



CODESYS ENGINEERING

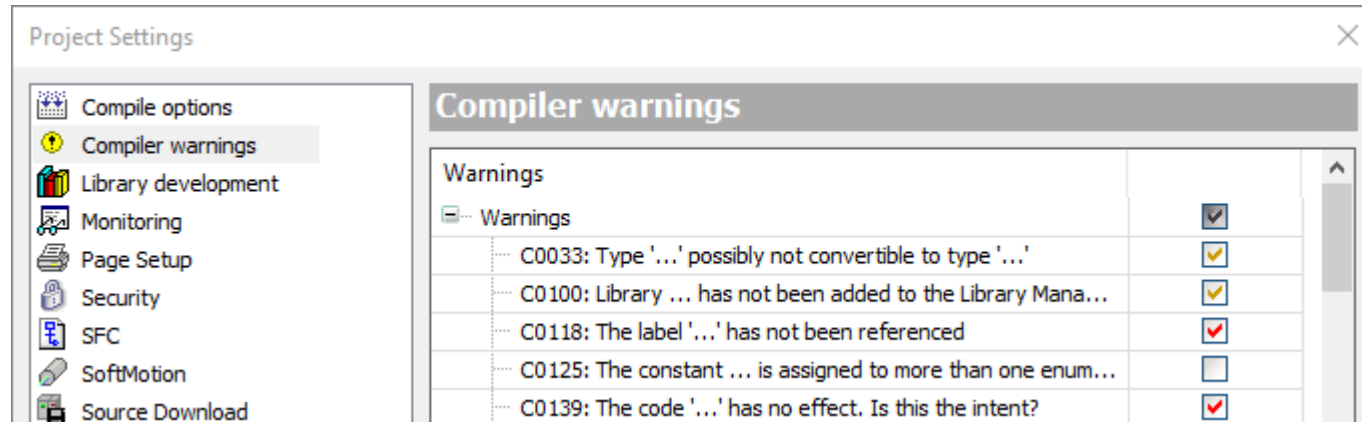
Compiler Features



CODESYS Feature Briefing, October 2024
Bernhard Reiter, Product Manager

Warnings as errors

- **Ideal: Projects should be free of warnings.**
 - Warnings might indicate unexpected or unintended behavior.
- **Difficult to enforce as a rule in the past**
- **From V3.5 SP21 onwards, warnings can be reported as compiler errors instead.**
- **Can be configured per warning.**



Configuration of usable stack size

- **The stack is temporary memory used during the execution of a task when programs and functions are called.**
- **Stack memory is limited – excessive usage can crash the application.**
 - Stack usage depends on the control flow of the application.
- **Stack usage is checked during compilation.**
 - In case the limit is reached, the compiler shows the according call stack.

Configuration of usable stack size

- From V3.5 SP21 on, stack usage will be displayed in the task configuration.
- For a defined task, the usage limit of a stack can be increased.

Task Configuration x

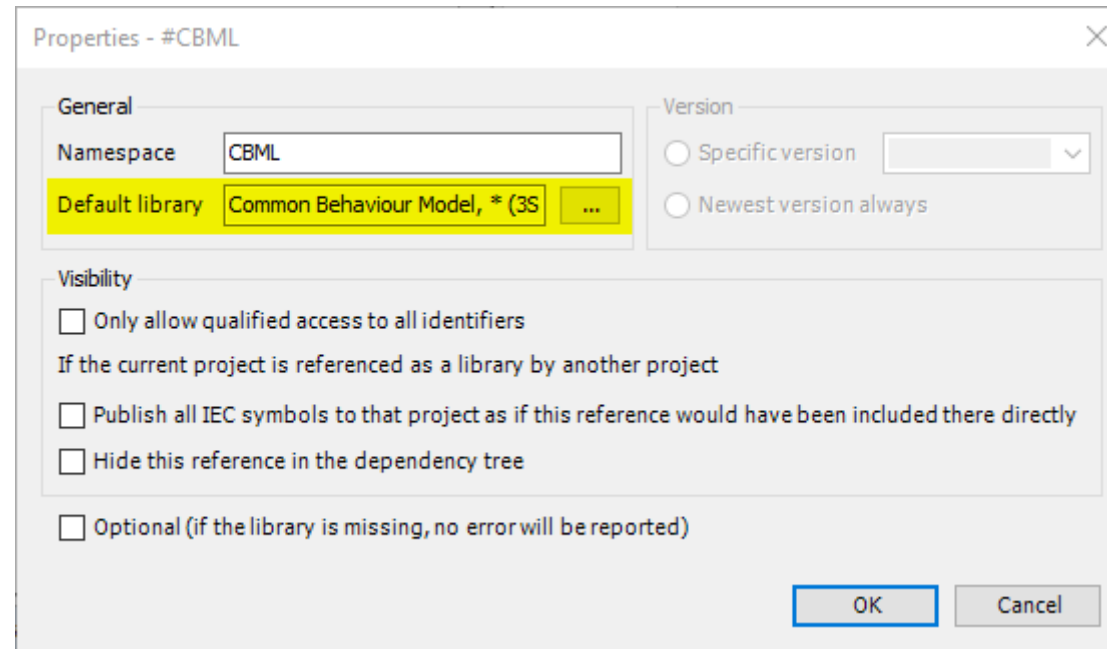
Task Groups Monitor Variable Usage **Stack Usage** System Events Properties

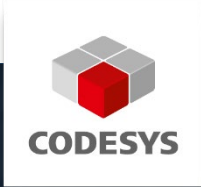
Available stack: 4.194.304 bytes Assumed stack size for external calls: 0 bytes

Task/Call Tree	Stack Size	Stack Consumption
Task		
VISU_TASK		
<Hidden/Implicit Callee>	40	40
<Hidden/Implicit Callee>	56	96
VISU_PRG	24	120
Visu_PRG	312	432
Visu_PRG.DoVisualization	72	504
<Hidden/Implicit Callee>	472	976
Visu_PRG.HandleEvent	392	1.368
<Hidden/Implicit Callee>	120	1.488
VisuFctExecuteVisu_ExceptionsHandled	136	1.624
VisuFctExecuteVisu_WithoutHandlingExceptions	184	1.808
VisuFbExecution.Execute	424	2.232
VisuFbExecution.StartCycle	136	2.368
<Hidden/Implicit Callee>	184	2.552
Visu_FbVisuManager.SetMainVisu	184	2.736

Default resolution of library

- Obsolete feature since V3.5 SP18
- Library placeholders in the POU's are handled as unbound placeholders.
- The setting will be removed in V3.5 SP21.





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