
HighQSoft



Technical Reference Sheet

Version 1.16

Translator MME1

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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.

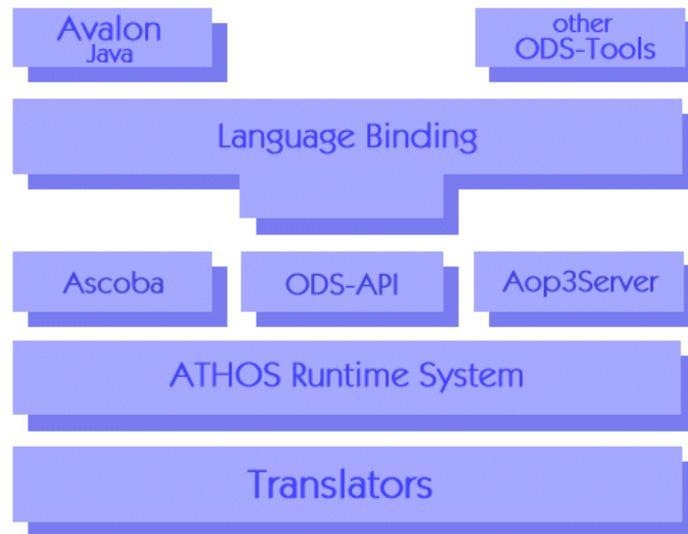


Figure 1.1: The Athos Runtime System

1.2 Introduction Translator MME1

The Athos Toolkit design pattern follows a driver concept to access different data sources like relational databases, ASAM Transport Format 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.

This translator support the ASAM ODS mixed mode physical storage, with relational base descriptive data and file oriented mass store data. The database must be Oracle, the access to the database is done by Oracle Embedded SQL

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 MME1

In addition to the Athos Runtime System an Oracle client or Oracle Database system of the proper version for the actual operating system are required. The disk space and volatile memory requirements of this translator do not add a significant amount to the Athos Runtime System (appr. 600 kByte).



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\\CurrentControlSet\\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 MME1

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.

Concerning the installation of the oracle database client on the operating system of your choice please refer to the documentation of your database vendor or ask your database administrator. Oracle SQL*Net client is required and the TNS for the database server must be installed correctly.

The MME* translator depends strongly from the Oracle client version. For the moment there are one version of the MME translator available.

Name of translator	Oracle client version	Oracle server version
MME1	8.1.6	8.1.7
MME92	9.2.	
MME102	10.2.	

The combination of these versions are tested, if there are other combination working please let us known. The combination of the wrong client/server version can produce unpredictable results. Most time the reported errors have no relation to the problem of version conflict.

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. 37).

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. 37).

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 reorganize the INI-File.

4.2 Configuration of the Athos Runtime System on Linux

The Athos Runtime System switch automatically into multithreaded 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 `NOSECURITYACTIVE = YES` will not change and the security will be activated by comment out of the variable `IGNORE_SECURITY`.

4.4 Configuration Translator MME1

This translator is highly configurable and adaptable to a multitude of different requirements. The 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 configuration variables of the MME-Translator are given in **Translator MME1 Configuration variables**(p. 44).

4.5 The convertfile in Translator MME1

The Translator MME1 supports converting none ASAM ODS definitions into ASAM ODS definitions. The conversion is only used at the reading of the application model from the `SVCENT` and `SVCATTR` database tables.

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
```

4.6 Directory handling for the external component files of the translator MME1.

The translator stores on request the values and flags of the localcolumn into files. The location of the files can be controlled by the INI-File configuration variables BIN_PATH and BIN_SUBDIR. The variable BIN_PATH defines the fix part of the directory structure, the variable BIN_SUBDIR defines a variable subdirectory of the fix part of the directory structure defined by BIN_PATH. The fix part of the directory structure must be available and will not be created by the translator, the variable subdirectory will be created when required.

On Window systems a drive is specified in the filename, this drive specification is also stored in the attribute filename_url of the instance of the external component. The translator will substitute the drive when configuration variable DRIVE is defined. The configuration variable DRIVE is only used for reading the file. The variable DRIVE can also specify another drive with subdirectory.

Note:

As soon as the configuration variable DRIVE is specified the drive of all files will be substituted. The drive of the file ends with the last column (:) of the filename.

More details about the configuration variables are given in **Translator MME1 Configuration variables**(p. 44).

Note:

For the filename (URL-location) specified in the external_references are not handle by the translator or the ASAM ODS Server software and the client is responsible for the directory structure of these files.

4.6.1 Directory handling for the external component files of the translator MME1 according the ASAM ODS specification 5.2.

Since the ASAM ODS version 5.2 the way to store the filenames in the server is more sophisticated, until this version only a URL was defined, however some implementations needed relative paths and from the customer the request came up to use UNC-paths or symbols in the filename_url. We have implemented the ASAM ODS specified way in the version atohos 3.6 and later. The server will still use the variable BIN_SUBDIR to define the subdirectory where to store the files with the values. How the filename_url is stored in the storage depends on the settings following variables.

FILE_NOTATION : { UNC_WIN | UNC_UNIX | URL }

defines in which notation the file locations are stored, shortly it's an issue of / vs. \. The goal is that a client should not generally need to scan the file location string due to performance reasons. Thus a context variable is introduced that may be read by a client. From this information a client can decide whether it must replace delimiters or may use the strings as provided by the ODS server.

- 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.

FILE_MODE : { ABSOLUTE | SINGLE_VOLUME | 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 prefix with the stored file location information. The file prefix information is not stored in the database. For BaseAttributes of AoExternalComponents 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).

Symbol Name

The server provides a comma separated list of defined symbol names with the context variable FILE_SYMBOLS. For each symbol name a context variable exists, which defines the prefix of the file location. For the SINGLE_VOLUME mode there are two predefined symbol names: FILE_ROOT and FILE_ROOT_EXT.

FILE_SYMBOLS

returns a list of comma-separated symbol names. The symbol names must be maintained 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. In case of SINGLE_VOLUME, there are two symbols predefined: FILE_ROOT and FILE_ROOT_EXT.



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 (e.g. "d:\\data\\measurementData"). In multi volume mode this contains only the default symbol name for external components (e.g. "Disk_1"). The path prefix will be available as value of the context variable whose name is given by the symbol name (e.g. Disk_1="d:\\data\\measurementData").

FILE_ROOT_EXTREF

define the root path for external references location attribute. 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 (e.g. "d:\\data\\externalreferences"). In multi volume mode this contains only the default symbol name for external references (e.g. "Disk_1"). The path prefix will be available as value of the context variable whose name is given by the symbol name (e.g. Disk_1="d:\\data\\externalreferences").

Here an overview, which context variables are available, on which mode:

	ABSOLUTE	SINGLE_VOLUME	MULTI_VOLUME
FILE_MODE	X	X	X
FILE_NOTATION	X	X	X
FILE_SYMBOLS	-	X	X
FILE_ROOT	-	X	X
FILE_ROOT_- EXTREF	-	X	X

Symbol names: may not contain blanks and consist of alphanumeric character plus underscore. Each symbol name is a (dynamic) context variable itself and may be accessed (to get its value). Symbol names may only be used to replace the initial part of a path specification, not a part within or at the end.

Note:

Don't change the settings of these variables during lifetime of the server, the server will not be able to find the files after changing the settings.

More details about the configuration variables are given in **Translator MME1 Configuration variables**(p. 44).

4.7 Memory usage of the translator MME1

The translator uses memory mapped files for the read access to the files of the external components for performance reasons. Normally the complete file is mapped into memory and the translator have direct access to the data. When the file is to large for the memory an error message A0_UNABLE_OPEN_FILE is reported and the slower way to load the data from the file is used. Only two files are mapped to the translator at the same time.

There are two way to provide the translator to report the error message.

1. Increase the paging file of the system to the maximum size of two data files.
2. Set a maximum for the part of the file to map with the configuration variable MAX_MAP_VIEW_SIZE more details about the configuration variables are given in **Translator MME1 Configuration variables**(p. 44).

Windows NT/2000

If the file-mapping object is backed by the paging file (hFile is INVALID_HANDLE_VALUE), the paging file must be large enough to hold the entire mapping. If it is not, MapViewOfFile fails.

See also:

Error reporting and logging Translator MME1(p. 34)

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 dependencies.
[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 Transport 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.

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`. Nothing 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_GetIdLow` 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 MME1

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 = mme1
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.

The Oracle client and a TNS-Entry must be available. You can use the Oracle tool `tnsping` to check the TNS-Entry. If there are problems with the TNS-Entry please contact your Oracle System support.

6.4 Usage tool MME1Tool

Using the translator `mme1` can lead to files which are not used anymore by the storage. Normally the files will be deleted as soon as the the last external component using the file ist deleted from the database. For any reason the database entries are deleted but the files are still there, or the delete of the files didn't work, there will be a discspace used which is not any longer required.

The tool `CheckExternalDirectory` in the `MMETool.jar` can helps you to cleanup the files. The Delete commands of the files will be given to the standard output, the commands can be copied into an batch-file and executed by the user after a manual check that no other files are listed.

You can start the tool with the following command

```
%JDK_HOME%\bin\java -jar jar\MMETool.jar
```

The following properties are used by the tool, for the detail and complete documentation of the properties see the property table.

Property Keyword	Datatype	Default	Description
ServiceName	String	"ZEUS/DB.ASAM-ODS".	The service to be used tool. <i>This value is an application property.</i>
WorkingDirectory	string	"BIN_PATH"	The working directory to check the files. The default will be loaded from the context variable BIN_PATH defined in the service. <i>This value is an application property.</i>
UserAuthentication	string	""	The user authentication. <i>This value is an application property.</i>
PlugableComponent	string	"CORBA"	The plugable component, this can be CORBA or ATHOS <i>This value is an application property.</i>
recursive	boolean	"false"	The recursive throu the directories. <i>This value is an application property.</i>

6.5 Usage tool UpdateStorage

Warning:

Before you run this tool, a backup of the database must be done. This tool will change the database and database structure, so after this tool has run the database may be destroyed. It is your risk when you run this tool.

The tool `UpdateStorage` is able to update an ASAM ODS physical storage to the newest version of ASAM ODS. The ASAM ODS physical storage is backwards compatible, so an update will cause no problems with previous versions.

The tool `UpdateStorage` will write the error- and log-messages in the Athos Runtime System error messages system see also **Error reporting Athos Runtime System**(p. 29). The logmessages are written in the file `updatestorage.log` in the current directory. The tool reads the base model from the basemodel url in the athos ini-file, therefor the environment variable `ATHOS_INI` must be set. The tool must be able to load the Athos Runtime System dynamic library (`athos.dll` or `athos.so`), extend the path with the athos binary directory. The tool `UpdateStorage` works with an Oracle SQL-Net client for the connection to the database. The tool is a program needs also an Oracle client installation to run.

The tool is named by the Oracleversion it is built for:

- Oracle 8.x -> UpdateStorage.exe



- Oracle 9.2 -> UpdateStorage-9_2.exe
- Oracle 10.2 -> UpdateStorage-10_2.exe

You can start the tool with the following command

```
UpdateStorage<Oracle_version> DB_USER DB_PASSWORD DB_NAME keyword [options]
```

DB_USER

The username of the database.

DB_PASSWORD

The password of the database user.

DB_NAME

The name of the database.

keyword

One of the following keywords.

- **SVCENT**, update the table SVCENT, the missing new columns are added. If an optional filename is given, the base elements Ids according the given convert file are updated.
- **SVCATTR**, update the SVCATTR and SVCREF tables, the missing columns are added. If an optional filename is given the base attributes are updated according the given convert file.
- **TABLES**, the default tables and elements for AoSubMatrix and AoLocalColumn are created, if they don't exist in the database. There are no options.
- **SVCVAL**, will update the tables for AoSubmatrix and AoLocalColumn, from the information of the svcval. There are no options.
- **INVNAME**, will create the attributes with the inverse name. The optional filename will be used as the environment variable for the INI-File of as the INI-File. If no option is given the environment variable ATHOS_INI is used.
- **SEQUENCE**, will create the Id sequence for the application elements.
- **INDEX**, creates for each 1 to N relation an index on the column with the foreign key.
- **EXTCOMP**, the default table and element for AoExternalComponent are created, if they don't exist in the database. When the table already exist the base attributes are updated to the ASAM ODS base model 29. There are no options.
- **DT_LONGLONG**, convert the datatype of the Id and reference attributes from DT_LONG to DT_LONGLONG.
- **ENUM**, will modify the datatype of the attribute from DT_LONG to DT_ENUM for the attributes derived from a base attribute which has the datatype DT_ENUM in the base model. The optional filename will be used as the environment variable for the INI-File of as the INI-File. If no option is given the environment variable ATHOS_INI is used. The basemodel given in the INI- File is used.

[options]

Optional arguments depending on the keyword.

The normal order of the usage of the keyword to update the physical storage is SVCENT, SVCATTR, SEQUENCE, TABLES, SVCVAL, INVNAME, EXTCOMP, DT_LONGLONG and ENUM. More details about the what is done with the keyword is given below:

SVCENT

Create the column SECURITY at the table SVCENT when the column not exist.

If a convert file is given as an option, the base element id, column BID of the table SVCENT, will be update according the BaseElement section of the convert file.

Caution, due to the repeating of the update of the base element Id's, it can happen that an base element Id is updated more than one time, which results in a wrong base element Id of an application element.

Update the base element Id of the top level AoSubTest, if there is no base element AoTest. The AoSubTest which has no reference to any other AoSubTest will be updated to be an AoTest. If no unique AoSubTest is found to be updated, a warning is given and no base element Id is changed from AoSubTest to AoTest.

The database user needs the rights to alter the tables.

SVCATTR

Create the column INVNAME at the table SVCATTR when the column not exist. Create the column ACLREF at the table SVCATTR when the column not exist. Create the column FLAG at the table SVCATTR when the column not exist. Create the column ENUMNAME at the table SVCATTR when the column not exist. The new created columns are not filled with any information. Create the column INVNAME at the table SVCREF when the column not exist. Create the column BANAME at the table SVCREF when the column not exist. Create the column INVBANAME at the table SVCREF when the column not exist. The new created columns are not filled with any information.

If a convert file is given as an option, the base attribute names, column BANAME of the table SVCATTR, will be update according the BaseAttribute section of the convert file.

The database user needs the rights to alter the tables.

TABLES

The table and element for AoSubmatrix and AoLocalcolumn will be created, when the tables do not exist. The tables SVCENT and SVCATTR are updated conform the created tables. A database constraint will be created for the reference between the tables.

Table with the name SUBMATRIX:

Columnname	Datatype	length	Remark
ID	INTEGER		unique, not NULL
NAME	VARCHAR	254	unique, not NULL
NOROWS	INTEGER		NULL
MEASUREMENT	INTEGER		not NULL
ATTRIBUTE- FLAGS	VARCHAR	255	NULL

A constraint on the column MEASUREMENT to the Id of the table of AoMeasurement will be created. If the foreign-key constraint can not be created a warning is given with the SQL-statement but the process will continue. It is up to the user to correct the statement for the constraint, the server can run also without this constraint. The oracle sequence SUBMATRIXID_SEQ is created.

Table with the name LOCALCOLUMN:

Columnname	Datatype	length	Remark
ID	INTEGER		unique, not NULL
NAME	VARCHAR	254	unique, not NULL
SUBMATRIX	INTEGER		not NULL
MEASUREMENTQUANTITY	INTEGER		not NULL
INDEPFLAG	SMALLINT		NULL
SEQREP	INTEGER		NULL
RAWDATATYPE	INTEGER		NULL
ATTRIBUTE-FLAGS	VARCHAR	255	NULL

A constraint on the column SUBMATRIX to the Id of the table of AoSubmatrix will be created. A constraint on the column MEASUREMENTQUANTITY to the Id of the table of AoMeasurementQuantity will be created. If the foreign-key constrain can not be created a warning is given with the SQL-statement but the process will continue. It is up to the user to correct the statement for the constraint, the server can run also without this constraint. The oracle sequence LOCALCOLUMNID_SEQ is created.

The database user needs the rights to create and alter the tables and create of sequence.

SVCVAL

The instances of AoSubMatrix are created depending on the column PMATNUM from the table SVCVAL. For each distinct number of the submatrix an instance will be created., The Id of the new instance comes from the sequence for the submatrix as defined in the ASAM ODS physical storage. The name of the instance of AoSubmatrix is PMATNUM converted to a string. The number of rows comes from the sum of the column VALBLOBLEN from the table SVCVAL. The column PMATNUM from the table SVCVAL is afterwards updated to the Id of the new created instance.

The instances of AoLocalColumn are created depending of the column MEQID of the table SVCVAL. For each distinct MEQID an instance will be created. The Id of the localcolumn is the nextval of the sequence. The name of the localcolumn is the name of the AoMeasurementQuantity. The sequence_representation is the VALEXIMP from the SVCVAL. The independent flag is the VALINDEP from the SVCVAL. The global_flag is set when there are no flags in the first VALBLOB of table SVCVAL. The submatrix reference is the id of the new created submatrix. The measurement_quantity reference is the id of the AoMeasurementQuantity.

Each measurement is committed to the physical storage, so when an error occurs the previous measurements are stored correctly, correct the erroneous measurement and start the tool again.

This keyword expects the data storage is conform the ASAM ODS Physical storage. There is no special rights required of the oracle user. The tool handles circa 150 measurements per minute, depending on the computer.

INVNAME

Will create the attributes with the inverse name. All the reference attributes which have no inverse reference name will get an inverse reference attribute, with a name as the attribute name and the prefix INV_. If there reference is a base reference the inverse base reference is

also written at the physical storage. The optional filename will be used as the environment variable for the INI-File of as the INI-File. If no option is given the environment variable `ATHOS_INI` is used. The basemodel given in the INI-File will be used to find the inverse base reference.

SEQUENCE

Will create the Id sequences for the application elements. The ASAM ODS physical storage defined for each application element a sequence with the name of the table and a postfix of `ID_SEQ`. The tablenames of the column `DBTNAME` of the table `SVCENT` are read the program checka if the oracle Id sequence exist, otherwise the Id sequence will be created with the correct name and the start value will be the next value of the Id. When the Id sequence already exist the next values of the sequence is checked that this value is higher al the maximum of the Id.

When the tablename is to large, the name of the sequence will exceed the oracle limitation of 30 characters for objectnames, an oracle error will be produced and the program will stop. It is up to the administrator to reduce the name of the table in the database, in `SVCENT` and start the program again.

DT_LONGLONG

The Id and reference attributes are at the ODS 3.2 storage with the datatype `DT_LONG`. ASAM ODS 5.0 and higher can handle Id with the datatype `DT_LONGLONG`, this is a bigger range and the Id of the instance will not overflow. In the table `SVCATTR` the column `ADTYPE` is modified. The datatype of the Id and reference attributes are changed to `DT_LONGLONG` and the datatype of the inverse (forwards) references are chanded from `DS_LONG` to `DS_LONGLONG`. When the datatype is modified, the older software will have problems because they expect for the Id and reference attributes the datatype `DT_LONG`.

ENUM

The table `SVCENUM` is created as defined in the ASAM ODS physical storage, when the table does not exist. The datatype of all base attributes of all base elements of the basemodel given in the INI-File, is check for the datatype `DT_ENUM`. If the datatype is found, when there are application elements of the corresponding base element, the table `SVCENUM` is check if the enumeration definition is already given. The table is updated if required and the columns `ADTYPE` and `ENUMNAME` of the table `SVCATTR` is updated accordingly. The optional filename will be used as the environment variable for the INI-File of as the INI-File. If no option is given the environment variable `ATHOS_INI` is used. The basemodel given in the INI-File is used. If there are no base attributes with the datatype `DT_ENUM` only the table `SVCENUM` is created.

EXTCOMP

The table and element for `AoExternalComponent` will be created, when the tables do not exist. The tables `SVCENT` and `SVCATTR` are updated conform the created tables. A database constraint will be created for the reference between the tables.

Table with the name `EXTCOMP`:



Columnname	Datatype	length	Remark
ID	INTEGER		unique, not NULL
NAME	VARCHAR	254	unique, not NULL
LOCALCOLUMN	INTEGER		not NULL
ORDNUM	INTEGER		
URL	VARCHAR	512	
LEN	INTEGER		
OFFSET	INTEGER		
VALPERBLOCK	INTEGER		
VALOFFSET	INTEGER		
LEN	INTEGER		
FLAG_URL	VARCHAR	512	
FLAGOFFSET	INTEGER		
ATTRIBUTE- FLAGS	VARCHAR	255	NULL

A constraint on the column LOCALCOLUMN to the Id of the table of AoLocalColumn will be created. If the foreign-key constraint can not be created a warning is given with the SQL-statement but the process will continue. It is up to the user to correct the statement for the constraint, the server can run also without this constraint. The oracle sequence EXTCOMPID_SEQ is created.

Note:

The base attributes names of the element of AoExternalComponent are now conform the ASAM ODS 5.0 specification when the table already exist the program updates the names of the base attributes to the ASAM ODS basemodel.

INDEX

Creates for each 1 to N relation an index on the column with the foreign key. The index tablespace can be given as an optional parameter, when no tablespace name is give the index is created at the default tablespace. The name of the index is "IDX_" + aid + name of the column. No special oracle attributes are set at the index. The index for the SVCVAL is also created when it not exist.

6.6 Usage tool ExtendModel

Warning:

Before you run this tool, a backup of the database must be done. This tool will change the database and database structure, so after this tool has run the database may be destroyed. It is your risk when you run this tool.

The tool ExtendModel is able to extend the application model with an element, an application element with an attribute or a relation between two elements. When the tool runs successful the application model is modified so check the client programs if they can handle the modification of the application model.

The tool ExtendModel will write the error- and log-messages in the Athos Runtime System error messages system see also **Error reporting Athos Runtime System**(p. 29). The log-messages are written in the file `extendmodel.log` in the current directory. The tool ExtendModel works with an Oracle SQL-Net client for the connection to the database. The tool is a program which uses the Athos Runtime System (dynamic library `athos`) with the environment variables `ATHOS_INI` and `ATHOS_ROOT` and needs also an Oracle client installation to run. The dynamic libraries and the oracle client must be available in the runtime path. The tool appends to the files `owner.sql` and

`user.sql` in the current directory special sql commands used at Audi for there special database user handling. Before the tool starts check if these files exist and the sql commands can be append to these files. When the file not exist they will be created automatically.

The tool is named by the Oracleversion it is built for:

- Oracle 8.x -> ExtendModel.exe
- Oracle 9.2 -> ExtendModel-9_2.exe
- Oracle 10.2 -> ExtendModel-10_2.exe

You can start the tool with the following command

```
ExtendModel<Oracle_version> DB_USER DB_PASSWORD DB_NAME KEYWORD ELEMENT [Keyword depending additional arguments]
```

DB_USER

The username of the database, needs credential to modify the table and insert into the table SVCATTR.

DB_PASSWORD

The password of the database user.

DB_NAME

The name of the database.

KEYWORD

The keyword what to do, the following keyword are supported:

- ATTR to create an attribute at the element. Additional arguments are: ATTRIBUTE DATATYPE [BASEATTRIBUTE] [LENGTH]
- ELEM to create an element with the attributes Id and Name in the model. Additional arguments are: BASETYPE IDNAME NAMENAME
- REL to create a relation between two elements. Additional arguments are: RELNAME TARGET RELRANGE INV_RELNAME INV_RELRANGE [BASEREALTION INV_BASEREALTION]

ELEMENT

The name of the element depending of the keyword the attribute or relation must be added to this element or the element is created.

The tool returns 0 on success with an message on the standard out.

6.6.1 Usage tool ExtendModel Keyword ATTR

Create a new attribute at the given application element. The additional arguments are:

ATTRIBUTE

The name of the attribute to be added.

DATATYPE

The datatype of the attribute. All datatypes defined in the function `NameToDatatype` of the Athos Runtime System are supported. Here a list with the most important datatypes and the accepted names.



- DT_STRING represented with value: 1 as string: 'DT_STRING', 'DT_String', 'String'
- DT_SHORT represented with value: 2 as string: 'DT_SHORT', 'DT_Short', 'DT_Int2', 'Short', 'Int2'
- DT_FLOAT represented with value: 3 as string: 'DT_FLOAT', 'DT_Float', 'DT_Real4', 'Float', 'Real4'
- DT_BOOLEAN represented with value: 4 as string: 'DT_BOOLEAN', 'DT_Boolean', Boolean
- DT_BYTE represented with value: 5 as string: 'DT_BYTE', 'DT_Byte', 'Byte'
- DT_LONG represented with value: 6 as string: 'DT_LONG', 'DT_Long', 'DT_Int4', 'Long', 'Int4'
- DT_DOUBLE represented with value: 7 as string: 'DT_DOUBLE', 'DT_Double', 'DT_Real8', 'Double', 'Real8'
- DT_LONGLONG represented with value: 8 as string: 'DT_LONGLONG', 'DT_LongLong', 'DT_Int8', 'LongLong', 'Int8'
- DT_DATE represented with value: 10 as string: 'DT_DATE', 'DT_Date', 'Date'
- DT_BYTESTR represented with value: 11 as string: 'DT_BYTESTR', 'DT_ByteStr', 'ByteStr', 'ByteStream'
- DT_BLOB represented with value: 12 as string: 'DT_BLOB', 'DT_Blob', 'Blob', 'DT_BLOB'
- DT_COMPLEX represented with value: 13 as string: 'DT_COMPLEX', 'DT_Complex', 'Complex', 'Complex4'
- DT_DCOMPLEX represented with value: 14 as string: 'DT_DCOMPLEX', 'DT_DComplex', 'DComplex', 'Complex8'
- DS_STRING represented with value: 15 as string: 'DS_STRING', 'DS_STRING', 'DT_String[]', 'String[]'
- DS_SHORT represented with value: 16 as string: 'DS_SHORT', 'DS_Short', 'DT_Short[]', 'Short[]'
- DS_FLOAT represented with value: 17 as string: 'DS_FLOAT', 'DS_Float', 'DT_Float[]', 'Float[]', 'Real4[]'
- DS_BOOLEAN represented with value: 18 as string: 'DS_BOOLEAN', 'DT_Boolean[]', 'DS_Boolean', 'Boolean[]'
- DS_BYTE represented with value: 19 as string: 'DS_BYTE', 'DS_Byte', 'DT_Byte[]', 'Byte[]'
- DS_LONG represented with value: 20 as string: 'DS_LONG', 'DS_Long', 'DT_Long[]', 'Long[]', 'Int4[]'
- DS_DOUBLE represented with value: 21 as string: 'DS_DOUBLE', 'DS_Double', 'DT_Double[]', 'Double[]', 'Real8[]'
- DS_LONGLONG represented with value: 22 as string: 'DS_LONGLONG', 'DS_LongLong', 'DT_LongLong[]', 'LongLong[]', 'Int8[]'
- DS_COMPLEX represented with value: 23 as string: 'DS_COMPLEX', 'DS_Complex', 'DT_Complex[]', 'Complex[]', 'Complex4[]'
- DS_DCOMPLEX represented with value: 24 as string: 'DS_DCOMPLEX', 'DS_DComplex', 'DT_DComplex[]', 'DComplex[]', 'Complex8[]'
- DS_DATE represented with value: 26 as string: 'DS_DATE', 'DS_Date', 'DT_Date[]', 'Date[]'
- DT_EXTERNALREFERENCE represented with value: 28 as string: 'DT_EXTERNALREFERENCE', 'ExternalReference'

- DS_EXTERNALREFERENCE represented with value: 29 as string: 'DS_EXTERNALREFERENCE', 'DT_EXTERNALREFERENCE[]', 'ExternalReference[]'

The datatype DT_ENUM or DS_ENUM is not supported.

BASEATTRIBUTE [optional]

The base attribute name of the new attribute.

LENGTH [optional]

The length of the attribute when the datatype of the attribute is a string attribute. The maximum length is 4000, due to an Oracle restriction. If the BASEATTRIBUTE parameter is not present, the tool registers that the last parameter is a numerical value and uses it as length.

The tool checks several ASAM ODS constraints before the table is extended with the column and the SVCATTR is updated. The some of the constraints are listed below:

- the element exist.
- the attribute does not exist.
- the base attribute does not exist.
- the attribute does not exist as a reference name of a n:m relation.
- No instance attributes with the attribute exist for the element.
- The datatype DT_BYTESTR or DT_BLOB is not used at the element.

6.6.2 Usage tool ExtendModel Keyword ELEM

Create a new application element with the given basetype in the application model. The additional arguments are:

BASETYPE

The base element type of the new element.

IDNAME

The name of the attribute derived from the base attribute 'id'.

NAMENAME

The name of the attribute derived from the base attribute 'name'. The length of the name attribute is fixed restricted to 254 characters.

The tool checks if the several ASAM ODS Constraints before the element is created. The some of the constraints are listed below:

- the element does not exist, the element is compared case blind. The application model is case sensitive in ASAM ODS but the tool is more restricted to check the element name case bind.
- The base element is defined in the base model (ATHOS_INI). The constraint on the number of elements of a certain type is not checked by the tool.
- The automatic generated table name does not exist.
- The datatype of the Id attribute is loaded from the storage.

6.6.3 Usage tool ExtendModel Keyword REL

Create a relation between the two given application elements. The additional arguments are:

RELNAME

The relation name, at the given element.

TARGET

The target application element.

REL RANGE

The relation range, for element to target application element. Possible values are: 0_1, 0_MANY, 1_1, 1_MANY, MANY_MANY

INV_RELNAME

The inverse relation name, is the relation name at the target element.

INV_REL RANGE

The inverse relation range from target application element to element. Possible values are: 0_1, 0_MANY, 1_1, 1_MANY, MANY_MANY

BASEREALTION [optional]

The base relation name for the relation name .

INV_BASEREALTION [optional]

The inverse base relation name for the inverse relation name, when the base relation name is given the inverse base relation name must be given also.

The tool checks several ASAM ODS constraints before the table is extended with the column and the SVCATTR or SVCREF is updated. The some of the constraints are listed below:

- the element exist.
- the relation does not exist as relation or attribute.
- the base relation does not exist.
- the relation does not exist as a reference name of a n:m relation.
- No instance attributes with the relation exist for the element.

6.7 Usage tool lcCopy

Warning:

Make first a dump of the database before the tool is started so you can always restore the database state if something get wrong with the program. During the run of the tool the values of the localcolumn are a short time removed from the database and only available in the memory of the tool, so in case the tool crashes the values of a localcolumn can get lost.

The tool lcCopy copies the local column within a services. This tool can be used to correct the length of the values in the svcval. To copy the column from the table SVCVAL into an external file

or the otherway around. This tool is independent of any translator but should be used only with database translators.

The tool supports any selection on the instances of the measurement quantity. The localcolumns belongs to selected instance of the measurement quantity are load from the database and written back to the same database.

Note:

The names of the localcolumn and the measurement quantities must be identical. There is no support for localcolumn with differnt names as the name of the instance of the measurement quantity.

The tool can be called on the command line with the following command:

```
lccopy service attrname comparotor condition
```

service

the name of the service from the INI-File, the environment variable ATHOS_INI is used.

attrname

Name or basename of the attribute of the measurment quantity. Default "datatype"

comparator

The comparator supported are "=" and "!=". Default "="

condition

The condition, with automatic conversion of the ASAM ODS datatype to an interger. Default "DT_DATE"

Example:

```
lcCopy ASAMDB name = Time
```

This call will copy all the localcolumn where the measurement quantity have the name 'Time' of the service ASAMDB from the INI-File given with the environment variable ATHOS_INI.

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. 31) 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. 37).

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. 37).

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. 31).

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_WARNING_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. 78)).

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.29)). 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 `ApplicationElement_GetName` until the new request `ApplicationElement_GetRelatedElementsByRelationship` was received 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 ApplicationElement_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 internal memory address 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:

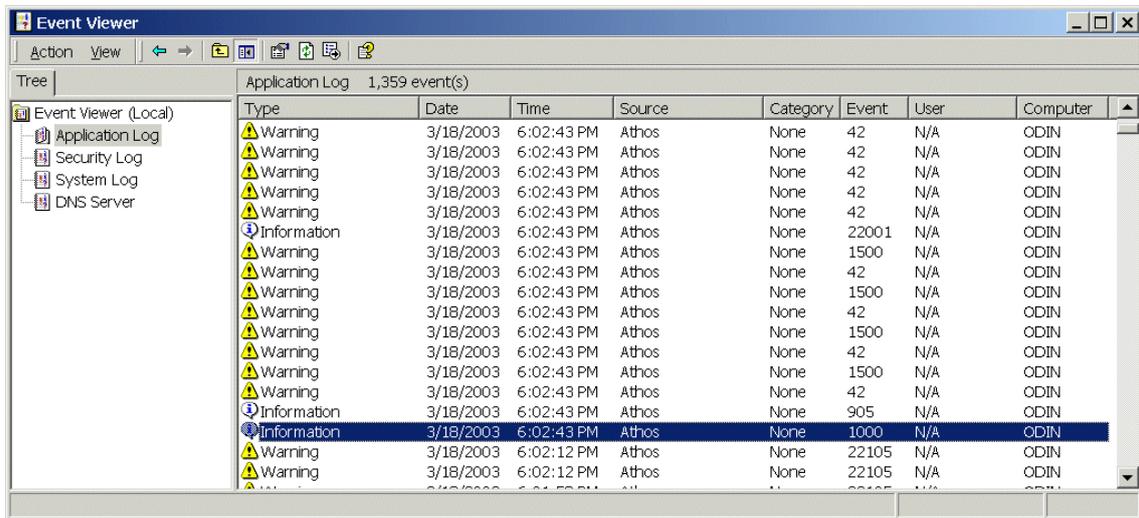


Figure 7.1: Windows Event viewer

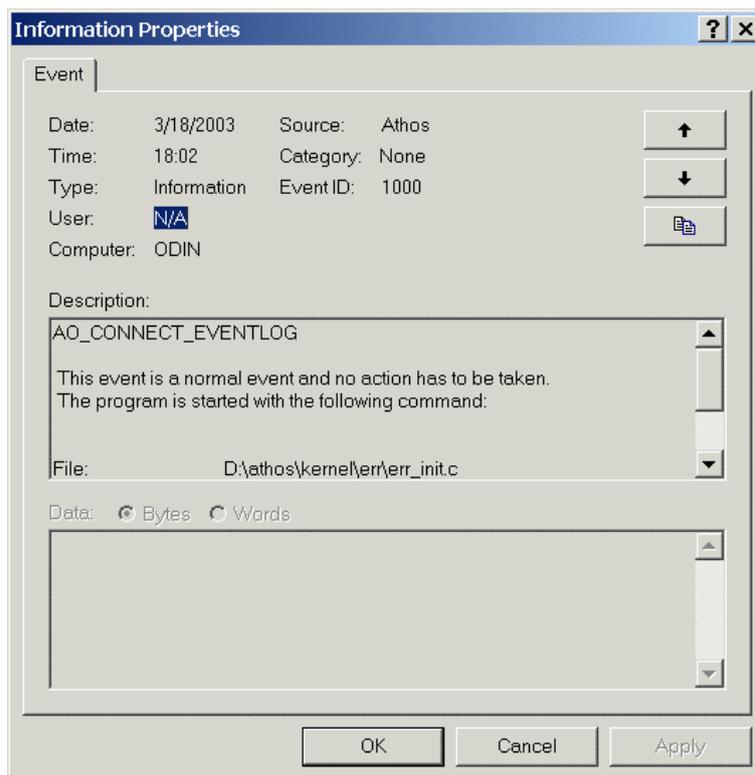


Figure 7.2: Detail of eventviewer

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.

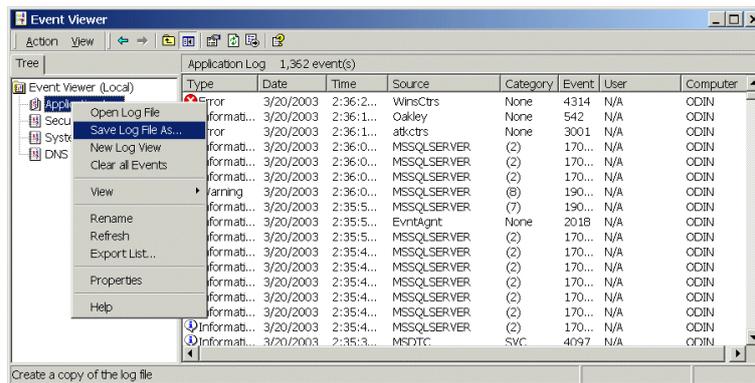


Figure 7.3: Eventviewer save

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:

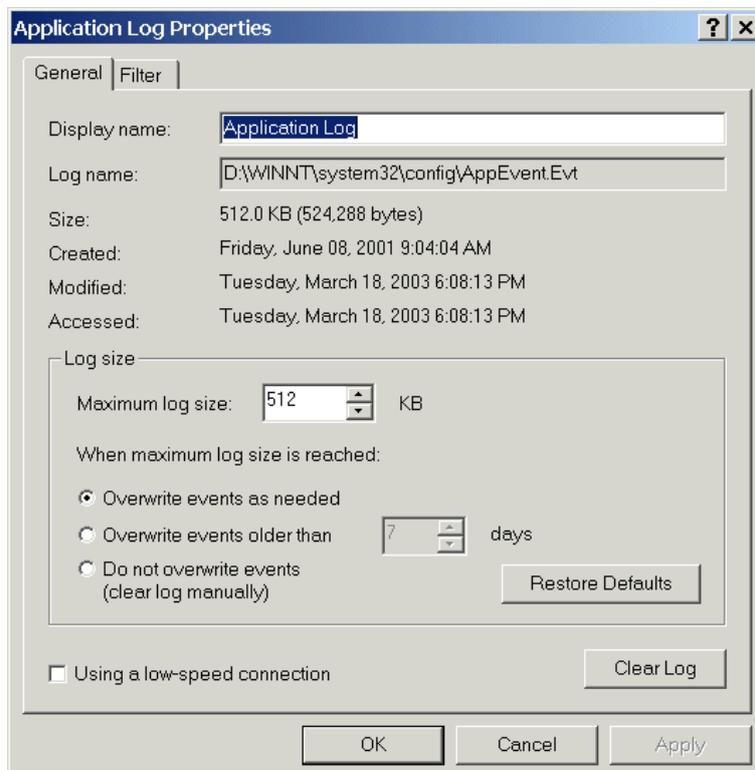


Figure 7.4: Eventviewer protocol properties

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 MME1

The translator use the normal Athos event logger. There is a triple of error messages which is special for this translator. This triple reports a message from Oracle database engine. The triple is show below. All other error messages can be reported by the translator as well.

Error Code	AO_ORACLE_ERROR_STATEMENT
Error Number	9070
Error Synopsis	An Oracle SQL-Error is detected-SQL Statement.
Error Description	An error occured within an Oracle SQL. The SQL statement was: %4
Error Code	AO_ORACLE_NATIVE_ERROR
Error Number	9071
Error Synopsis	An Oracle SQL-Error detected - SQL-native.
Error Description	An error occured during an Oracle SQL command. The following Oracle-native error is reported: %4
Error Code	AO_ORACLELEL_ERROR_MSG
Error Number	9072
Error Synopsis	An Oracle SQL-Error detected - SQL-message.
Error Description	An error occured during an Oracle SQL command. The following error messages is reported.
Error Code	AO_UNABLE_OPEN_FILE
Error Number	904
Error Synopsis	Unable to open file.
Error Description	Unable to open file. Filename: t4

AO_UNABLE_OPEN_FILE

This error message, see details below, is an error message which can be ignored and have no influence on the functionality of the translator. This message means that there is not enough memory available to map the file im memory. The memore is restricted by the size of the system page file. If the translator isnot able to open the file using the faster mapfile, the file will be opened with the normal open of files and position with the seek and read the files

using the normal file access functions. These normal file access functions are slower as the memory mapped file access but have no restriction for the size of the system page file.

```
904
AO_UNABLE_OPEN_FILE

Unable to open file.

Filename: mapview for e:\ZeusData\db-binaries\mea16598.bin,
Error: Not enough storage is available to process this command.

File: mme1_mapfile.c
Version of file: 1.1
Line in file: 231
Program: OdsApi
Version of program: 3.1c
```

The version of the file, the line and the name and version of the program can differ at other installations.

The german error message will be **Für diesen Befehl ist nicht genügend Speicher verfügbar.**

Note:

Other messages AO_UNABLE_OPEN_FILE can have important restrictions for the functionality of the translator, so look at the details error message before you ignore the message.

Windows NT/2000

If the file-mapping object is backed by the paging file (hFile is INVALID_HANDLE_VALUE), the paging file must be large enough to hold the entire mapping. If it is not, MapViewOfFile fails.

7.5 Translator MME1 connection lost to Oracle

When the connection to the Oracle database gets lost, the translator will try to reconnect to the database automatically. The translator needs at least three commands / calls to reconnect to the Oracle database. The first call to determine an error is occurred. The second call to determine Oracle connection isn't valid anymore, before the next call the translator will try to reconnect to Oracle again. So the Oracle database goes down, it can be required the client request three times until the connection is stable again.



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 character sets are supported. The character set must match with the character set of the storage (Oracle character 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 to 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 currently waiting to be deleted from the memory of the ATHOS Runtime System. This number is only an indication whether 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 the 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 prefix with 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 its 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 of 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 maintained 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 reference. When an inverse reference name is given or the base reference is given, this 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 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, there are some storage (ATF/CLA) or RPC-API which 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 combined 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 av13 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.

Normally 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_LOCALCOLUMN_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 localcolumns. 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

MAXBLOBLLEN

Maximum 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

Maximum 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 operating 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 relation. 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 MME1 Configuration variables

BIN_EXT

Extension of the binary (component) files.

This variable is checked every put of an instance element of type AoMeasurement, so this variable can be changed during runtime.

Default:	BTF
Source:	INI-File

BIN_PATH

Path of the binary (component) files.

The directories for the binary files must be created externally. This driver does not create this directory. If the directory not exist the driver is not able to connect to the storage and no user will get access to the server. The system user which runs the server need read, write and execute rights for this directory.

This variable is checked every put of an instance element of type AoMeasurement, so this variable can be changed during runtime.

The default is the current directory. **This variable is only used when the FILE_MODE is ABSOLUTE** use the For compatabillity when BIN_PATH is found the FILE_MODE will be set to ABSOLUTE and the FILE_NOTATION is set to URL, when these variables are not set. When this variable is not given the FILE_ROOT is used for the absolute files.

Default:	
Source:	INI-File

BIN_SUBDIR

Subdirectory of the path of the binary files.

This string can be a 'pattern', the pattern will be used as date specification. The following date specification is supported, 'YYYY' = Year, 2 or 4 characters required. 'MM' = Month,

2 characters are required. 'DD'= Day, 2 characters are required. 'HH'= Hour, 2 characters are required. 'WW' = Week of the year, 2 characters are required. You can put any other character in this string except the directory separator-character or other not allowed directory name character defined by your system. Eg. AYYYYBWW (A2004B05) will use a different subdirectory for each week of the year. When the directory doesn't exist, the directory will be created. The created directory will have all rights on UNIX systems, umask can be used to reduce the rights of the directory, the system user which runs the server need read, write and execute rights for the directory.

This variable is checked every put of an instance element of type AoMeasurement, so this variable can be changed during runtime.

The default is no subdirectory write to the directory given at BIN_PATH. This works only when the BIN_PATH or FILE_ROOT is given.

Default:	
Source:	INI-File

BLOB_COLUMNNAME

The name of the database column of the value stream of an attribute of the datatype DT_-BLOB.

Default:	BLOB
Source:	INI-File

CALC_MEQ_ATTR_VALUES

Calculate the values for the attributes minimum, maximum, average and standard deviation of the measurement quantity when the local column is written.

Default:	NO
Source:	INI-File

CHECK_DB_TABLES

Check the attributes and the columns of the database tables. This check is recommended for the datatypes of the database columns and asam ods datatypes of the attributes. If there are some tables as a view available the check will fail and the server will stop. The word 'NO' will skip this check but then the driver expects a correct relation between the two datatypes. When the table SVCENUM exist and the CHECK_OF_TABLES turned off, there will be no access to the SVCENUM and application model defined enumeration are not found. Set the variable SVCENUM_EXIST = YES so the driver tries to read the enumerations.

Default:	YES
Source:	INI-File

CHECK_REF_IDS

Check the Ids of the reference attribute value for N:M references.

Default:	NO
Source:	INI-File

COMPARE_CASE_SENSITIVE

This variable turns on the case sensitive comparison of the string attribute values. As long as the ATHOS Runtime System doesn't support case (in)sensitive switch of the string comparison this variable sets it in general for all. The word 'YES' will cause a case sensitive comparison.

Default:	NO
Source:	INI-File

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
```

If the data storage is created by SANTORIN or PUMA the convertfile "`///$(ATHOS_ROOT)/etc/athostoavl3.cnv`" is required.

Default:	No default
Source:	INI-File

DATE_FORMAT

Set the date format of the oracle database. The oracle date format is for the correct ASAM-ODS date format 'YYYYMMDDHH24MISS' use no other date format.

This variable has only influence on attributes with the datatype DT_DATE and the oracle column type must be DATE. The variable have no influence on any other column datatype. The database date format will be used as default.

Default:	No default
Source:	INI-File

DB_NAME

Name of the computer/server on which the database runs. This keyword is optional and only used in connection with ORACLE Database.

Default:	No default
Source:	INI-File

DB_PASSWORD

User password for database logon.

Default:	No default
Source:	INI-File

DB_USERNAME

User name for database logon.

Default:	No default
Source:	INI-File

DRIVE

Overwrite the drive specification of the URL with the given drive value. Use this INI-File variable when the data is moved to another drive of the drive is mapped to another drive. Add the drive separator at the drive specification E.g "E:".

Default:	None
Source:	INI-File

EXT_COMP_SEGSIZE

The maximum file size of new segments in bytes. When the client changes the values of this parameter, the following write operation on the values of the AoLocalColumn will use the new

definition. The minimum size is 1048576 Bytes (1 MByte) when all sizes smaller then this minimum will leads to the minimum size. The default size is 1073741824 Bytes (1 GByte) all files with an larger size can leads to memry problems and values of the offset (32 Bit signed interger)

Default:	1073741824
Source:	INI-File

FILE_ROOT

The Root of the component filename to make a filename from a relative path to an absolute path. When none is given the server expects the file is an absolute path.

Note: This is a preliminary variable the ODS definition will substitute this variable.

Note: This is only used for reading data bot for writing.

Default:	No default
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 transferred to the server.

Default:	No
Source:	INI-File

MAX_MAP_VIEW_SIZE

The maximum number of MBytes a mapped view an a file will be. If the size of the map view is bigger then the size of the memory with pagefile together the system don't load the file and the normal file access will be used. This file access is slower as the map view on the file. If this variable has the value 0, translator tries to map all required memory.

Default:	0
Source:	INI-File

MAXBYTESTRLLEN

Maximum size of a bytestream element in bytes. The default value corresponds with the maximum number of bytes in the valblob, if there are only a short bytestreams in the valblob avaiable this value can be reduced. This value is used to load the bytestreams.

Default:	10000
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

MAXDBNAMELEN

Maximum length of the database table and column names.

Default:	25
Source:	INI-File

MAXEXTREFLEN

Maximum length of one field strings allocated in the database for attributes of type <DT_ExternalReference> This value is used to create the column of the tables.

Default:	254
Source:	INI-File

MAXSTRLEN

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

Default:	254
Source:	INI-File

NUMBER_DB_CONNECTION

The number of database connections. The number of database connection is also the number of parallel threads using the database. Using multiple statements for one database connection was not stable, so we need multiple connections for multithreaded access. The number of database connections has no relation with the number of parallel threads for the server. If an invalid value is given the default value will be used.

Default:	1
Source:	INI-File

ORACLE_ANALYZE_SVCVAL

This variable force the translator to start the analyze of the SVCVAL table, when the variable have value "SVCVAL". The variable is checked every time an instance of AoMeasurement is deleted. After the check the variable is reseted, so the translator start the analyzation of the table only once. The analyzation cost a lot of time but afterwards the delete of the rows from the table SVCVAL is much faster. Normally the oracle administrator should do the analyze himself but in the testing environment this can increase the performance of the test.

Default:	""
Source:	INI-File

ORACLE_CONNECT_CALL

An oracle command which will be executed after the connect. NO return is expected.

Default:	No default
Source:	INI-File

ORACLE_CONSTRAINT_LC_MEQ

Is there a constraint defined in the database which checks the relation between the instances of AoMeasurmentQunatity and AoLocalColumn. The name of the base relation is local_columns, the inverse name is measurement_quantity, which should be check by a foriegn key database contraint. If this flag is set, the translator don't check if there are instances available of AoLocalColumn before the instance of AoMeasurementQuantity is deleted. When instances still exist, an error will occure and the instances of AoLocalColumn will deleted also. If the flag isn't set, the translator checks before the instance of AoMeasurementQuantity is deleted if there are any instance of AoLocalColumn and delete these instances also. Most time there are no instances of AoLocalColumn when the instance of AoMeasurementQuantity is deleted and the check will cost time, so using the constraint and error deleting the instances of AoMeasurementQuantity will be faster.

Default:	No
Source:	INI-File

ORACLE_HOST_ARRAY_SIZE

The size of the oracle host arrays. Modifying the host array size can improve the performance, but have influence on the memory requirements.

Default:	100
Source:	INI-File

SELECT_EQ_IS_LIKE

If this variable is set to 'yes' the 'EQ' compare for datatype DT_STRING is handle as 'LIKE' when a wildcard character is given in the pattern. The pattern of the condition value will be substituted and the SQL select will use the 'LIKE' compare operator. The variable do the same with 'NEQ' and 'NOT LIKE'.

ASAM ODS defines a different between 'EQ' and 'LIKE' so when this variable is set, the server don't act according the ASAM ODS standard.

Default:	NO
Source:	INI-File

SELECT_ON_INVERSE

If this variable is set to 'yes' the select with a related instance element will use the inverse relation when the element of the related instances is identical with the element where the selected attributes comes from.

ASAM ODS definition is not clear at the moment.

Default:	NO
Source:	INI-File

SQL_MAX_ROWS

Define the maximum rows to collect as a bulk in the SQL fetch statement. If there exist more rows they will not be fetched. This parameter works only for the attribute list, the instance elements will be all created and are independent of this variable. If an invalid value is given the default value will be used. If the value is high the performance of the server will go down because for each requested column a high piece of memory is allocated.

Default:	10000
Source:	INI-File

STR_VALBLOBLLEN

If this variable is set to 'YES' the translator expects the value of the column VALBLOBLLEN of the table SVCVAL to be the value of the number of strings. If this variable is not set the translator expects the column contains the number of total characters in all strings. For datatype DT_DATE and DT_BYTESTR is the same variable with the same meaning. The variables MAXBYTESTRLEN, MAXDATELEN and MAXSTRLEN are used for the number of bytes for each element to load the values.

Default:	NO
Source:	INI-File

SVCENUM_EXIST

This variable is a boolean switch and is used to indicate that the ASAM ODS system table svcenum is available in the datastorage (value: YES). To be compatible the default is NO that means that the svcenum table is not available. When the check of the tables is active the drivers recognize if the table exist or not.

Default:	NO
Source:	INI-File

SWAP_VALBLOB

Swap the bytes in the value blob of the table svcval. If the client has another endian type as the database server the bytes of the values in the value blob are in the wrong order and the client can not interpret the data correctly. If this keyword is available the bytes are swapped on read and write access.

If the bytes are swapped the driver requires twice the amount of memory for local columns. DRIVER_FACTOR must be set to 2. If no DRIVER_FACTOR is set, the driver set the value automatic.

The default is the valblob is not swapped.

Default:	
Source:	INI-File

TURN_OFF_SQL_TRACE

Turn the SQL_TRACE off, if this variable is set to 'yes', the SQL_TRACE will be turned off by the translator, otherwise the default setting of the SQL_TRACE is used.

Default:	NO
Source:	INI-File

UPDATING_MEASUREMENT_SELECT

The SQL-Select command to determine the measurements which are updated from an external system. The SQL command have to select the only the Id of the measurement instances which will currently updated from the external system. The content of the table must be maintained by the external system.

Default:	No default
Source:	INI-File

USE_DBCNAME

Normally the column names of the SVCREF called table are ID_ <ID of application element>. There are some server which use the column name given in the table SVCATTR. If the server gives the database error message 'wrong column name' the wrong column name is used and this option must be set to 'YES'.

The default is not set, use ID_ <ID of application element> as column name.

Default:	
Source:	INI-File

USE_ID_SEQUENCE

Use for the new instances a database sequence. Oracle can generated the next value of the Id with a database sequence. If this sequence is defined, when this parameter is set to YES the driver will use this sequence for the next value of the Id. The name of the sequence is the name of the database table of the entity added with the fixed string 'ID_SEQ'. Eg. Name of the table is 'Test' the name of the sequence must be 'TestID_SEQ'. Set this variable to 'YES' to activate the usage of sequences.

Default:	NO
Source:	INI-File

USE_ORACLE_HOST_ARRAY

If this variable is set to 'yes' the translator use the oracle host array for the query of the attribute values at the extended query. Using the host array can improve the performance, but requires more memory. This variable is not used anymore, the translator will always use the oracle host array because of the better performance.

Default:	Yes
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 fulfill the pattern matching of database set the escape character to '[' and one of the pattern matching 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:	\
Source:	INI-File

WILDONE

Wildcard character for one character.

Default:	?
Source:	INI-File

write_mode

The ASAM ODS defined variable, which tells the translator where to write the flags and values of the local columns. If this variable is set to 'file' the translator writes the values of the explicit channels in a file. The name of the file is concatenated from a fixed part and the Id of the measurement. The extension of the file is given in the variable BIN_EXT. The directory of the file is given in the variable BIN_PATH.

Default:	database
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 than 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'.

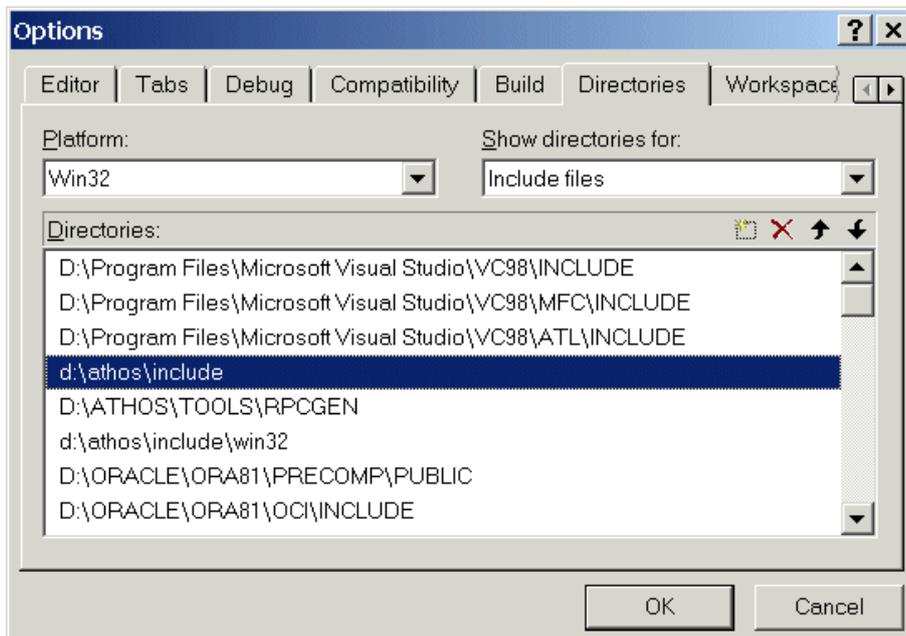


Figure 10.1: MSVC Options

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 Settings of the project. For all code using the Athos Runtime System the project settings are required to prevent Microsoft 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.

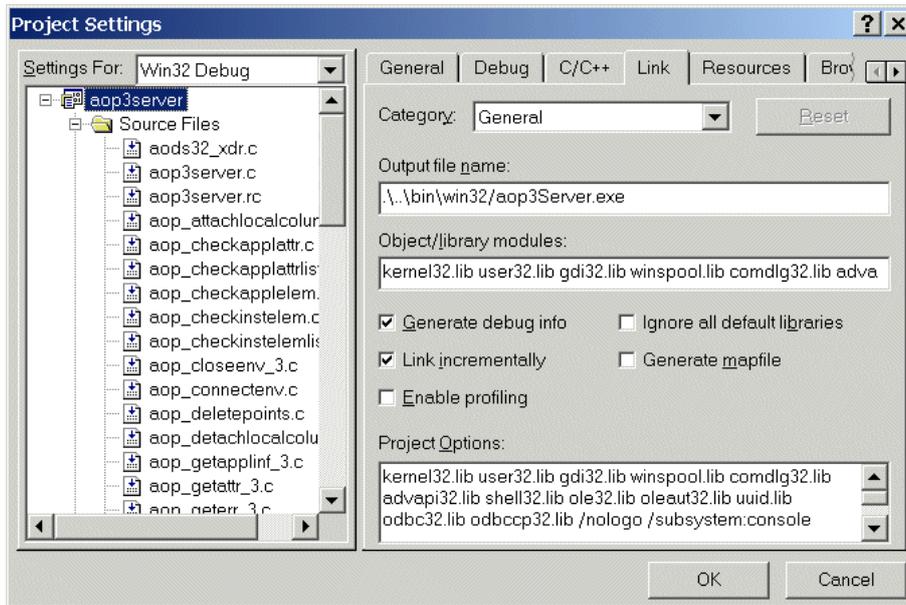


Figure 10.3: MSVC Link options

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.

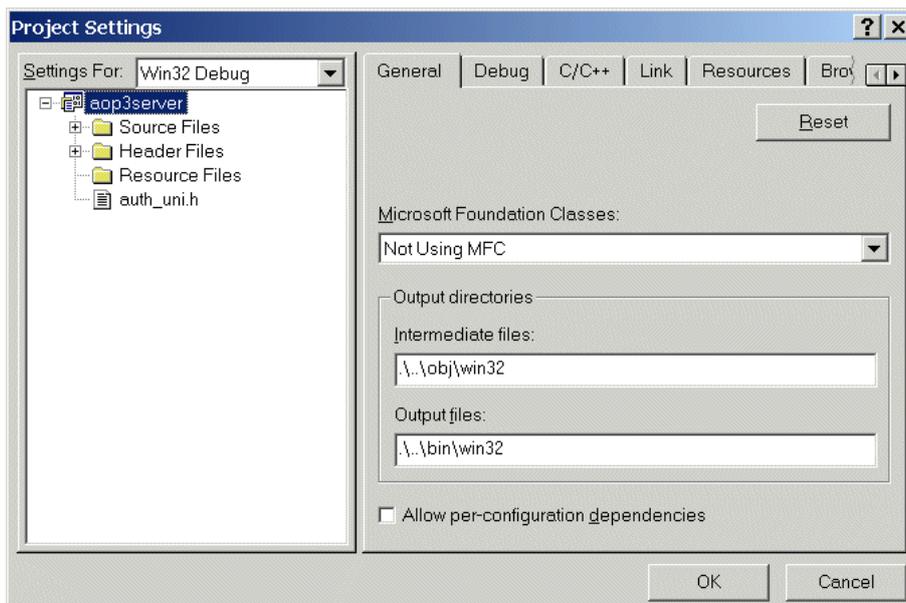


Figure 10.4: MSVC General options

10.1.6 Add additional system libraries

To add additional system libraries like `wsock32.lib`.

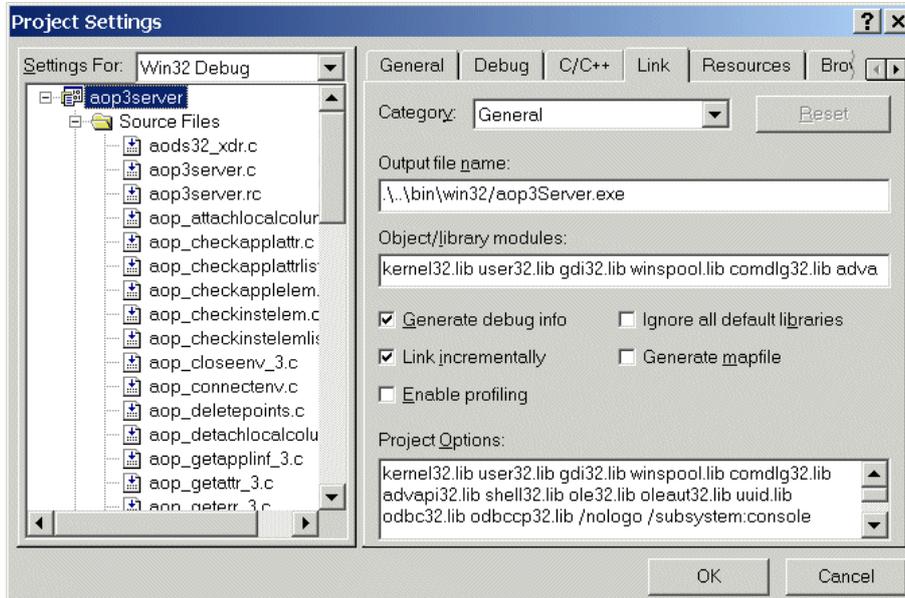


Figure 10.5: MSVC Link options

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 `c1.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'.

10.2 Compiler settings for Translator MME

The batch file abuild wil compile the Translator MME only if the environment variable **ORACLEHOME** is set. The build procedure expect that the ProC/C++ compiler of Oracle s in the reacable by the default search path.

There will occure no error if the Environment variable isn't set, but this module will not be compiled and linked.



Chapter 11

Know how

11.1 Usage of different schemas in an oracle database

The ASAM ODS defined tables `SVCENT` and `SVCATTR` describes for the ASAM ODS translators, the application model. In the table `SVCENT` is the description of the entities or application elements. This table has a column called `DBTNAME`, in this column the name of the database table is given. The translators for oracle embedded sql accepts the schema in front of the tablename in the column `DBTNAME` separated by dot. Eg. `'USER1.TABLE'`.

The ASAM ODS specification restricts the length of column `DBTNAME` to 30 characters, this restriction is used in the translator, so when the length of the column `DBTNAME` is changed because length of the schema and tablename exceed the length of 30 characters, the translators will not work properly.

The translators normally checks if the specified tables and columns in the tables `SVCENT` and `SVCATTR` exist. For this check reading access to the oracle tables `SYS.USER_TABLES` or `SYS.ALL_TABLES` is required. If the security on the oracle don't allow access to these table with the INI-File entry `CHECK_DB_TABLES` can this check be turned off. When the translator access a table or column which don't exist an error will occur and the client will get no answer.

11.2 Optimize the oracle database

Optimization of the oracle database is not part of ASAM ODS or the translator. The oracle database should be optimized as good as possible to get the best performance. Normally the database is optimized by the database administrator.

Here we like to give some tips to optimize the oracle database, these tips are collected from the experience of different installations, it does not say that these tips optimize also databases with other client applications.

- Use the ID sequences see also **Usage tool UpdateStorage**(p. 18). This will increase the performance to write new instances.
- Use an index on the `SVCVAL`.

```
CREATE INDEX IDX_SVCVAL ON SVCVAL (MEQID, PMATNUM, SEGNUM, VALBLOBLN, VALEXIMP, VALINDEP);
```

This will increase the performance to read the values and flags of the `AoLocalColumn`, when the values are stored in the table `SVCVAL` and not in external file access by the `AoExternalComponent`

- Create index on the reference between the elements `AoMeasurement`, `AoMeasurementQuantity`, `AoSubMatrix`, `AoLocalColumn` and `AoExternalComponent`. This will increase the performance to read the values and flags of the `AoLocalColumn`
- Create the constraint on the reference from `AoLocalColumn` to `AoMeasurementQuantity` and use the INI-File variable `ORACLE_CONSTRAINT_LC_MEQ` see also **Translator MME1 Configuration variables**(p. 44). This will increase the performance when the instances of `AoMeasurementQuantity` are deleted.
- Use the oracle tools to analyze the tables and indices. This will normally increase the all over performance of the database.

It is wise to create the indices and the constraints first before the analyze runs. The analyze on the index will increase the performance also.

11.3 Oracle errors.

This section gives some oracle error message and what the possible solutions are

11.3.1 TNS-12535: TNS: Timeout for operation

Problem

The connection from an oracle client to an remote oracle server doesnot work.

Check

Check the connection to the oracle server with the oracle tool `tnsping`.

```
d:\>tnsping testdb_mammu
```

```
TNS Ping Utility for 32-bit Windows: Version 9.2.0.2.0 - Production on 11-JAN-2008 10:19:09
```

```
Copyright (c) 1997 Oracle Corporation. All rights reserved.
```

```
Parameterdateien benutzt:
```

```
D:\oracle\ora92\network\admin\sqlnet.ora
```

```
Adapter TNSNAMES zur Auflösung des Alias benutzt
```

```
Attempting to contact (DESCRIPTION = (ADDRESS_LIST = (ADDRESS = (PROTOCOL = TCP)(HOST = mammu)(PORT = 1521))) (CONNECTION_TIMEOUT = 30)))
```

```
TNS-12535: TNS: Timeout for operation
```

Solution

The firewall on the server or the client block the oracle connection. Deactivate the firewall on the server and client and check again. When this works configure the firewall so the oracle connection comes through.



11.4 Rename the files in the external component table.

When the datastorage moves to another system, and the files are moved also to the new location, the names in the external component might be wrong. With the following SQL-script you can update the filenames in this table.

```
update EXTERNALCOMPONENT111
set filename1113 = replace(
filename1113, substr(filename1113, 1, instr(filename1113, '/ZeusData/','-1,1)+9
),
'file:///usr/local/AsamOdsServer/zeusdata/'
);
```



Chapter 12

Appendices

12.1 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_ORACLE_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

12.2 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.

Detailed 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 implemented 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 earlier.

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 occurred 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.

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.

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.

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 drivename.
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 system information.

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 `Cac_loadeddrivers` 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 not 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 occurred 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 occurred 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 ČYYYYMMDDŠ or ČYYYYMMDDHHMMSSŠ.

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 isnŠt 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 `UDatatype`. The attribute `UDatatype` 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 `Usvcval`. 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_VALBLOBLLEN` 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 relation 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 occurred. 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 than one submatrixes. With the automatic build function of the valuematrix exactly one independent channel is expected. These independent channels must be in all the submatrixes of the measurement. There are none or more than 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.

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 occurred 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 too many fathers. There was more than one father found for the element, please check the consistency of the data storages.

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 too 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 usergroup, 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 occurred 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 svcnt 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.

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 functionality of the software. You can switch off the search for the base reference with the INI-File variable SEARCH_FOR_-BASE_REF.

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 occurs 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 protocol 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 occurred 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 odsapjavadef.h. The package name with the class name must be identical with the definition in the odsapjavadef.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 occurred 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 occurred 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 occurred 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 occurred 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 occurred 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 occurred 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 occurred 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>_getAppElem. 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 %4\$ is too long.

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

ATF_NO_ATF_FILE

Syntax error in ATF file.

The initializer %4\$ 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. Detailed description:

%4

Event number	8006
Event synopsis	Missing identifier.
Event type	Warning

ATF_ALREADY_DEFINED

The identifier is already 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 occurred within a SQL-ODBC command. The SQL state %4 has been reported.

For more detailed 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 occurred during a SQL-ODBC command. The following SQL-native error is reported: %4

For more detailed 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 occurred 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 occurred 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 occurred 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 too long. The embedded SQL is built with fixed length of SQL-Statements. The fixed length is too 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 occurred within an Oracle SQL.

The SQL statement was:

%4

For more detailed 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 occurred during an Oracle SQL command. The following Oracle-native error is reported: %4

For more detailed 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 occurred 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 occurred.

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
pluggable 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 unknown.
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 instantiate 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 virtual 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 pluggable component, service factory options:

%4

Service factory options are implementation dependent options which are used by the specified pluggable component. For the pluggable 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 13

Glossary

- **Athos:** ASAM Transient Highperformance Object Storage
- **ASAM:** Association for Standardisation of Automation- and Measuring Systems
- **kernel:** The Athos Runtime System
- **URL:** Uniform Resource Locator - eindeutige Adresse einer Ressource, vor allem im Internet, z.B. einer Webseite, einer im Internet veröffentlichten pdf-Datei
- **HTML:** HyperText Markup Language
- **ODS:** Open Data Service
- **ANSI:** American National Standards Institute
- **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
- **HighQSoft LLC:** Mr. Mark Quinsland, 1397 Salmon Falls Road, El Dorado Hills, California 95762 FON: +1 (916) 939-7048 FAX: +1 (916) 939-7048 www.highqsoft.com
- **AVALON:**
- **Java:**
- **ASCOBA:**
- **ODS-API:**
- **Athos Toolkit:**
- **Win32:**
- **UNIX:**
- **ATF:** ASAM Transport Format
- **AVL3:**
- **atf13:**
- **Oracle:**

Chapter 14

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. 34) Add **Configuration of the Athos Runtime System on Linux**(p. 8)

2007/02/01

Add **Control the size of the files**.(p. 30)

2007/04/03

Add setting for compiling with Microsoft Visual Studio 2005

2008/04/10

Extend **Logging**(p. 31)

2004/02/18

More detail about the usage of the MME-Tool.

2004/09/22

Know how, added to the translator mme.

2004/11/02

Section **Usage tool UpdateStorage**(p. 18) added.

2005/01/06

Section **Directory handling for the external component files of the translator MME1**.(p. 9) added.

2005/06/14

Add keyword SEQUENCE to tool UpdateStorage

2005/08/31

Add keyword EXTCOMP to tool UpdateStorage

2005/09/06

Section **Memory usage of the translator MME1**(p. 11) added.

2005/12/05

raw_datatype as attribute for localcolumn added at tool UpdateStorage

2005/12/08

Add keyword DT_LONGLONG to tool UpdateStorage

2005/12/13

Add keyword ENUM to tool UpdateStorage

2006/02/16

Section **Optimize the oracle database**(p. 63) added.

2007/04/04

Add **Usage tool ExtendModel**(p. 23)

2007/05/18

Add **Usage tool ExtendModel Keyword ELEM**(p. 26)

2007/10/11

Add **Usage tool ExtendModel Keyword REL**(p. 27)

2007/10/17

Add more details how to start the tools UpdateStorage and ExtendModel

2007/11/22

Add **Translator MME1 connection lost to Oracle**(p. 35)

2008/01/10

Add **Oracle errors.**(p. 64)

2008/01/15

Add **Directory handling for the external component files of the translator MME1 according the ASAM ODS specification 5.2.**(p. 10)

2008/05/26

Add length to the keyword ATTR at the tool extendmodel.

2008/05/30

Add **Rename the files in the external component table.**(p. 65)

2008/07/25

Add INDEX to tool **Usage tool UpdateStorage**(p. 18)

2004/03/02

Add the description of the tool lcCopy.

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