Document Title	SWS_FlexRayNetworkManagement: Complete Change Documentation 4.3.0 - 4.3.1
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Part of AUTOSAR Standard	Classic Platform
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Table of Contents

1 SWS_FlexRayNetworkManagement

1.1 Specification Item ECUC_FrNm_00007

Trace References:

Content:

Container Name	FrNmChannelIdentifiersFrNmChannelIdentifiers
Description	This container contains instance specific identifiers related to the respective FlexRay Channel.
Configuration Parameters	

Included parameters:

Included Parameters	
Parameter Name	SWS Item ID
FrNmActiveWakeupBitEnabled	ECUC_FrNm_00082
FrNmCarWakeUpBitPosition	ECUC_FrNm_00076
FrNmCarWakeUpBytePosition	ECUC_FrNm_00075
FrNmCarWakeUpFilterEnabled	ECUC_FrNm_00077
FrNmCarWakeUpFilterNodeId	ECUC_FrNm_00078
FrNmCarWakeUpRxEnabled	ECUC_FrNm_00074
FrNmControlBitVectorActive	ECUC_FrNm_00020
FrNmNodeDetectionEnabled	ECUC_FrNm_00086
FrNmNodeId	ECUC_FrNm_00017
FrNmPduScheduleVariant	ECUC_FrNm_00022
FrNmPnEnabled	ECUC_FrNm_00072
FrNmPnEraCalcEnabled	ECUC_FrNm_00071
FrNmSourceNodeIdentifierEnabled	ECUC_FrNm_00085
FrNmSynchronizationPointEnabled	ECUC_FrNm_00021
FrNmChannelHandle	ECUC_FrNm_00013
FrNmComMNetworkHandleRef	ECUC_FrNm_00014
FrNmPnEraRxNSduRef	ECUC_FrNm_00070

Included containers:

Included Containers		
Container Name	Multiplicity	Scope / Dependency
FrNmRxPdu	1..*	This container describes the FlexRay NM RX PDU:s.
FrNmTxPdu	0..4	This container describes the FlexRay NM TX PDU:s.

Included Containers		
Container Name	Multiplicity	Scope / Dependency
FrNmUserDataTxPdu	0..1	This optional container is used to configure the UserNm PDU. This container is only available if FrNmCom UserDataSupport is enabled.

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: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."

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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

1.2   Specification Item ECUC_FrNm_00040

Trace References:

Content:

Name	FrNmNodeDetectionEnabledFrNmGlobalFeatures.FrNmNodeDetectionEnabled		
Parent Container	FrNmGlobalFeatures		
Description	Pre-processor switch for enabling node detection support.		
	calculationFormula = If (FrNmPassiveModeEnabled == False) then Equal(NmNodeDetection Enabled) else Equal(False)		
	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		

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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,

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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):

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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.

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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

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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 FrNmControlBitVec-
torEnabled 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_FrNm_00041

Trace References:

Content:

Name	FrNmControlBitVectorEnabledFrNmGlobalFeatures.FrNmControlBitVectorEnabled		
Description	Pre-processor switch for enabling control bit vector support.		
	calculationFormula = If (FrNmNodeDetectionEnabled == True) then Equal(True)		
Multiplicity	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 #70448: [FrNm] FrNmActiveWakeupBitEnabled dependency.

  Problem description:

  Hello

  I have a question regarding parameter FrNmActiveWakeupBitEnabled.

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If i take the dependencies:
- FrNmNodeDetectionEnabled
FrNmPassiveModeEnabled == False)
then Equal(NmNodeDetectionEnabled) else Equal(False)
- FrNmControlBitVectorEnabled
If (FrNmNodeDetectionEnabled == False)
then Equal(False) else Equal(False or True)
- FrNmControlBitVectorActive
This parameter may only be set to TRUE if
FrNmControlBitVectorEnabled is set to True.

Shouldn't FrNmActiveWakeupBitEnabled be valid only if FrNmControlBitVectorActive is set to true which also implies that PassiveMode is set to false.

Best Regards,
Lorant

Agreed solution:

FrNmActiveWakeupBitEnabled - ECUC_FrNm_00082:
Change from
dependency: This parameter is only valid if FrNmPassiveModeEnabled is False.
Change to
dependency: This parameter may only be set to TRUE If (FrNmControlBitVectorActive == TRUE) and (FrNmPassiveModeEnabled == FALSE)

FrNmControlBitVectorEnabled - ECUC_FrNm_00041:
Change from
Description: Pre-processor switch for enabling control bit vector support. calculationFormula = If (FrNmNodeDetectionEnabled == True) then Equal(True)
Change to
Description: Pre-processor switch for enabling control bit vector support.
–Last change on issue 70448 comment 23–

BW-C-Level:

Application	Specification	Bus
1	3	1

1.4   Specification Item ECUC_FrNm_00042

Trace References:

Content:

Name	FrNmSourceNodeIdentifierEnabledFrNmGlobalFeatures.FrNmSourceNodeIdentifierEnabled		
Parent Container	FrNmGlobalFeatures		
Description	Pre-processor switch for enabling SourceNodeIdentifier support. 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

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=== 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 ===

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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: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 CanNmRe-
peatMsgIndEnabled 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 CanNmUser-
DataEnabled or CanNmNodeIdEnabled is set to TRUE, CanNm shall return the
PDU data of the PDU that causes the call of Nm_CarWakeUpIndication."

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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

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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 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

1.5   Specification Item ECUC_FrNm_00082

Trace References:

Content:

Name	FrNmActiveWakeupBitEnabledFrNmChannelIdentifiers.FrNmActiveWakeupBitEnabled
Description	Enables/Disables the handling of the Active Wakeup Bit in the FrNm module.
Multiplicity	0..1
Type	EcucBooleanParamDef

Default value	false		
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, VARIANT-POST-BUILD
	Post-build time	–	
Value Configuration Class	Pre-compile time	X	VARIANT-PRE-COMPILE
	Link time	X	VARIANT-LINK-TIME, VARIANT-POST-BUILD
	Post-build time	–	
Scope / Dependency	scope: local dependency: This parameter is only valid if may only be set to TRUE If (FrNm ControlBitVectorActive == TRUE) and (FrNmPassiveModeEnabled is False. == FALSE)		

RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

- RfC #70448: [FrNm] FrNmActiveWakeupBitEnabled dependency.

   Problem description:

   Hello

   I have a question regarding parameter FrNmActiveWakeupBitEnabled.

   If i take the dependencies:
   - FrNmNodeDetectionEnabled
   FrNmPassiveModeEnabled == False)
   then Equal(NmNodeDetectionEnabled) else Equal(False)
   - FrNmControlBitVectorEnabled
   If (FrNmNodeDetectionEnabled == False)
   then Equal(False) else Equal(False or True)
   - FrNmControlBitVectorActive
   This parameter may only be set to TRUE if
   FrNmControlBitVectorEnabled is set to True.

   Shouldn't FrNmActiveWakeupBitEnabled be valid only if FrNmControlBitVec-
   torActive is set to true which also implies that PassiveMode is set to false.

   Best Regards,
   Lorant

   Agreed solution:

   FrNmActiveWakeupBitEnabled - ECUC_FrNm_00082:
   Change from

dependency: This parameter is only valid if FrNmPassiveModeEnabled is False.
Change to
dependency: This parameter may only be set to TRUE If (FrNmControlBitVectorActive == TRUE) and (FrNmPassiveModeEnabled == FALSE)

FrNmControlBitVectorEnabled - ECUC_FrNm_00041:
Change from
Description: Pre-processor switch for enabling control bit vector support. calculationFormula = If (FrNmNodeDetectionEnabled == True) then Equal(True)
Change to
Description: Pre-processor switch for enabling control bit vector support.
–Last change on issue 70448 comment 23–

BW-C-Level:

Application	Specification	Bus
1	3	1

1.6   Specification Item ECUC_FrNm_00085

Trace References:

Content:

Name	FrNmSourceNodeIdentifierEnabledFrNmChannelIdentifiers.FrNmSourceNodeIdentifierEnabled		
Parent Container	FrNmChannelIdentifiers		
Description	This parameter is used to enable or disable SourceNodeIdentifier support for a FrNm Channel.		
Multiplicity	1		
Type	EcucBooleanParamDef		
Default value	–		
Post-Build Variant Value	false		
Value Configuration Class	Pre-compile time	X	VARIANT-PRE-COMPILE
	Link time	X	VARIANT-LINK-TIME, VARIANT-POST-BUILD
	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|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 UdpNmGlob-

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

1.7 Specification Item ECUC_FrNm_00086

Trace References:

Content:

Name	FrNmNodeDetectionEnabledFrNmChannelIdentifiers.FrNmNodeDetectionEnabled		
Parent Container	FrNmChannelIdentifiers		
Description	This parameter is used to enable or disable node detection support for a FrNm Channel.		
Multiplicity	1		
Type	EcucBooleanParamDef		
Default value	–		
Post-Build Variant Value	false		
Value Configuration Class	Pre-compile time	X	VARIANT-PRE-COMPILE
	Link time	X	VARIANT-LINK-TIME, VARIANT-POST-BUILD
	Post-build time	–	
Scope / Dependency	scope: local dependency: FrNmSourceNodeIdentifierEnabled needs to be TRUE to use this feature for the corresponding FrNm Channel. calculationFormula = If (FrNmPassiveModeEnabled == False)then Equal(NmNodeDetectionEnabled) else Equal(False)		

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 SystemTem-
plate::NetworkManagement::NmCluster

Move ECUC_FrNm_00040 FrNmNodeDetectionEnabled from FrNmGlobalFea-
tures 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 FrNmGlob-
alFeatures 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 SystemTem-
plate::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

1.8   Specification Item SWS_FrNm_00021

Trace References:

SRS_BSW_00337, SRS_BSW_00331

Content:

The following errors shall be detectable by the FlexRay NM depending on its build version (development/production mode).

Type or error	Relevance	Related error code	Value
API service used without module initialization	Development	FRNM_E_UINIT UNINIT	01h
API service called with invalid channel handle	Development	FRNM_E_INVALID_CHANNEL	02h
API service called with Invalid pointer	Development	FRNM_E_PARAM_POINTER	03h
API service called with invalid PDU ID as input parameter	Development	FRNM_E_PDU_ID_INVALID	04h
FrNm initialization has failed, e.g. selected configuration set doesn't exist	Development	FRNM_E_INIT_FAILED	05h

RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

- RfC #59085: Rollout of 'Runtime errors'

  Problem description:

  Inconsistencies in SWS with semantics of Default errors
  –Last change on issue 59085 comment 26–

  Agreed solution:

  solution   in   Column   "G"   of   the   new   attachment
  https://www.autosar.org/bugzilla/attachment.cgi?id=4604

  Notes:

- It is not enough just to migrate the error from one classification table to another. Please also check the related requirements (and background information) which is referring to that error and adapt them if needed.

- The review task of the ITs shall be done by the WP to which the specification "belongs".

*** BSW UML Model ***

SWS_CanNm:

————-

Chapter 8.6.1 Optional Interfaces:
Add within SWS_CanNm_00325 the API function Det_ReportRunTimeError

SWS_LinIf:

————-

SWS_LinIf_00359: add Det_ReportRuntimeError

SWS_UdpNm:

————-

Replace UDPNM_E_NO_INIT with UDPNM_E_UNINIT in description of API UdpNm_MainFunction_<Instance Id> (SWS_UdpNm_00234)

*** ECUC XML ***

Not affected. No configuration of runtime error reporting required (see SWS BSW General).

–Last change on issue 59085 comment 88–

BW-C-Level:

Application	Specification	Bus
1	4	1

1.9   Specification Item SWS_FrNm_00046

Trace References:

Content:

If node detection is enabled, then the The function FrNm_GetLocalNodeIdentifier shall provide the node identifier configured for the local host node (FrNmNodeId) if FrNmSource NodeIdentifierEnabled 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|NmRepeatN

  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: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."

Document ID 695: ChangeDocumentation

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_FrNm_00047

Trace References:

SRS_Nm_02506

Content:

If the node detection feature is enabled, then the The function FrNm_GetNodeIdentifier shall provide the node identifier from the most recently received NM-message if FrNm SourceNodeIdentifierEnabled 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   SystemTem-
plate::NetworkManagement::NmCluster

Move ECUC_CanNm_00005 CanNmRepeatMsgIndEnabled from CanNGlob-
alConfig 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 CanNGlobalCon-
fig to CanNmChannelConfig and change Value Configuration Class to Pre-compile

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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: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

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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 Mes-

sage 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

1.11   Specification Item SWS_FrNm_00056

Trace References:

SRS_BSW_00369

Content:

Default Development errors shall not be returned by API functions. In case of a default development error the corresponding API function shall return E_NOT_OK, if applicable.

RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

- RfC #73570: No "default error" in AUTOSAR

  Problem description:

  The DET was renamed from development error tracer to default error tracer.

  This change was most of the time done automatically and unfortunately renamed "developement error" to "default error".

  "default error" should always be followed by "tracer", otherwise, "development error" is probably the right term.

  This could increase the impact (compared to my selection of impacted document, but formally, the configuration parameters *DevErrorDetect are not using the correct description:
  "Switches the Default Error Tracer (Det) detection and notification..."

  The parameter switches on/off the developement error detection. The DET does not need to be detected and can be present even when the parameter is set to false.

  Agreed solution:

  Rename "default error" to "development error" in all impacted documents, but not in an automated way (Do not change "default error tracer" to "developement error tracer"!)

  Blueprint/Example:
  - sub chapter is now called "7.x Default errors"
  - "[SWS_xxx_yyyyy]
  In case default error detection is enabled for the xxxx module: The xxxx module shall check API parameters for validity and report detected errors to the DET. ()"
  - "[SWS_xxx_yyyyy]

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If default error detection is enabled: the function shall check that the service xxx_Init was previously called. If the check fails, the function shall raise the default error XXX_E_NOT_INITIALIZED otherwise (if DET is disabled) return E_NOT_OK. ()"
- "In case default errors are enabled,..."
- "module raises the Default error XXX_E_TRANSITION"
- "The DET provides services to store default errors"

...

The correct text would be:
- sub chapter is called "7.x Development errors"
- "[SWS_xxx_yyyyy]
In case development error detection is enabled for the xxxx module: The xxxx module shall check API parameters for validity and report detected development errors to the DET. ()"
- "[SWS_xxx_yyyyy]
If development error detection is enabled: the function shall check that the service xxx_Init was previously called. If the check fails, the function shall raise the development error XXX_E_NOT_INITIALIZED otherwise (if DET is disabled) return E_NOT_OK. ()"
- "In case development errors are enabled,..."
- "module raises the development error XXX_E_TRANSITION"
- "The DET provides services to store development errors"

Solution for SWS_RTE:
– SWS_RTE —
- Change 4.8 Default errors to 4.8 Development errors
- Change "Errors which can occur at runtime in the RTE are classified as default errors" to "Errors which can occur at runtime in the RTE are classified as development errors"
- Remove [SWS_Rte_07676]
- Change [SWS_RTE_06611]"If a violation is detected the RTE shall report a default error to the DET." to "If a violation is detected the RTE shall report a development error to the DET."
- Change [SWS_Rte_06631]
[SWS_Rte_06631] d The RTE shall use the OS Application Identifier as the Instance Id to enable the developer to identify in which runtime section of the RTE the error occurs. This Instance ID is even unique across multi cores and so implicitly allows the development error to be traced to a specific core. c(SRS_BSW_00337)

SRS_Libraries:
- In chapter "3 Acronyms and abbreviations": Rename "Development Error Tracer"

to "Default Error Tracer"

SRS_SPALGeneral:
- In chapter "6.1.1.3.1 [SRS_SPAL_00157] ...": Rename "Development Error Tracer" to "Default Error Tracer"
- In chapter "6.1.1.4.2 [SRS_SPAL_12448] ...": Rename "Development Error Tracer" to "Default Error Tracer"

SRS_FlashTest:
- In chapter "6.1 Functional Requirements": Rename "Development Error Tracer" to "Default Error Tracer"
- In chapter "7 References":
Rename "Development Error Tracer" to "Default Error Tracer"
Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AU-TOSAR_SWS_DefaultErrorTracer"

SWS_MFXLibrary:
- In chapter "2 Acronyms and abbreviations": Rename "Development Error Tracer" to "Default Error Tracer"

SWS_MemoryAbstractionInterface:
- In chapter "3.1 Input documents":
Rename "Development Error Tracer" to "Default Error Tracer"
Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AU-TOSAR_SWS_DefaultErrorTracer"

SWS_FlexRayNetworkManagement:
- In chapter "3.3 Related AUTOSAR documents":
Rename "Development Error Tracer" to "Default Error Tracer"
Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AU-TOSAR_SWS_DefaultErrorTracer"

SWS_CANStateManager:
- In chapter "3.1 Input documents": Rename "AU-TOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"

SWS_PDURouter:
- In chapter "3.1 Input documents": Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"

SWS_EEPROMDriver:
- In chapter "3.1 Input documents": Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"
–Last change on issue 73570 comment 47–

BW-C-Level:

Application	Specification	Bus
1	1	1

1.12   Specification Item SWS_FrNm_00124

Trace References:

Content:

The If FrNmNodeDetectionEnabled is set to TRUE the FlexRay NM module shall leave the Normal Operation State and enter the Repeat Message State if a at the end of a NM Repetition Cycle when a Repeat Message Request is activeand if a Repetition Cycle is completed. 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.

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,

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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: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

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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 CanNmRe-peatMsgIndEnabled 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 CanNmUser-DataEnabled 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

1.13   Specification Item SWS_FrNm_00130

Trace References:

Content:

The 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 if Ready Sleep Time has not expired and 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_Repeat MessageRequest.

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

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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 SystemTem-
plate::NetworkManagement::NmCluster

Move ECUC_CanNm_00005 CanNmRepeatMsgIndEnabled from CanNGlob-
alConfig 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 CanNGlobalCon-
fig 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

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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: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.

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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 UdpNmUser-

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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

1.14   Specification Item SWS_FrNm_00170

Trace References:

Content:

The support of node detection for the FrNm module shall be configurable at pre-compile time by the configuration parameter FrNmNodeDetectionEnabled (see chapter 10). FrNm SourceNodeIdentifierEnabled should also be set as ON to use this feature..

RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

Document ID 695: ChangeDocumentation

● 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

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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 UdpNmGlob-

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

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+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

1.15   Specification Item SWS_FrNm_00172

Trace References:

Content:

If the node detection feature is enabled, then the The function FrNm_RepeatMessageRequest shall request node detection on the FlexRay Bus NM nodes if FrNmNodeDetectionEnabled 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

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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: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 CanNmUser-DataEnabled 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 UdpNmRe-

peatMsgIndEnabled 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

1.16   Specification Item SWS_FrNm_00228

Trace References:

Document ID 695: ChangeDocumentation

Content:

The function FrNm_RepeatMessageRequest shall be only available if the configuration parameter FrNmNodeDetectionEnabled is set to ON. (see SWS_FrNm_00170)

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

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=== 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: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.

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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

1.17 Specification Item SWS_FrNm_00242

Trace References:

Content:

Service name:	FrNm_GetPduDataFrNm_GetPduData	
Syntax:	Std_ReturnType FrNm_GetPduData(NetworkHandleType NetworkHandle, uint8* nmPduData)	
Service ID[hex]:	0x08	
Sync/Async:	Synchronous	
Reentrancy:	Reentrant	
Parameters (in):	NetworkHandleFrNm_GetPdu Data.NetworkHandle	Identification of the NM-channel
Parameters (inout):	None	
Parameters (out):	nmPduDataFrNm_GetPduData.nmPdu Data	Pointer where NM PDU shall be copied to.
Return value:	Std_ReturnType	E_OK: No error E_NOT_OK: Getting of NM PDU data has failed Data has failed or is not configured for this network handle.
Description:	Gets PDU data.	

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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,

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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 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

1.18   Specification Item SWS_FrNm_00243

Trace References:

Content:

Service name:	FrNm_RepeatMessageRequestFrNm_RepeatMessageRequest	
Syntax:	Std_ReturnType FrNm_RepeatMessageRequest(NetworkHandleType NetworkHandle)	
Service ID[hex]:	0x09	
Sync/Async:	Asynchronous	
Reentrancy:	Non Reentrant	
Parameters (in):	NetworkHandleFrNm_RepeatMessage Request.NetworkHandle	Identification of the NM-channel
Parameters (inout):	None	
Parameters (out):	None	
Return value:	Std_ReturnType	E_OK: No error E_NOT_OK: Setting of Repeat Message Request has failed Bit has failed or is not configured for this network handle.
Description:	This function causes a Repeat Message Request to be transmitted next on the bus.	

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 SystemTem-
plate::NetworkManagement::NmCluster

Move ECUC_FrNm_00040 FrNmNodeDetectionEnabled from FrNmGlobalFea-
tures 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 FrNmGlob-
alFeatures 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 SystemTem-
plate::NetworkManagement::NmCluster

Document ID 695: ChangeDocumentation

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."

Document ID 695: ChangeDocumentation

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

1.19   Specification Item SWS_FrNm_00244

Trace References:

Content:

Service name:	FrNm_GetNodeIdentifierFrNm_GetNodeIdentifier	
Syntax:	Std_ReturnType FrNm_GetNodeIdentifier(NetworkHandleType NetworkHandle, uint8* nmNodeIdPtr)	
Service ID[hex]:	0x0a	
Sync/Async:	Synchronous	
Reentrancy:	Reentrant	
Parameters (in):	NetworkHandleFrNm_GetNode Identifier.NetworkHandle	Identification of the NM-channel
Parameters (inout):	None	
Parameters (out):	nmNodeIdPtrFrNm_GetNode Identifier.nmNodeIdPtr	Pointer to the location where the node identifier from the last successfully received NM-message shall be copied.
Return value:	Std_ReturnType	E_OK: No error E_NOT_OK: Getting of the node identifier out of the last received NM-message has failed or is not configured for this network handle.
Description:	This function gets the node identifier from the last successfully received NM-message.	

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   SystemTem-

plate::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: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

1.20 Specification Item SWS_FrNm_00245

Trace References:

Content:

Service name:	FrNm_GetLocalNodeIdentifierFrNm_GetLocalNodeIdentifier	
Syntax:	Std_ReturnType FrNm_GetLocalNodeIdentifier(NetworkHandleType NetworkHandle, uint8* nmNodeIdPtr)	
Service ID[hex]:	0x0b	
Sync/Async:	Synchronous	
Reentrancy:	Reentrant	
Parameters (in):	NetworkHandleFrNm_GetLocalNode Identifier.NetworkHandle	Identification of the NM-channel
Parameters (inout):	None	
Parameters (out):	nmNodeIdPtrFrNm_GetLocalNode Identifier.nmNodeIdPtr	Pointer the location where the node identifier of the local node shall be copied.
Return value:	Std_ReturnType	E_OK: No error E_NOT_OK: Getting of the node identifier of the local node has failed or is not configured for this network handle.
Description:	This function gets the node identifier configured for the local node.	

RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

- RfC #75405: [NmIf] make "[RepeateMsgInd|NodeDetection|NodeId]Enabled" chan-nel 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 CanNGlob-

alConfig 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: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:

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1	4	1

1.21 Specification Item SWS_FrNm_00265

Trace References:

Content:

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.

RfCs affecting this spec item between releases 4.3.0 and 4.3.1: none

1.22 Specification Item SWS_FrNm_00266

Trace References:

Content:

The function FrNm_GetPduData shall only be available if the configuration parameter FrNmControlBitVectorEnabled or FrNmSourceNodeIdentifierEnabled or FrNmUserDataEnabled is set to ON.

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,

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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: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."

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Change SWS_CanNm_00014 to "If CanNmNodeDetectionEnabled and CanNmRe-peatMsgIndEnabled 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 CanNmUser-DataEnabled 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 CanNmNodeI-dEnabled 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–

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1.23   Specification Item SWS_FrNm_00267

Trace References:

Content:

The function FrNm_GetNodeIdentifier shall be only available if the configuration parameter FrNmSourceNodeIdentifierEnabled is set as ON (see SWS_FrNm_00170).

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):

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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: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."

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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

1.24   Specification Item SWS_FrNm_00268

Trace References:

Content:

The function FrNm_GetLocalNodeIdentifier shall be only available if the configuration parameter FrNmSourceNodeIdentifierEnabled is set as ON (refer to SWS_FrNm_00170).

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: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:

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