



DDS

What's New in Version 21.2?



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Table of Contents

1 DDS: Purpose and scope	3
2 DDS - What's new in 21.2.R0	3
2.1 New Features, Major Improvements	3
2.2 Minor Improvements, Correction of Bugs.....	4
3 DDS - What's new in 21.2 Appendix	8
3.1 No longer supported features.....	8
3.2 Questions?.....	8

1 DDS: Purpose and scope

This document describes the improvements and changes of the current DDS version compared to the previous versions.

2 DDS - What's new in 21.2.R0

2.1 New Features, Major Improvements

Key What's New In Dds

AD **ExpSrc**

DS-186
31

Introduction of preprocessor include guard directives for type definitions for enum, struct and union definitions. Additional keyword struct for nested struct members in a type definition to avoid to rely on a previous typedef, e.g.

```
#ifndef ENUM_CATEGORY_INCLUDED
#define ENUM_CATEGORY_INCLUDED
typedef enum {Good = 0, Normal = 1, Bad = 2} Category;
#endif

#ifndef STRUCT_STATE_INCLUDED
#define STRUCT_STATE_INCLUDED
struct State{
    struct NestedStruct nestedStruct;
    Category c_param_1[1][2];
};
#endif
```

ImpADD

Implementation of a filter of single module imported that is contained in a specified SoftwareComponent (SWC). If a SWC is specified in SoftwareComponent option of ImpADD, a specific container can additionally be specified in the container list, to act a a filter. The source files for the specified container is created the same as without filtering. All other entities that are not content of the specified container (entities with integration input) are moved to separate files e.g. the unassigned inputs file.

AD **ImpADD**

DS-185
44

The DDS Schema allows to set new attributes for number types to artificially limit the minimum and maximum value of a "numberType".

The attributes

- lowerBound
- upperBound

can be set for each number type to limit its allowed values to a subrange within "lowerLimit" and "upperLimit".

If the ImpADD option "-AdjustInitValuesToBounds" is set, all init values are adjusted to the given "lowerBound .. upperBound" range. This has impact on the generated source code. Default: The bounds check is turned off.

AD **Logging**

DS-18468

Extended the logging Option "OnlyErrorsOnStdError" for all DDS tools. If the the option is enabled, only messages with a severity equal or above Error (FatalError or Error) are logged to StdErr. In earlier versions of DDS all other messages (Information, Warning) were ignored and not written at all. This is not the case any more, because the messages are now written to StdOut and it is up to the user to ignore them or not.

3 issues

2.2 Minor Improvements, Correction of Bugs

Key **What's New In Dds**

Y

AD **ExpSrc**

DS-19279

Type-Declarations are generated AUTOSAR konform. The macros CONST and VAR are not used for struct-type declarations anymore.

AD **DDS AddOn Install**

DS-19267

Issues related to an error when installing DDS AddOn R1 on a system already containing a AddOn R0 - installation fixed.

AD **ImpADD**

DS-19132

It is possible that the following warning:

```
W0172 ADD - Import a container Can't import container, composition and softwareComponentContainer with the same name: '<name of the software component>'
```

is issued in projects without any Software-Components involved. As a consequence the import process is stopped.

The correlated check that issues this warning is intended only to run for imports where Software-Components are participating. This can be any project that contains at least one Software-Component in its hierarchy or an explicit Software-Components import via Option "DDSSoftwareComponent".

Bugfix: The warning must not occur when no Software-Component is present is imported at all. The import must run until it succeeds or fails of other reasons.

AD **ExpSrc**

DS-19087

The ExpSrc option "-DeclFile4StructTypes" can be used to specify that all struct types are declared in the specified header file (e.g. "-DeclFile4StructTypes global_structs.h") instead of the header file of the current module itself. If the option was used, a module that only uses struct types within the source code section marked by SW_INTERFACE was lacking the proper header include directive for the specified struct type header. This is not the case anymore.

AD ImpADD

Fixed correct import of AccessFrequency attributes of data object from ADD. The AccessFrequency import was not deterministic in rare cases in the past and did not consider data objects that were disabled by code variants (sometimes the AccessFrequency of an inactive output was taken instead the AccessFrequency of the active output). Also data object from an CSAp where not taken into account always correctly.

The take over of an AccessFrequency attribute from an ADD data object by an DDS entity follows those rules in that particular order:

1. The AccessFrequency of the active (not disabled by a code variant) data object with integration output is taken
2. The AccessFrequency of any inactive (disabled by a code variant) data object with integration output is taken (Those object are already filtered out by ADD during the import using default options)
3. The AccessFrequency of any inactive (disabled by a code variant) data object with integration input is taken

AD ExpSrc

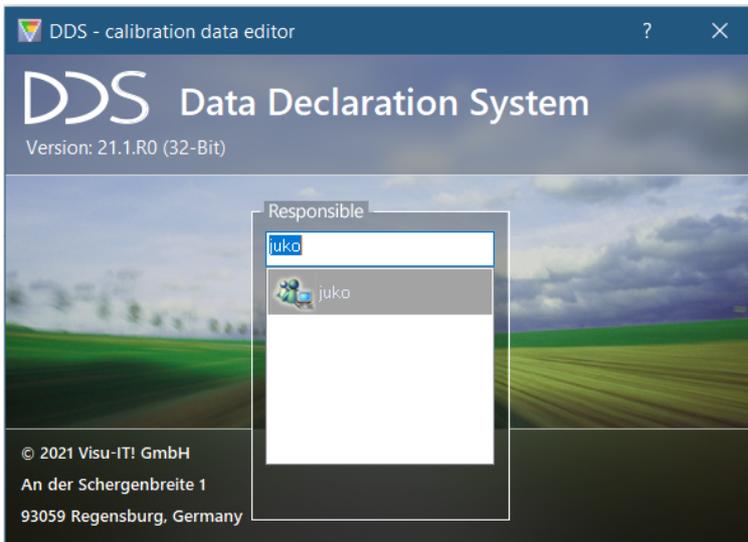
When enabling the option "-DataSpaceMemoryOptimizationMode Optimize" the optimal order of struct members imported from ADD struct data objects in regards of alignment and memory consumption an was lost. This issue is fixed.

AD ExpSrc

The code generation for data variants struct withing the section marked by SW_INTERFACE was not generated correctly. This issue is fixed.

AD GenEdit

Fixed user interface issue in log-in dialog to be able to select the responsible user, when the DPI setting for the screen > 100%.



AD ExpSrc

DS Bugix for generation of AUTOSAR conform code.
-18

93 The extern declaration of a struct may be wrong, when the struct contains at least on other struct that only contains
5 Onlines (RAM struct) and the code format produced is configured for AUTOSAR. The affected line is within the SW_INTERFACE block. The problem occurs sporadically. The following show the problematic line:

Correct:

```
extern VAR(struct struct_E, RTE_VAR)
ETMR_ADDS_18631_Struct_Third_ADDS_18631_SWCLOCAL;
```

Wrong:

```
extern CONST(struct struct_E, RTE_APPL_CONST)
ETMR_ADDS_18631_Struct_Third_ADDS_18631_SWCLOCAL;
```

Example "struct definition" that causes the problem:

```
#ifndef STRUCT_STRUCT_E_INCLUDED
#define STRUCT_STRUCT_E_INCLUDED
struct struct_E
{
    UBYTE E_onl_1;
};
#endif

#ifndef STRUCT_STRUCT_G_INCLUDED
#define STRUCT_STRUCT_G_INCLUDED
struct struct_G
{
    struct struct_E struct_4;
    FLOAT64_IEEE Online_1;
};
#endif
```

AD ImpELF

DS Fix and improve import of addresses for struct members for particular ELF file.
-18

84
1

AD ImpAdd

DS Take care of imported Units from ADD where a SIUnit without a connected base units exists in ADD. Newer versions
-18 of ADD do not create this base unit automatically anymore, because technically it's not needed for ADD. DDS now can
75 handle this case, too. No workarounds (manual creation of a base unit in the DB) necessary anymore.
7

AD ImpADD

DS

-18

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Using the import Options "MappingScheme4Parameters" or "MappingScheme4Onlines" in combination with "TreatAsValBlk" set to "yes" may cause that a scalar can get the mappingScheme for "ValBlk" assigned in case of similar MappingScheme names.

The problem may occur when you have 2 MappingSchemes where one of them contains the DisplayName partially and is used in the Option "MappingScheme4Parameters" e.g.

- MappingScheme4Parameters = Autosar40
- TreatArraysAsVALBLK

```
mappingSchemeParameter Autosar40_Array {
  dataTypeKind = dataTypeKind ARTYPE;
  displayName = mlString { value = "Autosar40_Array_ValBlk"; }
  mappingElements = mappingElement { kind = mappingElementKind values; }
  isValBlk = boolean true;
}

mappingSchemeParameter Autosar40 {
  dataTypeKind = dataTypeKind ARTYPE;
  displayName = mlString { value = "Autosar40"; }
  mappingElements = mappingElement { kind = mappingElementKind values; }
}
```

because the DisplayName "Autosar40" of one MappingScheme is part of the DisplayName "Autosar40_Array_ValBlk".

12 issues

3 DDS - What's new in 21.2 Appendix

3.1 No longer supported features

Key	What's New In Dds
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No issues found

3.2 Questions?

If you have any questions about this release, please contact the Visu-IT! Hotline:

DDS Hotline

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DDS Product Page

Internet: visu-it.de/products/dds/