

ETAS ASCET V6.4.6 Hotfix 4

Release Notes

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1. Introduction

DISCLAIMER:

This file contains important information. We strongly recommend that you read the entire document. For additional important information read the corresponding readme documents and ASCET documentation. We welcome your comments and suggestions.

This hotfix supports the efficient usage of ASCET. It contains the most current bug fixes for ASCET.

The functionality of the bug fixes has been thoroughly tested. However, this hotfix has not been subject to the complete release tests of ASCET. ETAS GmbH accepts no further obligation in relation to this hotfix.

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Privacy Disclaimer

Please note that personal data is processed when using this product. As the controller, the purchaser undertakes to ensure the legal conformity of these processing activities in accordance with Art. 4 No. 7 of the General Data Protection Regulation (GDPR). As the manufacturer, ETAS GmbH is not liable for any mishandling of this data.

Data categories

Please note that this product creates files containing file names and file paths, e.g. for purposes of error analysis, ensuring correct deinstallation, referencing source libraries, or for communicating with third party programs. The same file names and file paths may contain personal data, if they refer to the current user's personal directory or subdirectories (e.g., C:\Users\UserId\Documents\...).

If you do not want personal information to be included in the generated files, please make sure that

- the workspace of the product points to a directory without personal reference.
- all settings in the product (see menu "Window -> Preferences" in the product) refer to directories and file names without personal reference.
- all project settings in the product (see menu "Project -> Properties") refer to directories and file names without personal reference.
- Windows environment variables (such as the temporary directory) refer to directories without personal reference because these environment variables are used by the product.

In this case, please also make sure that the users of this product have read and write access to the newly set directories.

When using the ETAS License Manager in combination with user-based licenses, particularly the following personal data and/or data categories that can be traced back to a specific individual is recorded for the purpose of license management:

- User data: UserID
- Communication data: IP address

As an option, the following personal data and/or data categories that can be traced back to a specific individual in particular may be recorded for the purpose of assisting development:

- Problem Report, see below

When using the ASCET add-on ASCET-DIFF, particularly the following personal data and or data categories that can be traced back to a specific individual is recorded for the purposes of user-specific settings and user-specific logfiles:

- User data: UserID

Technical and organizational measures

- This product does not itself encrypt the personal data or data that can be traced back to a specific individual that it records. Please ensure that the data recorded is secured by means of suitable technical or organizational measures in your IT system, e.g. by using classic anti-theft and access protection.
- Personal data or data that can be traced back to a specific individual in generated files can be deleted by tools in the operating system.

Description of Problem Report

Purpose: When an error occurs, ASCET offers to send an error report to ETAS for troubleshooting. ETAS uses the personal information to have a contact person in case of system errors.

Personal Data: The problem report may contain the following personal or person-related data or data category:

- User data: Name and address entered during the installation process
UserID
- Communication data: IP address

Additionally to the problem information that is entered by the user itself, ASCET collects the available product related log files in a zip archive to support the bug fixing process at ETAS. The zip file is named by using the following pattern "EtasLogFiles<index number>.zip" and stored in the ETAS specific log files directory.

This automatically created zip file contains:

- Product related log files created at installation time. (Necessary for uninstall action)
- ETAS log files stored in the ETAS log files directory matching the file name pattern “*.log”
- Recursive registry export of ETAS (32bit)-key (and sub keys):
HKEY_CURRENT_USER\Software\ETAS
- Registry export of ETAS (32bit)-key (and sub keys):
HKEY_LOCAL_MACHINE\Software\ETAS

All ETAS related log files in the ETAS specific log files directory and the zip archives created by the Problem Report feature can be removed after closing all ETAS applications if they are no longer needed.

For further information see Support Function in Case of System Errors.

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1.1. Definitions and Abbreviations

Term/Abbreviation	Definition
EHI	ETAS Help Desk International
HW	Hardware
KIR	Known Issue Report – For severe Problem Reports which occur after a release, ETAS has introduced the Known Issue Report to inform affected customer immediately. The current Known Issues of former versions can be found on the ETAS website: www.etas.com/kir
PR	Problem Report
SW	Software
WB	Walkback – ASCET System Error

1.2. References

If a product issue develops, ETAS will prepare a Known Issue Report (KIR) and post it on the internet. The report includes information regarding the technical impact and status of the solution. Therefore, you must check the KIR applicable to this ETAS product version and follow the relevant instructions prior to operation of the product.

The ASCET Known Issue Report (KIR) can be found here:

<http://www.etas.com/kir>

1.3. User Documentation

The ASCET V6.4 user's documentation and the ASCET V6.4.6 Release Notes in PDF format can be found on the DVD.

2. Changes

This section describes the interface changes compared to the previous hotfix version of ASCET V6.4.6.

2.1. AMD Schema

No changes

2.2. Com API

No changes

2.3. Automation API

No changes

3. Fixed Problems

This section describes the set of fixed problems of the released version of ASCET V6.4.6.

Problem Number	Title
PR640370	Wrong implementation type check in Method Signature Editor ASCET performs a wrong implementation type check in the Method Signature Editor WHEN the method signature editor dialog is opened AND there is more than one argument in the method AND the arguments are of more than one implementation type AND one argument is selected AND the signature editor is closed The properties of all arguments are checked against the selected implementation type which may lead to an error message.
PR675891	IN/OUT Pins behind a sub hierarchy are hidden The solution of this problem in ASCET V6.4.6 Hotfix 3 results in not intended side effects.
PR703022	Multiple Customer Data section entries ASCET wrongly writes multiple Customer Data Section Entries to AMD WHEN an element is changed from primitive to array/matrix of enumeration
PR767662	OID information in AMD export differs in tags "OsDescription" and "Experiment" when re-exporting ASCET refers to the information for the OS description and the Experiment Environment by a unique identifier. When importing an AMD export file this information is not used and a new unique identifier is created. Therefore, this information changes when exporting the component later. The OIDs in the tags "OsDescription" and "Experiment" are now different.

3.1. Predecessor hotfixes

Problems fixed with the predecessor hotfixes of V6.4.6 are included in this hotfix

3.1.1. ASCET V6.4.6 Hotfix 3

Problem Number	Title
PR653582/ PR695304	Requirement: Analyze usage information from the ARXML Preparation for custom engineering.
PR675891	IN/OUT Pins behind a sub hierarchy are hidden ASCET may wrongly hide pins WHEN IN/OUT pins are added to a hierarchy AND there is a sub hierarchy The IN/OUT pins may be hidden by the sub hierarchy. <i>Solution: The IN/OUT pins are visible and marked red like variables.</i>
PR676785	Missing sequence calls for statement blocks in navigation view ASCET does not show a Sequence Calls in the Navigation Tree WHEN it is modeled under a Statement Block
PR676811	Erroneous navigation with CTRL arrow key in statement blocks ASCET may fail to jump to the next/previous Sequence Call WHEN the user navigates inside a Statement Block AND the Ctrl + Left/Right keys are used in the Block Diagram Editor An arbitrary other sequence call is selected instead.
PR679693	Performing DCM-Export by ASCET-API call clears monitor content When performing the API method to export a DCM file, then ASCET clears the contents of the monitor window before writing the DCM file.
PR684889	Wrong code when using compile-time system constants on multiple MUX operators ASCET generates wrong code WHEN the target settings System Constant Resolution are set to COMPILE-TIME AND a System Constant is used as part of the conditional expression of a MUX operator AND one of the connections to the MUX contains another MUX operator AND the inner MUX operator contains expressions where a temporary variable is generated in order to avoid recalculation, e.g. a MAX operator The algorithm used to keep track of the usage of the temporary variables gets confused and uses temporary variables which have not yet been assigned to in the respective path of the MUX.

PR686679	"Find and Replace" in C editor wrongly overwrites Header code ASCET wrongly overwrites the Header code with the C/ESDL Code in the C code editor WHEN the Header code tab is selected AND the function "Find and Replace" is used in combination with "Replace All"
PR687002	Error during AXL import ASCET wrongly shows an import error during the import of an AXL file WHEN it contains a model with BDE elements created with the function 'Send to Back' AND these elements are inside hierarchies
PR687823	Common Subexpression Elimination generates broken Code for switch statements with non-empty fallthrough ASCET generates wrong code WHEN the user writes ESDL code with a switch statement AND common subexpression elimination is enabled AND one of the cases (called case "f") has fallthrough behavior (into the next case, called case "g") AND the case "f" is not empty, i.e., it contains any non-empty statement before falling through into case "g" (please note that the model triggers the warning WMdl885) AND there is a (sub-)expression present in all cases that could be extracted if there were no fallthrough AND one of the variables used in the subexpression is overwritten in case "f" before the subexpression occurs again in case "g" ASCET generates wrong compilable code by extracting the subexpression, so that it is not re-evaluated after the variable is overwritten.
PR688594	Generation of not matching type definitions for complex types ASCET uses wrong type definitions for matrix types WHEN the short name template for RTE types in the ARXML options is used AND the original declaration is provided externally (e.g. by the AUTOSAR-RTE)
PR690217	Wrong code generation for remainder/division min/max sequence ASCET generates wrong code WHEN the code contains a min or max expression AND both operands of the min (or max) expression are modulo or division expressions AND either the two left operands or the two right operands of the modulo/division expressions are identical ASCET wrongly extracts the modulo expression out of the min or max expression, resp. the division without exchanging the min (or max) with a max (or min).
PR690275	ASCET overwrites temp vars used in loop condition ASCET generates wrong code WHEN the model contains a WHILE- or FOR-loop AND the code generator introduces a temporary variable that is only used in the condition of the loop AND the code generator needs another temporary variable in the loop body The code generator wrongly reuses the temporary variable, overwriting its content.
PR691636	Wrong optimization for Arithmetics ASCET may generate wrong code WHEN the code generator is configured for "object-based controller physical" or "physical experiment"

	<p>AND the model contains an expression with sub-expressions, where one of the sub-expressions is of type udisc</p> <p>AND the value of the expression is always less or equal to zero</p> <p>ASCET might wrongly substitute zero for the expression.</p> <p>(e.g.: $B = A + -2 * C$ is transformed into $B = A$, where A, B and C are all of type udisc).</p>
PR695186	<p>System error during code generation</p> <p>ASCET runs into a system error during code generation</p> <p>WHEN accessing an extended input value on a method call without arguments</p> <p>A walkback occurs:</p> <p>(ExCLDTIndexOutOfRange) Index out of range.: 1 (1279732568)</p>
PR695363	<p>Duplicate entries shown in Implementation page when importing AMD</p> <p>ASCET may show duplicate entries in the Implementation page</p> <p>WHEN components are imported from an *.amd file</p> <p>AND a component contains Wrap-Around or Limited Integers</p> <p>An immediate look onto the Implementation page of this component may show duplicate entries for the elements.</p>
PR697599	<p>Wrong error MMdl6 during code generation</p> <p>ASCET reports a wrong error MMdl6 during code generation</p> <p>WHEN an AUTOSAR interface is used</p> <p>AND this interface is represented by multiple objects with different contents</p>

3.1.2. ASCET V6.4.6 Hotfix 2

Problem Number Title

**PR617953/
PR646079/
PR664869/
PR678564** **Customer specific Engineering enhancements of AUTOSAR Importer**

PR644892 **System error when using customer specific Engineering enhancement**
ASCET runs into a system error
WHEN graphics are exported from a BDE
AND Traceability text is included
A walkback occurs:
WB Signal does not understand defaultAction

PR673170 **Missing type definition in generated code**
ASCET generated code does not compile
WHEN the project uses the AUTOSAR context
AND Implementation Types are defined in the project and used
The names of the used Implementation Types appear in the generated C-Code
instead of their associated platform type.

PR677511 **System error during code generation**
ASCET runs into a system error during code generation
WHEN a switch statement is used
AND one or more associated case statements use constant arithmetic expressions
instead of a constant only as "literal", e.g. sysconst + 1
The code generation aborts with a walkback:
UndefinedObject does not understand isFloatContext

PR677986 **ASCET generates superfluous limit code due to wrong internal interval calculation**
ASCET generates superfluous limit code
WHEN an implementation specific code generator is used
AND arithmetic services are used
AND the specified scaling factors lead to the situation that constant folding using the
inverse operator is detected (e.g. $(x * 16) / 16$)
The interval calculation does not adapt the resulting interval AFTER the optimization,
thus leading to superfluous limit code generated.

PR678598	<p>System error when opening SWC View</p> <p>ASCET runs into a system error</p> <p>WHEN an ARXML model is imported into a existing database</p> <p>AND the ARXML overwrites elements with a different type</p> <p>AND afterwards a BDE View using these elements is opened</p> <p>A walkback occurs:</p> <p>SGDataGO does not understand createSymbolGO:</p>
PR679435	<p>Inaccurate code on float literals with more than 14 decimal places</p> <p>ASCET code generation generates inaccurate code due to large overflow</p> <p>WHEN a float literal with more than 14 decimal places is used in an ESDL method body</p> <p>AND an implementation specific code generator is used</p> <p>AND the expression in which the literal is used is NOT assigned to a float typed variable</p> <p>The result of the expression containing the literal might result in 0 (due to the large overflow).</p> <p><i>Note: There is no difference in the behavior for literals or ASCET constants.</i></p>
PR680064	<p>Integer arithmetic error with physical code generation active</p> <p>ASCET wrongly shows an integer arithmetic error</p> <p>WHEN physical code generation is used</p> <p>AND a Mixed_Physical_Implementation has been specified for a component</p> <p>AND a method with a return type 'sdisc' has been implemented, e.g. to define a symbol, but NOT the associated return element</p> <p>AND the return value of the method is used in an arithmetic expression using 'sdisc' model types</p> <p>The code generation reports an overflow from the arithmetic expression.</p>
PR680074	<p>Requirement: Add Component OID to PostPasteHook document</p> <p>Engineering extension:</p> <p>Activating the PostPasteHook writes a document for each copied component.</p> <p>The document contains the OIDs of the component's elements before and after the copy action.</p> <p>This document is now extended to also include the component OID before and after the copy action.</p>
PR680376	<p>Wrong type for distribution search results</p> <p>ASCET generates the wrong type for distribution search results</p> <p>WHEN physical controller code generation is used</p> <p>AND a distribution type is used with its component model type is 'sdisc'</p> <p>An 'sint' c-code type is generated instead of a 'uint' c-code type.</p>
PR682617	<p>Remove erroneous mnemonics from component manager</p> <p>The mnemonics of the component manager have been set into function with a workaround that is not available with the updated development framework. They are presented erroneously, now (with &1, &2, ... marks). They shall be removed completely.</p>

PR683358	System Error during when writing DCM for a map with less values than expected by its axis ASCET runs into a system error WHEN a DCM file is written for the data of a map AND due to an inconsistency in the data model this map has less values than its distribution requests A walkback occurs: Primitive failed in: Object>>#at: due to Index out of range in argument 1 (1188417863)
PR683724	Show unused elements does not work correctly for record elements ASCET wrongly shows elements as unused WHEN nested elements of records are used in the Block Diagram editor AND they are searched with the feature 'Show unused Elements'
PR685590	Code generator generates duplicate typedefs ASCET generates multiple typedefs with the same name WHEN the project is generated in the AUTOSAR context AND an array/matrix type is used for non-AUTOSAR elements The generated code does not compile.
PR685971	Requirement: Target option "Guarded typedef" ASCET introduces a new target option "Guarded typedef" in order to generate C preprocessor directives to avoid duplicate definitions on typedefs on c-code level.

3.1.3. ASCET V6.4.6 Hotfix 1

Problem Number Title

PR632017	Enable customer specific Engineering feature
PR650003	Enable customer specific Engineering feature
PR650764	<p>Impossible to create Statement Block with IF condition</p> <p>ASCET rejects the creation of the statement block</p> <p>WHEN the user tries to encapsulate some selected graphics objects of a block diagram editor into a new statement block</p> <p>AND the list of selected graphic objects contains an IF statement</p>
PR651431	<p>Storing problem of external code (C-, H- and object code)</p> <p>ASCET stores unexpected external C code</p> <p>WHEN the contents of an external specified file in the External Source Code Editor are reduced in the number of characters</p> <p>AND the related C code component is persisted by using the AMD format (workspace, export)</p> <p>ASCET does not reduce the file size accordingly to the new contents. The former specified information at the end of the file is still available.</p>
PR653182	<p>Requirement: WebService command to generate eps files of graphics</p> <p>ASCET shall offer a WebService command to generate eps files of graphics for the current canvas.</p> <p>Documented in <installation>\cebra\Etas.AscetNET.chm.</p>
PR655062	<p>Sequence calls not sorted in default path of switch-case statement</p> <p>In the Navigation Tree, ASCET does not sort the children in the Switch Node (default).</p>
PR662996	<p>Wrong import as Boolean from ARXML</p> <p>ASCET wrongly imports elements from an ARXML file</p> <p>WHEN the value range is restricted to [0 .. 1]</p> <p>Even though the BASE-TYPE-SIZE of the Basic Type in the ARXML file is greater than 1, the element is imported as "Boolean" Implementation type.</p>
PR666527	<p>Impossible to drop global System Constant in SWC</p> <p>ASCET does not allow to drop a global System Constant in an AUTOSAR Software Component. An error message is shown instead.</p>
PR667154	<p>Missing warning for inconsistent specification (wrap-around integer)</p> <p>ASCET shall generate a warning</p> <p>WHEN a wrap-around integer is specified using different min/max values than given by the interval of the associated implementation type</p>

PR671137	Unit of distribution not updated when opening data editor for group tables ASCET shows inconsistent data WHEN the unit information of a distribution is changed AND the data editor for a group table which uses this distribution is opened ASCET does not show the new unit information of the distribution.
PR671602	Duplicate C-Code name with multiple instances of CT-blocks ASCET code generation stops with an error message WHEN the project is generated using a Controller target AND multiple instances of CT-blocks components are used within the model ASCET wrongly complains about the same name used more than once in the global name space.
PR672102	Wrong c-code type for service classes ASCET generates the wrong c-code type for service classes WHEN the target template for c-code type names of ASCET classes has been changed to "CamelCase" ASCET still generates the c-code type for the service class using uppercase
PR672235	Temporary variable used without initialization ASCET generates wrong code WHEN an implementation specific code generator is used AND the code generation option "Generate Float Limiter on Assignment" has been activated AND the code generation option "Common Subexpression elimination" has been activated AND an assignment to float typed element (requiring the limiter generation) is used multiple times within a MULTIPLEX expression ASCET generates a SWITCH statement (from the MULTIPLEX expression) which contains the usage of temporary variables in CASE statements without initialization.
PR672343	Rte_Read called via pointer instead of local variable ASCET generates wrong code WHEN the code is generated for the AUTOSAR context AND a READ access to a complex element, i.e. element typed as ARRAY or RECORD is used AND the access uses explicit semantics AND the data returned from the RTE_READ macro is not directly stored in a model element, thus the code generator introduces a temporary variable ASCET wrongly generates a pointer type for that variable instead of a non-pointer type to actually be able to store the returned data.

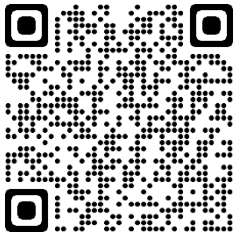
<p>PR672371</p>	<p>ASCET-DIFF fails if installation directory write protected ASCET-DIFF does not perform a comparison WHEN the comparison is triggered from the ASCET Component Manager by selecting two files (Tools\ASCET-DIFF\Compare\Selected Components) AND the ASCET-DIFF installation directory is write protected Note: <i>Temporary interface files are written in "%APPDATA%\ETAS\DIFF\Coupling", now. ASCET-DIFF V6.4.6 continues to be compatible with ASCET from V5.2.2 by reading the predecessor directory ("<INSTALL>\ASCET Coupling"), if "%APPDATA%\ETAS\DIFF\Coupling" does not contain the temporary interface file or does not exist.</i></p>
<p>PR672934</p>	<p>Error message when reimporting a component: 'interface isNil' ASCET wrongly reports an error WHEN a component is imported into ASCET AND the component already exists in the current database The consistency check for data & implementation wrongly reports 'interface isNil'.</p>
<p>PR673142</p>	<p>Compile error for incorrectly generated record ASCET shows a compile error WHEN the project is used in the AUTOSAR context AND a record type is not embedded into an AUTOSAR specification item, like specific interfaces, etc. but used within ASCET module or classes only A compile error occurs for the record type being generated incorrectly</p>
<p>PR673196</p>	<p>System error when used as headless server ASCET runs into a system error WHEN it is used as a headless server in a cloud system AND a code generation web service is requested immediately after deploying the web server A walkback occurs: UndefinedObject does not understand at:ifAbsent: (2133000129)</p>
<p>PR673328</p>	<p>Database entries corrupted in two-byte character OS (Jap., Chin., Korean, ...) ASCET creates corrupt data WHEN an Asian OS is used (two-byte Char OS, e.g. Japanese, Chinese, Korean, ...) AND database objects containing strings are edited or newly created OR a database repair is executed These objects are handled and saved incorrectly. The result is that these database objects are no longer usable. Suggested preparation for bugfix: <ul style="list-style-type: none"> - Perform a clean all to remove all generated code. - Export your database contents into an *.axl file or as separate *.amd files. - Install the fixed product version or hotfix - Either open your database and check your specified code in ESDL, C-Code and state machine components or reimport the exported files </p>

PR674253	<p>System error during code generation</p> <p>ASCET runs into a system error</p> <p>WHEN the model uses FIXED characteristic tables</p> <p>AND the project option "optimized Direct Access" has been activated</p> <p>AND the access to a FIXED characteristic table element is done via a direct access</p> <p>A walkback occurs:</p> <p>UndefinedObject does not understand varDecl (4178011582)</p>
PR674333	<p>System Constants: Wrong import as logic basic type from ARXML</p> <p>ASCET wrongly imports System Constants from an ARXML file</p> <p>WHEN the value range is [0 .. 1]</p> <p>Even though the Implementation Data Type in the ARXML file is not "Boolean", the System Constants are imported as "logic" basic type.</p>
PR674752	<p>Compiler Warning because variable <code>_Ascet_RteStatus</code> set but not used</p> <p>ASCET generated code results in a compiler warning</p> <p>WHEN the project is generated in the AUTOSAR context</p> <p>AND a client server operation is called without taking care of the return value (using the BDE invoke operator with no error block)</p> <p>The compiler issues the warning, that the return value of the method (value of <code>Rte_StandardReturnType</code>) is not used.</p> <p>Note: In addition, a code generation warning (MMdl2761) has been introduced in case the operation returns an application error which is not taken care of.</p>
PR674934	<p>System error during code generation</p> <p>Walkback in customer specific Engineering enhancement.</p> <p>ERROR(Elle533): GENERAL: missing error message: Elle533</p>
PR676105	<p>Multiple mapping of NV data variables handled incorrectly</p> <p>ASCET code generation misses to show an error</p> <p>WHEN mappings in the AUTOSAR context are used</p> <p>AND a non-volatile variable is mapped to two different data elements via associated require ports</p>
PR677032	<p>Show unused Elements lists referenced messages of type Record</p> <p>ASCET wrongly lists messages in the result list of 'Show unused elements'</p> <p>WHEN these messages are of type Record</p> <p>AND the messages are referenced (e.g., mapped in a Software Component)</p>
PR677872	<p>Superfluous limit code for float typed elements</p> <p>ASCET generates wrong limit code for float typed elements</p> <p>WHEN an Implementation specific code generator is used</p> <p>AND the Integer Arithmetic Option "Generate Float Limiter on Assignment" has been enabled</p> <p>AND a float typed element does have limits specified</p> <p>AND the float typed element is part of an expression which is assigned to an integer typed element</p> <p>ASCET generates superfluous limit code taken from the float typed element prior to the assignment to the integer typed element.</p>

4. Contact Information

4.1. Technical Support

For details of your local sales office as well as your local technical support team and product hotlines, take a look at the website: www.etas.com/hotlines



4.2. ETAS Headquarters

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