure check has detected an application element that does not have all relations required by the base structure.
The missing relation is: %4

Event number	38
Event synopsis	Missing application relation.
Event type	Error

AO_MISSING_VALUE
An obligatory value is missing.

Event number	39
Event synopsis	Missing obligatory value.
Event type	Warning

AO_NO_MEMORY
There is no more memory available.

Event number	40
Event synopsis	No more memory available.
Event type	Error

AO_NO_PATH_TO_ELEMENT
The application structure check has detected an application element that cannot be reached via an ASAM path. The element is not properly hooked into the application structure.

Event number	41
Event synopsis	No path to application element.
Event type	Error

AO_NOT_FOUND
The requested object was not found.
The object searched for was: <%4>

Event number	42
Event synopsis	Object not found.
Event type	Warning

AO_NOT_IMPLEMENTED
This feature is not yet implemented.
The not implemement feature is: <%4>
Please inform the developers which features is required.

Event number	43
Event synopsis	Feature not yet implemented.
Event type	Warning

AO_NOT_UNIQUE
This error occurs if the instances of a property are required to be unique.
%4

Event number	44
Event synopsis	Attribute value not unique.
Event type	Warning

AO_OPEN_MODE_NOT_SUPPORTED
The requested open mode is not supported.

Event number	45
Event synopsis	Open mode not supported.
Event type	Error

AO_SESSION_LIMIT_REACHED
The number of sessions is limited for this server. No more sessions available.
Try again later.

Event number	46
Event synopsis	Session limit reached.
Event type	Error

AO_SESSION_NOT_ACTIVE

The requested session is not active. It may have been closed ealier.
Anyway: You are beating a dead horse!

Event number	47
Event synopsis	Session no longer active.
Event type	Error

AO_TRANSACTION_ALREADY_ACTIVE

Tried to start a transaction in a session where a transaction is already active. Please check the calling program.

Event number	48
Event synopsis	Transaction already active.
Event type	Warning

AO_TRANSACTION_NOT_ACTIVE

Tried to changed the ASAM ODS data storage without starting a transaction. Start a transaction before you create or modify any data in the ASAM ODS data storage. When you commit the transaction the changes become permanent and visible for the other users.

Event number	49
Event synopsis	Transaction not active.
Event type	Warning

AO_HAS_BASE_RELATION

Base relation found. It is not allowed to modify the relationtype, -range or -ship of an application relation derived from a base relation.
The name of the application relation is: %4

Event number	50
Event synopsis	Base relation found.
Event type	Error

AO_HAS_BASE_ATTRIBUTE

Base attribute found. It is not allowed to modify the datatype, unique- or obligatory flag .
The name of the application attribute is: %4

Event number	51
Event synopsis	Base attribute found.
Event type	Error

AO_UNKNOWN_UNIT

The physical unit is unknown. The given unit was not found as an instance name of the application element derived from AoUnit.
Name of the unit: %4

Event number	52
Event synopsis	Unknown physical unit.
Event type	Warning

AO_NO_SCALING_COLUMN

The given column is not a scaling column. The method expects a scaling column as input column.

Event number	53
Event synopsis	Column is no scaling column.
Event type	Error

AO_QUERY_TYPE_INVALID
The server does not support the specified query language type.
Request query language: %4

Event number	54
Event synopsis	Invalid query type.
Event type	Error

AO_QUERY_INVALID
Some error in the query string or some inconsistency between the return type of the query string and the result type specified by parameter "QueryResultType" has been detected.
%4

Event number	55
Event synopsis	Invalid query.
Event type	Error

AO_QUERY_PROCESSING_ERROR
Some error occured during the execution of the query.

Event number	56
Event synopsis	Query processing error.
Event type	Error

AO_QUERY_TIMEOUT_EXCEEDED
It was not possible to execute the query within the time limit set by parameter "MaxDuration".
maxDuration = %4

Event number	57
Event synopsis	Query timeout.
Event type	Error

AO_QUERY_INCOMPLETE
The execution of the query was not yet completed.

Event number	58
Event synopsis	Query not yet completed.
Event type	Informational

AO_QUERY_INVALID_RESULTTYPE
The requested result type of the query do no match with the previous definition of the result type.
%4

Event number	59
Event synopsis	Invalid result type.
Event type	Warning

AO_INVALID_VALUEMATRIX_STRUCTURE
The server is unable to create the valuematrix due to the data of the measurement

- if there are no independent column

- if there are different independent columns

- if there are submatrices with more than one independent
  column.
  Reason: %4

Event number	60
Event synopsis	Unable to create the value matrix of the measurement.
Event type	Warning

AO_LAST_ODS_ERROR
This code must always be the last standard ASAM ODS error code.

Event number	100
Event synopsis	Last ASAM-ODS standard error code.
Event type	Informational

AO_HAS_ELEMENTS
Elements are present and the requested operation cannot be performed when elements are present.

Event number	902
Event synopsis	Elements are present.
Event type	Error

AO_SYNTAX_ERROR_IN_ASAMPATH
A syntax error in the ASAM path was found. Please correct the ASAM path. See at the parameter which error is found.
Given ASAM Path is :
%4

Event number	903
Event synopsis	Syntax error in ASAM path.
Event type	Warning

AO_UNABLE_OPEN_FILE
Unable to open file.
Filename:%t%4

Event number	904
Event synopsis	Unable to open file.
Event type	Error

AO_FILE_OPEN
The file is open.
Filename:%t%4

Event number	905
Event synopsis	File is open.
Event type	Informational

AO_CONNECT_EVENTLOG
This event is a normal event and no action has to be taken.
The program is started with the following command:
%4

Event number	1000
Event synopsis	Program connect to and initialize the event log.
Event type	Informational

AO_CLOSE_EVENTLOG
This event is a normal event and no action has to be taken.

Event number	1001
Event synopsis	Program close event log.
Event type	Informational

AO_SUPPRESS_REPORT

The previous event is reported more than 10 (MAX_ERROR) times. The report of the event will be suppressed automatically. All events will be suppressed until another event is reported. Suppressed event:%t%4

Event number	1002
Event synopsis	Automatic suppress of event reporting.
Event type	Warning

AO_REPORT_ALL_EVENT

Finished the automatic suppression of event reporting.
%4

Event number	1003
Event synopsis	Finished automatic suppression of event reporting.
Event type	Warning

AO_THREAD_START

A thread is started. This is only a debug message, no further action required.
%4

Event number	1004
Event synopsis	Thread started.
Event type	Informational

AO_THREAD_STOP

A thread is stopped. This is only a debug messages, no further action required.
%4

Event number	1005
Event synopsis	Thread stopped.
Event type	Informational

AO_ERROR_THREAD_CREATE

The server is unable to start a new thread. The last request will run in single threaded mode. Error messages: %4

Event number	1006
Event synopsis	Unable to create a new thread.
Event type	Error

AO_DRIVER_LOAD_SUCCESSFUL

The driver <%4> is loaded successful.

Event number	1100
Event synopsis	The driver is loaded successful.
Event type	Informational

AO_EVENT

This is just a trace message. Refer to the previously reported event.

Event number	1500
Event synopsis	Trace to error origin.
Event type	Informational

AO_UNKNOWN_UNICODE_CHAR
The conversion expects unicode characters with the high byte to be zero. A unicode character has been found with another high byte code.
Unicode character:%t%4

Event number	2500
Event synopsis	Wrong unicode character.
Event type	Warning

AO_UNKNOWN_KEYWORD_VALUE
The value of the keyword in the INI-File is unknown. The default value of the keyword is used.
The unknown value is: %4

Event number	2501
Event synopsis	Unknown keyword value.
Event type	Warning

AO_NO_OBJECT
No object defined. NULL-pointer as input parameter.
Expected object type:%t%4

Event number	3000
Event synopsis	No object defined.
Event type	Error

AO_WRONG_OBJECT
Type of expected object and input object:%t%4

Event number	3001
Event synopsis	Wrong object type.
Event type	Error

AO_UNKNOWN_DATATYPE
Type of data is unknown.
unknown Type:%t%4

Event number	3002
Event synopsis	Unknown data type.
Event type	Error

AO_NO_ARRAY
The object requires an array for the local storage of the elements or objects. There is no array defined in the object.
Name of object:%t%4

Event number	3003
Event synopsis	No array found .
Event type	Error

AO_ARRAY_ERROR
Some error occured in the array utility.
Name of object:%t%4

Event number	3004
Event synopsis	Error occured in the array utility.
Event type	Error

AO_NO_VALUES_ARRAY
The object requires an array for the local storage of the elements or objects. There are no values in the array stored in this object.
Name of object:%t%4

Event number	3005
Event synopsis	No values in array.
Event type	Error

AO_NO_COPY_FUNCTION
The object needs a copy function. There is no copy function defined in the object.
Name of object:%t%4

Event number	3006
Event synopsis	No array copy function defined.
Event type	Error

AO_NO_VALUE
The object requires a value. There is no value defined in this object.
Name of object:%t%4

Event number	3007
Event synopsis	No value found.
Event type	Error

AO_IS_READONLY
The object is readonly. It is not allowed to modify this object.
Name of object:%t%4

Event number	3008
Event synopsis	Object is readonly.
Event type	Warning

AO_NO_NAME
The object has no name.
The object without a name has following description: %4

Event number	3009
Event synopsis	Object has no name.
Event type	Error

AO_NO_PUT_OBJECT
The object has no put object function.
Name of object:%t%4

Event number	3010
Event synopsis	No put object function available.
Event type	Error

AO_NO_DISCONNECT
The object has no disconnect function.
Name of object:%t%4

Event number	3011
Event synopsis	No disconnect function available.
Event type	Error

AO_NO_OPENENV
The object has no open environment function.

Name of object:%t%4

Event number	3013
Event synopsis	No open environment function available.
Event type	Error

AO_NO_GET_OBJECT
The object has no get object function.
Name of object:%t%4

Event number	3014
Event synopsis	No get object function available.
Event type	Error

AO_NO_DRIVERNAME
Could not determine the name of the driver from the driver directory.
Directory:%t%4

Event number	3015
Event synopsis	Unable to determine drivername.
Event type	Error

AO_NO_SHAREOBJECT
Could not determine the name of the shared object of the driver.
Driver:%t%4

Event number	3016
Event synopsis	Unable to create driver shared object name.
Event type	Error

AO_LOAD_DRIVER
Look at the next error event for more detailed systeminformation.
Driver:%t%4

Event number	3017
Event synopsis	Could not load driver.
Event type	Error

AO_ERROR_MSG
The system error message of the previous error event is:
%4

Event number	3018
Event synopsis	System error message.
Event type	Error

AO_NO_VALUE_SIZE
The size of the value is undefined.
Value type:%t%4

Event number	3019
Event synopsis	Size of value undefined.
Event type	Error

AO_OUT_OF_RANGE
The index must be in the range from 0 to max. The max index value is not included. $(0 <= index < max)$
Used index and max index value:%t%4

Event number	3020
Event synopsis	Index out of range.
Event type	Error

AO_NO_DRIVER
The service does not have a driver.

Event number	3021
Event synopsis	No driver in service available.
Event type	Error

AO_NO_ENVIRONMENT
The service does not have an environment.

Event number	3022
Event synopsis	No environment in service available.
Event type	Error

AO_UNABLE_LOAD_DRIVER
Unable to load the driver for the service connect. The name or directory of the driver are possibly wrong.
Name of driver:%t%4

Event number	3023
Event synopsis	Unable to load driver.
Event type	Error

AO_IS_SAME_POINTER
The pointer of the old and new value are identical. The value will not be set. Set the new value would cause to dirty memory because the function frees the old pointer and this will destroy the new value.

Event number	3025
Event synopsis	Identical pointers found.
Event type	Warning

AO_NO_BASEREF
The are no base references available in the base element.

Event number	3026
Event synopsis	No base reference found.
Event type	Error

AO_NO_BASEATTR
The are no base attributes available in the base element.

Event number	3027
Event synopsis	No base attributes found.
Event type	Error

AO_NO_ATTROBJ
There is no attribute object available in element.

Event number	3028
Event synopsis	No attribute object found.
Event type	Error

AO_NO_REFOBJECT
There is no reference object available in element.

Event number	3029
Event synopsis	No reference object.
Event type	Error

AO_NO_APPLELEM
There is no application element object available in the instance element.

Event number	3030
Event synopsis	No application element.
Event type	Error

AO_ONLY_ONE_ENV
Only one environment application element of this type is allowed. There is already an application element of the same type in the application structure.

Event number	3031
Event synopsis	Only one environment application element allowed.
Event type	Error

AO_NO_BASEELEM
The object has no base element. No base element found.
The object which was searched for the base element is:
%4

Event number	3032
Event synopsis	No base element found.
Event type	Error

AO_WRONG_BA_DATATYPE
The base attribute has a wrong datatype name.
The wrong data type name is:%t%4
Allowed names are:
%tUnknown
%tReal4
%tReal8
%tInt2
%tInt4
%tInt8
%tBoolean
%tByte
%tString
%tWideString
%tDate
%tByteStream

Event number	3033
Event synopsis	Wrong base attribute datatype.
Event type	Error

AO_NO_SERVICE
There is no service available in the ASAM-C object.

Event number	3034
Event synopsis	No service found.
Event type	Error

AO_NO_SRV_FOUND
There was no matching service found in the ASAM-C object.
Search for service:%t%4

Event number	3035
Event synopsis	No matching service found.
Event type	Error

AO_NO_DESTRUCTION
The number of calls of the function Ćac_loadeddriversŚ with creation flag and the destruction flag do not match. There are more calls with the destruction flag than calls with the creation flag. Do no destruct drivers which are not created.

Event number	3036
Event synopsis	More destruction calls than creation calls.
Event type	Error

AO_UNABLE_WRITE_FILE
Unable to write to file.
Filename:%t%4

Event number	3038
Event synopsis	Unable to write to file.
Event type	Error

AO_NO_INIT_FILE
No initialization file loaded.
Filename:%t%4

Event number	3039
Event synopsis	No initialization file loaded.
Event type	Error

AO_DIM_ALREADY_SET
The dimension of the matrix is already set. You cannot modify the dimension of a matrix.
If you would like to change the dimension of a matrix, create a new matrix with the new dimension and copy the elements of the old matrix into the new matrix. Then you can delete the old matrix.
Name of matrix:%t%4

Event number	3040
Event synopsis	Dimension already set.
Event type	Error

AO_NO_MATRIX
The object requires a Value Matrix. There is no matrix defined in this object.
Name of object:%t%4

Event number	3041
Event synopsis	No Value Matrix found.
Event type	Error

AO_NO_SEQUENCE
The object requires a sequence. There is no sequence defined in this LocalColumn object.
Some previous error must have occured and was ignored afterwards.
Name of LocalColumn object:%t%4

Event number	3042
Event synopsis	No sequence in LocalColumn.
Event type	Error

AO_NO_COLLECTION

The object requires a collection. There is no collection defined in this submatrix object. Some previous error has occured and afterwards ignored.
Name of the sub matrix object:%t%4

Event number	3043
Event synopsis	No collection in submatrix.
Event type	Error

AO_WRONG_NUMBER_IN_COLUMN

The number of elements in a LocalColumn must be the same for all LocalColumns of the submatrix. The number of elements in the new LocalColumn differs from the number of elements in the previous stored columns.
Name of the submatrix object:%t%4

Event number	3044
Event synopsis	Wrong number of elements in LocalColumn.
Event type	Error

AO_NO_SUBMAT

The object requires a submatrix. There is no submatrix defined in this object.
The element where the submatrix was expected: %4

Event number	3045
Event synopsis	No submatrix available.
Event type	Error

AO_NO_MEA_BASEELEM

The type of the base element is not measurement. The instance element can only contain submatrixes when the type of the instance element is measurement.
%4

Event number	3046
Event synopsis	Base element is not measurement.
Event type	Warning

AO_NO_ID

The application element has no attribute with a base attribute 'Id' or the instance element has no value for the attribute derived from the base attribute 'Id'.
Element with no ID is:%t%4

Event number	3047
Event synopsis	No base element ID found.
Event type	Error

AO_NO_INSTELEM

There is no instance element available.
No instance for:%t%4

Event number	3048
Event synopsis	No instance element available.
Event type	Informational

AO_NO_REFERENCE_FOUND

The instance element has a reference to another instance. The referenced instance was not found in the instance collection of the target application element. Instance of application element with reference position and referenced ID:
%t%4

Event number	3049
Event synopsis	No reference found.
Event type	Error

AO_ALREADY_IN_LIST
The object is already in the list. The object is not inserted into the list.

Event number	3050
Event synopsis	Object already in list.
Event type	Informational

AO_WRONG_DATE
Format of date or time is wrong. The ASAM format is ĆYYYYMMDDŚ or
ĆYYYYMMDDHHMMSSŚ.
The date or time is:%t%4

Event number	3051
Event synopsis	Wrong date format.
Event type	Error

AO_NO_LC_FOUND
The requested LocalColumn was not found.
Search for:%t%4

Event number	3053
Event synopsis	No LocalColumn found.
Event type	Error

AO_NO_TARGET_FOUND
The requested target application element isnŚt found. There is a reference in the application
model to an application element which is unknown.
Search for application element:%t%4

Event number	3054
Event synopsis	No target application element found.
Event type	Warning

AO_UNABLE_INIT_SOCKET
Unable to initialize the Windows socket DLL.
%4

Event number	3055
Event synopsis	Unable to initialize windows socket DLL.
Event type	Error

AO_WRONG_ASAMPATH
The specified ASAM ODS path is wrong, no instance is found for the specified ASAM path.
Specified ASAM ODS path:%t%4

Event number	3056
Event synopsis	Wrong ASAM ODS path.
Event type	Warning

AO_NO_UNIQUE_ASAMPATH
The specified ASAM ODS path is not for a unique instance. The data in the server is not
ASAM ODS conform.
Specified ASAM ODS path:%t%4

Event number	3057
Event synopsis	ASAM ODS path not unique.
Event type	Warning

AO_NO_DATATYPE
The instance of the measurement quantity has no attribute derived from the base attribute ŬDatatype-. The attribute ŬDatatype- is required for the ASAM ODS servers to store the Datatype of the LocalColumns. The LocalColumn cannot be saved or restored from the data storage.
Name of the instance of the measurement quantity:%t%4
The convert file might be wrong or not activated, see also the INI-File variable 'CONVERT-FILE'.

Event number	3058
Event synopsis	Measurement quantity has no datatype.
Event type	Error

AO_NO_LC_FOR_MEQ
The instance of the measurement quantity has no corresponding LocalColumn in the database table Ŭsvcval-. Normally all measurement quantities have a corresponding LocalColumn. Measurement quantities are found in the database with no LocalColumns.
ID of the instance of the measurement quantity:%t%4

Event number	3059
Event synopsis	Measurement quantity has no corresponding LocalColumn.
Event type	Warning

AO_NOTHING_TO_SET
A set request is given, but the function could not recognize the number of bytes to set.
Possible reason:
The INI-File variable STR_VALBLOBLEN is not set at the service for the database storages.

Event number	3060
Event synopsis	Nothing to set.
Event type	Error

AO_WRONG_ENVIRONMENT
The ID of the requested environment is wrong.

Event number	3061
Event synopsis	Wrong environment ID.
Event type	Error

AO_NO_RELATION_FOUND
There is no releation between the two given application elements.
The two application elements are:%t%4.

Event number	3062
Event synopsis	No relation between application elements.
Event type	Error

AO_INVALID_REQUEST
The request of the function has invalid parameter.
Detail information about the invalid parameter is:
%4

Event number	3063
Event synopsis	Invalid request.
Event type	Error

AO_WRONG_DATATYPE
The data type does not match the data type of the object or the structure.

Detailed information: %4

Event number	3064
Event synopsis	Wrong data type.
Event type	Error

AO_ORPHAN_APPLICATION_ELEMENTS

After creating the application model hierarchy there are elements left from the application model. When the model is correct and complete there should be no orphan elements left.
Number of elements left over: %4

Event number	3065
Event synopsis	Orphan application elements detected.
Event type	Warning

AO_NO_FATHER

The element has no father. If the element is an application element there is no relation in the application element to a father application element. Please check and correct the application model. If the element is an instance element there is no predecessor found for the given instance element.
The element:%t%4

Event number	3066
Event synopsis	Application element has no father.
Event type	Warning

AO_NO_UNIQUE_INSTANCE

There is no unique instance found for the given name. The application element has more than one instance matching to the given name. No instance returned.
Name of instance and number of duplicates:%t%4

Event number	3067
Event synopsis	No unique instance found.
Event type	Warning

AO_NO_SUB_BASEELEM

The type of the base element is not a submatrix. An instance of a submatrix is expected.

Event number	3068
Event synopsis	Base element is no submatrix.
Event type	Warning

AO_NO_LCC_BASEELEM

The type of the base element is not a LocalColumn. An instance of a LocalColumn is expected.

Event number	3069
Event synopsis	Base element is no LocalColumn.
Event type	Warning

AO_WRONG_BASEELEM

A special type of element (application or instance) is requested. The type of the element is wrong.
The expected type and input type are: %4

Event number	3070
Event synopsis	Wrong element type.
Event type	Error

AO_NOT_IN_SAME_STRUCTURE
An application element is set to an application relation. The application element is not in the same application structure as the application relation. Only elements of the same structure can be set to a relation. The application relation is the connection between two elements in an application structure.

Event number	3071
Event synopsis	Relation does not belong to application structure.
Event type	Error

AO_NO_LOCALCOLUMN
The column has no Athos LocalColumn. Internal error or implementation error occured. The allocation of memory failed.

Event number	3072
Event synopsis	No Athos LocalColumn.
Event type	Error

AO_NO_COLUMN
There is no LocalColumn defined in this object.
The object where a LocalColumn is expected: %4

Event number	3073
Event synopsis	No LocalColumn in submatrix.
Event type	Error

AO_NO_APPLELEMS
The list function of the application element cannot return a list because there are no application elements stored in the environment. This can happen when a driver opens a new data storage.
Name of the environment: %4

Event number	3076
Event synopsis	No application element in application structure.
Event type	Warning

AO_NO_SMATLINK
The object has no submatrix links. The requested operation cannot be performed.

Event number	3077
Event synopsis	No submatrix link.
Event type	Error

AO_MORE_INDEP_CHANNEL
To build the valuematrix at the measurement there are no submatlinks defined and there are more then one submatrixes. With the automatic build function of the valuematrix exactly one independet channel is expected. These indepedent channels must be in all the submatrixes of the measurement. There are none or more then one independent channels found, so the valuematrix cannot be built automatically. Please use the submat links to build a valuematrix. The instance is: %4

Event number	3078
Event synopsis	More than one independent channel in submatrixes.
Event type	Error

AO_NO_INSTANCE_ATTRIBUTE
It is only allowed to remove or rename an instance attribute. Attributes derived from an application attribute cannot be removed or renamed.

Event number	3080
Event synopsis	Attribute is not an instance attribute.
Event type	Error

AO_RELATED_INST_LEFT
After removing an instance element there are still related instances left. Delete first the relation then try again.

Event number	3081
Event synopsis	Related instances left.
Event type	Error

AO_WRONG_APPLELEM
The application elements of the instance elements and the relation do not match. Try to access a relation at the instance and the relation has no connection to the application element of the instance.
%4

Event number	3082
Event synopsis	Application elements do not match.
Event type	Error

AO_FOUND_DIFFERENCE
A difference has been found in a compare function. The difference is: %4

Event number	3083
Event synopsis	Difference found.
Event type	Error

AO_NO_TARGET
A reference was found without a target element. The name of the reference is: %4

Event number	3084
Event synopsis	Reference without target element.
Event type	Warning

AO_UNKNOWN_RELATIONSHIP
The relationship in the relation is unknown.

Event number	3085
Event synopsis	Unknown relationship.
Event type	Error

AO_NO_INVERSE_REFERENCE
There is no inverse reference. The inverse reference is built from the AO_BASE.HTM. After reading the base model from the file, the references are checked and for each reference the inverse reference is searched.
An error occured reading the AO_BASE.HTM because an inverse reference was not found. The name of the base reference is: %4

Event number	3086
Event synopsis	No inverse reference.
Event type	Error

AO_TO_MUCH_FATHER

The element has to many fathers. There was more than one father found for the element, please check the consistency of the datastorages.

The element:%t%4

Event number	3087
Event synopsis	Application element has too many fathers.
Event type	Warning

AO_NO_SPACE_LEFT

There is no space left. All reserved space is used. Please send this messages to the development team.

The extended space is:

%4

Event number	3088
Event synopsis	No space left.
Event type	Error

AO_NO_PASSWORD

The user did not enter the password.

Name of the user: %4

Event number	3089
Event synopsis	Username without password.
Event type	Error

AO_WRONG_PASSWORD

The user did not enter the correct password.

Name of the user: <%4>

Event number	3090
Event synopsis	Wrong password.
Event type	Error

AO_WITHOUT_PASSWORD

The base attribute 'password' was not found at an application element of AoUser. So there is no password check. If a password check is required define an application attribute derived from the base attribute "password".

Event number	3091
Event synopsis	No password in data storage.
Event type	Informational

AO_UNKNOWN_NUMBER_OF_VALUES

The number of values is unknown. There is no definition for the number of values. There might be another LocalColumn which defined the number of values for the submatrix.

Name of the LocalColumn: <%4>

Event number	3092
Event synopsis	Unknown number of values.
Event type	Informational

AO_TO_MUCH_ELEMENTS

There are to many elements found. ASAM ODS has defined that only one element of the given base type may be derived. The system expects exactly one element and got another element of the same base type.

The wrong base element is: <%4>

Event number	3093
Event synopsis	Too many elements found.
Event type	Error

AO_WRONG_USERNAME

The user name is not in the server.

Name of the user: <%4>

Event number	3094
Event synopsis	Unknown user name.
Event type	Error

AO_NOT_IN_USERGROUP

The user is not in a usergoup, no access is allowed.

Name of the user: <%4>

Event number	3095
Event synopsis	User not in usergroup.
Event type	Error

AO_UNSUPPORTED_MODE

The given mode is not supported by the program. Look for the filename which part of the software does not support, in the given mode.

The mode is: <%4>

Event number	3096
Event synopsis	Unsupported mode.
Event type	Error

AO_WRONG_NAME

The given name is not a name which is expected.

The given name is: <%4>.

Event number	3097
Event synopsis	Wrong name.
Event type	Error

AO_DIFFERENT_ENV_NAMES

The names of the environment given in the ASAM path are different. This difference will be ignored. It is allowed to get an element from an other environment outside the current environment.

%4

Event number	3098
Event synopsis	Different environment names.
Event type	Informational

AO_OLD_BASE_MODEL

The base model file <%4> is too old. Please provide a current version.

Event number	3099
Event synopsis	Base model out dated.
Event type	Error

AO_NO_STRUCTURE

No structure defined. NULL-pointer as input parameter.

Expected structure type:%t%4

Event number	3100
Event synopsis	No structure defined.
Event type	Error

AO_WRONG_STRUCTURE

Type of expected structure and input structure:%t%4

Event number	3101
Event synopsis	Wrong structure type.
Event type	Error

AO_WRONG_LENGTH

The length of the value of the structure does not correspond to the length expected by the function.

Details: %4

Event number	3102
Event synopsis	Wrong length.
Event type	Error

AO_WRONG_CONFIG

The configuration is wrong. The variable setting in the INI-File does not match the data from storage. Please check the settings of the INI-File.

Wrong variable: %4

Event number	3103
Event synopsis	Wrong configuration.
Event type	Error

AO_WIN32_ERROR

An error has occured in a Win32 system function. The Win32 error message is:

%4

Event number	3104
Event synopsis	Error in Win32 system.
Event type	Error

AO_SVCTABLE_ERROR

The content of the svc-tables of the physical storage is wrong. There are tables or columns defined in the tables svcent or svcattr which do not exist in the database.

Detailed information: %4

Event number	3105
Event synopsis	Error in the svc-tables found.
Event type	Error

AO_BASE_ATTRIBUTE_REQUIRED

The given base attribute is required for the program. The base attribute isn't available on the given element.

%4

Event number	3106
Event synopsis	A base attribute is required.
Event type	Error

AO_ATTRIBUTE_AUTO_GENERATED

The attribute is automatically generated. There is no specification of the attribute at the storage, the attribute is required and automatically generated by the software. The software generates the attribute automatically. The name of the automatic generated attribute and the element is given below.

%4

Event number	3107
Event synopsis	The attribute is automatically generated.
Event type	Informational

AO_NO_INV_REFERENCE
There is no inverse reference in the application model. This is only a message and has no influence on the server. The inverse reference will be generated automatically by the software.
%4

Event number	3108
Event synopsis	There is no inverse reference.
Event type	Informational

AO_NO_BASE_REFERENCE
The Athos Runtime System search for a base reference between the different elements. If an application reference is found and no base reference is given. Athos Runtime System tries to find a corresponding base reference. There are a lot of application models which do not tell the software the correct base reference for each application reference.

However every application reference does not have a base reference, because in the ASAM ODS base model there is no base reference between each pair of elements.

This is only a messages and has no influence of the functionallity of the software. You can switch off the search for the base reference with the INI-File variable SEARCH_FOR_-BASE_REF.
%4

Event number	3109
Event synopsis	There is no base reference between the elements.
Event type	Informational

AO_DEADLOCK_DETECT
There is a deadlock found, the automatic system tries to solve the deadlock.
The deadlock is found between: %4
For more information look in the log-file.

Event number	3110
Event synopsis	Deadlock detected.
Event type	Warning

AO_WRONG_ATTRIBUTE
A special attributes is expected for this function. The function is used with another kind of attribute.
The expected special attribute is: %4

Event number	3111
Event synopsis	Wrong attribute.
Event type	Warning

AO_DIVISION_BY_ZERO
A division by zero is detected.
Detected at %4

Event number	3112
Event synopsis	Division by zero.
Event type	Warning

AO_NULL_POINTER
NULL-pointer found in a wrapper class.
Details: %4
Expected object type:%t%4

Event number	3200
Event synopsis	Null pointer found.
Event type	Error

AO_WRONG_FILETYPE

The type of the file is wrong. There are several checks available to check the type of a file. One of the checks failed.

The failed check is: %4

Event number	3300
Event synopsis	Wrong file type.
Event type	Error

AO_NO_BASEELEMENT

Checking the application structure the following application element has no base element. Every application elements needs a base element. If the application element is of no specific ASAM ODS base element type, at least the base element 'AoAny' must be used.

The application element without base element is: %4

Event number	3500
Event synopsis	Application element has no base element.
Event type	Warning

AO_WRONG_BASEATTR

Checking the application structure the following application element has an attribute which has a base attribute type which does not match one of the base attributes of the base element from the application element.

%4

Event number	3501
Event synopsis	Application attribute of wrong base attribute type.
Event type	Warning

AO_NO_TIMESTAMP

The LocalColumn has no timetsamp. Something went wrong within the software. Please check the calling sequence of the software.

The name of the LocalColumn is: %4

Event number	3600
Event synopsis	Object has no timestamp.
Event type	Warning

AOP_UNEXPECTED_STATE

Protocol level function returned unexpected result state. The reason may be a severe problem in the protocol level server or a wrong version of the server.

%4

Event number	4000
Event synopsis	Protocol level function returned unexpected result state.
Event type	Error

AOP_RETVAL_ZERO

Protocol level function returned a zero. This error is caused by a programming error in the protocol level. Normally the server returns at least some error state or information about what happened. If this error is reproduceable please inform the developers.

The probable reason is that there is no authorization for the user / computer to use rpc. The check of the authorization in the rpc-library is not implemented for all the operating system.

Event number	4001
Event synopsis	Protocol level function returned zero.
Event type	Error

AOP_DELETE_NOTHING

There was a delete request without any information what to delete. The delete request was ignored.

Event number	4002
Event synopsis	Delete request without data.
Event type	Error

AOP_DT_MISMATCH

Datatype mismatch in application attribute: %4

Event number	4003
Event synopsis	Datatype mismatch.
Event type	Warning

AOP_NO_ENVIRONMENT

The first application element received from the server is not of the type environment. The driver overwrites the unknown type of the application element to environment.
Server:%t%4

Event number	4004
Event synopsis	First application element not of type environment.
Event type	Warning

AOP_NO_LOCALCOLUMN

No LocalColumn received from the server. According to the received information there should be data for LocalColumn, when trying to read this data no error messages occures and also no data is delivered.

Event number	4005
Event synopsis	No LocalColumn received from server.
Event type	Error

AOP_UNKNOWN_DATATYPE

The data type given from the protocol level server (2 or 3) is unknown by the driver. The attribute or LocalColumn is used within Athos with the data type "Unknown".
Retrieved datatype from the server: %4

Event number	4006
Event synopsis	Data type from protocoll level unknown.
Event type	Warning

AO_FILEVERSION_NOT_SUPPORTED

The file version found in the datastorage is not supported by the driver.
The driver is unable to interpret the requested file.
Found fileversion is: %4

Event number	4007
Event synopsis	File version not supported by driver.
Event type	Warning

AO_FILETYPE_NOT_SUPPORTED

The type of the file found in the datastorage is not supported by the driver.
The driver is unable to interpret the requested file.
Found type of file is: %4

Event number	4008
Event synopsis	File type not supported by driver.
Event type	Warning

AOP_SVC_ERROR

An RPC-service error has been detected.
The message is:
%4

Event number	4010
Event synopsis	RPC-service error detected.
Event type	Error

AO_NOT_CLOSED

The query is opened again, but the previous query isn't closed until now. There is only one opened query allowed.
%4

Event number	4011
Event synopsis	The query isn't closed.
Event type	Warning

AO_DRIVER_CRASHED

Some error occured in the driver. The driver crashed with a system exception, such as "access violation". Please check the code of the driver.
Name of driver:%t%4

Event number	4500
Event synopsis	Driver crashed.
Event type	Error

AO_UNKNOWN_CLIENT

The server was not able to find the control block of the current client.
The address of the client is %4.

Event number	5000
Event synopsis	Client not found.
Event type	Error

AO_NO_CLASS

The requested java class was not found. The class or package name is changed, see java implementation and odsapijavadef.h. The package name with the class name must be identical with the definition in the odsapijavadef.h file.
Name of the class:%t%4
Please report this error to the developers!!

Event number	5050
Event synopsis	Java class not found.
Event type	Error

AO_NO_FIELDID

The requested field in the java class was not found. The field is changed, see java implementation and source file. The name of the field and the signature must be identical in the class file and the C-implementation.
Name of the class and field:%t%4
Please report this error to the developers!!

Event number	5051
Event synopsis	Field in java class not found.
Event type	Error

AO_NO_METHODID

The requested method in the java class was found. The method is changed, see java implementation and source file. The name of the method and the signature must be identical in the class file and the C-implementation.
Name of the class and method:%t%4
Please report this error to the developers!!

Event number	5052
Event synopsis	Method in java class not found.
Event type	Error

AO_NO_ENV_ELEM

Syntax error:
No environment element found in base model. There must be an environment element in base model.
Base model read from file:%t%4

Event number	6000
Event synopsis	No environment element found.
Event type	Error

AO_SYNTAX_NAME

Syntax error:
<AO_NAME> without name specified.
The syntax error occured during the load of the information from the base element definition file and created the base element hierarchy.
The syntax error in line: %4

Event number	6001
Event synopsis	<AO_NAME> without name.
Event type	Error

AO_SYNTAX_BAN

Syntax error:
No base attribute name specified.
The syntax error occured during the load of the information from the base element definition file and created the base element hierarchy.
The syntax error in line: %4

Event number	6002
Event synopsis	No base attribute name.
Event type	Error

AO_SYNTAX_BADT

Syntax error:
No base attribute data type specified.
The syntax error occured during the load of the information from the base element definition file and created the base element hierarchy.
The syntax error in line: %4

Event number	6003
Event synopsis	No base attribute data type.
Event type	Error

AO_SYNTAX_BASK

Syntax error:
The base attribute search key is unclear.

The syntax error occured during the load of the information from the base element definition file and created the base element hierarchy.
The syntax error in line: %4

Event number	6004
Event synopsis	Base attribute search key unclear.
Event type	Error

AO_SYNTAX_BRFN
Syntax error:
No base reference father name specified.
The syntax error occured during the load of the information from the base element definition file and created the base element hierarchy.
The syntax error in line: %4

Event number	6005
Event synopsis	No base reference father name specified.
Event type	Error

AO_SYNTAX_BRCN
Syntax error:
No base reference child name specified.
The syntax error occured during the load of the information from the base element definition file and created the base element hierarchy.
The syntax error in line: %4

Event number	6006
Event synopsis	No base reference child name specified.
Event type	Error

AO_SYNTAX_BRIN
Syntax error:
No base reference informational name specified.
The syntax error occured during the load of the information from the base element definition file and created the base element hierarchy.
The syntax error in line: %4

Event number	6007
Event synopsis	No base reference informational name specified.
Event type	Error

AO_ORPHAN_BASE_ELEMENTS
After creating the base model hierarchy there are elements left from the base model. When the model is correct and complete there should be no orphan elements left.
Number of elements left over: %4

Event number	6010
Event synopsis	Orphan base elements detected.
Event type	Warning

AO_NO_DRIVER_INFO
The driver information is not found. The driver information is required to connect.
The missing information: %4

Event number	7000
Event synopsis	No driver information is found.
Event type	Warning

AO_OPEN_ENV

The driver could not open environment on the server.

The name of the server: %4

Event number	7003
Event synopsis	Unable to open environment.
Event type	Warning

AO_ENV_NOT_OPEN

The environment is not open.

Event number	7004
Event synopsis	Environment is not open.
Event type	Warning

AO_NO_CARD

The element has no card.

Name of the card: %4

If you get here you probably have an error in <driver>_getApplElem. One of the application element cards has not been set. Go there and fix it.

Event number	7005
Event synopsis	No card in application element.
Event type	Warning

AO_CLOSE_ENV

The driver could not close the environment on the server.

The name of the server: %4

Event number	7006
Event synopsis	Error closing the environment.
Event type	Warning

WINNT_SERVICE_CONTROL

The following service control request from the service control manager is called.

%4

This messages is only on Windows NT.

Event number	7500
Event synopsis	Service control request.
Event type	Informational

WINNT_UNABLE_REGISTER

The service is unable to register in the Windows NT registry-database.

Name of the service: %4

This message is only available on Windows NT.

Event number	7501
Event synopsis	NT Service unable to register.
Event type	Error

WINNT_OPEN_SERVICECONTROLMANAGER

Cannot open the service control manager. The service control manager is needed for the request and start of services.

The Windows NT error is:

%4

This message is only available on Windows NT.

Event number	7502
Event synopsis	Cannot open NT service control manager.
Event type	Error

WINNT_OPEN_SERVICE

Cannot open the service. The service is a windows NT service. See at the <Settings>
<Control panel>=""> <Services> if the service is available.
%4
This message is only available on Windows NT.

Event number	7503
Event synopsis	Cannot open NT service.
Event type	Error

WINNT_START_SERVICE_ERROR

Unable to start the service. The service is a windows NT service. See at the <Settings>
<Control panel>=""> <Services> if the service is available.
%4
This message is only available on Windows NT.

Event number	7504
Event synopsis	Unable to start NT service.
Event type	Error

WINNT_START_SERVICE

The service has been started. The service is a Windows NT service.
Name of the service: %4
This message is only available on Windows NT.

Event number	7505
Event synopsis	Start of NT service.
Event type	Informational

WINNT_CONTROL_SERVICE_ERROR

Unable to control the service. The service is a windows NT service. See at the <Settings>
<Control panel>=""> <Services> if the service is available.
%4
This message is only available on Windows NT.

Event number	7506
Event synopsis	Unable to control NT service.
Event type	Error

WINNT_SERVICE_WRONG_STATE

The service has not the required state. The service is a Windows NT service. The expected
states are running, start pending or continue pending.
%4
Service State – for CurrentState
SERVICE_STOPPED 0x00000001
SERVICE_START_PENDING 0x00000002
SERVICE_STOP_PENDING 0x00000003
SERVICE_RUNNING 0x00000004
SERVICE_CONTINUE_PENDING 0x00000005
SERVICE_PAUSE_PENDING 0x00000006
SERVICE_PAUSED 0x00000007
This message is only available on Windows NT.

Event number	7507
Event synopsis	NT Service has wrong state.
Event type	Warning

WINNT_SERVICE_STATE
The state of the service is:
%4
This is an information message to check the state of the service.
This message is only available on Windows NT.

Event number	7508
Event synopsis	State of the service.
Event type	Informational

WINNT_SERVICE_STATE_ERROR
An error was detected during the report of the service state to the service control manager.
The error is: %4
This message does not have any influence on the functionality of the service. The service control manager is unable to get the state of the service and will cause an error.
This message is only available on Windows NT.

Event number	7509
Event synopsis	Error reporting state to NT service control manager.
Event type	Error

ATF_MISSING_QUOTE
Syntax error in ATF file.
The terminating quote of a %4 definition is missing.

Event number	8000
Event synopsis	Missing quote in ATF file.
Event type	Warning

ATF_TOKEN_TOO_LONG
Syntax error in ATF file.
The token Ď%4Ş is to long.

Event number	8001
Event synopsis	Token in ATF file to long.
Event type	Warning

ATF_NO_ATF_FILE
Syntax error in ATF file.
The initializer ĎATF_FILEŞ was not found in file: %4.

Event number	8002
Event synopsis	No initialize found in ATF file.
Event type	Warning

ATF_WRONG_ATF_VERSION
Syntax error in ATF file.
The version string %4 in file is invalid.

Event number	8003
Event synopsis	Wrong version is found in ATF file.
Event type	Warning

ATF_NO_TERMINATOR
Syntax error in ATF file.
Terminator not found in %4.

Event number	8004
Event synopsis	Terminator not found.
Event type	Warning

ATF_WRONG_TOKEN
Syntax error in ATF file.
Token not allowed in %4.

Event number	8005
Event synopsis	Token not allowed.
Event type	Warning

ATF_MISSING_IDENTIFIER
A missing identifier caused a problem when generating the ATF file. The missing name has been set to UNDEFINED in the output file. This may cause problems (name collisions) when interpreting the file. Detailled description:
%4

Event number	8006
Event synopsis	Missing identifier.
Event type	Warning

ATF_ALREADY_DEFINED
The identifier is alread defined. The first definition of the identifier is used.
The duplicate identifier is: %4

Event number	8007
Event synopsis	Identifier already defined.
Event type	Warning

ATF_SEEK_ERROR
The position in the file was not found.
Name of the file/URL is: %4

Event number	8008
Event synopsis	File seek error.
Event type	Error

XATF_ERROR_FOUND
The following error is found:
%4

Event number	8500
Event synopsis	An error is found in the ATF/XML file.
Event type	Error

XATF_ERROR_REPORT
The error is found at the following location:
%4
See also the error message XATF_ERROR_FOUND, for more details.

Event number	8501
Event synopsis	An error is found in the ATF/XML file.
Event type	Error

XATF_WARNING_FOUND
The following warning is found:
%4
See also the XATF_LOGFILE.

Event number	8502
Event synopsis	A warning is found in the ATF/XML file.
Event type	Warning

AO_NO_ENVNAME

The driver expects an environment name. There is no environment specified in the service. The service information is read from the INI-File.

Name of the service: %4

Event number	9000
Event synopsis	No environment name in service.
Event type	Warning

AO_NO_APPLELEMS_LOAD

The driver is not able to load the application model of the opened environment.

Name of the environment: %4

Event number	9002
Event synopsis	Unable to load application model.
Event type	Warning

AO_NO_APPLATTRS_LOAD

The driver is not able to load the application attributes of an application element.

Name of the application element: %4

Event number	9003
Event synopsis	Unable to load application attributes.
Event type	Warning

AO_WRONG_ARGUMENTS

At least one of the function arguments is not valid. Using these arguments will cause an invalid memory access. Please check the calling function.

Name of the called function: %4

Event number	9004
Event synopsis	Invalid function argument.
Event type	Error

AO_NO_INSTATTR_LOAD

The driver is not able to load the instance attributes of the following instance element.

Name of application element and ID of instance: %4

Event number	9005
Event synopsis	Unable to load instance attributes.
Event type	Warning

AO_NO_SUBMAT_LOAD

The driver was not able to load the submatrixes of the following instance element.

Name of application element and ID of instance: %4

Event number	9006
Event synopsis	Unable to load submatrixes.
Event type	Warning

AO_NO_LOCALCOLUMN_LOAD

The driver is not able to load the LocalColumn information of the following instance element and submatrix.

Name of application element, ID of instance and ID of submatrix: %4

Event number	9007
Event synopsis	Unable to load LocalColumns.
Event type	Warning

AO_NO_VALUES_LOAD

The driver is not able to load the values of a LocalColumn of the following instance element and submatrix.

Name of application element, ID of instance, ID of submatrix and name of LocalColumn: %4

Event number	9008
Event synopsis	Unable to load values of LocalColumns.
Event type	Warning

AO_UNKNOWN_SAVE_MODE

The save mode to put an object into the server is not supported by the driver.

Corrupt save mode: %4

Event number	9009
Event synopsis	Save mode not supported by driver.
Event type	Warning

AO_SQL_ERROR_STATE

An error occured within a SQL-ODBC command. The SQL state %4 has been reported.

For more detailled information see also the two other messages about the native error and the SQL error messages.

Event number	9050
Event synopsis	SQL-ODBC error detected - SQL-state.
Event type	Error

AO_SQL_NATIVE_ERROR

An error occured during a SQL-ODBC command. The following SQL-native error is reported: %4

For more detailled information see also the two other messages about the 'SQL-state' and the SQL error messages. More detailed information about the native error is given in the documentation of the database server.

Event number	9051
Event synopsis	SQL-ODBC error detected - SQL-native.
Event type	Error

AO_SQL_ERROR_MSG

An error occured during a SQL-ODBC command. The following error messages is reported.

Messages: %4

For more detail information see also the two other messages about the 'SQL-state' and the 'native error'.

Event number	9052
Event synopsis	SQL-ODBC error detected - SQL-message.
Event type	Error

AO_USE_DATABASE

An error occured during the command "use database". The database is not available or database engine is not able to select a special database. For example Oracle is not able to select a database. Correct or remove the entry DATABASE in the INI-File.

Name of the special database is: %4

For more detail information see also the three messages about the 'SQL-state' the 'native error' and the 'Error message'.

Event number	9053
Event synopsis	Use Database error.
Event type	Error

AO_ERROR_IN_SQL

Error in the SQl-Statement. See also the SQL-Error messages for further information.
The SQL-Statement is:
%4

Event number	9055
Event synopsis	Error in SQL-Statement.
Event type	Error

AO_SQL_INFORMATION

The following information was issued by the SQL database system:
%4

Event number	9056
Event synopsis	Information from SQL Subsystem.
Event type	Informational

AOD_UNABLE_PUT_APPLELEM

Unable to add the application element. The application element is already in the database.
The name of the application element, the name of the table or the ID are already used in the
database.
Name of the application element: %4

Event number	9060
Event synopsis	Unable to add application element.
Event type	Error

AOD_UNABLE_CREATE_TABLE

To store the application element in the database base a new table must be created. The
creation of the table failed. See the corresponding SQL Error messages to determine the
reason of the error.
The create string is: %4

Event number	9061
Event synopsis	Unable to create new database table.
Event type	Error

AOD_UNABLE_CHANGE_APPLELEM

Unable to change (DELETE or REPLACE) the application element. There are still instances
of the requested application element in the database. The delete and replace function on
an application element are only allowed when there are no more instances derived from the
application element. Please delete all the instances first and try again.
Name of the application element: %4

Event number	9062
Event synopsis	Unable to modify application element.
Event type	Error

AOD_NO_MEQ

There was no measurement quantity found in the application model. In the application model
no application element is derived from the base element measurement quantity. The driver
is unable to store the LocalColumn because the LocalColumn has a direct connection to an
instance of the application element of the type measurement quantity.

Event number	9063
Event synopsis	No measurement quantity found.
Event type	Error

AOD_UNABLE_TO_INSERT

An error occured during the insert of an instance element.

The instance was inserted with the following command:

%4

Event number	9064
Event synopsis	Unable to insert instance.
Event type	Error

AOD_NO_APPLELEM

There is no application element of the required type available in the environment. The driver needs this application element.

The required type is: %4

Event number	9065
Event synopsis	No application element of required type is found.
Event type	Error

AO_STMT_TO_LONG

The SQL-Statement is to long. The embedded SQL is built with fixed length of SQL-Statements. The fixed length is to small for the given statement.

The current length is: %4

Event number	9066
Event synopsis	SQL-Statement too long.
Event type	Error

AO_ORACLE_ERROR_STATEMENT

An error occured within an Oracle SQL.

The SQL statement was:

%4

For more detailled information see also the two other messages about the Oracle native error and the Oracle error messages.

Event number	9070
Event synopsis	An Oracle SQL-Error is detected-SQL Statement.
Event type	Error

AO_ORACLE_NATIVE_ERROR

An error occured during an Oracle SQL command. The following Oracle-native error is reported: %4

For more detailled information see also the two other messages about the 'SQL-statmente' and the SQL error messages. More detailed information about the native error is given in the documentation of the database server.

Event number	9071
Event synopsis	An Oracle SQL-Error detected - SQL-native.
Event type	Error

AO_ORACLEL_ERROR_MSG

An error occured during an Oracle SQL command. The following error messages is reported.

Messages: %4

For more detail information see also the two other messages about the 'SQL-state' and the 'native error'.

Event number	9072
Event synopsis	An Oracle SQL-Error detected - SQL-message.
Event type	Error

AO_NOT_ALL_INSTANCE_LOADED
The result of the query is large. There is a maximum number of result values defined. The query result is larger then this maximum.
The maximum is defined by the INI-File variable SQL_MAX_ROWS.
%4

Event number	9073
Event synopsis	Not all the instances are loaded.
Event type	Informational

AO_SUPERUSER_LOGIN
The superuser <%4> has logged into the server. The security checks are turned off for him.

Event number	9999
Event synopsis	Superuser is logged in.
Event type	Informational

AOC_WRITE_DENY
Write access denied. Another application has opened the environment for writing.
Name of the environment: %4

Event number	10000
Event synopsis	Write access denied.
Event type	Warning

AOC_UNKNOWN_MODE
The open mode is unknown.
Open mode: %4

Event number	10001
Event synopsis	Unknown open mode.
Event type	Warning

P3D_CANNOT_LOAD_VIEW
Cannot load the view class %4.

Event number	21000
Event synopsis	Cannot load view class.
Event type	Error

P3D_CANNOT_LOAD_MODEL
Cannot load the model class %4.

Event number	21001
Event synopsis	Cannot load model class.
Event type	Error

P3D_CANNOT_LOAD_CONTROL
Cannot load the control class %4.

Event number	21002
Event synopsis	Cannot load the control class.
Event type	Error

P3D_CANNOT_UPDATE_VIEW
Cannot load and update the view class. For details see an error message before.

Event number	21003
Event synopsis	Cannot update view.
Event type	Error

P3D_CANNOT_UPDATE_MODEL
Cannot load and update the model class. For details see an error message before.

Event number	21004
Event synopsis	Cannot update model.
Event type	Error

P3D_CANNOT_UPDATE_CONTROL
Cannot load and update the control class. For details see an error message before.

Event number	21005
Event synopsis	Cannot update control.
Event type	Error

P3D_COMPONENT_IS_NOT_REGISTERED
The component is already unregistered.

Event number	21006
Event synopsis	Component not registered.
Event type	Warning

P3D_NO_PARENT_NODE
Capability not set for the %4 property.

Event number	21050
Event synopsis	Capability not set.
Event type	Warning

P3D_ILLEGAL_SHARING
Illegal sharing exception occured.

Event number	21051
Event synopsis	Illegal sharing.
Event type	Warning

P3D_CAPABILITY_NOT_SET
Capability for the property %4 not set.

Event number	21100
Event synopsis	Capability not set.
Event type	Warning

P3D_COMPONENT_ARRAY_INDEX_OUT_OF_BOUNDS
The array index is out of bounds for the array access of the component container.

Event number	21150
Event synopsis	Component array index out of bounds.
Event type	Warning

P3D_WRONG_AXIS_TYPE_VALUE
There is no axis that matches the axis value %4. Use the predefined constants of the class P3DAxisType.

Event number	21200
Event synopsis	Wrong axis type.
Event type	Warning

P3D_CANNOT_SET_AXIS_DEFAULTS
  It is not possible to set the axis defaults. For details see an error message before.

Event number	21201
Event synopsis	Cannot set axis defaults.
Event type	Warning

P3D_CANNOT_SET_CHANNEL_DEFAULTS
  It is not possible to set the channel defaults. For details see an error message before.

Event number	21202
Event synopsis	Cannot set channel defaults.
Event type	Warning

P3D_CANNOT_SET_TEXT_DEFAULTS
  It is not possible to set the text defaults. For details see an error message before.

Event number	21203
Event synopsis	Cannot set text defaults.
Event type	Warning

P3D_CANNOT_SET_LINE_DEFAULTS
  It is not possible to set the line defaults. For details see an error message before.

Event number	21204
Event synopsis	Cannot set line defaults.
Event type	Warning

P3D_CANNOT_SET_PLOT_DEFAULTS
  It isn't possible to set the plot defaults. For details see an error message before.

Event number	21205
Event synopsis	Cannot set plot defaults.
Event type	Warning

P3D_INVALID_CHANNEL_NAME
  The specified channel name is invalid.

Event number	21300
Event synopsis	Invalid channel name.
Event type	Warning

P3D_CANNOT_CAST_TO_AXIS
  Unable to cast given object to axis.

Event number	21400
Event synopsis	Cannot cast to axis .
Event type	Warning

P3D_CANNOT_CAST_TO_CHANNEL
  Unable to cast given object to channel.

Event number	21401
Event synopsis	Cannot cast to channel.
Event type	Warning

FWK_CLASS_INSTANTIATION_SUCCESSFUL
  Class successfully instantiated:
  %4

Event number	22001
Event synopsis	Class successfully instantiated.
Event type	Informational

FWK_SERVICE_CONTROL_MANAGER_START_SUCCESSFUL
Service Control Manager start successful:
%4

Event number	22002
Event synopsis	Service Control Manager start successful.
Event type	Informational

FWK_ASAM_ODS_SERVICE_CREATION_SUCCESSFUL
AoService successfully created with the following
plugable component, service options:
%4

Event number	22003
Event synopsis	AoService successfully created.
Event type	Informational

FWK_ASAM_ODS_FACTORY_CREATION_SUCCESSFUL
AoFactory successfully created with the following
service name and service options:
%4

Event number	22004
Event synopsis	AoFactory successfully created.
Event type	Informational

FWK_ORB_CREATION_SUCCESSFUL
Object Request Broker successfully created with the following options:
%4

Event number	22005
Event synopsis	Object Request Broker successfully created.
Event type	Informational

FWK_NAME_SERVICE_CREATION_SUCCESSFUL
Name Service successfully created with the following command:
%4

Event number	22006
Event synopsis	Name Service successfully created.
Event type	Informational

FWK_NAME_SERVICE_FOUND
Name Service successfully located:
%4

Event number	22007
Event synopsis	Name Service found.
Event type	Informational

FWK_BIND_TO_NAME_SERVICE_SUCCESSFUL
Bind to Name Service successful. ORB is running.
Name Service: %4

Event number	22008
Event synopsis	Bind to Name Service successful. ORB is running.
Event type	Informational

FWK_NAME_SERVER_UP
Avalon name server successfully started.
See previous event for details.

Event number	22009
Event synopsis	Avalon name server successfully started.
Event type	Informational

FWK_NO_ROOT_NAMING_CONTEXT
Cannot resolve initial references: %4

Event number	22010
Event synopsis	No Root Naming Context.
Event type	Error

FWK_NO_NAMING_CONTEXT
No Naming Context: %4

Event number	22011
Event synopsis	No Naming Context.
Event type	Error

FWK_SERVICE_STATE_REPORT
Service state report:
%4

Event number	22050
Event synopsis	Service state report.
Event type	Informational

FWK_CLASS_INSTANTIATION_FAILED
Class Instantiation failed:
%4
The following reasons may cause this error:
1. The classpath definition is not complete.
2. The specified class does not exist.
3. There may be an error in the constructor of the class.

Event number	22101
Event synopsis	Class instantiation failed.
Event type	Warning

FWK_CLASS_NOT_FOUND
The class file was not found. The Java classpath may
be incomplete or there may be a typing error in the
class name. Please check the attribute "Parameter"
in the following exception if the class name is the
one you really want. Example of a typical class
name: com.highqsoft.myappl.MyClass
%4

Event number	22102
Event synopsis	Class file not found.
Event type	Warning

FWK_CONSTRUCTOR_NOT_FOUND
The requested constructor was not defined in the class.

Event number	22103
Event synopsis	Constructor not found.
Event type	Warning

FWK_DOCUMENT_NODE_UNKNOWN
The document node is not available.

Event number	22104
Event synopsis	Document node unkown.
Event type	Warning

FWK_INPUT_FAILED
Input file not available or read error:
%4

Event number	22105
Event synopsis	Input failed.
Event type	Warning

FWK_METHOD_INVOCATION_FAILED
The method produced an error.

Event number	22106
Event synopsis	Method invocation failed.
Event type	Warning

FWK_METHOD_NOT_FOUND
The requested method is not available with the requested parameter(s).

Event number	22107
Event synopsis	Method not found.
Event type	Warning

FWK_OUTPUT_FAILED
Output file could not be opened or a write error occurred.

Event number	22108
Event synopsis	Output failed.
Event type	Warning

FWK_XML_PARSER_PROBLEM
See detailed exception message.

Event number	22109
Event synopsis	XML parser error message.
Event type	Warning

FWK_UNKNOWN_HOST
The requested (local) host name is unknown.

Event number	22110
Event synopsis	Hostname unknown.
Event type	Warning

FWK_UNABLE_TO_JOIN_INFOBUS
The infobus could not be joined.

Event number	22111
Event synopsis	Unable to become an infobus member.
Event type	Warning

FWK_WRONG_LISTENER_CONTROLLER_TYPE
The specified listener controller has the wrong type.

Event number	22112
Event synopsis	Wrong listener controller type specified.
Event type	Warning

FWK_CANNOT_CREATE_DATAFLAVOR

Cannot create the requested data flavor.

Event number	22113
Event synopsis	Cannot create DataFlavor.
Event type	Warning

FWK_ARRAY_INDEX_OUT_OF_BOUNDS

The array index is out of bounds for the array access.

Event number	22114
Event synopsis	Array index out of bounds.
Event type	Warning

FWK_HELPSET_NOT_FOUND

The HelpSet is not found.

Event number	22115
Event synopsis	HelpSet not found.
Event type	Warning

FWK_PROPERTY_VETO

Veto on property change for propertyname <%4>

Event number	22116
Event synopsis	Veto on property change.
Event type	Warning

FWK_IS_ETERNAL_AND_ALREADY_REGISTERED

An eternal application has tried to instanciate twice.

Event number	22117
Event synopsis	Application is eternal and already registered.
Event type	Warning

FWK_CANNOT_START_FRAME

An eternal application has tried to start a framethread.

Event number	22118
Event synopsis	Frame not started.
Event type	Warning

FWK_WRONG_STRING_FORMAT

ANSI - C format string expected.%nWrong format string: <%4>.

Event number	22119
Event synopsis	Wrong format string.
Event type	Warning

FWK_PROPERTY_CAST_FAILED

Property value could not be casted to requested datatype. <%4>

Event number	22120
Event synopsis	Property cast failed.
Event type	Warning

FWK_NO_AUTOSTART

Autostart was suppressed by the property
noautostart = %4

Event number	22121
Event synopsis	Autostart suppressed.
Event type	Warning

FWK_LOAD_LIBRARY_NOT_FOUND

Native load library not found. Please make
sure that the requested library can be found
in one of the directories pointed to by the
path variable of your operation system.
Further information about the native library:
%4

Event number	22501
Event synopsis	Native load library not found.
Event type	Error

FWK_SERVICE_CONTROL_MANAGER_START_FAILED

Service Control Manager start failed:
%4

Event number	22502
Event synopsis	Service Control Manager start failed.
Event type	Error

FWK_UNABLE_START_VM

The software was not able to start the java virtiual machine. Please check the class path.

Event number	22503
Event synopsis	Unable to start the virtual machine.
Event type	Error

FWK_ASAM_ODS_SERVICE_CREATION_FAILED

AoService creation failed with the following
plugable component, service factory options:
%4
Service factory options are implementation
dependent options which are used by the
specified plugable component. For the
plugable component com.highqsoft.ods.athos
the supported option is for example:
INIFILE=ATHOS_INI (the Athos default).

Event number	22504
Event synopsis	AoService creation failed.
Event type	Error

FWK_ASAM_ODS_FACTORY_CREATION_FAILED

AoFactory creation failed with the following
service name and service options:
%4

Event number	22505
Event synopsis	AoFactory creation failed.
Event type	Error

FWK_ORB_CREATION_FAILED

Object Request Broker creation failed with the following options:

%4

Event number	22506
Event synopsis	Object Request Broker creation failed.
Event type	Error

FWK_NAME_SERVICE_CREATION_FAILED

Name Service creation failed with the following command:

%4

Event number	22507
Event synopsis	Name Service creation failed.
Event type	Error

FWK_NAME_SERVICE_NOT_FOUND

Name Service not found:

%4

Event number	22508
Event synopsis	Name Service not found.
Event type	Error

FWK_BIND_TO_NAME_SERVICE_FAILED

Binding AoFactory to the following
Corba Name Service failed:

%4

Event number	22509
Event synopsis	Binding AoFactory to Corba Name Service failed.
Event type	Error

FWK_PORT_ADDRESS_IN_USE

The port address is already in use:

%4

Event number	22510
Event synopsis	The requested port address is already in use.
Event type	Error

INFOBUS_REJECTED_JOIN

The attempt to join the infobus was rejected.

Event number	23000
Event synopsis	Rejected infobus join.
Event type	Warning

INFOBUS_INVALID_NAME

The specified infobus name is invalid.

Event number	23001
Event synopsis	Invalid infobus name.
Event type	Warning

INFOBUS_MISSING_SEPARATOR_IN_NAME

The specification of the infobus name must contain @.

Event number	23002
Event synopsis	Missing @ in name.
Event type	Warning

INFOBUS_UNABLE_TO_LEAVE
The consumer is unable to leave the infobus.

Event number	23003
Event synopsis	Unable to leave infobus.
Event type	Warning

INFOBUS_UNABLE_TO_CREATE_DATAFLAVOR
Unable to create the requested dataflavor.

Event number	23004
Event synopsis	Unable to create data flavor.
Event type	Warning

PUMA_INVALID_HOSTNAME
The hostname is null or not set.
The given hostname is: %4

Event number	30000
Event synopsis	Invalid hostname.
Event type	Error

PUMA_INVALID_PORT
The port is null or not set.
The given port is: %4

Event number	30001
Event synopsis	Invalid port.
Event type	Error

PUMA_NO_SESSION_FOUND
No session to the PUMA engine found.

Event number	30002
Event synopsis	No session to PUMA engine.
Event type	Error

PUMA_WRONG_MSG_TYPE
The message type is wrong or out of range.
The given type is: %4

Event number	30003
Event synopsis	Wrong message type.
Event type	Warning

PUMA_WRONG_STATUS
The status is wrong or out of range.
The given status is: %4

Event number	30004
Event synopsis	Wrong status.
Event type	Warning

PUMA_WRONG_ERROR
The error is wrong or out of range.
The given error is: %4

Event number	30005
Event synopsis	Wrong error level.
Event type	Warning

PUMA_WRONG_SEVERITY
The severity is wrong or out of range.
The given severity is: %4

Event number	30006
Event synopsis	Wrong severity level.
Event type	Warning

PUMA_WRONG_DESTINATIONBITS
The destinationbits are wrong or out of range.
The given destinationbits are: %4

Event number	30007
Event synopsis	Wrong destination bits.
Event type	Warning

PUMA_ENGINE_FAILURE
The communication between the PUMA engine and the client are wrong.

Event number	30008
Event synopsis	The PUMA engine has a problem.
Event type	Warning

CONVERTER_UNABLE_OPEN_FILE
Unable to open file.

Event number	31000
Event synopsis	Unable to open file.
Event type	Error

EXTERNAL_ERROR
%4

Event number	65535
Event synopsis	External error.
Event type	Error

EXTERNAL_INFO
%4

Event number	65535
Event synopsis	External information.
Event type	Informational

EXTERNAL_WARNING
%4

Event number	65535
Event synopsis	External warning.
Event type	Warning

Chapter 12

Glossary

- **Athos:** **A**SAM **T**ransient **H**ighperformance **O**bject **St**orage

- **ASAM:** **A**ssociation for **S**tandardisation of **A**utomation- and **M**easuring Systems

- **kernel:** The Athos Runtime System

- **URL:** **U**niform **R**esource **L**ocator - eindeutige Adresse einer Ressource, vor allem im Internet, z.B. einer Webseite, einer im Internet veröffentlichten pdf-Datei

- **HTML:** **H**yper**T**ext **M**arkup **L**anguage

- **ODS:** **O**pen **D**ata **S**ervice

- **ANSI:** **A**merican **N**ational **S**tandards **I**nstitute

- **ANSI-C:** Standard **C** that runs on most operating systems; For example ANSI C will run on multiple operating systems, including: Windows, Macintosh, UNIX, IBM Mainframes.

- **HighQSoft GmbH:** Mr. Hans Bothe, Schlossborner Weg 6b, D-61479 Glashuetten/Taunus FON: +49(0)6174-62915 FAX: +49(0)6174-62935 www.highqsoft.de

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- **AVALON:**

- **Java:**

- **ASCOBA:**

- **ODS-API:**

- **Athos Toolkit:**

- **Win32:**

- **UNIX:**

- **ATF:** **A**SAM **T**ransport **F**ormat

- **AVL3:**

- **atf13:**

- **Oracle:**

- **ODBC**

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- **AVL3** Asam Version Level 3, the ASAM ODS RPC Interface.

Chapter 13

Modification Histroy

The modification history is only for the explicit textual changes. If a configuration variable or error description is added or changed, there will be no remark in this chapter. The entries in the list are sorted by theme and not by date.

2004/02/18
 Add the modification history

2004/07/05
 Textual revision, correcting of the english language.

2005/11/21
 Add **Datatype of Id's in Athos Runtime System.**(p. 15)

2006/03/14
 Add AthosConfig. Add **LogViewer**(p. 24) Add **Configuration of the Athos Runtime System on Linux**(p. 8)

2007/02/01
 Add **Control the size of the files.**(p. 20)

2007/04/03
 Add setting for compiling with Microsoft Visual Studio 2005

2008/04/10
 Extend **Logging**(p. 21)

2004/11/01
 Section 'Write with the Translator AVL3' added.

2005/1/31
 Configuration with old PUMA securtiy(p. 10) added.

2007/03/16
 Section **Configuration Translator AVL3**(p. 8) extended with information of the security configuration.

2008/ß1/15
 Add **Configuration with Santorin.**(p. 10)

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