

Document Title	SWS_NetworkManagementInterface: Complete Change Documentation 4.3.0 - 4.3.1
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1 SWS_NetworkManagementInterface

1.1 Specification Item ECUC_Nm_00200

Trace References:

none

Content:

Container Name	NmGlobalFeaturesNmGlobalFeatures
Description	-
Configuration Parameters	

Included parameters:

Included Parameters	
Parameter Name	SWS Item ID
NmBusSynchronizationEnabled	ECUC_Nm_00208
NmCarWakeUpCallout	ECUC_Nm_00234
NmCarWakeUpCalloutHeader	ECUC_Nm_00244
NmCarWakeUpRxEnabled	ECUC_Nm_00235
NmComControlEnabled	ECUC_Nm_00210
NmCoordinatorSupportEnabled	ECUC_Nm_00206
NmCoordinatorSyncSupport	ECUC_Nm_00240
NmGlobalCoordinatorTime	ECUC_Nm_00237
NmNodeDetectionEnabled	ECUC_Nm_00212
NmNodeIdEnabled	ECUC_Nm_00213
NmPduRxIndicationEnabled	ECUC_Nm_00214
NmRemoteSleepIndEnabled	ECUC_Nm_00207
NmRepeatMsgIndEnabled	ECUC_Nm_00229
NmStateChangeIndEnabled	ECUC_Nm_00215
NmUserDataEnabled	ECUC_Nm_00211

Included containers:

No Included Containers

RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

- RfC #77070: [NmIf] Generic <cdd>.h inclusion in context of CarWakeUp

Problem description:

Hello,

Requirement SWS_Nm_00124 specifies that:

<cdd>.h (If a CDD is used for CarWakeup-functionality. The name of the CDD is generic.)

1. Shouldn't be a configuration parameter available to specify the header file ?
2. In case NmCarWakeUpCallout is specified the declaration of the callout function shouldn't be in Nm.h ?

Best Regards,
Lorant

Agreed solution:

add parameter to NmGlobalFeatures

Name: NmCarWakeUpCalloutHeader

Description : Defines the header file which declares the callout function configured via NmCarWakeUpCallout.

Multiplicity : 0..1

Type_ EcucStringParamDef

Length 1-32

Variant Multiplicity false

Variant Value false

Config Class : Pre-compile for all variants

dependency : only available if NmCarWakeUpCallout is configured

change SWS_Nm_00124 to

The following header files shall be included by the Nm Interface module:

Std_Types.h (for AUTOSAR standard types)

Note: Platform_Types.h (for platform specific types) and Compiler.h (for compiler specific language extensions) are indirectly included via AUTOSAR standard types.

Nm_MemMap.h (for memory abstraction)

SchM_Nm.h (for interfaces with the BSW Scheduler)

ComM_Nm.h (for Communication Manager callback functions)

BswM_Nm.h (If the BswM is used for CarWakeup-functionality)

<NmCarWakeUpCalloutHeader>.h (If a CDD is used for CarWakeup-functionality.)

–Last change on issue 77070 comment 18–

BW-C-Level:

Application	Specification	Bus
1	3	1

1.2 Specification Item ECUC_Nm_00212

Trace References:

none

Content:

Name	NmNodeDetectionEnabledNmGlobalFeatures.NmNodeDetectionEnabled		
Parent Container	NmGlobalFeatures		
Description	Pre-processor switch for enabling the Node Detection feature. Tags: atp.Status=obsolete		
Multiplicity	1 0..1		
Type	EcucBooleanParamDef		
Default value	-		
Post-Build Variant Value	false		
Value Configuration Class	Pre-compile time	X	All Variants
	Link time	-	
	Post-build time	-	
Scope / Dependency	scope: local dependency: Only valid if NmNodeIdEnabled is set to TRUE		

RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

- RfC #75405: [NmIf] make "[RepeateMsgInd|NodeDetection|NodeId]Enabled" channel based configurable

Problem description:

The following attributes are NmEcu global:

nmRepeatMsgIndEnabled
 nmNodeDetectionEnabled
 nmNodeIdEnabled

This attributes should be configurable per channel.

Agreed solution:

=== SysT ===

set the atpStatus to obsolete for the following attributes:

SystemTemplate::NetworkManagement::NmEcu.nmNodeIdEnabled

SystemTemplate::NetworkManagement::NmEcu.nmRepeatMsgIndEnabled

SystemTemplate::NetworkManagement::NmEcu.nmNodeDetectionEnabled

introduce the following optional attributes to NmCluster:

SystemTemplate::NetworkManagement::NmCluster.nmNodeIdEnabled

SystemTemplate::NetworkManagement::NmCluster.nmRepeatMsgIndEnabled

SystemTemplate::NetworkManagement::NmCluster.nmNodeDetectionEnabled

=== EcuC NmIf ===

set the atpStatus to obsolete and make them optional for the following parameters:

Nm:NmGlobalConfig:NmGlobalFeatures:NmNodeIdEnabled

Nm:NmGlobalConfig:NmGlobalFeatures:NmRepeatMsgIndEnabled

Nm:NmGlobalConfig:NmGlobalFeatures:NmNodeDetectionEnabled

-upstream-mapping for Nm:NmGlobalConfig:NmGlobalFeatures:(NmNodeIdEnabled|NmRepeatM

Remove ECUC_Nm_00213 NmNodeIdEnabled from NmGlobalFeatures

Remove ECUC_Nm_00212 NmNodeDetectionEnabled from NmGlobalFeatures

Remove ECUC_Nm_00229 NmRepeatMsgIndEnabled from NmGlobalFeatures

=== EcuC CanNm ===

set the atpStatus to obsolete and make them optional for the following parameters:

CanNm:CanNmGlobalConfig:CanNmNodeIdEnabled

CanNm:CanNmGlobalConfig:CanNmRepeatMsgIndEnabled

CanNm:CanNmGlobalConfig:CanNmNodeDetectionEnabled

Introduce new optional parameters in CanNmChannelConfig (same properties as in CanNmGlobalConfig container):

CanNm:CanNmGlobalConfig:CanNmChannelConfig:CanNmNodeIdEnabled

CanNm:CanNmGlobalConfig:CanNmChannelConfig:CanNmRepeatMsgIndEnabled

CanNm:CanNmGlobalConfig:CanNmChannelConfig:CanNmNodeDetectionEnabled

+upstream-mapping 1:1 to new SysT attributes in SystemTemplate::NetworkManagement::NmCluster

Move ECUC_CanNm_00005 CanNmRepeatMsgIndEnabled from CanNmGlobalConfig to CanNmChannelConfig and change Value Configuration Class to Pre-compile time -> VARIANT-PRE-COMPILE / Link time -> VARIANT-LINK-TIME, VARIANT-POST-BUILD

Move ECUC_CanNm_00007 CanNmNodeDetectionEnabled from CanNmGlobalConfig to CanNmChannelConfig and change Value Configuration Class to Pre-compile time -> VARIANT-PRE-COMPILE / Link time -> VARIANT-LINK-TIME, VARIANT-

POST-BUILD

Move ECUC_CanNm_00083 CanNmNodeIdEnabled from CanNGlobalConfig to CanNmChannelConfig and change Value Configuration Class to Pre-compile time -> VARIANT-PRE-COMPILE / Link time -> VARIANT-LINK-TIME, VARIANT-POST-BUILD

=== EcuC UdpNm ===

set the atpStatus to obsolete and make them optional for the following parameters:

UdpNm:UdpNmGlobalConfig:UdpNmNodeIdEnabled
UdpNm:UdpNmGlobalConfig:UdpNmRepeatMsgIndEnabled
UdpNm:UdpNmGlobalConfig:UdpNmNodeDetectionEnabled

Introduce new optional parameters in UdpNmChannelConfig (same properties as in UdpNmGlobalConfig container):

UdpNm:UdpNmGlobalConfig:UdpNmChannelConfig:UdpNmNodeIdEnabled
UdpNm:UdpNmGlobalConfig:UdpNmChannelConfig:UdpNmRepeatMsgIndEnabled
UdpNm:UdpNmGlobalConfig:UdpNmChannelConfig:UdpNmNodeDetectionEnabled

+upstream-mapping 1:1 to new SysT attributes in SystemTemplate::NetworkManagement::NmCluster

Move ECUC_UdpNm_00015 UdpNmRepeatMsgIndEnabled from UdpNmGlobalConfig to UdpNmChannelConfig and change Value Configuration Class to Pre-compile time -> VARIANT-PRE-COMPILE / Link time -> VARIANT-LINK-TIME, VARIANT-POST-BUILD

Move ECUC_UdpNm_00007 UdpNmNodeDetectionEnabled from UdpNmGlobalConfig to UdpNmChannelConfig and change Value Configuration Class to Pre-compile time -> VARIANT-PRE-COMPILE / Link time -> VARIANT-LINK-TIME, VARIANT-POST-BUILD

Move ECUC_UdpNm_00008 UdpNmNodeIdEnabled from UdpNmGlobalConfig to UdpNmChannelConfig and change Value Configuration Class to Pre-compile time -> VARIANT-PRE-COMPILE / Link time -> VARIANT-LINK-TIME, VARIANT-POST-BUILD

=== EcuC FrNm ===

set the atpStatus to obsolete and make them optional for the following parameters:

FrNm:FrNmGlobalConfig:FrNmGlobalFeatures:FrNmSourceNodeIdentifierEnabled
FrNm:FrNmGlobalConfig:FrNmGlobalFeatures:FrNmNodeDetectionEnabled

Introduce new optional parameters in FrNmChannelConfigs (same properties as in NmGlobalFeatures container):

FrNm:FrNmChannelConfig:FrNmChannel:FrNmSourceNodeIdentifierEnabled
FrNm:FrNmChannelConfig:FrNmChannel:FrNmNodeDetectionEnabled

+upstream-mapping 1:1 to new SysT attributes in SystemTemplate::NetworkManagement::NmCluster

Move ECUC_FrNm_00040 FrNmNodeDetectionEnabled from FrNmGlobalFeatures to FrNmChannelConfig and change Value Configuration Class to Pre-compile time -> VARIANT-PRE-COMPILE / Link time -> VARIANT-LINK-TIME, VARIANT-POST-BUILD

Append "FrNmSourceNodeIdentifierEnabled needs to be TRUE to use this feature." to the description of Move ECUC_FrNm_00040.

Move ECUC_FrNm_00042 FrNmSourceNodeIdentifierEnabled from FrNmGlobalFeatures to FrNmChannelConfig and change Value Configuration Class to Pre-compile time -> VARIANT-PRE-COMPILE / Link time -> VARIANT-LINK-TIME, VARIANT-POST-BUILD

=== EcuC LinNm ===

set the atpStatus to obsolete and make them optional for the following parameters:

LinNm:LinNmGlobalConfig:LinNmNodeIdentifierEnabled

LinNm:LinNmGlobalConfig:LinNmNodeDetectionEnabled

Introduce new optional parameters in LinNmChannelConfig (same properties as in LinNmGlobalConfig container):

LinNm:LinNmGlobalConfig:LinNmChannelConfig:LinNmNodeIdentifierEnabled

LinNm:LinNmGlobalConfig:LinNmChannelConfig:LinNmNodeDetectionEnabled

+upstream-mapping 1:1 to new SysT attributes in SystemTemplate::NetworkManagement::NmCluster

Move ECUC_LinNm_00021 from LinNmGlobalConfig to LinNmChannelConfig

Move ECUC_CanNm_00007 from LinNmGlobalConfig to LinNmChannelConfig

=== BSW UML CanNm ===

Change SWS_CanNm_00219 Return Value description E_NOT_OK to "Getting of the node identifier out of the most recently received NM PDU has failed or is not configured for this network handle."

Change SWS_CanNm_00220 Return Value description E_NOT_OK to "Getting of the node identifier of the local node has failed or is not configured for this network handle."

Change SWS_CanNm_00221 Return Value description E_NOT_OK to "Setting of Repeat Message Request Bit has failed or is not configured for this network handle."
Change SWS_CanNm_00222 Return Value description E_NOT_OK to "Getting of NM PDU Data has failed or is not configured for this network handle."

=== BSW UML UdpNm ===

Remove the complete "Configuration:" part from the description of SWS_UdpNm_00221, SWS_UdpNm_00309, SWS_UdpNm_00219, SWS_UdpNm_00220.

=== SWS NmIf ===

Remove SWS_Nm_00142, SWS_Nm_00146, SWS_Nm_00148, SWS_Nm_00144, and SWS_Nm_00231.

=== SWS CanNm ===

Remove SWS_CanNm_00135

Change SWS_CanNm_00119 to "If CanNmNodeDetectionEnabled is set to TRUE and Repeat Message Request bit is received in the Normal Operation State CanNm shall enter Repeat Message State."

Change SWS_CanNm_00111 to "If CanNmNodeDetectionEnabled is set to TRUE and Repeat Message Request bit is received in the Ready Sleep State CanNm shall enter Repeat Message State."

Change SWS_CanNm_00120 to "If CanNmNodeDetectionEnabled is set to TRUE and function CanNm_RepeatMessageRequest is called in the Normal Operation State CanNm shall enter Repeat Message State."

Change SWS_CanNm_00121 to "If CanNmNodeDetectionEnabled is set to TRUE and function CanNm_RepeatMessageRequest is called in the Normal Operation State CanNm shall set the Repeat Message Bit."

Change SWS_CanNm_00112 to "If CanNmNodeDetectionEnabled is set to TRUE and function CanNm_RepeatMessageRequest is called in the Ready Sleep State CanNm shall enter Repeat Message State."

Change SWS_CanNm_00113 to "If CanNmNodeDetectionEnabled is set to TRUE and function CanNm_RepeatMessageRequest is called in the Ready Sleep State CanNm shall set the Repeat Message Bit."

Change SWS_CanNm_00107 to "If CanNmNodeDetectionEnabled is set to TRUE CanNm shall clear the Repeat Message Bit when leaving Repeat Message State."

Change SWS_CanNm_00014 to "If CanNmNodeDetectionEnabled and CanNmRepeatMsgIndEnabled are set to TRUE and Repeat Message Request bit is received CanNm module shall call the callback function Nm_RepeatMessageIndication."

Change SWS_CanNm_00138 to "The service call CanNm_GetPduData shall

provide whole PDU data (Node ID, Control Bit Vector and User Data) of the most recently received Network Management PDU if CanNmNodeDetectionEnabled or CanNmUserDataEnabled or CanNmNodeIdEnabled is set to TRUE." and move this requirement to chapter 8.3.14 CanNm_GetPduData

Change SWS_CanNm_00407 to "If CanNm_GetPduData is called in the context of Nm_CarWakeUpIndication and if CanNmNodeDetectionEnabled or CanNmUserDataEnabled or CanNmNodeIdEnabled is set to TRUE, CanNm shall return the PDU data of the PDU that causes the call of Nm_CarWakeUpIndication."

Change SWS_CanNm_00132 to "The service call CanNm_GetNodeIdentifier shall provide the node identifier out of the most recently received Network Management PDU if CanNmNodeIdEnabled is set to TRUE.

Change SWS_CanNm_00133 to "The service call CanNm_GetLocalNodeIdentifier shall provide the node identifier configured for the local host node if CanNmNodeIdEnabled is set to TRUE.

Remove SWS_CanNm_00274

Remove SWS_CanNm_00276

Remove SWS_CanNm_00270

Remove SWS_CanNm_00272

=== SWS UdpNm ===

Remove SWS_UdpNm_00135

Remove SWS_UdpNm_00139

Change SWS_UdpNm_00119 to "If UdpNmNodeDetectionEnabled is set to TRUE and Repeat Message Request bit is received in the Normal Operation State, UdpNm shall enter Repeat Message State. (SRS_Nm_00153)"

Change SWS_UdpNm_00111 to "If UdpNmNodeDetectionEnabled is set to TRUE and Repeat Message Request bit is received in the Ready Sleep State, UdpNm shall enter Repeat Message State. (SRS_Nm_00153)"

Change SWS_UdpNm_00120 to "If UdpNmNodeDetectionEnabled is set to TRUE and function UdpNm_RepeatMessageRequest is called in the Normal Operation State, UdpNm shall enter Repeat Message State. (SRS_Nm_00153)"

Change SWS_UdpNm_00121 to "If UdpNmNodeDetectionEnabled is set to TRUE and function UdpNm_RepeatMessageRequest is called in the Normal Operation State, UdpNm shall set the Repeat Message Bit. (SRS_Nm_00153)"

Change SWS_UdpNm_00112 to "If UdpNmNodeDetectionEnabled is set to TRUE and function UdpNm_RepeatMessageRequest is called in the Ready Sleep State, UdpNm shall enter Repeat Message State. (SRS_Nm_00153)"

Change SWS_UdpNm_00113 to "If UdpNmNodeDetectionEnabled is set to TRUE and function UdpNm_RepeatMessageRequest is called in the Ready Sleep State, UdpNm shall set the Repeat Message Bit. (SRS_Nm_00153)"

Change SWS_UdpNm_00107 to "If UdpNmNodeDetectionEnabled is set to TRUE UdpNm shall clear the Repeat Message Bit when leaving Repeat Message State."

Change SWS_UdpNm_00014 to "If UdpNmNodeDetectionEnabled and UdpNmRepeatMsgIndEnabled are set to TRUE and Repeat Message Request bit is received, UdpNm module shall call the callback function Nm_RepeatMessageIndication. (SRS_Nm_00153)"

Change SWS_UdpNm_00138 to "The service call UdpNm_GetPduData shall provide whole payload (Source Node ID, Control Bit Vector and User Data) of the most recently received Network Management PDU if UdpNmNodeDetectionEnabled or UdpNmUserDataEnabled or UdpNmNodeIdEnabled is set to TRUE." and move this requirement to chapter "8.3.12 UdpNm_GetPduData"

Change SWS_UdpNm_00375 to "If UdpNm_GetPduData is called in the context of Nm_CarWakeUpIndication and if UdpNmNodeDetectionEnabled or UdpNmUserDataEnabled or UdpNmNodeIdEnabled is set to TRUE, UdpNm shall return the PDU data of the PDU that causes the call of Nm_CarWakeUpIndication."

Change SWS_UdpNm_00219 Return Value description E_NOT_OK to "Getting of the node identifier out of the most recently received NM PDU has failed or is not configured for this network handle."

Change SWS_UdpNm_00132 to "The service call UdpNm_GetNodeIdentifier shall provide the node identifier out of the most recently received Network Management PDU if UdpNmNodeIdEnabled is set to TRUE."

Change SWS_UdpNm_00220 Return Value description E_NOT_OK to "Getting of the node identifier of the local node has failed or is not configured for this network handle."

Change SWS_UdpNm_00133 to "The service call UdpNm_GetLocalNodeIdentifier shall provide the node identifier configured for the local host node if UdpNmNodeIdEnabled is set to TRUE."

Change SWS_UdpNm_00221 Return Value description E_NOT_OK to "Setting of Repeat Message Request Bit has failed or is not configured for this network handle."

Change SWS_UdpNm_00309 Return Value description E_NOT_OK to "Getting of NM PDU Data has failed or is not configured for this network handle."

=== SWS FrNm ===

Remove SWS_FrNm_00170

Remove SWS_FrNm_00172

Remove SWS_FrNm_00228

Remove SWS_FrNm_00266

Remove SWS_FrNm_00267

Remove SWS_FrNm_00268

Change SWS_FrNm_00124 to "If FrNmNodeDetectionEnabled is set to TRUE the FlexRay NM module shall leave the Normal Operation State and enter the Repeat Message State at the end of a NM Repetition Cycle when a Repeat Message Request is active. During this transition it shall set the Repeat Message Request Bit if the Repeat Message Request is active due to a call of

FrNm_RepeatMessageRequest."

Change SWS_FrNm_00130 to "If FrNmNodeDetectionEnabled is set to TRUE the FlexRay NM module shall leave the Ready Sleep State and enter the Repeat Message State at the end of a NM Repetition Cycle when a Repeat Message Request is active and Ready Sleep Time has not expired. During this transition it shall set the Repeat Message Request Bit if the Repeat Message Request is active due to a call of FrNm_RepeatMessageRequest."

Change SWS_FrNm_00243 Return Value description E_NOT_OK to "Setting of Repeat Message Request Bit has failed or is not configured for this network handle."

Change SWS_FrNm_00172 to "The function FrNm_RepeatMessageRequest shall request node detection on the FlexRay Bus NM nodes if FrNmNodeDetectionEnabled is set to TRUE."

Change SWS_FrNm_00244 Return Value description E_NOT_OK to "Getting of the node identifier out of the last received NM-message has failed or is not configured for this network handle."

Change SWS_FrNm_00047 to "The function FrNm_GetNodeIdentifier shall provide the node identifier from the most recently received NM-message if FrNmSourceNodeIdentifierEnabled is set to TRUE."

Change SWS_FrNm_00245 Return Value description E_NOT_OK to "Getting of the node identifier of the local node has failed or is not configured for this network handle."

Change SWS_FrNm_00046 to "The function FrNm_GetLocalNodeIdentifier shall provide the node identifier configured for the local host node (FrNmNodeId) if FrNmSourceNodeIdentifierEnabled is set to TRUE."

Change SWS_FrNm_00242 Return Value description E_NOT_OK to "Getting of NM PDU Data has failed or is not configured for this network handle."

Change SWS_FrNm_00265 to "The function FrNm_GetPduData shall get the whole NM PDU data out of the most recently received NM message if FrNmControlBitVectorEnabled or FrNmSourceNodeIdentifierEnabled or FrNmUserDataEnabled is set to TRUE."

=== SWS LinNm ===

–Last change on issue 75405 comment 51–

BW-C-Level:

Application	Specification	Bus
1	4	1

1.3 Specification Item ECUC_Nm_00213

Trace References:

none

Content:

Name	NmNodeIdEnabledNmGlobalFeatures.NmNodeIdEnabled		
Parent Container	NmGlobalFeatures		
Description	Pre-processor switch for enabling transmission of the source node identifier in NM messages. Tags: atp.Status=obsolete		
Multiplicity	1 0..1		
Type	EcucBooleanParamDef		
Default value	-		
Post-Build Variant Value	false		
Value Configuration Class	Pre-compile time	X	All Variants
	Link time	-	
	Post-build time	-	
Scope / Dependency	scope: local		

RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

- RfC #75405: [NmIf] make "[RepeatMsgInd|NodeDetection|NodeId]Enabled" channel based configurable

Problem description:

The following attributes are NmEcu global:
 nmRepeatMsgIndEnabled
 nmNodeDetectionEnabled
 nmNodeIdEnabled

This attributes should be configurable per channel.

Agreed solution:

=== SysT ===

set the atpStatus to obsolete for the following attributes:
 SystemTemplate::NetworkManagement::NmEcu.nmNodeIdEnabled
 SystemTemplate::NetworkManagement::NmEcu.nmRepeatMsgIndEnabled
 SystemTemplate::NetworkManagement::NmEcu.nmNodeDetectionEnabled

introduce the following optional attributes to NmCluster:
 SystemTemplate::NetworkManagement::NmCluster.nmNodeIdEnabled
 SystemTemplate::NetworkManagement::NmCluster.nmRepeatMsgIndEnabled

SystemTemplate::NetworkManagement::NmCluster.nmNodeDetectionEnabled

=== EcuC NmIf ===

set the atpStatus to obsolete and make them optional for the following parameters:

Nm:NmGlobalConfig:NmGlobalFeatures:NmNodeIdEnabled

Nm:NmGlobalConfig:NmGlobalFeatures:NmRepeatMsgIndEnabled

Nm:NmGlobalConfig:NmGlobalFeatures:NmNodeDetectionEnabled

-upstream-mapping for Nm:NmGlobalConfig:NmGlobalFeatures:(NmNodeIdEnabled|NmRepeatMsgIndEnabled)

Remove ECUC_Nm_00213 NmNodeIdEnabled from NmGlobalFeatures

Remove ECUC_Nm_00212 NmNodeDetectionEnabled from NmGlobalFeatures

Remove ECUC_Nm_00229 NmRepeatMsgIndEnabled from NmGlobalFeatures

=== EcuC CanNm ===

set the atpStatus to obsolete and make them optional for the following parameters:

CanNm:CanNmGlobalConfig:CanNmNodeIdEnabled

CanNm:CanNmGlobalConfig:CanNmRepeatMsgIndEnabled

CanNm:CanNmGlobalConfig:CanNmNodeDetectionEnabled

Introduce new optional parameters in CanNmChannelConfig (same properties as in CanNmGlobalConfig container):

CanNm:CanNmGlobalConfig:CanNmChannelConfig:CanNmNodeIdEnabled

CanNm:CanNmGlobalConfig:CanNmChannelConfig:CanNmRepeatMsgIndEnabled

CanNm:CanNmGlobalConfig:CanNmChannelConfig:CanNmNodeDetectionEnabled

+upstream-mapping 1:1 to new SysT attributes in SystemTemplate::NetworkManagement::NmCluster

Move ECUC_CanNm_00005 CanNmRepeatMsgIndEnabled from CanNmGlobalConfig to CanNmChannelConfig and change Value Configuration Class to Pre-compile time -> VARIANT-PRE-COMPILE / Link time -> VARIANT-LINK-TIME, VARIANT-POST-BUILD

Move ECUC_CanNm_00007 CanNmNodeDetectionEnabled from CanNmGlobalConfig to CanNmChannelConfig and change Value Configuration Class to Pre-compile time -> VARIANT-PRE-COMPILE / Link time -> VARIANT-LINK-TIME, VARIANT-POST-BUILD

Move ECUC_CanNm_00083 CanNmNodeIdEnabled from CanNmGlobalConfig to CanNmChannelConfig and change Value Configuration Class to Pre-compile time -> VARIANT-PRE-COMPILE / Link time -> VARIANT-LINK-TIME, VARIANT-POST-BUILD

=== EcuC UdpNm ===

set the atpStatus to obsolete and make them optional for the following parameters:

UdpNm:UdpNmGlobalConfig:UdpNmNodeIdEnabled
UdpNm:UdpNmGlobalConfig:UdpNmRepeatMsgIndEnabled
UdpNm:UdpNmGlobalConfig:UdpNmNodeDetectionEnabled

Introduce new optional parameters in UdpNmChannelConfig (same properties as in UdpNmGlobalConfig container):

UdpNm:UdpNmGlobalConfig:UdpNmChannelConfig:UdpNmNodeIdEnabled
UdpNm:UdpNmGlobalConfig:UdpNmChannelConfig:UdpNmRepeatMsgIndEnabled
UdpNm:UdpNmGlobalConfig:UdpNmChannelConfig:UdpNmNodeDetectionEnabled

+upstream-mapping 1:1 to new SysT attributes in SystemTemplate::NetworkManagement::NmCluster

Move ECUC_UdpNm_00015 UdpNmRepeatMsgIndEnabled from UdpNmGlobalConfig to UdpNmChannelConfig and change Value Configuration Class to Pre-compile time -> VARIANT-PRE-COMPILE / Link time -> VARIANT-LINK-TIME, VARIANT-POST-BUILD

Move ECUC_UdpNm_00007 UdpNmNodeDetectionEnabled from UdpNmGlobalConfig to UdpNmChannelConfig and change Value Configuration Class to Pre-compile time -> VARIANT-PRE-COMPILE / Link time -> VARIANT-LINK-TIME, VARIANT-POST-BUILD

Move ECUC_UdpNm_00008 UdpNmNodeIdEnabled from UdpNmGlobalConfig to UdpNmChannelConfig and change Value Configuration Class to Pre-compile time -> VARIANT-PRE-COMPILE / Link time -> VARIANT-LINK-TIME, VARIANT-POST-BUILD

=== EcuC FrNm ===

set the atpStatus to obsolete and make them optional for the following parameters:

FrNm:FrNmGlobalConfig:FrNmGlobalFeatures:FrNmSourceNodeIdentifierEnabled
FrNm:FrNmGlobalConfig:FrNmGlobalFeatures:FrNmNodeDetectionEnabled

Introduce new optional parameters in FrNmChannelConfigs (same properties as in NmGlobalFeatures container):

FrNm:FrNmChannelConfig:FrNmChannel:FrNmSourceNodeIdentifierEnabled
FrNm:FrNmChannelConfig:FrNmChannel:FrNmNodeDetectionEnabled

+upstream-mapping 1:1 to new SysT attributes in SystemTemplate::NetworkManagement::NmCluster

Move ECUC_FrNm_00040 FrNmNodeDetectionEnabled from FrNmGlobalFeatures to FrNmChannelConfig and change Value Configuration Class to Pre-compile time -> VARIANT-PRE-COMPILE / Link time -> VARIANT-LINK-TIME, VARIANT-POST-BUILD

Append "FrNmSourceNodeIdentifierEnabled needs to be TRUE to use this feature." to the description of Move ECUC_FrNm_00040.

Move ECUC_FrNm_00042 FrNmSourceNodeIdentifierEnabled from FrNmGlobalFeatures to FrNmChannelConfig and change Value Configuration Class to Pre-compile time -> VARIANT-PRE-COMPILE / Link time -> VARIANT-LINK-TIME, VARIANT-POST-BUILD

=== EcuC LinNm ===

set the atpStatus to obsolete and make them optional for the following parameters:

LinNm:LinNmGlobalConfig:LinNmNodeIdentifierEnabled

LinNm:LinNmGlobalConfig:LinNmNodeDetectionEnabled

Introduce new optional parameters in LinNmChannelConfig (same properties as in LinNmGlobalConfig container):

LinNm:LinNmGlobalConfig:LinNmChannelConfig:LinNmNodeIdentifierEnabled

LinNm:LinNmGlobalConfig:LinNmChannelConfig:LinNmNodeDetectionEnabled

+upstream-mapping 1:1 to new SysT attributes in SystemTemplate::NetworkManagement::NmCluster

Move ECUC_LinNm_00021 from LinNmGlobalConfig to LinNmChannelConfig

Move ECUC_CanNm_00007 from LinNmGlobalConfig to LinNmChannelConfig

=== BSW UML CanNm ===

Change SWS_CanNm_00219 Return Value description E_NOT_OK to "Getting of the node identifier out of the most recently received NM PDU has failed or is not configured for this network handle."

Change SWS_CanNm_00220 Return Value description E_NOT_OK to "Getting of the node identifier of the local node has failed or is not configured for this network handle."

Change SWS_CanNm_00221 Return Value description E_NOT_OK to "Setting of Repeat Message Request Bit has failed or is not configured for this network handle."

Change SWS_CanNm_00222 Return Value description E_NOT_OK to "Getting of NM PDU Data has failed or is not configured for this network handle."

=== BSW UML UdpNm ===

Remove the complete "Configuration:" part from the description of SWS_UdpNm_00221, SWS_UdpNm_00309, SWS_UdpNm_00219, SWS_UdpNm_00220.

=== SWS NmIf ===

Remove SWS_Nm_00142, SWS_Nm_00146, SWS_Nm_00148, SWS_Nm_00144, and SWS_Nm_00231.

=== SWS CanNm ===

Remove SWS_CanNm_00135

Change SWS_CanNm_00119 to "If CanNmNodeDetectionEnabled is set to TRUE and Repeat Message Request bit is received in the Normal Operation State CanNm shall enter Repeat Message State."

Change SWS_CanNm_00111 to "If CanNmNodeDetectionEnabled is set to TRUE and Repeat Message Request bit is received in the Ready Sleep State CanNm shall enter Repeat Message State."

Change SWS_CanNm_00120 to "If CanNmNodeDetectionEnabled is set to TRUE and function CanNm_RepeatMessageRequest is called in the Normal Operation State CanNm shall enter Repeat Message State."

Change SWS_CanNm_00121 to "If CanNmNodeDetectionEnabled is set to TRUE and function CanNm_RepeatMessageRequest is called in the Normal Operation State CanNm shall set the Repeat Message Bit."

Change SWS_CanNm_00112 to "If CanNmNodeDetectionEnabled is set to TRUE and function CanNm_RepeatMessageRequest is called in the Ready Sleep State CanNm shall enter Repeat Message State."

Change SWS_CanNm_00113 to "If CanNmNodeDetectionEnabled is set to TRUE and function CanNm_RepeatMessageRequest is called in the Ready Sleep State CanNm shall set the Repeat Message Bit."

Change SWS_CanNm_00107 to "If CanNmNodeDetectionEnabled is set to TRUE CanNm shall clear the Repeat Message Bit when leaving Repeat Message State."

Change SWS_CanNm_00014 to "If CanNmNodeDetectionEnabled and CanNmRepeatMsgIndEnabled are set to TRUE and Repeat Message Request bit is received CanNm module shall call the callback function Nm_RepeatMessageIndication."

Change SWS_CanNm_00138 to "The service call CanNm_GetPduData shall provide whole PDU data (Node ID, Control Bit Vector and User Data) of the most recently received Network Management PDU if CanNmNodeDetectionEnabled or CanNmUserDataEnabled or CanNmNodeIdEnabled is set to TRUE." and move this requirement to chapter 8.3.14 CanNm_GetPduData

Change SWS_CanNm_00407 to "If CanNm_GetPduData is called in the context of

Nm_CarWakeUpIndication and if CanNmNodeDetectionEnabled or CanNmUserDataEnabled or CanNmNodeIdEnabled is set to TRUE, CanNm shall return the PDU data of the PDU that causes the call of Nm_CarWakeUpIndication."

Change SWS_CanNm_00132 to "The service call CanNm_GetNodeIdentifier shall provide the node identifier out of the most recently received Network Management PDU if CanNmNodeIdEnabled is set to TRUE.

Change SWS_CanNm_00133 to "The service call CanNm_GetLocalNodeIdentifier shall provide the node identifier configured for the local host node if CanNmNodeIdEnabled is set to TRUE.

Remove SWS_CanNm_00274

Remove SWS_CanNm_00276

Remove SWS_CanNm_00270

Remove SWS_CanNm_00272

=== SWS UdpNm ===

Remove SWS_UdpNm_00135

Remove SWS_UdpNm_00139

Change SWS_UdpNm_00119 to "If UdpNmNodeDetectionEnabled is set to TRUE and Repeat Message Request bit is received in the Normal Operation State, UdpNm shall enter Repeat Message State. (SRS_Nm_00153)"

Change SWS_UdpNm_00111 to "If UdpNmNodeDetectionEnabled is set to TRUE and Repeat Message Request bit is received in the Ready Sleep State, UdpNm shall enter Repeat Message State. (SRS_Nm_00153)"

Change SWS_UdpNm_00120 to "If UdpNmNodeDetectionEnabled is set to TRUE and function UdpNm_RepeatMessageRequest is called in the Normal Operation State, UdpNm shall enter Repeat Message State. (SRS_Nm_00153)"

Change SWS_UdpNm_00121 to "If UdpNmNodeDetectionEnabled is set to TRUE and function UdpNm_RepeatMessageRequest is called in the Normal Operation State, UdpNm shall set the Repeat Message Bit. (SRS_Nm_00153)"

Change SWS_UdpNm_00112 to "If UdpNmNodeDetectionEnabled is set to TRUE and function UdpNm_RepeatMessageRequest is called in the Ready Sleep State, UdpNm shall enter Repeat Message State. (SRS_Nm_00153)"

Change SWS_UdpNm_00113 to "If UdpNmNodeDetectionEnabled is set to TRUE and function UdpNm_RepeatMessageRequest is called in the Ready Sleep State, UdpNm shall set the Repeat Message Bit. (SRS_Nm_00153)"

Change SWS_UdpNm_00107 to "If UdpNmNodeDetectionEnabled is set to TRUE UdpNm shall clear the Repeat Message Bit when leaving Repeat Message State."

Change SWS_UdpNm_00014 to "If UdpNmNodeDetectionEnabled and UdpNmRepeatMsgIndEnabled are set to TRUE and Repeat Message Request bit is received, UdpNm module shall call the callback function Nm_RepeatMessageIndication. (SRS_Nm_00153)"

Change SWS_UdpNm_00138 to "The service call UdpNm_GetPduData shall

provide whole payload (Source Node ID, Control Bit Vector and User Data) of the most recently received Network Management PDU if `UdpNmNodeDetectionEnabled` or `UdpNmUserDataEnabled` or `UdpNmNodeIdEnabled` is set to `TRUE`." and move this requirement to chapter "8.3.12 `UdpNm_GetPduData`"

Change `SWS_UdpNm_00375` to "If `UdpNm_GetPduData` is called in the context of `Nm_CarWakeUpIndication` and if `UdpNmNodeDetectionEnabled` or `UdpNmUserDataEnabled` or `UdpNmNodeIdEnabled` is set to `TRUE`, `UdpNm` shall return the PDU data of the PDU that causes the call of `Nm_CarWakeUpIndication`."

Change `SWS_UdpNm_00219` Return Value description `E_NOT_OK` to "Getting of the node identifier out of the most recently received NM PDU has failed or is not configured for this network handle."

Change `SWS_UdpNm_00132` to "The service call `UdpNm_GetNodeIdIdentifier` shall provide the node identifier out of the most recently received Network Management PDU if `UdpNmNodeIdEnabled` is set to `TRUE`."

Change `SWS_UdpNm_00220` Return Value description `E_NOT_OK` to "Getting of the node identifier of the local node has failed or is not configured for this network handle."

Change `SWS_UdpNm_00133` to "The service call `UdpNm_GetLocalNodeIdIdentifier` shall provide the node identifier configured for the local host node if `UdpNmNodeIdEnabled` is set to `TRUE`."

Change `SWS_UdpNm_00221` Return Value description `E_NOT_OK` to "Setting of Repeat Message Request Bit has failed or is not configured for this network handle."

Change `SWS_UdpNm_00309` Return Value description `E_NOT_OK` to "Getting of NM PDU Data has failed or is not configured for this network handle."

=== SWS FrNm ===

Remove `SWS_FrNm_00170`

Remove `SWS_FrNm_00172`

Remove `SWS_FrNm_00228`

Remove `SWS_FrNm_00266`

Remove `SWS_FrNm_00267`

Remove `SWS_FrNm_00268`

Change `SWS_FrNm_00124` to "If `FrNmNodeDetectionEnabled` is set to `TRUE` the FlexRay NM module shall leave the Normal Operation State and enter the Repeat Message State at the end of a NM Repetition Cycle when a Repeat Message Request is active. During this transition it shall set the Repeat Message Request Bit if the Repeat Message Request is active due to a call of `FrNm_RepeatMessageRequest`."

Change `SWS_FrNm_00130` to "If `FrNmNodeDetectionEnabled` is set to `TRUE` the FlexRay NM module shall leave the Ready Sleep State and enter the Repeat Message State at the end of a NM Repetition Cycle when a Repeat Message Request is active and Ready Sleep Time has not expired. During this transition it

shall set the Repeat Message Request Bit if the Repeat Message Request is active due to a call of FrNm_RepeatMessageRequest."

Change SWS_FrNm_00243 Return Value description E_NOT_OK to "Setting of Repeat Message Request Bit has failed or is not configured for this network handle."

Change SWS_FrNm_00172 to "The function FrNm_RepeatMessageRequest shall request node detection on the FlexRay Bus NM nodes if FrNmNodeDetectionEnabled is set to TRUE."

Change SWS_FrNm_00244 Return Value description E_NOT_OK to "Getting of the node identifier out of the last received NM-message has failed or is not configured for this network handle."

Change SWS_FrNm_00047 to "The function FrNm_GetNodeIdentifier shall provide the node identifier from the most recently received NM-message if FrNmSourceNodeIdentifierEnabled is set to TRUE."

Change SWS_FrNm_00245 Return Value description E_NOT_OK to "Getting of the node identifier of the local node has failed or is not configured for this network handle."

Change SWS_FrNm_00046 to "The function FrNm_GetLocalNodeIdentifier shall provide the node identifier configured for the local host node (FrNmNodeId) if FrNmSourceNodeIdentifierEnabled is set to TRUE."

Change SWS_FrNm_00242 Return Value description E_NOT_OK to "Getting of NM PDU Data has failed or is not configured for this network handle."

Change SWS_FrNm_00265 to "The function FrNm_GetPduData shall get the whole NM PDU data out of the most recently received NM message if FrNmControlBitVectorEnabled or FrNmSourceNodeIdentifierEnabled or FrNmUserDataEnabled is set to TRUE."

=== SWS LinNm ===

-Last change on issue 75405 comment 51-

BW-C-Level:

Application	Specification	Bus
1	4	1

1.4 Specification Item ECUC_Nm_00229

Trace References:

none

Content:

Name	NmRepeatMsgIndEnabledNmGlobalFeatures.NmRepeatMsgIndEnabled
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Parent Container	NmGlobalFeatures		
Description	Pre-processor switch for enabling the Repeat Message Bit Indication. Tags: atp.Status=obsolete		
Multiplicity	1 0..1		
Type	EcucBooleanParamDef		
Default value	-		
Post-Build Variant Value	false		
Value Configuration Class	Pre-compile time	X	All Variants
	Link time	-	
	Post-build time	-	
Scope / Dependency	scope: local		

RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

- RfC #75405: [NmIf] make "[RepeateMsgInd|NodeDetection|NodeId]Enabled" channel based configurable

Problem description:

The following attributes are NmEcu global:

nmRepeatMsgIndEnabled
 nmNodeDetectionEnabled
 nmNodeIdEnabled

This attributes should be configurable per channel.

Agreed solution:

=== SysT ===

set the atpStatus to obsolete for the following attributes:

SystemTemplate::NetworkManagement::NmEcu.nmNodeIdEnabled
 SystemTemplate::NetworkManagement::NmEcu.nmRepeatMsgIndEnabled
 SystemTemplate::NetworkManagement::NmEcu.nmNodeDetectionEnabled

introduce the following optional attributes to NmCluster:

SystemTemplate::NetworkManagement::NmCluster.nmNodeIdEnabled
 SystemTemplate::NetworkManagement::NmCluster.nmRepeatMsgIndEnabled
 SystemTemplate::NetworkManagement::NmCluster.nmNodeDetectionEnabled

=== EcuC NmIf ===

set the atpStatus to obsolete and make them optional for the following parameters:
 Nm:NmGlobalConfig:NmGlobalFeatures:NmNodeIdEnabled

Nm:NmGlobalConfig:NmGlobalFeatures:NmRepeatMsgIndEnabled
Nm:NmGlobalConfig:NmGlobalFeatures:NmNodeDetectionEnabled

-upstream-mapping for Nm:NmGlobalConfig:NmGlobalFeatures:(NmNodeIdEnabled|NmRepeatMsgIndEnabled)

Remove ECUC_Nm_00213 NmNodeIdEnabled from NmGlobalFeatures
Remove ECUC_Nm_00212 NmNodeDetectionEnabled from NmGlobalFeatures
Remove ECUC_Nm_00229 NmRepeatMsgIndEnabled from NmGlobalFeatures

=== EcuC CanNm ===

set the atpStatus to obsolete and make them optional for the following parameters:

CanNm:CanNmGlobalConfig:CanNmNodeIdEnabled
CanNm:CanNmGlobalConfig:CanNmRepeatMsgIndEnabled
CanNm:CanNmGlobalConfig:CanNmNodeDetectionEnabled

Introduce new optional parameters in CanNmChannelConfig (same properties as in CanNmGlobalConfig container):

CanNm:CanNmGlobalConfig:CanNmChannelConfig:CanNmNodeIdEnabled
CanNm:CanNmGlobalConfig:CanNmChannelConfig:CanNmRepeatMsgIndEnabled
CanNm:CanNmGlobalConfig:CanNmChannelConfig:CanNmNodeDetectionEnabled

+upstream-mapping 1:1 to new SysT attributes in SystemTemplate::NetworkManagement::NmCluster

Move ECUC_CanNm_00005 CanNmRepeatMsgIndEnabled from CanNmGlobalConfig to CanNmChannelConfig and change Value Configuration Class to Pre-compile time -> VARIANT-PRE-COMPILE / Link time -> VARIANT-LINK-TIME, VARIANT-POST-BUILD

Move ECUC_CanNm_00007 CanNmNodeDetectionEnabled from CanNmGlobalConfig to CanNmChannelConfig and change Value Configuration Class to Pre-compile time -> VARIANT-PRE-COMPILE / Link time -> VARIANT-LINK-TIME, VARIANT-POST-BUILD

Move ECUC_CanNm_00083 CanNmNodeIdEnabled from CanNmGlobalConfig to CanNmChannelConfig and change Value Configuration Class to Pre-compile time -> VARIANT-PRE-COMPILE / Link time -> VARIANT-LINK-TIME, VARIANT-POST-BUILD

=== EcuC UdpNm ===

set the atpStatus to obsolete and make them optional for the following parameters:

UdpNm:UdpNmGlobalConfig:UdpNmNodeIdEnabled
UdpNm:UdpNmGlobalConfig:UdpNmRepeatMsgIndEnabled

UdpNm:UdpNmGlobalConfig:UdpNmNodeDetectionEnabled

Introduce new optional parameters in UdpNmChannelConfig (same properties as in UdpNmGlobalConfig container):

UdpNm:UdpNmGlobalConfig:UdpNmChannelConfig:UdpNmNodeEnabled

UdpNm:UdpNmGlobalConfig:UdpNmChannelConfig:UdpNmRepeatMsgIndEnabled

UdpNm:UdpNmGlobalConfig:UdpNmChannelConfig:UdpNmNodeDetectionEnabled

+upstream-mapping 1:1 to new SysT attributes in SystemTemplate::NetworkManagement::NmCluster

Move ECUC_UdpNm_00015 UdpNmRepeatMsgIndEnabled from UdpNmGlobalConfig to UdpNmChannelConfig and change Value Configuration Class to Pre-compile time -> VARIANT-PRE-COMPILE / Link time -> VARIANT-LINK-TIME, VARIANT-POST-BUILD

Move ECUC_UdpNm_00007 UdpNmNodeDetectionEnabled from UdpNmGlobalConfig to UdpNmChannelConfig and change Value Configuration Class to Pre-compile time -> VARIANT-PRE-COMPILE / Link time -> VARIANT-LINK-TIME, VARIANT-POST-BUILD

Move ECUC_UdpNm_00008 UdpNmNodeEnabled from UdpNmGlobalConfig to UdpNmChannelConfig and change Value Configuration Class to Pre-compile time -> VARIANT-PRE-COMPILE / Link time -> VARIANT-LINK-TIME, VARIANT-POST-BUILD

=== EcuC FrNm ===

set the atpStatus to obsolete and make them optional for the following parameters:

FrNm:FrNmGlobalConfig:FrNmGlobalFeatures:FrNmSourceNodeIdentifierEnabled

FrNm:FrNmGlobalConfig:FrNmGlobalFeatures:FrNmNodeDetectionEnabled

Introduce new optional parameters in FrNmChannelConfigs (same properties as in NmGlobalFeatures container):

FrNm:FrNmChannelConfig:FrNmChannel:FrNmSourceNodeIdentifierEnabled

FrNm:FrNmChannelConfig:FrNmChannel:FrNmNodeDetectionEnabled

+upstream-mapping 1:1 to new SysT attributes in SystemTemplate::NetworkManagement::NmCluster

Move ECUC_FrNm_00040 FrNmNodeDetectionEnabled from FrNmGlobalFeatures to FrNmChannelConfig and change Value Configuration Class to Pre-compile time -> VARIANT-PRE-COMPILE / Link time -> VARIANT-LINK-TIME, VARIANT-POST-BUILD

Append "FrNmSourceNodeIdentifierEnabled needs to be TRUE to use this feature."

to the description of Move ECUC_FrNm_00040.

Move ECUC_FrNm_00042 FrNmSourceNodeIdentifierEnabled from FrNmGlobalFeatures to FrNmChannelConfig and change Value Configuration Class to Pre-compile time -> VARIANT-PRE-COMPILE / Link time -> VARIANT-LINK-TIME, VARIANT-POST-BUILD

=== EcuC LinNm ===

set the atpStatus to obsolete and make them optional for the following parameters:

LinNm:LinNmGlobalConfig:LinNmNodeIdentifierEnabled

LinNm:LinNmGlobalConfig:LinNmNodeDetectionEnabled

Introduce new optional parameters in LinNmChannelConfig (same properties as in LinNmGlobalConfig container):

LinNm:LinNmGlobalConfig:LinNmChannelConfig:LinNmNodeIdentifierEnabled

LinNm:LinNmGlobalConfig:LinNmChannelConfig:LinNmNodeDetectionEnabled

+upstream-mapping 1:1 to new SysT attributes in SystemTemplate::NetworkManagement::NmCluster

Move ECUC_LinNm_00021 from LinNmGlobalConfig to LinNmChannelConfig

Move ECUC_CanNm_00007 from LinNmGlobalConfig to LinNmChannelConfig

=== BSW UML CanNm ===

Change SWS_CanNm_00219 Return Value description E_NOT_OK to "Getting of the node identifier out of the most recently received NM PDU has failed or is not configured for this network handle."

Change SWS_CanNm_00220 Return Value description E_NOT_OK to "Getting of the node identifier of the local node has failed or is not configured for this network handle."

Change SWS_CanNm_00221 Return Value description E_NOT_OK to "Setting of Repeat Message Request Bit has failed or is not configured for this network handle."

Change SWS_CanNm_00222 Return Value description E_NOT_OK to "Getting of NM PDU Data has failed or is not configured for this network handle."

=== BSW UML UdpNm ===

Remove the complete "Configuration:" part from the description of SWS_UdpNm_00221, SWS_UdpNm_00309, SWS_UdpNm_00219, SWS_UdpNm_00220.

=== SWS NmIf ===

Remove SWS_Nm_00142, SWS_Nm_00146, SWS_Nm_00148, SWS_Nm_00144,
and SWS_Nm_00231.

=== SWS CanNm ===

Remove SWS_CanNm_00135

Change SWS_CanNm_00119 to "If CanNmNodeDetectionEnabled is set to TRUE and Repeat Message Request bit is received in the Normal Operation State CanNm shall enter Repeat Message State."

Change SWS_CanNm_00111 to "If CanNmNodeDetectionEnabled is set to TRUE and Repeat Message Request bit is received in the Ready Sleep State CanNm shall enter Repeat Message State."

Change SWS_CanNm_00120 to "If CanNmNodeDetectionEnabled is set to TRUE and function CanNm_RepeatMessageRequest is called in the Normal Operation State CanNm shall enter Repeat Message State."

Change SWS_CanNm_00121 to "If CanNmNodeDetectionEnabled is set to TRUE and function CanNm_RepeatMessageRequest is called in the Normal Operation State CanNm shall set the Repeat Message Bit."

Change SWS_CanNm_00112 to "If CanNmNodeDetectionEnabled is set to TRUE and function CanNm_RepeatMessageRequest is called in the Ready Sleep State CanNm shall enter Repeat Message State."

Change SWS_CanNm_00113 to "If CanNmNodeDetectionEnabled is set to TRUE and function CanNm_RepeatMessageRequest is called in the Ready Sleep State CanNm shall set the Repeat Message Bit."

Change SWS_CanNm_00107 to "If CanNmNodeDetectionEnabled is set to TRUE CanNm shall clear the Repeat Message Bit when leaving Repeat Message State."

Change SWS_CanNm_00014 to "If CanNmNodeDetectionEnabled and CanNmRepeatMsgIndEnabled are set to TRUE and Repeat Message Request bit is received CanNm module shall call the callback function Nm_RepeatMessageIndication."

Change SWS_CanNm_00138 to "The service call CanNm_GetPduData shall provide whole PDU data (Node ID, Control Bit Vector and User Data) of the most recently received Network Management PDU if CanNmNodeDetectionEnabled or CanNmUserDataEnabled or CanNmNodeIdEnabled is set to TRUE." and move this requirement to chapter 8.3.14 CanNm_GetPduData

Change SWS_CanNm_00407 to "If CanNm_GetPduData is called in the context of Nm_CarWakeUpIndication and if CanNmNodeDetectionEnabled or CanNmUserDataEnabled or CanNmNodeIdEnabled is set to TRUE, CanNm shall return the PDU data of the PDU that causes the call of Nm_CarWakeUpIndication."

Change SWS_CanNm_00132 to "The service call CanNm_GetNodeIdentifier shall provide the node identifier out of the most recently received Network Management PDU if CanNmNodeIdEnabled is set to TRUE."

Change SWS_CanNm_00133 to "The service call CanNm_GetLocalNodeIdentifier shall provide the node identifier configured for the local host node if CanNmNodeIdentifierEnabled is set to TRUE.

Remove SWS_CanNm_00274

Remove SWS_CanNm_00276

Remove SWS_CanNm_00270

Remove SWS_CanNm_00272

=== SWS UdpNm ===

Remove SWS_UdpNm_00135

Remove SWS_UdpNm_00139

Change SWS_UdpNm_00119 to "If UdpNmNodeDetectionEnabled is set to TRUE and Repeat Message Request bit is received in the Normal Operation State, UdpNm shall enter Repeat Message State. (SRS_Nm_00153)"

Change SWS_UdpNm_00111 to "If UdpNmNodeDetectionEnabled is set to TRUE and Repeat Message Request bit is received in the Ready Sleep State, UdpNm shall enter Repeat Message State. (SRS_Nm_00153)"

Change SWS_UdpNm_00120 to "If UdpNmNodeDetectionEnabled is set to TRUE and function UdpNm_RepeatMessageRequest is called in the Normal Operation State, UdpNm shall enter Repeat Message State. (SRS_Nm_00153)"

Change SWS_UdpNm_00121 to "If UdpNmNodeDetectionEnabled is set to TRUE and function UdpNm_RepeatMessageRequest is called in the Normal Operation State, UdpNm shall set the Repeat Message Bit. (SRS_Nm_00153)"

Change SWS_UdpNm_00112 to "If UdpNmNodeDetectionEnabled is set to TRUE and function UdpNm_RepeatMessageRequest is called in the Ready Sleep State, UdpNm shall enter Repeat Message State. (SRS_Nm_00153)"

Change SWS_UdpNm_00113 to "If UdpNmNodeDetectionEnabled is set to TRUE and function UdpNm_RepeatMessageRequest is called in the Ready Sleep State, UdpNm shall set the Repeat Message Bit. (SRS_Nm_00153)"

Change SWS_UdpNm_00107 to "If UdpNmNodeDetectionEnabled is set to TRUE UdpNm shall clear the Repeat Message Bit when leaving Repeat Message State."

Change SWS_UdpNm_00014 to "If UdpNmNodeDetectionEnabled and UdpNmRepeatMsgIndEnabled are set to TRUE and Repeat Message Request bit is received, UdpNm module shall call the callback function Nm_RepeatMessageIndication. (SRS_Nm_00153)"

Change SWS_UdpNm_00138 to "The service call UdpNm_GetPduData shall provide whole payload (Source Node ID, Control Bit Vector and User Data) of the most recently received Network Management PDU if UdpNmNodeDetectionEnabled or UdpNmUserDataEnabled or UdpNmNodeIdentifierEnabled is set to TRUE." and move this requirement to chapter "8.3.12 UdpNm_GetPduData"

Change SWS_UdpNm_00375 to "If UdpNm_GetPduData is called in the context of Nm_CarWakeUpIndication and if UdpNmNodeDetectionEnabled or UdpNmUser-

DataEnabled or UdpNmNodeIdEnabled is set to TRUE, UdpNm shall return the PDU data of the PDU that causes the call of Nm_CarWakeUpIndication."

Change SWS_UdpNm_00219 Return Value description E_NOT_OK to "Getting of the node identifier out of the most recently received NM PDU has failed or is not configured for this network handle."

Change SWS_UdpNm_00132 to "The service call UdpNm_GetNodeIdentifier shall provide the node identifier out of the most recently received Network Management PDU if UdpNmNodeIdEnabled is set to TRUE.

Change SWS_UdpNm_00220 Return Value description E_NOT_OK to "Getting of the node identifier of the local node has failed or is not configured for this network handle."

Change SWS_UdpNm_00133 to "The service call UdpNm_GetLocalNodeIdentifier shall provide the node identifier configured for the local host node if UdpNmNodeIdEnabled is set to TRUE.

Change SWS_UdpNm_00221 Return Value description E_NOT_OK to "Setting of Repeat Message Request Bit has failed or is not configured for this network handle."

Change SWS_UdpNm_00309 Return Value description E_NOT_OK to "Getting of NM PDU Data has failed or is not configured for this network handle."

=== SWS FrNm ===

Remove SWS_FrNm_00170

Remove SWS_FrNm_00172

Remove SWS_FrNm_00228

Remove SWS_FrNm_00266

Remove SWS_FrNm_00267

Remove SWS_FrNm_00268

Change SWS_FrNm_00124 to "If FrNmNodeDetectionEnabled is set to TRUE the FlexRay NM module shall leave the Normal Operation State and enter the Repeat Message State at the end of a NM Repetition Cycle when a Repeat Message Request is active. During this transition it shall set the Repeat Message Request Bit if the Repeat Message Request is active due to a call of FrNm_RepeatMessageRequest."

Change SWS_FrNm_00130 to "If FrNmNodeDetectionEnabled is set to TRUE the FlexRay NM module shall leave the Ready Sleep State and enter the Repeat Message State at the end of a NM Repetition Cycle when a Repeat Message Request is active and Ready Sleep Time has not expired. During this transition it shall set the Repeat Message Request Bit if the Repeat Message Request is active due to a call of FrNm_RepeatMessageRequest."

Change SWS_FrNm_00243 Return Value description E_NOT_OK to "Setting of Repeat Message Request Bit has failed or is not configured for this network handle."

Change SWS_FrNm_00172 to "The function FrNm_RepeatMessageRequest shall request node detection on the FlexRay Bus NM nodes if FrNmNodeDetectionEn-

abled is set to TRUE."

Change SWS_FrNm_00244 Return Value description E_NOT_OK to "Getting of the node identifier out of the last received NM-message has failed or is not configured for this network handle."

Change SWS_FrNm_00047 to "The function FrNm_GetNodeIdentifier shall provide the node identifier from the most recently received NM-message if FrNm-SourceNodeIdentifierEnabled is set to TRUE."

Change SWS_FrNm_00245 Return Value description E_NOT_OK to "Getting of the node identifier of the local node has failed or is not configured for this network handle."

Change SWS_FrNm_00046 to "The function FrNm_GetLocalNodeIdentifier shall provide the node identifier configured for the local host node (FrNmNodeId) if FrNmSourceNodeIdentifierEnabled is set to TRUE."

Change SWS_FrNm_00242 Return Value description E_NOT_OK to "Getting of NM PDU Data has failed or is not configured for this network handle."

Change SWS_FrNm_00265 to "The function FrNm_GetPduData shall get the whole NM PDU data out of the most recently received NM message if FrNmControlBitVectorEnabled or FrNmSourceNodeIdentifierEnabled or FrNmUserDataEnabled is set to TRUE."

=== SWS LinNm ===

–Last change on issue 75405 comment 51–

BW-C-Level:

Application	Specification	Bus
1	4	1

1.5 Specification Item ECUC_Nm_00234

Trace References:

none

Content:

Name	NmCarWakeUpCalloutNmGlobalFeatures.NmCarWakeUpCalloutin container NmGlobalFeatures
Description	Name of the callout function to be called if Nm_CarWakeUpIndication() is called. If this parameter is not configured, the Nm If will call BswM_Nm_CarWakeUpIndication.
Multiplicity	0..1
Type	EcucFunctionNameDef
Default value	–
maxLength	–

minLength	-		
regularExpression	-		
Post-Build Variant Multiplicity	false		
Post-Build Variant Value	false		
Multiplicity Configuration Class	Pre-compile time	X	VARIANT-PRE-COMPILE
	Link time	X	VARIANT-LINK-TIME
	Post-build time	-	
Value Configuration Class	Pre-compile time	X	VARIANT-PRE-COMPILE
	Link time	X	VARIANT-LINK-TIME
	Post-build time	-	
Scope / Dependency	scope: local dependency: only available if NmCarWakeUpRxEnabled == TRUE		

RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

- RfC #77069: Different API Declarations for Car Wake Up in NM and BswM modules

Problem description:

Hello,

Requirement SWS_Nm_00285 specifies that in case no callback function is specified, the Nm shall call BswM_CarWakeUpIndication.

In the BswM module this function is not specified.
 In BswM the function specified for Car Wake Up is:
 BswM_NmIf_CarWakeUpIndication.

Which definition shall be used, the one specified in Nm or the one specified by BswM ?

Best Regards,
 Lorant

Agreed solution:

In the SWS Nm:
 A1)Change SWS_Nm_00285 to:

[SWS_Nm_00285] If the <bus>Nm calls NmCarWakeUpIndication and Nm-CarWakeUpCallout is not defined, the NM Interface shall call the function BswM_Nm_CarWakeUpIndication with nmNetworkHandle as parameter.
 (SRS_Nm_02503)

A2)Change ECUC_Nm_00234 description to:

Name of the callout function to be called if Nm_CarWakeUpIndication() is called. If this parameter is not configured, the Nm will call BswM_Nm_CarWakeUpIndication.

In the SWS BswM:

B1) Change "NmIf" to "Nm" in all of the following spec items (names & descriptions):

- SWS_BswM_00235 (BswM_NmIf_CarWakeUpIndication)
- ECUC_BswM_00856 (BswMModeRequestSource)
- ECUC_BswM_01048 (BswMNmIfCarWakeUpIndication)

B2) Change "NmIf" to "Nm" in the descriptive text found in chapters:

- 5.17
- 8.3.23
- Last change on issue 77069 comment 19-

BW-C-Level:

Application	Specification	Bus
1	4	1

1.6 Specification Item ECUC_Nm_00244

Trace References:

none

Content:

Name	NmCarWakeUpCalloutHeaderNmGlobalFeatures.NmCarWakeUpCalloutHeader
Parent Container	NmGlobalFeatures
Description	Defines the header file which declares the callout function configured via NmCarWakeUpCallout.
Multiplicity	0..1
Type	EcucStringParamDef
Default value	-
maxLength	32
minLength	1
regularExpression	-
Post-Build Variant Multiplicity	false

Post-Build Variant Value	false		
Value Configuration Class	Pre-compile time	X	All Variants
	Link time	-	
	Post-build time	-	
Scope / Dependency	scope: local dependency: Only available if NmCarWakeUpCallout is configured.		

RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

- RfC #77070: [NmIf] Generic <cdd>.h inclusion in context of CarWakeup

Problem description:

Hello,

Requirement SWS_Nm_00124 specifies that:

<cdd>.h (If a CDD is used for CarWakeup-functionality. The name of the CDD is generic.)

1. Shouldn't be a configuration parameter available to specify the header file ?
2. In case NmCarWakeUpCallout is specified the declaration of the callout function shouldn't be in Nm.h ?

Best Regards,
 Lorant

Agreed solution:

add parameter to NmGlobalFeatures

Name: NmCarWakeUpCalloutHeader

Description : Defines the header file which declares the callout function configured via NmCarWakeUpCallout.

Multiplicity : 0..1

Type_ EcucStringParamDef

Length 1-32

Variant Multiplicity false

Variant Value false

Config Class : Pre-compile for all variants

dependency : only available if NmCarWakeUpCallout is configured

change SWS_Nm_00124 to

The following header files shall be included by the Nm Interface module:

Std_Types.h (for AUTOSAR standard types)

Note: Platform_Types.h (for platform specific types) and Compiler.h (for compiler specific language extensions) are indirectly included via AUTOSAR standard types.

Nm_MemMap.h (for memory abstraction)

SchM_Nm.h (for interfaces with the BSW Scheduler)

ComM_Nm.h (for Communication Manager callback functions)

BswM_Nm.h (If the BswM is used for CarWakeup-functionality)

<NmCarWakeUpCalloutHeader>.h (If a CDD is used for CarWakeup-functionality.)

–Last change on issue 77070 comment 18–

BW-C-Level:

Application	Specification	Bus
1	3	1

1.7 Specification Item SWS_Nm_00124

Trace References:

SRS_BSW_00348, SRS_BSW_00353, SRS_BSW_00357, SRS_BSW_00381,
 SRS_BSW_00384, SRS_BSW_00412

Content:

The following header files shall be included by the Nm Interface module:

- Std_Types.h (for AUTOSAR standard types)
 Note: Platform_Types.h (for platform specific types) and Compiler.h (for compiler specific language extensions) are indirectly included via AUTOSAR standard types.
- Nm_MemMap.h (for memory abstraction)
- SchM_Nm.h (for interfaces with the BSW Scheduler)
- ComM_Nm.h (for Communication Manager callback functions)
- BswM_Nm.h (If the BswM is used for CarWakeup-functionality)
- <cddNmCarWakeUpCalloutHeader>.h (If a CDD is used for CarWakeup-functionality. **The name of the CDD is generic.**)

RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

- RfC #77070: [NmIf] Generic <cdd>.h inclusion in context of CarWakeup

Problem description:

Hello,

Requirement SWS_Nm_00124 specifies that:

<cdd>.h (If a CDD is used for CarWakeUp-functionality. The name of the CDD is generic.)

1. Shouldn't be a configuration parameter available to specify the header file ?
2. In case NmCarWakeUpCallout is specified the declaration of the callout function shouldn't be in Nm.h ?

Best Regards,
Lorant

Agreed solution:

add parameter to NmGlobalFeatures

Name: NmCarWakeUpCalloutHeader

Description : Defines the header file which declares the callout function configured via NmCarWakeUpCallout.

Multiplicity : 0..1

Type_ EcucStringParamDef

Length 1-32

Variant Multiplicity false

Variant Value false

Config Class : Pre-compile for all variants

dependency : only available if NmCarWakeUpCallout is configured

change SWS_Nm_00124 to

The following header files shall be included by the Nm Interface module:

Std_Types.h (for AUTOSAR standard types)

Note: Platform_Types.h (for platform specific types) and Compiler.h (for compiler specific language extensions) are indirectly included via AUTOSAR standard types.

Nm_MemMap.h (for memory abstraction)

SchM_Nm.h (for interfaces with the BSW Scheduler)

ComM_Nm.h (for Communication Manager callback functions)

BswM_Nm.h (If the BswM is used for CarWakeUp-functionality)

<NmCarWakeUpCalloutHeader>.h (If a CDD is used for CarWakeUp-functionality.)

–Last change on issue 77070 comment 18–

BW-C-Level:

Application	Specification	Bus
1	3	1

1.8 Specification Item SWS_Nm_00142

Trace References:

[SRS_Nm_00150](#)

Content:

Configuration of Nm_GetPduData: This function is only available if NmGlobalFeatures.NmNodeIdEnabled or NmGlobalFeatures.NmUserDataEnabled is set to TRUE.

RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

- RfC #75405: [NmIf] make "[RepeateMsgInd|NodeDetection|NodeId]Enabled" channel based configurable

Problem description:

The following attributes are NmEcu global:

nmRepeatMsgIndEnabled
 nmNodeDetectionEnabled
 nmNodeIdEnabled

This attributes should be configurable per channel.

Agreed solution:

=== SysT ===

set the atpStatus to obsolete for the following attributes:

SystemTemplate::NetworkManagement::NmEcu.nmNodeIdEnabled
 SystemTemplate::NetworkManagement::NmEcu.nmRepeatMsgIndEnabled
 SystemTemplate::NetworkManagement::NmEcu.nmNodeDetectionEnabled

introduce the following optional attributes to NmCluster:

SystemTemplate::NetworkManagement::NmCluster.nmNodeIdEnabled
 SystemTemplate::NetworkManagement::NmCluster.nmRepeatMsgIndEnabled
 SystemTemplate::NetworkManagement::NmCluster.nmNodeDetectionEnabled

=== EcuC NmIf ===

set the atpStatus to obsolete and make them optional for the following parameters:

Nm:NmGlobalConfig:NmGlobalFeatures:NmNodeIdEnabled

Nm:NmGlobalConfig:NmGlobalFeatures:NmRepeatMsgIndEnabled

Nm:NmGlobalConfig:NmGlobalFeatures:NmNodeDetectionEnabled

-upstream-mapping for Nm:NmGlobalConfig:NmGlobalFeatures:(NmNodeIdEnabled|NmRepeatM

Remove ECUC_Nm_00213 NmNodeIdEnabled from NmGlobalFeatures

Remove ECUC_Nm_00212 NmNodeDetectionEnabled from NmGlobalFeatures

Remove ECUC_Nm_00229 NmRepeatMsgIndEnabled from NmGlobalFeatures

=== EcuC CanNm ===

set the atpStatus to obsolete and make them optional for the following parameters:

CanNm:CanNmGlobalConfig:CanNmNodeIdEnabled

CanNm:CanNmGlobalConfig:CanNmRepeatMsgIndEnabled

CanNm:CanNmGlobalConfig:CanNmNodeDetectionEnabled

Introduce new optional parameters in CanNmChannelConfig (same properties as in CanNmGlobalConfig container):

CanNm:CanNmGlobalConfig:CanNmChannelConfig:CanNmNodeIdEnabled

CanNm:CanNmGlobalConfig:CanNmChannelConfig:CanNmRepeatMsgIndEnabled

CanNm:CanNmGlobalConfig:CanNmChannelConfig:CanNmNodeDetectionEnabled

+upstream-mapping 1:1 to new SysT attributes in SystemTemplate::NetworkManagement::NmCluster

Move ECUC_CanNm_00005 CanNmRepeatMsgIndEnabled from CanNGlobalConfig to CanNmChannelConfig and change Value Configuration Class to Pre-compile time -> VARIANT-PRE-COMPILE / Link time -> VARIANT-LINK-TIME, VARIANT-POST-BUILD

Move ECUC_CanNm_00007 CanNmNodeDetectionEnabled from CanNGlobalConfig to CanNmChannelConfig and change Value Configuration Class to Pre-compile time -> VARIANT-PRE-COMPILE / Link time -> VARIANT-LINK-TIME, VARIANT-POST-BUILD

Move ECUC_CanNm_00083 CanNmNodeIdEnabled from CanNGlobalConfig to CanNmChannelConfig and change Value Configuration Class to Pre-compile time -> VARIANT-PRE-COMPILE / Link time -> VARIANT-LINK-TIME, VARIANT-POST-BUILD

=== EcuC UdpNm ===

set the atpStatus to obsolete and make them optional for the following parameters:

UdpNm:UdpNmGlobalConfig:UdpNmNodeIdEnabled
UdpNm:UdpNmGlobalConfig:UdpNmRepeatMsgIndEnabled
UdpNm:UdpNmGlobalConfig:UdpNmNodeDetectionEnabled

Introduce new optional parameters in UdpNmChannelConfig (same properties as in UdpNmGlobalConfig container):

UdpNm:UdpNmGlobalConfig:UdpNmChannelConfig:UdpNmNodeIdEnabled
UdpNm:UdpNmGlobalConfig:UdpNmChannelConfig:UdpNmRepeatMsgIndEnabled
UdpNm:UdpNmGlobalConfig:UdpNmChannelConfig:UdpNmNodeDetectionEnabled

+upstream-mapping 1:1 to new SysT attributes in SystemTemplate::NetworkManagement::NmCluster

Move ECUC_UdpNm_00015 UdpNmRepeatMsgIndEnabled from UdpNmGlobalConfig to UdpNmChannelConfig and change Value Configuration Class to Pre-compile time -> VARIANT-PRE-COMPILE / Link time -> VARIANT-LINK-TIME, VARIANT-POST-BUILD

Move ECUC_UdpNm_00007 UdpNmNodeDetectionEnabled from UdpNmGlobalConfig to UdpNmChannelConfig and change Value Configuration Class to Pre-compile time -> VARIANT-PRE-COMPILE / Link time -> VARIANT-LINK-TIME, VARIANT-POST-BUILD

Move ECUC_UdpNm_00008 UdpNmNodeIdEnabled from UdpNmGlobalConfig to UdpNmChannelConfig and change Value Configuration Class to Pre-compile time -> VARIANT-PRE-COMPILE / Link time -> VARIANT-LINK-TIME, VARIANT-POST-BUILD

=== EcuC FrNm ===

set the atpStatus to obsolete and make them optional for the following parameters:

FrNm:FrNmGlobalConfig:FrNmGlobalFeatures:FrNmSourceNodeIdentifierEnabled
FrNm:FrNmGlobalConfig:FrNmGlobalFeatures:FrNmNodeDetectionEnabled

Introduce new optional parameters in FrNmChannelConfigs (same properties as in NmGlobalFeatures container):

FrNm:FrNmChannelConfig:FrNmChannel:FrNmSourceNodeIdentifierEnabled
FrNm:FrNmChannelConfig:FrNmChannel:FrNmNodeDetectionEnabled

+upstream-mapping 1:1 to new SysT attributes in SystemTemplate::NetworkManagement::NmCluster

Move ECUC_FrNm_00040 FrNmNodeDetectionEnabled from FrNmGlobalFeatures to FrNmChannelConfig and change Value Configuration Class to Pre-compile time -> VARIANT-PRE-COMPILE / Link time -> VARIANT-LINK-TIME, VARIANT-

POST-BUILD

Append "FrNmSourceNodeIdentifierEnabled needs to be TRUE to use this feature."
 to the description of Move ECUC_FrNm_00040.

Move ECUC_FrNm_00042 FrNmSourceNodeIdentifierEnabled from FrNmGlobalFeatures to FrNmChannelConfig and change Value Configuration Class to Pre-compile time -> VARIANT-PRE-COMPILE / Link time -> VARIANT-LINK-TIME, VARIANT-POST-BUILD

=== EcuC LinNm ===

set the atpStatus to obsolete and make them optional for the following parameters:

LinNm:LinNmGlobalConfig:LinNmNodeIdentifierEnabled

LinNm:LinNmGlobalConfig:LinNmNodeDetectionEnabled

Introduce new optional parameters in LinNmChannelConfig (same properties as in LinNmGlobalConfig container):

LinNm:LinNmGlobalConfig:LinNmChannelConfig:LinNmNodeIdentifierEnabled

LinNm:LinNmGlobalConfig:LinNmChannelConfig:LinNmNodeDetectionEnabled

+upstream-mapping 1:1 to new SysT attributes in SystemTemplate::NetworkManagement::NmCluster

Move ECUC_LinNm_00021 from LinNmGlobalConfig to LinNmChannelConfig

Move ECUC_CanNm_00007 from LinNmGlobalConfig to LinNmChannelConfig

=== BSW UML CanNm ===

Change SWS_CanNm_00219 Return Value description E_NOT_OK to "Getting of the node identifier out of the most recently received NM PDU has failed or is not configured for this network handle."

Change SWS_CanNm_00220 Return Value description E_NOT_OK to "Getting of the node identifier of the local node has failed or is not configured for this network handle."

Change SWS_CanNm_00221 Return Value description E_NOT_OK to "Setting of Repeat Message Request Bit has failed or is not configured for this network handle."

Change SWS_CanNm_00222 Return Value description E_NOT_OK to "Getting of NM PDU Data has failed or is not configured for this network handle."

=== BSW UML UdpNm ===

Remove the complete "Configuration:" part from the description of SWS_UdpNm_00221, SWS_UdpNm_00309, SWS_UdpNm_00219,

SWS_UdpNm_00220.

=== SWS NmIf ===

Remove SWS_Nm_00142, SWS_Nm_00146, SWS_Nm_00148, SWS_Nm_00144,
and SWS_Nm_00231.

=== SWS CanNm ===

Remove SWS_CanNm_00135

Change SWS_CanNm_00119 to "If CanNmNodeDetectionEnabled is set to TRUE and Repeat Message Request bit is received in the Normal Operation State CanNm shall enter Repeat Message State."

Change SWS_CanNm_00111 to "If CanNmNodeDetectionEnabled is set to TRUE and Repeat Message Request bit is received in the Ready Sleep State CanNm shall enter Repeat Message State."

Change SWS_CanNm_00120 to "If CanNmNodeDetectionEnabled is set to TRUE and function CanNm_RepeatMessageRequest is called in the Normal Operation State CanNm shall enter Repeat Message State."

Change SWS_CanNm_00121 to "If CanNmNodeDetectionEnabled is set to TRUE and function CanNm_RepeatMessageRequest is called in the Normal Operation State CanNm shall set the Repeat Message Bit."

Change SWS_CanNm_00112 to "If CanNmNodeDetectionEnabled is set to TRUE and function CanNm_RepeatMessageRequest is called in the Ready Sleep State CanNm shall enter Repeat Message State."

Change SWS_CanNm_00113 to "If CanNmNodeDetectionEnabled is set to TRUE and function CanNm_RepeatMessageRequest is called in the Ready Sleep State CanNm shall set the Repeat Message Bit."

Change SWS_CanNm_00107 to "If CanNmNodeDetectionEnabled is set to TRUE CanNm shall clear the Repeat Message Bit when leaving Repeat Message State."

Change SWS_CanNm_00014 to "If CanNmNodeDetectionEnabled and CanNmRepeatMsgIndEnabled are set to TRUE and Repeat Message Request bit is received CanNm module shall call the callback function Nm_RepeatMessageIndication."

Change SWS_CanNm_00138 to "The service call CanNm_GetPduData shall provide whole PDU data (Node ID, Control Bit Vector and User Data) of the most recently received Network Management PDU if CanNmNodeDetectionEnabled or CanNmUserDataEnabled or CanNmNodeIdEnabled is set to TRUE." and move this requirement to chapter 8.3.14 CanNm_GetPduData

Change SWS_CanNm_00407 to "If CanNm_GetPduData is called in the context of Nm_CarWakeUpIndication and if CanNmNodeDetectionEnabled or CanNmUserDataEnabled or CanNmNodeIdEnabled is set to TRUE, CanNm shall return the PDU data of the PDU that causes the call of Nm_CarWakeUpIndication."

Change SWS_CanNm_00132 to "The service call CanNm_GetNodeIdentifier shall

provide the node identifier out of the most recently received Network Management PDU if CanNmNodeIdEnabled is set to TRUE.

Change SWS_CanNm_00133 to "The service call CanNm_GetLocalNodeIdentifier shall provide the node identifier configured for the local host node if CanNmNodeIdEnabled is set to TRUE.

Remove SWS_CanNm_00274

Remove SWS_CanNm_00276

Remove SWS_CanNm_00270

Remove SWS_CanNm_00272

=== SWS UdpNm ===

Remove SWS_UdpNm_00135

Remove SWS_UdpNm_00139

Change SWS_UdpNm_00119 to "If UdpNmNodeDetectionEnabled is set to TRUE and Repeat Message Request bit is received in the Normal Operation State, UdpNm shall enter Repeat Message State. (SRS_Nm_00153)"

Change SWS_UdpNm_00111 to "If UdpNmNodeDetectionEnabled is set to TRUE and Repeat Message Request bit is received in the Ready Sleep State, UdpNm shall enter Repeat Message State. (SRS_Nm_00153)"

Change SWS_UdpNm_00120 to "If UdpNmNodeDetectionEnabled is set to TRUE and function UdpNm_RepeatMessageRequest is called in the Normal Operation State, UdpNm shall enter Repeat Message State. (SRS_Nm_00153)"

Change SWS_UdpNm_00121 to "If UdpNmNodeDetectionEnabled is set to TRUE and function UdpNm_RepeatMessageRequest is called in the Normal Operation State, UdpNm shall set the Repeat Message Bit. (SRS_Nm_00153)"

Change SWS_UdpNm_00112 to "If UdpNmNodeDetectionEnabled is set to TRUE and function UdpNm_RepeatMessageRequest is called in the Ready Sleep State, UdpNm shall enter Repeat Message State. (SRS_Nm_00153)"

Change SWS_UdpNm_00113 to "If UdpNmNodeDetectionEnabled is set to TRUE and function UdpNm_RepeatMessageRequest is called in the Ready Sleep State, UdpNm shall set the Repeat Message Bit. (SRS_Nm_00153)"

Change SWS_UdpNm_00107 to "If UdpNmNodeDetectionEnabled is set to TRUE UdpNm shall clear the Repeat Message Bit when leaving Repeat Message State."

Change SWS_UdpNm_00014 to "If UdpNmNodeDetectionEnabled and UdpNmRepeatMsgIndEnabled are set to TRUE and Repeat Message Request bit is received, UdpNm module shall call the callback function Nm_RepeatMessageIndication. (SRS_Nm_00153)"

Change SWS_UdpNm_00138 to "The service call UdpNm_GetPduData shall provide whole payload (Source Node ID, Control Bit Vector and User Data) of the most recently received Network Management PDU if UdpNmNodeDetectionEnabled or UdpNmUserDataEnabled or UdpNmNodeIdEnabled is set to TRUE." and move this requirement to chapter "8.3.12 UdpNm_GetPduData"

Change SWS_UdpNm_00375 to "If UdpNm_GetPduData is called in the context of Nm_CarWakeUpIndication and if UdpNmNodeDetectionEnabled or UdpNmUserDataEnabled or UdpNmNodeIdEnabled is set to TRUE, UdpNm shall return the PDU data of the PDU that causes the call of Nm_CarWakeUpIndication."

Change SWS_UdpNm_00219 Return Value description E_NOT_OK to "Getting of the node identifier out of the most recently received NM PDU has failed or is not configured for this network handle."

Change SWS_UdpNm_00132 to "The service call UdpNm_GetNodeIdentifier shall provide the node identifier out of the most recently received Network Management PDU if UdpNmNodeIdEnabled is set to TRUE."

Change SWS_UdpNm_00220 Return Value description E_NOT_OK to "Getting of the node identifier of the local node has failed or is not configured for this network handle."

Change SWS_UdpNm_00133 to "The service call UdpNm_GetLocalNodeIdentifier shall provide the node identifier configured for the local host node if UdpNmNodeIdEnabled is set to TRUE."

Change SWS_UdpNm_00221 Return Value description E_NOT_OK to "Setting of Repeat Message Request Bit has failed or is not configured for this network handle."

Change SWS_UdpNm_00309 Return Value description E_NOT_OK to "Getting of NM PDU Data has failed or is not configured for this network handle."

=== SWS FrNm ===

Remove SWS_FrNm_00170

Remove SWS_FrNm_00172

Remove SWS_FrNm_00228

Remove SWS_FrNm_00266

Remove SWS_FrNm_00267

Remove SWS_FrNm_00268

Change SWS_FrNm_00124 to "If FrNmNodeDetectionEnabled is set to TRUE the FlexRay NM module shall leave the Normal Operation State and enter the Repeat Message State at the end of a NM Repetition Cycle when a Repeat Message Request is active. During this transition it shall set the Repeat Message Request Bit if the Repeat Message Request is active due to a call of FrNm_RepeatMessageRequest."

Change SWS_FrNm_00130 to "If FrNmNodeDetectionEnabled is set to TRUE the FlexRay NM module shall leave the Ready Sleep State and enter the Repeat Message State at the end of a NM Repetition Cycle when a Repeat Message Request is active and Ready Sleep Time has not expired. During this transition it shall set the Repeat Message Request Bit if the Repeat Message Request is active due to a call of FrNm_RepeatMessageRequest."

Change SWS_FrNm_00243 Return Value description E_NOT_OK to "Setting of Repeat Message Request Bit has failed or is not configured for this network handle."

Change SWS_FrNm_00172 to "The function FrNm_RepeatMessageRequest shall request node detection on the FlexRay Bus NM nodes if FrNmNodeDetectionEnabled is set to TRUE."

Change SWS_FrNm_00244 Return Value description E_NOT_OK to "Getting of the node identifier out of the last received NM-message has failed or is not configured for this network handle."

Change SWS_FrNm_00047 to "The function FrNm_GetNodeIdentifier shall provide the node identifier from the most recently received NM-message if FrNmSourceNodeIdentifierEnabled is set to TRUE."

Change SWS_FrNm_00245 Return Value description E_NOT_OK to "Getting of the node identifier of the local node has failed or is not configured for this network handle."

Change SWS_FrNm_00046 to "The function FrNm_GetLocalNodeIdentifier shall provide the node identifier configured for the local host node (FrNmNodeId) if FrNmSourceNodeIdentifierEnabled is set to TRUE."

Change SWS_FrNm_00242 Return Value description E_NOT_OK to "Getting of NM PDU Data has failed or is not configured for this network handle."

Change SWS_FrNm_00265 to "The function FrNm_GetPduData shall get the whole NM PDU data out of the most recently received NM message if FrNmControlBitVectorEnabled or FrNmSourceNodeIdentifierEnabled or FrNmUserDataEnabled is set to TRUE."

=== SWS LinNm ===

–Last change on issue 75405 comment 51–

BW-C-Level:

Application	Specification	Bus
1	4	1

1.9 Specification Item SWS_Nm_00144

Trace References:

[SRS_Nm_00150](#)

Content:

Configuration of Nm_RepeatMessageRequest: This function is only available if NmGlobalFeatures.NmNodeDetectionEnabled is set to TRUE.

RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

- RfC #75405: [NmIf] make "[RepeatMsgInd|NodeDetection|NodeId]Enabled" channel based configurable

Problem description:

The following attributes are NmEcu global:

nmRepeatMsgIndEnabled
nmNodeDetectionEnabled
nmNodeIdEnabled

This attributes should be configurable per channel.

Agreed solution:

=== SysT ===

set the atpStatus to obsolete for the following attributes:

SystemTemplate::NetworkManagement::NmEcu.nmNodeIdEnabled
SystemTemplate::NetworkManagement::NmEcu.nmRepeatMsgIndEnabled
SystemTemplate::NetworkManagement::NmEcu.nmNodeDetectionEnabled

introduce the following optional attributes to NmCluster:

SystemTemplate::NetworkManagement::NmCluster.nmNodeIdEnabled
SystemTemplate::NetworkManagement::NmCluster.nmRepeatMsgIndEnabled
SystemTemplate::NetworkManagement::NmCluster.nmNodeDetectionEnabled

=== EcuC NmIf ===

set the atpStatus to obsolete and make them optional for the following parameters:

Nm:NmGlobalConfig:NmGlobalFeatures:NmNodeIdEnabled
Nm:NmGlobalConfig:NmGlobalFeatures:NmRepeatMsgIndEnabled
Nm:NmGlobalConfig:NmGlobalFeatures:NmNodeDetectionEnabled

-upstream-mapping for Nm:NmGlobalConfig:NmGlobalFeatures:(NmNodeIdEnabled|NmRepeatM

Remove ECUC_Nm_00213 NmNodeIdEnabled from NmGlobalFeatures

Remove ECUC_Nm_00212 NmNodeDetectionEnabled from NmGlobalFeatures

Remove ECUC_Nm_00229 NmRepeatMsgIndEnabled from NmGlobalFeatures

=== EcuC CanNm ===

set the atpStatus to obsolete and make them optional for the following parameters:

CanNm:CanNmGlobalConfig:CanNmNodeIdEnabled
CanNm:CanNmGlobalConfig:CanNmRepeatMsgIndEnabled
CanNm:CanNmGlobalConfig:CanNmNodeDetectionEnabled

Introduce new optional parameters in CanNmChannelConfig (same properties as in CanNmGlobalConfig container):

CanNm:CanNmGlobalConfig:CanNmChannelConfig:CanNmNodeIdEnabled

CanNm:CanNmGlobalConfig:CanNmChannelConfig:CanNmRepeatMsgIndEnabled

CanNm:CanNmGlobalConfig:CanNmChannelConfig:CanNmNodeDetectionEnabled

+upstream-mapping 1:1 to new SysT attributes in SystemTemplate::NetworkManagement::NmCluster

Move ECUC_CanNm_00005 CanNmRepeatMsgIndEnabled from CanNmGlobalConfig to CanNmChannelConfig and change Value Configuration Class to Pre-compile time -> VARIANT-PRE-COMPILE / Link time -> VARIANT-LINK-TIME, VARIANT-POST-BUILD

Move ECUC_CanNm_00007 CanNmNodeDetectionEnabled from CanNmGlobalConfig to CanNmChannelConfig and change Value Configuration Class to Pre-compile time -> VARIANT-PRE-COMPILE / Link time -> VARIANT-LINK-TIME, VARIANT-POST-BUILD

Move ECUC_CanNm_00083 CanNmNodeIdEnabled from CanNmGlobalConfig to CanNmChannelConfig and change Value Configuration Class to Pre-compile time -> VARIANT-PRE-COMPILE / Link time -> VARIANT-LINK-TIME, VARIANT-POST-BUILD

=== EcuC UdpNm ===

set the atpStatus to obsolete and make them optional for the following parameters:

UdpNm:UdpNmGlobalConfig:UdpNmNodeIdEnabled

UdpNm:UdpNmGlobalConfig:UdpNmRepeatMsgIndEnabled

UdpNm:UdpNmGlobalConfig:UdpNmNodeDetectionEnabled

Introduce new optional parameters in UdpNmChannelConfig (same properties as in UdpNmGlobalConfig container):

UdpNm:UdpNmGlobalConfig:UdpNmChannelConfig:UdpNmNodeIdEnabled

UdpNm:UdpNmGlobalConfig:UdpNmChannelConfig:UdpNmRepeatMsgIndEnabled

UdpNm:UdpNmGlobalConfig:UdpNmChannelConfig:UdpNmNodeDetectionEnabled

+upstream-mapping 1:1 to new SysT attributes in SystemTemplate::NetworkManagement::NmCluster

Move ECUC_UdpNm_00015 UdpNmRepeatMsgIndEnabled from UdpNmGlobalConfig to UdpNmChannelConfig and change Value Configuration Class to Pre-compile time -> VARIANT-PRE-COMPILE / Link time -> VARIANT-LINK-TIME, VARIANT-POST-BUILD

Move ECUC_UdpNm_00007 UdpNmNodeDetectionEnabled from UdpNmGlobal-

alConfig to UdpNmChannelConfig and change Value Configuration Class to Pre-compile time -> VARIANT-PRE-COMPILE / Link time -> VARIANT-LINK-TIME, VARIANT-POST-BUILD

Move ECUC_UdpNm_00008 UdpNmNodeIdEnabled from UdpNmGlobalConfig to UdpNmChannelConfig and change Value Configuration Class to Pre-compile time -> VARIANT-PRE-COMPILE / Link time -> VARIANT-LINK-TIME, VARIANT-POST-BUILD

=== EcuC FrNm ===

set the atpStatus to obsolete and make them optional for the following parameters:
FrNm:FrNmGlobalConfig:FrNmGlobalFeatures:FrNmSourceNodeIdentifierEnabled
FrNm:FrNmGlobalConfig:FrNmGlobalFeatures:FrNmNodeDetectionEnabled

Introduce new optional parameters in FrNmChannelConfigs (same properties as in NmGlobalFeatures container):

FrNm:FrNmChannelConfig:FrNmChannel:FrNmSourceNodeIdentifierEnabled
FrNm:FrNmChannelConfig:FrNmChannel:FrNmNodeDetectionEnabled

+upstream-mapping 1:1 to new SysT attributes in SystemTemplate::NetworkManagement::NmCluster

Move ECUC_FrNm_00040 FrNmNodeDetectionEnabled from FrNmGlobalFeatures to FrNmChannelConfig and change Value Configuration Class to Pre-compile time -> VARIANT-PRE-COMPILE / Link time -> VARIANT-LINK-TIME, VARIANT-POST-BUILD

Append "FrNmSourceNodeIdentifierEnabled needs to be TRUE to use this feature." to the description of Move ECUC_FrNm_00040.

Move ECUC_FrNm_00042 FrNmSourceNodeIdentifierEnabled from FrNmGlobalFeatures to FrNmChannelConfig and change Value Configuration Class to Pre-compile time -> VARIANT-PRE-COMPILE / Link time -> VARIANT-LINK-TIME, VARIANT-POST-BUILD

=== EcuC LinNm ===

set the atpStatus to obsolete and make them optional for the following parameters:
LinNm:LinNmGlobalConfig:LinNmNodeIdEnabled
LinNm:LinNmGlobalConfig:LinNmNodeDetectionEnabled

Introduce new optional parameters in LinNmChannelConfig (same properties as in LinNmGlobalConfig container):

LinNm:LinNmGlobalConfig:LinNmChannelConfig:LinNmNodeIdEnabled
LinNm:LinNmGlobalConfig:LinNmChannelConfig:LinNmNodeDetectionEnabled

+upstream-mapping 1:1 to new SysT attributes in SystemTemplate::NetworkManagement::NmCluster

Move ECUC_LinNm_00021 from LinNmGlobalConfig to LinNmChannelConfig

Move ECUC_CanNm_00007 from LinNmGlobalConfig to LinNmChannelConfig

=== BSW UML CanNm ===

Change SWS_CanNm_00219 Return Value description E_NOT_OK to "Getting of the node identifier out of the most recently received NM PDU has failed or is not configured for this network handle."

Change SWS_CanNm_00220 Return Value description E_NOT_OK to "Getting of the node identifier of the local node has failed or is not configured for this network handle."

Change SWS_CanNm_00221 Return Value description E_NOT_OK to "Setting of Repeat Message Request Bit has failed or is not configured for this network handle."

Change SWS_CanNm_00222 Return Value description E_NOT_OK to "Getting of NM PDU Data has failed or is not configured for this network handle."

=== BSW UML UdpNm ===

Remove the complete "Configuration:" part from the description of SWS_UdpNm_00221, SWS_UdpNm_00309, SWS_UdpNm_00219, SWS_UdpNm_00220.

=== SWS NmIf ===

Remove SWS_Nm_00142, SWS_Nm_00146, SWS_Nm_00148, SWS_Nm_00144, and SWS_Nm_00231.

=== SWS CanNm ===

Remove SWS_CanNm_00135

Change SWS_CanNm_00119 to "If CanNmNodeDetectionEnabled is set to TRUE and Repeat Message Request bit is received in the Normal Operation State CanNm shall enter Repeat Message State."

Change SWS_CanNm_00111 to "If CanNmNodeDetectionEnabled is set to TRUE and Repeat Message Request bit is received in the Ready Sleep State CanNm shall enter Repeat Message State."

Change SWS_CanNm_00120 to "If CanNmNodeDetectionEnabled is set to TRUE and function CanNm_RepeatMessageRequest is called in the Normal Operation

State CanNm shall enter Repeat Message State."

Change SWS_CanNm_00121 to "If CanNmNodeDetectionEnabled is set to TRUE and function CanNm_RepeatMessageRequest is called in the Normal Operation State CanNm shall set the Repeat Message Bit."

Change SWS_CanNm_00112 to "If CanNmNodeDetectionEnabled is set to TRUE and function CanNm_RepeatMessageRequest is called in the Ready Sleep State CanNm shall enter Repeat Message State."

Change SWS_CanNm_00113 to "If CanNmNodeDetectionEnabled is set to TRUE and function CanNm_RepeatMessageRequest is called in the Ready Sleep State CanNm shall set the Repeat Message Bit."

Change SWS_CanNm_00107 to "If CanNmNodeDetectionEnabled is set to TRUE CanNm shall clear the Repeat Message Bit when leaving Repeat Message State."

Change SWS_CanNm_00014 to "If CanNmNodeDetectionEnabled and CanNmRepeatMsgIndEnabled are set to TRUE and Repeat Message Request bit is received CanNm module shall call the callback function Nm_RepeatMessageIndication."

Change SWS_CanNm_00138 to "The service call CanNm_GetPduData shall provide whole PDU data (Node ID, Control Bit Vector and User Data) of the most recently received Network Management PDU if CanNmNodeDetectionEnabled or CanNmUserDataEnabled or CanNmNodeIdEnabled is set to TRUE." and move this requirement to chapter 8.3.14 CanNm_GetPduData

Change SWS_CanNm_00407 to "If CanNm_GetPduData is called in the context of Nm_CarWakeUpIndication and if CanNmNodeDetectionEnabled or CanNmUserDataEnabled or CanNmNodeIdEnabled is set to TRUE, CanNm shall return the PDU data of the PDU that causes the call of Nm_CarWakeUpIndication."

Change SWS_CanNm_00132 to "The service call CanNm_GetNodeIdentifier shall provide the node identifier out of the most recently received Network Management PDU if CanNmNodeIdEnabled is set to TRUE.

Change SWS_CanNm_00133 to "The service call CanNm_GetLocalNodeIdentifier shall provide the node identifier configured for the local host node if CanNmNodeIdEnabled is set to TRUE.

Remove SWS_CanNm_00274

Remove SWS_CanNm_00276

Remove SWS_CanNm_00270

Remove SWS_CanNm_00272

=== SWS UdpNm ===

Remove SWS_UdpNm_00135

Remove SWS_UdpNm_00139

Change SWS_UdpNm_00119 to "If UdpNmNodeDetectionEnabled is set to TRUE and Repeat Message Request bit is received in the Normal Operation State, UdpNm shall enter Repeat Message State. (SRS_Nm_00153)"

Change SWS_UdpNm_00111 to "If UdpNmNodeDetectionEnabled is set to TRUE

and Repeat Message Request bit is received in the Ready Sleep State, UdpNm shall enter Repeat Message State. (SRS_Nm_00153)"

Change SWS_UdpNm_00120 to "If UdpNmNodeDetectionEnabled is set to TRUE and function UdpNm_RepeatMessageRequest is called in the Normal Operation State, UdpNm shall enter Repeat Message State. (SRS_Nm_00153)"

Change SWS_UdpNm_00121 to "If UdpNmNodeDetectionEnabled is set to TRUE and function UdpNm_RepeatMessageRequest is called in the Normal Operation State, UdpNm shall set the Repeat Message Bit. (SRS_Nm_00153)"

Change SWS_UdpNm_00112 to "If UdpNmNodeDetectionEnabled is set to TRUE and function UdpNm_RepeatMessageRequest is called in the Ready Sleep State, UdpNm shall enter Repeat Message State. (SRS_Nm_00153)"

Change SWS_UdpNm_00113 to "If UdpNmNodeDetectionEnabled is set to TRUE and function UdpNm_RepeatMessageRequest is called in the Ready Sleep State, UdpNm shall set the Repeat Message Bit. (SRS_Nm_00153)"

Change SWS_UdpNm_00107 to "If UdpNmNodeDetectionEnabled is set to TRUE UdpNm shall clear the Repeat Message Bit when leaving Repeat Message State."

Change SWS_UdpNm_00014 to "If UdpNmNodeDetectionEnabled and UdpNmRepeatMsgIndEnabled are set to TRUE and Repeat Message Request bit is received, UdpNm module shall call the callback function Nm_RepeatMessageIndication. (SRS_Nm_00153)"

Change SWS_UdpNm_00138 to "The service call UdpNm_GetPduData shall provide whole payload (Source Node ID, Control Bit Vector and User Data) of the most recently received Network Management PDU if UdpNmNodeDetectionEnabled or UdpNmUserDataEnabled or UdpNmNodeIdEnabled is set to TRUE." and move this requirement to chapter "8.3.12 UdpNm_GetPduData"

Change SWS_UdpNm_00375 to "If UdpNm_GetPduData is called in the context of Nm_CarWakeUpIndication and if UdpNmNodeDetectionEnabled or UdpNmUserDataEnabled or UdpNmNodeIdEnabled is set to TRUE, UdpNm shall return the PDU data of the PDU that causes the call of Nm_CarWakeUpIndication."

Change SWS_UdpNm_00219 Return Value description E_NOT_OK to "Getting of the node identifier out of the most recently received NM PDU has failed or is not configured for this network handle."

Change SWS_UdpNm_00132 to "The service call UdpNm_GetNodeIdentifier shall provide the node identifier out of the most recently received Network Management PDU if UdpNmNodeIdEnabled is set to TRUE.

Change SWS_UdpNm_00220 Return Value description E_NOT_OK to "Getting of the node identifier of the local node has failed or is not configured for this network handle."

Change SWS_UdpNm_00133 to "The service call UdpNm_GetLocalNodeIdentifier shall provide the node identifier configured for the local host node if UdpNmNodeIdEnabled is set to TRUE.

Change SWS_UdpNm_00221 Return Value description E_NOT_OK to "Setting of Repeat Message Request Bit has failed or is not configured for this network handle."

Change SWS_UdpNm_00309 Return Value description E_NOT_OK to "Getting of NM PDU Data has failed or is not configured for this network handle."

=== SWS FrNm ===

Remove SWS_FrNm_00170

Remove SWS_FrNm_00172

Remove SWS_FrNm_00228

Remove SWS_FrNm_00266

Remove SWS_FrNm_00267

Remove SWS_FrNm_00268

Change SWS_FrNm_00124 to "If FrNmNodeDetectionEnabled is set to TRUE the FlexRay NM module shall leave the Normal Operation State and enter the Repeat Message State at the end of a NM Repetition Cycle when a Repeat Message Request is active. During this transition it shall set the Repeat Message Request Bit if the Repeat Message Request is active due to a call of FrNm_RepeatMessageRequest."

Change SWS_FrNm_00130 to "If FrNmNodeDetectionEnabled is set to TRUE the FlexRay NM module shall leave the Ready Sleep State and enter the Repeat Message State at the end of a NM Repetition Cycle when a Repeat Message Request is active and Ready Sleep Time has not expired. During this transition it shall set the Repeat Message Request Bit if the Repeat Message Request is active due to a call of FrNm_RepeatMessageRequest."

Change SWS_FrNm_00243 Return Value description E_NOT_OK to "Setting of Repeat Message Request Bit has failed or is not configured for this network handle."

Change SWS_FrNm_00172 to "The function FrNm_RepeatMessageRequest shall request node detection on the FlexRay Bus NM nodes if FrNmNodeDetectionEnabled is set to TRUE."

Change SWS_FrNm_00244 Return Value description E_NOT_OK to "Getting of the node identifier out of the last received NM-message has failed or is not configured for this network handle."

Change SWS_FrNm_00047 to "The function FrNm_GetNodeIdentifier shall provide the node identifier from the most recently received NM-message if FrNmSourceNodeIdentifierEnabled is set to TRUE."

Change SWS_FrNm_00245 Return Value description E_NOT_OK to "Getting of the node identifier of the local node has failed or is not configured for this network handle."

Change SWS_FrNm_00046 to "The function FrNm_GetLocalNodeIdentifier shall provide the node identifier configured for the local host node (FrNmNodeId) if FrNmSourceNodeIdentifierEnabled is set to TRUE."

Change SWS_FrNm_00242 Return Value description E_NOT_OK to "Getting of NM PDU Data has failed or is not configured for this network handle."

Change SWS_FrNm_00265 to "The function FrNm_GetPduData shall get the whole

NM PDU data out of the most recently received NM message if FrNmControlBitVectorEnabled or FrNmSourceNodeIdentifierEnabled or FrNmUserDataEnabled is set to TRUE."

=== SWS LinNm ===

–Last change on issue 75405 comment 51–

BW-C-Level:

Application	Specification	Bus
1	4	1

1.10 Specification Item SWS_Nm_00146

Trace References:

[SRS_Nm_00150](#)

Content:

Configuration of Nm_GetNodeIdentifier: This function is only available if NmGlobalFeatures.NmNodeIdentifierEnabled is set to TRUE.

RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

- RfC #75405: [NmIf] make "[RepeatMsgInd|NodeDetection|NodeIdentifierEnabled]" channel based configurable

Problem description:

The following attributes are NmEcu global:

nmRepeatMsgIndEnabled
 nmNodeDetectionEnabled
 nmNodeIdentifierEnabled

This attributes should be configurable per channel.

Agreed solution:

=== SysT ===

set the atpStatus to obsolete for the following attributes:

SystemTemplate::NetworkManagement::NmEcu.nmNodeIdentifierEnabled
 SystemTemplate::NetworkManagement::NmEcu.nmRepeatMsgIndEnabled
 SystemTemplate::NetworkManagement::NmEcu.nmNodeDetectionEnabled

introduce the following optional attributes to NmCluster:

SystemTemplate::NetworkManagement::NmCluster.nmNodeIdEnabled

SystemTemplate::NetworkManagement::NmCluster.nmRepeatMsgIndEnabled

SystemTemplate::NetworkManagement::NmCluster.nmNodeDetectionEnabled

=== EcuC NmIf ===

set the atpStatus to obsolete and make them optional for the following parameters:

Nm:NmGlobalConfig:NmGlobalFeatures:NmNodeIdEnabled

Nm:NmGlobalConfig:NmGlobalFeatures:NmRepeatMsgIndEnabled

Nm:NmGlobalConfig:NmGlobalFeatures:NmNodeDetectionEnabled

-upstream-mapping for Nm:NmGlobalConfig:NmGlobalFeatures:(NmNodeIdEnabled|NmRepeatM

Remove ECUC_Nm_00213 NmNodeIdEnabled from NmGlobalFeatures

Remove ECUC_Nm_00212 NmNodeDetectionEnabled from NmGlobalFeatures

Remove ECUC_Nm_00229 NmRepeatMsgIndEnabled from NmGlobalFeatures

=== EcuC CanNm ===

set the atpStatus to obsolete and make them optional for the following parameters:

CanNm:CanNmGlobalConfig:CanNmNodeIdEnabled

CanNm:CanNmGlobalConfig:CanNmRepeatMsgIndEnabled

CanNm:CanNmGlobalConfig:CanNmNodeDetectionEnabled

Introduce new optional parameters in CanNmChannelConfig (same properties as in CanNmGlobalConfig container):

CanNm:CanNmGlobalConfig:CanNmChannelConfig:CanNmNodeIdEnabled

CanNm:CanNmGlobalConfig:CanNmChannelConfig:CanNmRepeatMsgIndEnabled

CanNm:CanNmGlobalConfig:CanNmChannelConfig:CanNmNodeDetectionEnabled

+upstream-mapping 1:1 to new SysT attributes in SystemTemplate::NetworkManagement::NmCluster

Move ECUC_CanNm_00005 CanNmRepeatMsgIndEnabled from CanNmGlobalConfig to CanNmChannelConfig and change Value Configuration Class to Pre-compile time -> VARIANT-PRE-COMPILE / Link time -> VARIANT-LINK-TIME, VARIANT-POST-BUILD

Move ECUC_CanNm_00007 CanNmNodeDetectionEnabled from CanNmGlobalConfig to CanNmChannelConfig and change Value Configuration Class to Pre-compile time -> VARIANT-PRE-COMPILE / Link time -> VARIANT-LINK-TIME, VARIANT-POST-BUILD

Move ECUC_CanNm_00083 CanNmNodeIdEnabled from CanNmGlobalConfig to

CanNmChannelConfig and change Value Configuration Class to Pre-compile time
-> VARIANT-PRE-COMPILE / Link time -> VARIANT-LINK-TIME, VARIANT-POST-BUILD

=== EcuC UdpNm ===

set the atpStatus to obsolete and make them optional for the following parameters:

UdpNm:UdpNmGlobalConfig:UdpNmNodeIdEnabled

UdpNm:UdpNmGlobalConfig:UdpNmRepeatMsgIndEnabled

UdpNm:UdpNmGlobalConfig:UdpNmNodeDetectionEnabled

Introduce new optional parameters in UdpNmChannelConfig (same properties as in UdpNmGlobalConfig container):

UdpNm:UdpNmGlobalConfig:UdpNmChannelConfig:UdpNmNodeIdEnabled

UdpNm:UdpNmGlobalConfig:UdpNmChannelConfig:UdpNmRepeatMsgIndEnabled

UdpNm:UdpNmGlobalConfig:UdpNmChannelConfig:UdpNmNodeDetectionEnabled

+upstream-mapping 1:1 to new SysT attributes in SystemTemplate::NetworkManagement::NmCluster

Move ECUC_UdpNm_00015 UdpNmRepeatMsgIndEnabled from UdpNmGlobalConfig to UdpNmChannelConfig and change Value Configuration Class to Pre-compile time -> VARIANT-PRE-COMPILE / Link time -> VARIANT-LINK-TIME, VARIANT-POST-BUILD

Move ECUC_UdpNm_00007 UdpNmNodeDetectionEnabled from UdpNmGlobalConfig to UdpNmChannelConfig and change Value Configuration Class to Pre-compile time -> VARIANT-PRE-COMPILE / Link time -> VARIANT-LINK-TIME, VARIANT-POST-BUILD

Move ECUC_UdpNm_00008 UdpNmNodeIdEnabled from UdpNmGlobalConfig to UdpNmChannelConfig and change Value Configuration Class to Pre-compile time -> VARIANT-PRE-COMPILE / Link time -> VARIANT-LINK-TIME, VARIANT-POST-BUILD

=== EcuC FrNm ===

set the atpStatus to obsolete and make them optional for the following parameters:

FrNm:FrNmGlobalConfig:FrNmGlobalFeatures:FrNmSourceNodeIdentifierEnabled

FrNm:FrNmGlobalConfig:FrNmGlobalFeatures:FrNmNodeDetectionEnabled

Introduce new optional parameters in FrNmChannelConfigs (same properties as in NmGlobalFeatures container):

FrNm:FrNmChannelConfig:FrNmChannel:FrNmSourceNodeIdentifierEnabled

FrNm:FrNmChannelConfig:FrNmChannel:FrNmNodeDetectionEnabled

+upstream-mapping 1:1 to new SysT attributes in SystemTemplate::NetworkManagement::NmCluster

Move ECUC_FrNm_00040 FrNmNodeDetectionEnabled from FrNmGlobalFeatures to FrNmChannelConfig and change Value Configuration Class to Pre-compile time -> VARIANT-PRE-COMPILE / Link time -> VARIANT-LINK-TIME, VARIANT-POST-BUILD

Append "FrNmSourceNodeIdentifierEnabled needs to be TRUE to use this feature." to the description of Move ECUC_FrNm_00040.

Move ECUC_FrNm_00042 FrNmSourceNodeIdentifierEnabled from FrNmGlobalFeatures to FrNmChannelConfig and change Value Configuration Class to Pre-compile time -> VARIANT-PRE-COMPILE / Link time -> VARIANT-LINK-TIME, VARIANT-POST-BUILD

=== EcuC LinNm ===

set the atpStatus to obsolete and make them optional for the following parameters:

LinNm:LinNmGlobalConfig:LinNmNodeIdentifierEnabled

LinNm:LinNmGlobalConfig:LinNmNodeDetectionEnabled

Introduce new optional parameters in LinNmChannelConfig (same properties as in LinNmGlobalConfig container):

LinNm:LinNmGlobalConfig:LinNmChannelConfig:LinNmNodeIdentifierEnabled

LinNm:LinNmGlobalConfig:LinNmChannelConfig:LinNmNodeDetectionEnabled

+upstream-mapping 1:1 to new SysT attributes in SystemTemplate::NetworkManagement::NmCluster

Move ECUC_LinNm_00021 from LinNmGlobalConfig to LinNmChannelConfig

Move ECUC_CanNm_00007 from LinNmGlobalConfig to LinNmChannelConfig

=== BSW UML CanNm ===

Change SWS_CanNm_00219 Return Value description E_NOT_OK to "Getting of the node identifier out of the most recently received NM PDU has failed or is not configured for this network handle."

Change SWS_CanNm_00220 Return Value description E_NOT_OK to "Getting of the node identifier of the local node has failed or is not configured for this network handle."

Change SWS_CanNm_00221 Return Value description E_NOT_OK to "Setting of Repeat Message Request Bit has failed or is not configured for this network handle."

Change SWS_CanNm_00222 Return Value description E_NOT_OK to "Getting of NM PDU Data has failed or is not configured for this network handle."

=== BSW UML UdpNm ===

Remove the complete "Configuration:" part from the description of SWS_UdpNm_00221, SWS_UdpNm_00309, SWS_UdpNm_00219, SWS_UdpNm_00220.

=== SWS NmIf ===

Remove SWS_Nm_00142, SWS_Nm_00146, SWS_Nm_00148, SWS_Nm_00144, and SWS_Nm_00231.

=== SWS CanNm ===

Remove SWS_CanNm_00135

Change SWS_CanNm_00119 to "If CanNmNodeDetectionEnabled is set to TRUE and Repeat Message Request bit is received in the Normal Operation State CanNm shall enter Repeat Message State."

Change SWS_CanNm_00111 to "If CanNmNodeDetectionEnabled is set to TRUE and Repeat Message Request bit is received in the Ready Sleep State CanNm shall enter Repeat Message State."

Change SWS_CanNm_00120 to "If CanNmNodeDetectionEnabled is set to TRUE and function CanNm_RepeatMessageRequest is called in the Normal Operation State CanNm shall enter Repeat Message State."

Change SWS_CanNm_00121 to "If CanNmNodeDetectionEnabled is set to TRUE and function CanNm_RepeatMessageRequest is called in the Normal Operation State CanNm shall set the Repeat Message Bit."

Change SWS_CanNm_00112 to "If CanNmNodeDetectionEnabled is set to TRUE and function CanNm_RepeatMessageRequest is called in the Ready Sleep State CanNm shall enter Repeat Message State."

Change SWS_CanNm_00113 to "If CanNmNodeDetectionEnabled is set to TRUE and function CanNm_RepeatMessageRequest is called in the Ready Sleep State CanNm shall set the Repeat Message Bit."

Change SWS_CanNm_00107 to "If CanNmNodeDetectionEnabled is set to TRUE CanNm shall clear the Repeat Message Bit when leaving Repeat Message State."

Change SWS_CanNm_00014 to "If CanNmNodeDetectionEnabled and CanNmRepeatMsgIndEnabled are set to TRUE and Repeat Message Request bit is received CanNm module shall call the callback function Nm_RepeatMessageIndication."

Change SWS_CanNm_00138 to "The service call CanNm_GetPduData shall provide whole PDU data (Node ID, Control Bit Vector and User Data) of the most recently received Network Management PDU if CanNmNodeDetectionEnabled or

CanNmUserDataEnabled or CanNmNodeIdEnabled is set to TRUE." and move this requirement to chapter 8.3.14 CanNm_GetPduData

Change SWS_CanNm_00407 to "If CanNm_GetPduData is called in the context of Nm_CarWakeUpIndication and if CanNmNodeDetectionEnabled or CanNmUserDataEnabled or CanNmNodeIdEnabled is set to TRUE, CanNm shall return the PDU data of the PDU that causes the call of Nm_CarWakeUpIndication."

Change SWS_CanNm_00132 to "The service call CanNm_GetNodeIdentifier shall provide the node identifier out of the most recently received Network Management PDU if CanNmNodeIdEnabled is set to TRUE.

Change SWS_CanNm_00133 to "The service call CanNm_GetLocalNodeIdentifier shall provide the node identifier configured for the local host node if CanNmNodeIdEnabled is set to TRUE.

Remove SWS_CanNm_00274

Remove SWS_CanNm_00276

Remove SWS_CanNm_00270

Remove SWS_CanNm_00272

=== SWS UdpNm ===

Remove SWS_UdpNm_00135

Remove SWS_UdpNm_00139

Change SWS_UdpNm_00119 to "If UdpNmNodeDetectionEnabled is set to TRUE and Repeat Message Request bit is received in the Normal Operation State, UdpNm shall enter Repeat Message State. (SRS_Nm_00153)"

Change SWS_UdpNm_00111 to "If UdpNmNodeDetectionEnabled is set to TRUE and Repeat Message Request bit is received in the Ready Sleep State, UdpNm shall enter Repeat Message State. (SRS_Nm_00153)"

Change SWS_UdpNm_00120 to "If UdpNmNodeDetectionEnabled is set to TRUE and function UdpNm_RepeatMessageRequest is called in the Normal Operation State, UdpNm shall enter Repeat Message State. (SRS_Nm_00153)"

Change SWS_UdpNm_00121 to "If UdpNmNodeDetectionEnabled is set to TRUE and function UdpNm_RepeatMessageRequest is called in the Normal Operation State, UdpNm shall set the Repeat Message Bit. (SRS_Nm_00153)"

Change SWS_UdpNm_00112 to "If UdpNmNodeDetectionEnabled is set to TRUE and function UdpNm_RepeatMessageRequest is called in the Ready Sleep State, UdpNm shall enter Repeat Message State. (SRS_Nm_00153)"

Change SWS_UdpNm_00113 to "If UdpNmNodeDetectionEnabled is set to TRUE and function UdpNm_RepeatMessageRequest is called in the Ready Sleep State, UdpNm shall set the Repeat Message Bit. (SRS_Nm_00153)"

Change SWS_UdpNm_00107 to "If UdpNmNodeDetectionEnabled is set to TRUE UdpNm shall clear the Repeat Message Bit when leaving Repeat Message State."

Change SWS_UdpNm_00014 to "If UdpNmNodeDetectionEnabled and UdpNmRepeatMsgIndEnabled are set to TRUE and Repeat Message Request bit is received,

UdpNm module shall call the callback function Nm_RepeatMessageIndication. (SRS_Nm_00153)"

Change SWS_UdpNm_00138 to "The service call UdpNm_GetPduData shall provide whole payload (Source Node ID, Control Bit Vector and User Data) of the most recently received Network Management PDU if UdpNmNodeDetectionEnabled or UdpNmUserDataEnabled or UdpNmNodeIdEnabled is set to TRUE." and move this requirement to chapter "8.3.12 UdpNm_GetPduData"

Change SWS_UdpNm_00375 to "If UdpNm_GetPduData is called in the context of Nm_CarWakeUpIndication and if UdpNmNodeDetectionEnabled or UdpNmUserDataEnabled or UdpNmNodeIdEnabled is set to TRUE, UdpNm shall return the PDU data of the PDU that causes the call of Nm_CarWakeUpIndication."

Change SWS_UdpNm_00219 Return Value description E_NOT_OK to "Getting of the node identifier out of the most recently received NM PDU has failed or is not configured for this network handle."

Change SWS_UdpNm_00132 to "The service call UdpNm_GetNodeIdentifier shall provide the node identifier out of the most recently received Network Management PDU if UdpNmNodeIdEnabled is set to TRUE.

Change SWS_UdpNm_00220 Return Value description E_NOT_OK to "Getting of the node identifier of the local node has failed or is not configured for this network handle."

Change SWS_UdpNm_00133 to "The service call UdpNm_GetLocalNodeIdentifier shall provide the node identifier configured for the local host node if UdpNmNodeIdEnabled is set to TRUE.

Change SWS_UdpNm_00221 Return Value description E_NOT_OK to "Setting of Repeat Message Request Bit has failed or is not configured for this network handle."

Change SWS_UdpNm_00309 Return Value description E_NOT_OK to "Getting of NM PDU Data has failed or is not configured for this network handle."

=== SWS FrNm ===

Remove SWS_FrNm_00170

Remove SWS_FrNm_00172

Remove SWS_FrNm_00228

Remove SWS_FrNm_00266

Remove SWS_FrNm_00267

Remove SWS_FrNm_00268

Change SWS_FrNm_00124 to "If FrNmNodeDetectionEnabled is set to TRUE the FlexRay NM module shall leave the Normal Operation State and enter the Repeat Message State at the end of a NM Repetition Cycle when a Repeat Message Request is active. During this transition it shall set the Repeat Message Request Bit if the Repeat Message Request is active due to a call of FrNm_RepeatMessageRequest."

Change SWS_FrNm_00130 to "If FrNmNodeDetectionEnabled is set to TRUE

the FlexRay NM module shall leave the Ready Sleep State and enter the Repeat Message State at the end of a NM Repetition Cycle when a Repeat Message Request is active and Ready Sleep Time has not expired. During this transition it shall set the Repeat Message Request Bit if the Repeat Message Request is active due to a call of FrNm_RepeatMessageRequest."

Change SWS_FrNm_00243 Return Value description E_NOT_OK to "Setting of Repeat Message Request Bit has failed or is not configured for this network handle."

Change SWS_FrNm_00172 to "The function FrNm_RepeatMessageRequest shall request node detection on the FlexRay Bus NM nodes if FrNmNodeDetectionEnabled is set to TRUE."

Change SWS_FrNm_00244 Return Value description E_NOT_OK to "Getting of the node identifier out of the last received NM-message has failed or is not configured for this network handle."

Change SWS_FrNm_00047 to "The function FrNm_GetNodeIdentifier shall provide the node identifier from the most recently received NM-message if FrNm-SourceNodeIdentifierEnabled is set to TRUE."

Change SWS_FrNm_00245 Return Value description E_NOT_OK to "Getting of the node identifier of the local node has failed or is not configured for this network handle."

Change SWS_FrNm_00046 to "The function FrNm_GetLocalNodeIdentifier shall provide the node identifier configured for the local host node (FrNmNodeId) if FrNmSourceNodeIdentifierEnabled is set to TRUE."

Change SWS_FrNm_00242 Return Value description E_NOT_OK to "Getting of NM PDU Data has failed or is not configured for this network handle."

Change SWS_FrNm_00265 to "The function FrNm_GetPduData shall get the whole NM PDU data out of the most recently received NM message if FrNmControlBitVectorEnabled or FrNmSourceNodeIdentifierEnabled or FrNmUserDataEnabled is set to TRUE."

=== SWS LinNm ===

–Last change on issue 75405 comment 51–

BW-C-Level:

Application	Specification	Bus
1	4	1

1.11 Specification Item SWS_Nm_00148

Trace References:

[SRS_Nm_00150](#)

Content:

Configuration of Nm_GetLocalNodeIdentifier: This function is only available if NmGlobalFeatures.NmNodeIdEnabled is set to TRUE.

RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

- RfC #75405: [NmIf] make "[RepeateMsgInd|NodeDetection|NodeId]Enabled" channel based configurable

Problem description:

The following attributes are NmEcu global:

nmRepeatMsgIndEnabled
nmNodeDetectionEnabled
nmNodeIdEnabled

This attributes should be configurable per channel.

Agreed solution:

=== SysT ===

set the atpStatus to obsolete for the following attributes:

SystemTemplate::NetworkManagement::NmEcu.nmNodeIdEnabled
SystemTemplate::NetworkManagement::NmEcu.nmRepeatMsgIndEnabled
SystemTemplate::NetworkManagement::NmEcu.nmNodeDetectionEnabled

introduce the following optional attributes to NmCluster:

SystemTemplate::NetworkManagement::NmCluster.nmNodeIdEnabled
SystemTemplate::NetworkManagement::NmCluster.nmRepeatMsgIndEnabled
SystemTemplate::NetworkManagement::NmCluster.nmNodeDetectionEnabled

=== EcuC NmIf ===

set the atpStatus to obsolete and make them optional for the following parameters:

Nm:NmGlobalConfig:NmGlobalFeatures:NmNodeIdEnabled
Nm:NmGlobalConfig:NmGlobalFeatures:NmRepeatMsgIndEnabled
Nm:NmGlobalConfig:NmGlobalFeatures:NmNodeDetectionEnabled

-upstream-mapping for Nm:NmGlobalConfig:NmGlobalFeatures:(NmNodeIdEnabled|NmRepeatM

Remove ECUC_Nm_00213 NmNodeIdEnabled from NmGlobalFeatures

Remove ECUC_Nm_00212 NmNodeDetectionEnabled from NmGlobalFeatures

Remove ECUC_Nm_00229 NmRepeatMsgIndEnabled from NmGlobalFeatures

=== EcuC CanNm ===

set the atpStatus to obsolete and make them optional for the following parameters:

CanNm:CanNmGlobalConfig:CanNmNodeIdEnabled
CanNm:CanNmGlobalConfig:CanNmRepeatMsgIndEnabled
CanNm:CanNmGlobalConfig:CanNmNodeDetectionEnabled

Introduce new optional parameters in CanNmChannelConfig (same properties as in CanNmGlobalConfig container):

CanNm:CanNmGlobalConfig:CanNmChannelConfig:CanNmNodeIdEnabled
CanNm:CanNmGlobalConfig:CanNmChannelConfig:CanNmRepeatMsgIndEnabled
CanNm:CanNmGlobalConfig:CanNmChannelConfig:CanNmNodeDetectionEnabled

+upstream-mapping 1:1 to new SysT attributes in SystemTemplate::NetworkManagement::NmCluster

Move ECUC_CanNm_00005 CanNmRepeatMsgIndEnabled from CanNmGlobalConfig to CanNmChannelConfig and change Value Configuration Class to Pre-compile time -> VARIANT-PRE-COMPILE / Link time -> VARIANT-LINK-TIME, VARIANT-POST-BUILD

Move ECUC_CanNm_00007 CanNmNodeDetectionEnabled from CanNmGlobalConfig to CanNmChannelConfig and change Value Configuration Class to Pre-compile time -> VARIANT-PRE-COMPILE / Link time -> VARIANT-LINK-TIME, VARIANT-POST-BUILD

Move ECUC_CanNm_00083 CanNmNodeIdEnabled from CanNmGlobalConfig to CanNmChannelConfig and change Value Configuration Class to Pre-compile time -> VARIANT-PRE-COMPILE / Link time -> VARIANT-LINK-TIME, VARIANT-POST-BUILD

=== EcuC UdpNm ===

set the atpStatus to obsolete and make them optional for the following parameters:

UdpNm:UdpNmGlobalConfig:UdpNmNodeIdEnabled
UdpNm:UdpNmGlobalConfig:UdpNmRepeatMsgIndEnabled
UdpNm:UdpNmGlobalConfig:UdpNmNodeDetectionEnabled

Introduce new optional parameters in UdpNmChannelConfig (same properties as in UdpNmGlobalConfig container):

UdpNm:UdpNmGlobalConfig:UdpNmChannelConfig:UdpNmNodeIdEnabled
UdpNm:UdpNmGlobalConfig:UdpNmChannelConfig:UdpNmRepeatMsgIndEnabled
UdpNm:UdpNmGlobalConfig:UdpNmChannelConfig:UdpNmNodeDetectionEnabled

+upstream-mapping 1:1 to new SysT attributes in SystemTem-

plate::NetworkManagement::NmCluster

Move ECUC_UdpNm_00015 UdpNmRepeatMsgIndEnabled from UdpNmGlobalConfig to UdpNmChannelConfig and change Value Configuration Class to Pre-compile time -> VARIANT-PRE-COMPILE / Link time -> VARIANT-LINK-TIME, VARIANT-POST-BUILD

Move ECUC_UdpNm_00007 UdpNmNodeDetectionEnabled from UdpNmGlobalConfig to UdpNmChannelConfig and change Value Configuration Class to Pre-compile time -> VARIANT-PRE-COMPILE / Link time -> VARIANT-LINK-TIME, VARIANT-POST-BUILD

Move ECUC_UdpNm_00008 UdpNmNodeIdEnabled from UdpNmGlobalConfig to UdpNmChannelConfig and change Value Configuration Class to Pre-compile time -> VARIANT-PRE-COMPILE / Link time -> VARIANT-LINK-TIME, VARIANT-POST-BUILD

=== EcuC FrNm ===

set the atpStatus to obsolete and make them optional for the following parameters:
FrNm:FrNmGlobalConfig:FrNmGlobalFeatures:FrNmSourceNodeIdentifierEnabled
FrNm:FrNmGlobalConfig:FrNmGlobalFeatures:FrNmNodeDetectionEnabled

Introduce new optional parameters in FrNmChannelConfigs (same properties as in NmGlobalFeatures container):

FrNm:FrNmChannelConfig:FrNmChannel:FrNmSourceNodeIdentifierEnabled
FrNm:FrNmChannelConfig:FrNmChannel:FrNmNodeDetectionEnabled

+upstream-mapping 1:1 to new SysT attributes in SystemTemplate::NetworkManagement::NmCluster

Move ECUC_FrNm_00040 FrNmNodeDetectionEnabled from FrNmGlobalFeatures to FrNmChannelConfig and change Value Configuration Class to Pre-compile time -> VARIANT-PRE-COMPILE / Link time -> VARIANT-LINK-TIME, VARIANT-POST-BUILD

Append "FrNmSourceNodeIdentifierEnabled needs to be TRUE to use this feature." to the description of Move ECUC_FrNm_00040.

Move ECUC_FrNm_00042 FrNmSourceNodeIdentifierEnabled from FrNmGlobalFeatures to FrNmChannelConfig and change Value Configuration Class to Pre-compile time -> VARIANT-PRE-COMPILE / Link time -> VARIANT-LINK-TIME, VARIANT-POST-BUILD

=== EcuC LinNm ===

set the atpStatus to obsolete and make them optional for the following parameters:

LinNm:LinNmGlobalConfig:LinNmNodeIdEnabled
LinNm:LinNmGlobalConfig:LinNmNodeDetectionEnabled

Introduce new optional parameters in LinNmChannelConfig (same properties as in LinNmGlobalConfig container):

LinNm:LinNmGlobalConfig:LinNmChannelConfig:LinNmNodeIdEnabled
LinNm:LinNmGlobalConfig:LinNmChannelConfig:LinNmNodeDetectionEnabled

+upstream-mapping 1:1 to new SysT attributes in SystemTemplate::NetworkManagement::NmCluster

Move ECUC_LinNm_00021 from LinNmGlobalConfig to LinNmChannelConfig
Move ECUC_CanNm_00007 from LinNmGlobalConfig to LinNmChannelConfig

=== BSW UML CanNm ===

Change SWS_CanNm_00219 Return Value description E_NOT_OK to "Getting of the node identifier out of the most recently received NM PDU has failed or is not configured for this network handle."

Change SWS_CanNm_00220 Return Value description E_NOT_OK to "Getting of the node identifier of the local node has failed or is not configured for this network handle."

Change SWS_CanNm_00221 Return Value description E_NOT_OK to "Setting of Repeat Message Request Bit has failed or is not configured for this network handle."

Change SWS_CanNm_00222 Return Value description E_NOT_OK to "Getting of NM PDU Data has failed or is not configured for this network handle."

=== BSW UML UdpNm ===

Remove the complete "Configuration:" part from the description of SWS_UdpNm_00221, SWS_UdpNm_00309, SWS_UdpNm_00219, SWS_UdpNm_00220.

=== SWS NmIf ===

Remove SWS_Nm_00142, SWS_Nm_00146, SWS_Nm_00148, SWS_Nm_00144, and SWS_Nm_00231.

=== SWS CanNm ===

Remove SWS_CanNm_00135

Change SWS_CanNm_00119 to "If CanNmNodeDetectionEnabled is set to TRUE

and Repeat Message Request bit is received in the Normal Operation State CanNm shall enter Repeat Message State."

Change SWS_CanNm_00111 to "If CanNmNodeDetectionEnabled is set to TRUE and Repeat Message Request bit is received in the Ready Sleep State CanNm shall enter Repeat Message State."

Change SWS_CanNm_00120 to "If CanNmNodeDetectionEnabled is set to TRUE and function CanNm_RepeatMessageRequest is called in the Normal Operation State CanNm shall enter Repeat Message State."

Change SWS_CanNm_00121 to "If CanNmNodeDetectionEnabled is set to TRUE and function CanNm_RepeatMessageRequest is called in the Normal Operation State CanNm shall set the Repeat Message Bit."

Change SWS_CanNm_00112 to "If CanNmNodeDetectionEnabled is set to TRUE and function CanNm_RepeatMessageRequest is called in the Ready Sleep State CanNm shall enter Repeat Message State."

Change SWS_CanNm_00113 to "If CanNmNodeDetectionEnabled is set to TRUE and function CanNm_RepeatMessageRequest is called in the Ready Sleep State CanNm shall set the Repeat Message Bit."

Change SWS_CanNm_00107 to "If CanNmNodeDetectionEnabled is set to TRUE CanNm shall clear the Repeat Message Bit when leaving Repeat Message State."

Change SWS_CanNm_00014 to "If CanNmNodeDetectionEnabled and CanNmRepeatMsgIndEnabled are set to TRUE and Repeat Message Request bit is received CanNm module shall call the callback function Nm_RepeatMessageIndication."

Change SWS_CanNm_00138 to "The service call CanNm_GetPduData shall provide whole PDU data (Node ID, Control Bit Vector and User Data) of the most recently received Network Management PDU if CanNmNodeDetectionEnabled or CanNmUserDataEnabled or CanNmNodeIdEnabled is set to TRUE." and move this requirement to chapter 8.3.14 CanNm_GetPduData

Change SWS_CanNm_00407 to "If CanNm_GetPduData is called in the context of Nm_CarWakeUpIndication and if CanNmNodeDetectionEnabled or CanNmUserDataEnabled or CanNmNodeIdEnabled is set to TRUE, CanNm shall return the PDU data of the PDU that causes the call of Nm_CarWakeUpIndication."

Change SWS_CanNm_00132 to "The service call CanNm_GetNodeIdentifier shall provide the node identifier out of the most recently received Network Management PDU if CanNmNodeIdEnabled is set to TRUE.

Change SWS_CanNm_00133 to "The service call CanNm_GetLocalNodeIdentifier shall provide the node identifier configured for the local host node if CanNmNodeIdEnabled is set to TRUE.

Remove SWS_CanNm_00274

Remove SWS_CanNm_00276

Remove SWS_CanNm_00270

Remove SWS_CanNm_00272

=== SWS UdpNm ===

Remove SWS_UdpNm_00135

Remove SWS_UdpNm_00139

Change SWS_UdpNm_00119 to "If UdpNmNodeDetectionEnabled is set to TRUE and Repeat Message Request bit is received in the Normal Operation State, UdpNm shall enter Repeat Message State. (SRS_Nm_00153)"

Change SWS_UdpNm_00111 to "If UdpNmNodeDetectionEnabled is set to TRUE and Repeat Message Request bit is received in the Ready Sleep State, UdpNm shall enter Repeat Message State. (SRS_Nm_00153)"

Change SWS_UdpNm_00120 to "If UdpNmNodeDetectionEnabled is set to TRUE and function UdpNm_RepeatMessageRequest is called in the Normal Operation State, UdpNm shall enter Repeat Message State. (SRS_Nm_00153)"

Change SWS_UdpNm_00121 to "If UdpNmNodeDetectionEnabled is set to TRUE and function UdpNm_RepeatMessageRequest is called in the Normal Operation State, UdpNm shall set the Repeat Message Bit. (SRS_Nm_00153)"

Change SWS_UdpNm_00112 to "If UdpNmNodeDetectionEnabled is set to TRUE and function UdpNm_RepeatMessageRequest is called in the Ready Sleep State, UdpNm shall enter Repeat Message State. (SRS_Nm_00153)"

Change SWS_UdpNm_00113 to "If UdpNmNodeDetectionEnabled is set to TRUE and function UdpNm_RepeatMessageRequest is called in the Ready Sleep State, UdpNm shall set the Repeat Message Bit. (SRS_Nm_00153)"

Change SWS_UdpNm_00107 to "If UdpNmNodeDetectionEnabled is set to TRUE UdpNm shall clear the Repeat Message Bit when leaving Repeat Message State."

Change SWS_UdpNm_00014 to "If UdpNmNodeDetectionEnabled and UdpNmRepeatMsgIndEnabled are set to TRUE and Repeat Message Request bit is received, UdpNm module shall call the callback function Nm_RepeatMessageIndication. (SRS_Nm_00153)"

Change SWS_UdpNm_00138 to "The service call UdpNm_GetPduData shall provide whole payload (Source Node ID, Control Bit Vector and User Data) of the most recently received Network Management PDU if UdpNmNodeDetectionEnabled or UdpNmUserDataEnabled or UdpNmNodeIdEnabled is set to TRUE." and move this requirement to chapter "8.3.12 UdpNm_GetPduData"

Change SWS_UdpNm_00375 to "If UdpNm_GetPduData is called in the context of Nm_CarWakeUpIndication and if UdpNmNodeDetectionEnabled or UdpNmUserDataEnabled or UdpNmNodeIdEnabled is set to TRUE, UdpNm shall return the PDU data of the PDU that causes the call of Nm_CarWakeUpIndication."

Change SWS_UdpNm_00219 Return Value description E_NOT_OK to "Getting of the node identifier out of the most recently received NM PDU has failed or is not configured for this network handle."

Change SWS_UdpNm_00132 to "The service call UdpNm_GetNodeIdentifier shall provide the node identifier out of the most recently received Network Management PDU if UdpNmNodeIdEnabled is set to TRUE."

Change SWS_UdpNm_00220 Return Value description E_NOT_OK to "Getting of

the node identifier of the local node has failed or is not configured for this network handle."

Change SWS_UdpNm_00133 to "The service call UdpNm_GetLocalNodeIdentifier shall provide the node identifier configured for the local host node if UdpNmNodeIdentifierEnabled is set to TRUE.

Change SWS_UdpNm_00221 Return Value description E_NOT_OK to "Setting of Repeat Message Request Bit has failed or is not configured for this network handle."

Change SWS_UdpNm_00309 Return Value description E_NOT_OK to "Getting of NM PDU Data has failed or is not configured for this network handle."

=== SWS FrNm ===

Remove SWS_FrNm_00170

Remove SWS_FrNm_00172

Remove SWS_FrNm_00228

Remove SWS_FrNm_00266

Remove SWS_FrNm_00267

Remove SWS_FrNm_00268

Change SWS_FrNm_00124 to "If FrNmNodeDetectionEnabled is set to TRUE the FlexRay NM module shall leave the Normal Operation State and enter the Repeat Message State at the end of a NM Repetition Cycle when a Repeat Message Request is active. During this transition it shall set the Repeat Message Request Bit if the Repeat Message Request is active due to a call of FrNm_RepeatMessageRequest."

Change SWS_FrNm_00130 to "If FrNmNodeDetectionEnabled is set to TRUE the FlexRay NM module shall leave the Ready Sleep State and enter the Repeat Message State at the end of a NM Repetition Cycle when a Repeat Message Request is active and Ready Sleep Time has not expired. During this transition it shall set the Repeat Message Request Bit if the Repeat Message Request is active due to a call of FrNm_RepeatMessageRequest."

Change SWS_FrNm_00243 Return Value description E_NOT_OK to "Setting of Repeat Message Request Bit has failed or is not configured for this network handle."

Change SWS_FrNm_00172 to "The function FrNm_RepeatMessageRequest shall request node detection on the FlexRay Bus NM nodes if FrNmNodeDetectionEnabled is set to TRUE."

Change SWS_FrNm_00244 Return Value description E_NOT_OK to "Getting of the node identifier out of the last received NM-message has failed or is not configured for this network handle."

Change SWS_FrNm_00047 to "The function FrNm_GetNodeIdentifier shall provide the node identifier from the most recently received NM-message if FrNm-SourceNodeIdentifierEnabled is set to TRUE."

Change SWS_FrNm_00245 Return Value description E_NOT_OK to "Getting of the node identifier of the local node has failed or is not configured for this network

handle."

Change SWS_FrNm_00046 to "The function FrNm_GetLocalNodeIdentifier shall provide the node identifier configured for the local host node (FrNmNodeId) if FrNmSourceNodeIdentifierEnabled is set to TRUE."

Change SWS_FrNm_00242 Return Value description E_NOT_OK to "Getting of NM PDU Data has failed or is not configured for this network handle."

Change SWS_FrNm_00265 to "The function FrNm_GetPduData shall get the whole NM PDU data out of the most recently received NM message if FrNmControlBitVectorEnabled or FrNmSourceNodeIdentifierEnabled or FrNmUserDataEnabled is set to TRUE."

=== SWS LinNm ===

–Last change on issue 75405 comment 51–

BW-C-Level:

Application	Specification	Bus
1	4	1

1.12 Specification Item SWS_Nm_00166

Trace References:

SRS_Nm_00150, SRS_Nm_02515

Content:

API function	Description
<BusNm>_CheckRemoteSleepIndication	Check if remote sleep indication takes place or not.
<BusNm>_DisableCommunication	Disable the NM PDU transmission ability.
<BusNm>_EnableCommunication	Enable the NM PDU transmission ability.
<BusNm>_GetLocalNodeIdentifier	Get node identifier configured for the local node.
<BusNm>_GetNodeIdentifier	Get node identifier out of the last successfully received NM-message.
<BusNm>_GetPduData	Pointer where NM PDU shall be copied to.
<BusNm>_GetState	Returns the state and the mode of the network management.
<BusNm>_GetUserData	Get user data out of the last successfully received NM message.
<BusNm>_NetworkRelease	Release the network, since ECU doesn't have to communicate on the bus.

API function	Description
<BusNm>_NetworkRequest	Request the network, since ECU needs to communicate on the bus.
<BusNm>_RepeatMessageRequest	Request a Repeat Message Request to be transmitted next on the bus.
<BusNm>_RequestBusSynchronization	Request bus synchronization.
<BusNm>_SetSleepReadyBit	Set the NM Coordinator Sleep Ready bit in the Control Bit Vector
<BusNm>_SetUserData	Set user data for NM messages transmitted next on the bus.
BswM_NmIf_CarWakeUpIndication	Function called by Nm If to indicate a CarWakeUp.
Com_SendSignal	The service Com_SendSignal updates the signal object identified by SignalId with the signal referenced by the Signal DataPtr parameter.
Det_ReportError	Service to report development errors.

RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

- RfC #76404: [Det] Clarifications on runtime errors

Problem description:

There are several uncertainties/problems in the SWS DET:

1. According to SWS_Det_00180, the callouts should have the same signatures as the corresponding DET functions, but they are void(void) (SWS_Det_00181, SWS_Det_00184, SWS_Det_00187).
2. Section 8.2.3.1 does not describe how the instance ID is passed to DET.
3. Configuration of header files for all three error type callouts are missing.
4. Why does the development error callout reside in DetNotification, while the other two callouts reside in DetGeneral?
5. The limitation in section 4.1 regarding "supervisor mode" does not really make sense. It is assumed that the DET is ignorant regarding the call context, and the software receiving DET callbacks (like DLT or the implementers of the callouts) need to take care of resolving the calling context, if necessary (e.g. in multi-core environments).
6. SWS_Det_00302 defines several runtime errors. But apart from DET_E_CANNOT_REPORT, it is unclear in which situation these errors could be reported by DET: For errors reported by BSW, the DET has no means to validate anything that could lead to such an error. And for SWCs, the modeling already takes care that DET_E_WRONG_MODULE and DET_E_WRONG_INSTANCE cannot occur, while the other two errors can also not be checked by DET without further configuration.
7. Det_ReportTransientFault (SWS_Det_01003) shall return the return value of a configured callout. But what shall happen if more than one callout exists, and the return different values?

8. SWS_Det_00052: The only API that can result in DET_E_PARAM_POINTER is Det_GetVersionInfo (as the error description mentions correctly). Please reformulate this requirement and move it to section 8.1.3.6 "Det_GetVersionInfo".
 –Last change on issue 76404 comment 13–

Agreed solution:

1.
 ~change SWS_Det_00181/184/187 such that signatures match the APIs
 ~Figures 3,5, and 7 to be corrected (return missing)
5. remove from 4.1. the sentence: "It is assumed that the whole Basic Software runs in supervisor mode or the switch to supervisor mode is done by a system call within the error reporting function of the DET module."
6. remove SWS_Det_00302 and SWS_Det_00303 and all included errors
7. change SWS_Det_01003 (Return Value-Part only): "Std_ReturnType" If no callout exists it shall return E_OK, otherwise it shall return the value of the configured callout. In case several callouts are configured the logical or (sum) of the callout return values shall be returned. Rationale: since E_OK=0, E_OK will be only returned if all are E_OK, and for multiple error codes there is a good chance to detect several of them.
8. change SWS_Det_00052 from "in case a null pointer error occurs." to "in case a null pointer error occurs in Det_GetVersionInfo." Do not move the requirement, since otherwise the section 7.7 would be empty, but add the following sentence to 8.1.3.6: "In case a null pointer is passed, DET_E_PARAM_POINTER is returned, see SWS_Det_00052."
 –Last change on issue 76404 comment 30–

BW-C-Level:

Application	Specification	Bus
1	4	1

- RfC #77069: Different API Declarations for Car Wake Up in NM and BswM modules

Problem description:

Hello,

Requirement SWS_Nm_00285 specifies that in case no callback function is specified, the Nm shall call BswM_CarWakeUpIndication.

In the BswM module this function is not specified.
 In BswM the function specified for Car Wake Up is:
 BswM_NmIf_CarWakeUpIndication.

Which definition shall be used, the one specified in Nm or the one specified

by BswM ?

Best Regards,
 Lorant

Agreed solution:

In the SWS Nm:

A1)Change SWS_Nm_00285 to:

[SWS_Nm_00285] If the <bus>Nm calls NmCarWakeUpIndication and Nm-CarWakeUpCallout is not defined, the NM Interface shall call the function BswM_Nm_CarWakeUpIndication with nmNetworkHandle as parameter.
 (SRS_Nm_02503)

A2)Change ECUC_Nm_00234 description to:

Name of the callout function to be called if Nm_CarWakeUpIndication() is called. If this parameter is not configured, the Nm will call BswM_Nm_CarWakeUpIndication.

In the SWS BswM:

B1) Change "NmIf" to "Nm" in all of the following spec items (names & descriptions):

- SWS_BswM_00235 (BswM_NmIf_CarWakeUpIndication)
- ECUC_BswM_00856 (BswMModeRequestSource)
- ECUC_BswM_01048 (BswMNmIfCarWakeUpIndication)

B2) Change "NmIf" to "Nm" in the descriptive text found in chapters:

- 5.17
- 8.3.23
- Last change on issue 77069 comment 19-

BW-C-Level:

Application	Specification	Bus
1	4	1

1.13 Specification Item SWS_Nm_00231

Trace References:

[SRS_Nm_00150](#)

Content:

Configuration of Nm_RepeatMessageIndication: This function is only available if NmGlobalFeatures.NmRepeatMsgIndEnabled is set to TRUE.

RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

- RfC #75405: [NmIf] make "[RepeateMsgInd|NodeDetection|NodeId]Enabled" channel based configurable

Problem description:

The following attributes are NmEcu global:

nmRepeatMsgIndEnabled
nmNodeDetectionEnabled
nmNodeIdEnabled

This attributes should be configurable per channel.

Agreed solution:

=== SysT ===

set the atpStatus to obsolete for the following attributes:

SystemTemplate::NetworkManagement::NmEcu.nmNodeIdEnabled
SystemTemplate::NetworkManagement::NmEcu.nmRepeatMsgIndEnabled
SystemTemplate::NetworkManagement::NmEcu.nmNodeDetectionEnabled

introduce the following optional attributes to NmCluster:

SystemTemplate::NetworkManagement::NmCluster.nmNodeIdEnabled
SystemTemplate::NetworkManagement::NmCluster.nmRepeatMsgIndEnabled
SystemTemplate::NetworkManagement::NmCluster.nmNodeDetectionEnabled

=== EcuC NmIf ===

set the atpStatus to obsolete and make them optional for the following parameters:

Nm:NmGlobalConfig:NmGlobalFeatures:NmNodeIdEnabled
Nm:NmGlobalConfig:NmGlobalFeatures:NmRepeatMsgIndEnabled
Nm:NmGlobalConfig:NmGlobalFeatures:NmNodeDetectionEnabled

-upstream-mapping for Nm:NmGlobalConfig:NmGlobalFeatures:(NmNodeIdEnabled|NmRepeatM

Remove ECUC_Nm_00213 NmNodeIdEnabled from NmGlobalFeatures

Remove ECUC_Nm_00212 NmNodeDetectionEnabled from NmGlobalFeatures

Remove ECUC_Nm_00229 NmRepeatMsgIndEnabled from NmGlobalFeatures

=== EcuC CanNm ===

set the atpStatus to obsolete and make them optional for the following parameters:

CanNm:CanNmGlobalConfig:CanNmNodeIdEnabled
CanNm:CanNmGlobalConfig:CanNmRepeatMsgIndEnabled
CanNm:CanNmGlobalConfig:CanNmNodeDetectionEnabled

Introduce new optional parameters in CanNmChannelConfig (same properties as in CanNmGlobalConfig container):

CanNm:CanNmGlobalConfig:CanNmChannelConfig:CanNmNodeIdEnabled
CanNm:CanNmGlobalConfig:CanNmChannelConfig:CanNmRepeatMsgIndEnabled
CanNm:CanNmGlobalConfig:CanNmChannelConfig:CanNmNodeDetectionEnabled

+upstream-mapping 1:1 to new SysT attributes in SystemTemplate::NetworkManagement::NmCluster

Move ECUC_CanNm_00005 CanNmRepeatMsgIndEnabled from CanNmGlobalConfig to CanNmChannelConfig and change Value Configuration Class to Pre-compile time -> VARIANT-PRE-COMPILE / Link time -> VARIANT-LINK-TIME, VARIANT-POST-BUILD

Move ECUC_CanNm_00007 CanNmNodeDetectionEnabled from CanNmGlobalConfig to CanNmChannelConfig and change Value Configuration Class to Pre-compile time -> VARIANT-PRE-COMPILE / Link time -> VARIANT-LINK-TIME, VARIANT-POST-BUILD

Move ECUC_CanNm_00083 CanNmNodeIdEnabled from CanNmGlobalConfig to CanNmChannelConfig and change Value Configuration Class to Pre-compile time -> VARIANT-PRE-COMPILE / Link time -> VARIANT-LINK-TIME, VARIANT-POST-BUILD

=== EcuC UdpNm ===

set the atpStatus to obsolete and make them optional for the following parameters:

UdpNm:UdpNmGlobalConfig:UdpNmNodeIdEnabled
UdpNm:UdpNmGlobalConfig:UdpNmRepeatMsgIndEnabled
UdpNm:UdpNmGlobalConfig:UdpNmNodeDetectionEnabled

Introduce new optional parameters in UdpNmChannelConfig (same properties as in UdpNmGlobalConfig container):

UdpNm:UdpNmGlobalConfig:UdpNmChannelConfig:UdpNmNodeIdEnabled
UdpNm:UdpNmGlobalConfig:UdpNmChannelConfig:UdpNmRepeatMsgIndEnabled
UdpNm:UdpNmGlobalConfig:UdpNmChannelConfig:UdpNmNodeDetectionEnabled

+upstream-mapping 1:1 to new SysT attributes in SystemTem-

plate::NetworkManagement::NmCluster

Move ECUC_UdpNm_00015 UdpNmRepeatMsgIndEnabled from UdpNmGlobalConfig to UdpNmChannelConfig and change Value Configuration Class to Pre-compile time -> VARIANT-PRE-COMPILE / Link time -> VARIANT-LINK-TIME, VARIANT-POST-BUILD

Move ECUC_UdpNm_00007 UdpNmNodeDetectionEnabled from UdpNmGlobalConfig to UdpNmChannelConfig and change Value Configuration Class to Pre-compile time -> VARIANT-PRE-COMPILE / Link time -> VARIANT-LINK-TIME, VARIANT-POST-BUILD

Move ECUC_UdpNm_00008 UdpNmNodeIdEnabled from UdpNmGlobalConfig to UdpNmChannelConfig and change Value Configuration Class to Pre-compile time -> VARIANT-PRE-COMPILE / Link time -> VARIANT-LINK-TIME, VARIANT-POST-BUILD

=== EcuC FrNm ===

set the atpStatus to obsolete and make them optional for the following parameters:
FrNm:FrNmGlobalConfig:FrNmGlobalFeatures:FrNmSourceNodeIdentifierEnabled
FrNm:FrNmGlobalConfig:FrNmGlobalFeatures:FrNmNodeDetectionEnabled

Introduce new optional parameters in FrNmChannelConfigs (same properties as in NmGlobalFeatures container):

FrNm:FrNmChannelConfig:FrNmChannel:FrNmSourceNodeIdentifierEnabled
FrNm:FrNmChannelConfig:FrNmChannel:FrNmNodeDetectionEnabled

+upstream-mapping 1:1 to new SysT attributes in SystemTemplate::NetworkManagement::NmCluster

Move ECUC_FrNm_00040 FrNmNodeDetectionEnabled from FrNmGlobalFeatures to FrNmChannelConfig and change Value Configuration Class to Pre-compile time -> VARIANT-PRE-COMPILE / Link time -> VARIANT-LINK-TIME, VARIANT-POST-BUILD

Append "FrNmSourceNodeIdentifierEnabled needs to be TRUE to use this feature." to the description of Move ECUC_FrNm_00040.

Move ECUC_FrNm_00042 FrNmSourceNodeIdentifierEnabled from FrNmGlobalFeatures to FrNmChannelConfig and change Value Configuration Class to Pre-compile time -> VARIANT-PRE-COMPILE / Link time -> VARIANT-LINK-TIME, VARIANT-POST-BUILD

=== EcuC LinNm ===

set the atpStatus to obsolete and make them optional for the following parameters:

LinNm:LinNmGlobalConfig:LinNmNodeIdEnabled
 LinNm:LinNmGlobalConfig:LinNmNodeDetectionEnabled

Introduce new optional parameters in LinNmChannelConfig (same properties as in LinNmGlobalConfig container):

LinNm:LinNmGlobalConfig:LinNmChannelConfig:LinNmNodeIdEnabled
 LinNm:LinNmGlobalConfig:LinNmChannelConfig:LinNmNodeDetectionEnabled

+upstream-mapping 1:1 to new SysT attributes in SystemTemplate::NetworkManagement::NmCluster

Move ECUC_LinNm_00021 from LinNmGlobalConfig to LinNmChannelConfig
 Move ECUC_CanNm_00007 from LinNmGlobalConfig to LinNmChannelConfig

=== BSW UML CanNm ===

Change SWS_CanNm_00219 Return Value description E_NOT_OK to "Getting of the node identifier out of the most recently received NM PDU has failed or is not configured for this network handle."

Change SWS_CanNm_00220 Return Value description E_NOT_OK to "Getting of the node identifier of the local node has failed or is not configured for this network handle."

Change SWS_CanNm_00221 Return Value description E_NOT_OK to "Setting of Repeat Message Request Bit has failed or is not configured for this network handle."

Change SWS_CanNm_00222 Return Value description E_NOT_OK to "Getting of NM PDU Data has failed or is not configured for this network handle."

=== BSW UML UdpNm ===

Remove the complete "Configuration:" part from the description of SWS_UdpNm_00221, SWS_UdpNm_00309, SWS_UdpNm_00219, SWS_UdpNm_00220.

=== SWS NmIf ===

Remove SWS_Nm_00142, SWS_Nm_00146, SWS_Nm_00148, SWS_Nm_00144, and SWS_Nm_00231.

=== SWS CanNm ===

Remove SWS_CanNm_00135

Change SWS_CanNm_00119 to "If CanNmNodeDetectionEnabled is set to TRUE

and Repeat Message Request bit is received in the Normal Operation State CanNm shall enter Repeat Message State."

Change SWS_CanNm_00111 to "If CanNmNodeDetectionEnabled is set to TRUE and Repeat Message Request bit is received in the Ready Sleep State CanNm shall enter Repeat Message State."

Change SWS_CanNm_00120 to "If CanNmNodeDetectionEnabled is set to TRUE and function CanNm_RepeatMessageRequest is called in the Normal Operation State CanNm shall enter Repeat Message State."

Change SWS_CanNm_00121 to "If CanNmNodeDetectionEnabled is set to TRUE and function CanNm_RepeatMessageRequest is called in the Normal Operation State CanNm shall set the Repeat Message Bit."

Change SWS_CanNm_00112 to "If CanNmNodeDetectionEnabled is set to TRUE and function CanNm_RepeatMessageRequest is called in the Ready Sleep State CanNm shall enter Repeat Message State."

Change SWS_CanNm_00113 to "If CanNmNodeDetectionEnabled is set to TRUE and function CanNm_RepeatMessageRequest is called in the Ready Sleep State CanNm shall set the Repeat Message Bit."

Change SWS_CanNm_00107 to "If CanNmNodeDetectionEnabled is set to TRUE CanNm shall clear the Repeat Message Bit when leaving Repeat Message State."

Change SWS_CanNm_00014 to "If CanNmNodeDetectionEnabled and CanNmRepeatMsgIndEnabled are set to TRUE and Repeat Message Request bit is received CanNm module shall call the callback function Nm_RepeatMessageIndication."

Change SWS_CanNm_00138 to "The service call CanNm_GetPduData shall provide whole PDU data (Node ID, Control Bit Vector and User Data) of the most recently received Network Management PDU if CanNmNodeDetectionEnabled or CanNmUserDataEnabled or CanNmNodeIdEnabled is set to TRUE." and move this requirement to chapter 8.3.14 CanNm_GetPduData

Change SWS_CanNm_00407 to "If CanNm_GetPduData is called in the context of Nm_CarWakeUpIndication and if CanNmNodeDetectionEnabled or CanNmUserDataEnabled or CanNmNodeIdEnabled is set to TRUE, CanNm shall return the PDU data of the PDU that causes the call of Nm_CarWakeUpIndication."

Change SWS_CanNm_00132 to "The service call CanNm_GetNodeIdentifier shall provide the node identifier out of the most recently received Network Management PDU if CanNmNodeIdEnabled is set to TRUE.

Change SWS_CanNm_00133 to "The service call CanNm_GetLocalNodeIdentifier shall provide the node identifier configured for the local host node if CanNmNodeIdEnabled is set to TRUE.

Remove SWS_CanNm_00274

Remove SWS_CanNm_00276

Remove SWS_CanNm_00270

Remove SWS_CanNm_00272

=== SWS UdpNm ===

Remove SWS_UdpNm_00135

Remove SWS_UdpNm_00139

Change SWS_UdpNm_00119 to "If UdpNmNodeDetectionEnabled is set to TRUE and Repeat Message Request bit is received in the Normal Operation State, UdpNm shall enter Repeat Message State. (SRS_Nm_00153)"

Change SWS_UdpNm_00111 to "If UdpNmNodeDetectionEnabled is set to TRUE and Repeat Message Request bit is received in the Ready Sleep State, UdpNm shall enter Repeat Message State. (SRS_Nm_00153)"

Change SWS_UdpNm_00120 to "If UdpNmNodeDetectionEnabled is set to TRUE and function UdpNm_RepeatMessageRequest is called in the Normal Operation State, UdpNm shall enter Repeat Message State. (SRS_Nm_00153)"

Change SWS_UdpNm_00121 to "If UdpNmNodeDetectionEnabled is set to TRUE and function UdpNm_RepeatMessageRequest is called in the Normal Operation State, UdpNm shall set the Repeat Message Bit. (SRS_Nm_00153)"

Change SWS_UdpNm_00112 to "If UdpNmNodeDetectionEnabled is set to TRUE and function UdpNm_RepeatMessageRequest is called in the Ready Sleep State, UdpNm shall enter Repeat Message State. (SRS_Nm_00153)"

Change SWS_UdpNm_00113 to "If UdpNmNodeDetectionEnabled is set to TRUE and function UdpNm_RepeatMessageRequest is called in the Ready Sleep State, UdpNm shall set the Repeat Message Bit. (SRS_Nm_00153)"

Change SWS_UdpNm_00107 to "If UdpNmNodeDetectionEnabled is set to TRUE UdpNm shall clear the Repeat Message Bit when leaving Repeat Message State."

Change SWS_UdpNm_00014 to "If UdpNmNodeDetectionEnabled and UdpNmRepeatMsgIndEnabled are set to TRUE and Repeat Message Request bit is received, UdpNm module shall call the callback function Nm_RepeatMessageIndication. (SRS_Nm_00153)"

Change SWS_UdpNm_00138 to "The service call UdpNm_GetPduData shall provide whole payload (Source Node ID, Control Bit Vector and User Data) of the most recently received Network Management PDU if UdpNmNodeDetectionEnabled or UdpNmUserDataEnabled or UdpNmNodeIdEnabled is set to TRUE." and move this requirement to chapter "8.3.12 UdpNm_GetPduData"

Change SWS_UdpNm_00375 to "If UdpNm_GetPduData is called in the context of Nm_CarWakeUpIndication and if UdpNmNodeDetectionEnabled or UdpNmUserDataEnabled or UdpNmNodeIdEnabled is set to TRUE, UdpNm shall return the PDU data of the PDU that causes the call of Nm_CarWakeUpIndication."

Change SWS_UdpNm_00219 Return Value description E_NOT_OK to "Getting of the node identifier out of the most recently received NM PDU has failed or is not configured for this network handle."

Change SWS_UdpNm_00132 to "The service call UdpNm_GetNodeIdentifier shall provide the node identifier out of the most recently received Network Management PDU if UdpNmNodeIdEnabled is set to TRUE."

Change SWS_UdpNm_00220 Return Value description E_NOT_OK to "Getting of

the node identifier of the local node has failed or is not configured for this network handle."

Change SWS_UdpNm_00133 to "The service call UdpNm_GetLocalNodeIdentifier shall provide the node identifier configured for the local host node if UdpNmNodeIdentifierEnabled is set to TRUE.

Change SWS_UdpNm_00221 Return Value description E_NOT_OK to "Setting of Repeat Message Request Bit has failed or is not configured for this network handle."

Change SWS_UdpNm_00309 Return Value description E_NOT_OK to "Getting of NM PDU Data has failed or is not configured for this network handle."

=== SWS FrNm ===

Remove SWS_FrNm_00170

Remove SWS_FrNm_00172

Remove SWS_FrNm_00228

Remove SWS_FrNm_00266

Remove SWS_FrNm_00267

Remove SWS_FrNm_00268

Change SWS_FrNm_00124 to "If FrNmNodeDetectionEnabled is set to TRUE the FlexRay NM module shall leave the Normal Operation State and enter the Repeat Message State at the end of a NM Repetition Cycle when a Repeat Message Request is active. During this transition it shall set the Repeat Message Request Bit if the Repeat Message Request is active due to a call of FrNm_RepeatMessageRequest."

Change SWS_FrNm_00130 to "If FrNmNodeDetectionEnabled is set to TRUE the FlexRay NM module shall leave the Ready Sleep State and enter the Repeat Message State at the end of a NM Repetition Cycle when a Repeat Message Request is active and Ready Sleep Time has not expired. During this transition it shall set the Repeat Message Request Bit if the Repeat Message Request is active due to a call of FrNm_RepeatMessageRequest."

Change SWS_FrNm_00243 Return Value description E_NOT_OK to "Setting of Repeat Message Request Bit has failed or is not configured for this network handle."

Change SWS_FrNm_00172 to "The function FrNm_RepeatMessageRequest shall request node detection on the FlexRay Bus NM nodes if FrNmNodeDetectionEnabled is set to TRUE."

Change SWS_FrNm_00244 Return Value description E_NOT_OK to "Getting of the node identifier out of the last received NM-message has failed or is not configured for this network handle."

Change SWS_FrNm_00047 to "The function FrNm_GetNodeIdentifier shall provide the node identifier from the most recently received NM-message if FrNm-SourceNodeIdentifierEnabled is set to TRUE."

Change SWS_FrNm_00245 Return Value description E_NOT_OK to "Getting of the node identifier of the local node has failed or is not configured for this network

handle."

Change SWS_FrNm_00046 to "The function FrNm_GetLocalNodeIdentifier shall provide the node identifier configured for the local host node (FrNmNodeId) if FrNmSourceNodeIdentifierEnabled is set to TRUE."

Change SWS_FrNm_00242 Return Value description E_NOT_OK to "Getting of NM PDU Data has failed or is not configured for this network handle."

Change SWS_FrNm_00265 to "The function FrNm_GetPduData shall get the whole NM PDU data out of the most recently received NM message if FrNmControlBitVectorEnabled or FrNmSourceNodeIdentifierEnabled or FrNmUserDataEnabled is set to TRUE."

=== SWS LinNm ===

–Last change on issue 75405 comment 51–

BW-C-Level:

Application	Specification	Bus
1	4	1

1.14 Specification Item SWS_Nm_00285

Trace References:

SRS_Nm_02503

Content:

If the <bus>Nm calls Nm_CarWakeUpIndication and NmGlobalFeatures.NmCarWakeUpCallout is not defined, the NM Interface shall call the function BswM_Nm_CarWakeUpIndication with nmNetworkHandle as parameter.

RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

- RfC #77069: Different API Declarations for Car Wake Up in NM and BswM modules

Problem description:

Hello,

Requirement SWS_Nm_00285 specifies that in case no callback function is specified, the Nm shall call BswM_CarWakeUpIndication.

In the BswM module this function is not specified.
 In BswM the function specified for Car Wake Up is:

BswM_Nmlf_CarWakeUpIndication.

Which definition shall be used, the one specified in Nm or the one specified by BswM ?

Best Regards,
 Lorant

Agreed solution:

In the SWS Nm:

A1)Change SWS_Nm_00285 to:

[SWS_Nm_00285] If the <bus>Nm calls NmCarWakeUpIndication and Nm-CarWakeUpCallout is not defined, the NM Interface shall call the function BswM_Nm_CarWakeUpIndication with nmNetworkHandle as parameter.
 (SRS_Nm_02503)

A2)Change ECUC_Nm_00234 description to:

Name of the callout function to be called if Nm_CarWakeUpIndication() is called. If this parameter is not configured, the Nm will call BswM_Nm_CarWakeUpIndication.

In the SWS BswM:

B1) Change "Nmlf" to "Nm" in all of the following spec items (names & descriptions):

- SWS_BswM_00235 (BswM_Nmlf_CarWakeUpIndication)
- ECUC_BswM_00856 (BswMModeRequestSource)
- ECUC_BswM_01048 (BswMNmlfCarWakeUpIndication)

B2) Change "Nmlf" to "Nm" in the descriptive text found in chapters:

- 5.17
- 8.3.23
- Last change on issue 77069 comment 19-

BW-C-Level:

Application	Specification	Bus
1	4	1