| Document Title | SWS_CANNetworkManagement: Complete Change Documentation 4.3.0 - 4.3.1 |
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# Table of Contents

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# 1 SWS_CANNetworkManagement

## 1.1 Specification Item ECUC_CanNm_00005

**Trace References:**

**Content:**

| Name | CanNmRepeatMsgIndEnabledCanNmGlobalConfig.CanNmRepeatMsgIndEnabled | | |
|---|---|---|---|
| Parent Container | CanNmGlobalConfig | | |
| Description | Enable/disable the notification that a RepeatMessageRequest bit has been received. 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: ECU dependency: calculationFormula = If (CanNmPassiveModeEnabled == False) then Equal(NmRepeatMsgIndEnabled) 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

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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

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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 |

## 1.2 Specification Item ECUC_CanNm_00007

**Trace References:**

**Content:**

| Name | CanNmNodeDetectionEnabledCanNmGlobalConfig.CanNmNodeDetectionEnabled | | |
|---|---|---|---|
| Parent Container | CanNmGlobalConfig | | |
| Description | Precompile time switch to enable the node detection feature. Tags: atp.Status=obsolete | | |
| Multiplicity | 1 0..1 | | |
| Type | EcucBooleanParamDef | | |
| Default value | – | | |
| Post-Build Variant Value | false | | |
| Value Configuration Class | Pre-compile time | X | All Variants |
| | Link time | – | |
| | Post-build time | – | |
| Scope / Dependency | scope: ECU dependency: Only valid if CanNmNodeIdEnabled is set to TRUE If CanNmPassiveModeEnabled == True then CanNmNodeDetection = 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

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=== 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 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 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 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 |

# 1.3 Specification Item ECUC_CanNm_00017

**Trace References:**

**Content:**

| Container Name | CanNmChannelConfigCanNmChannelConfig |
|---|---|
| Description | This container contains the channel specific configuration parameter of the CanNm. |
| Post-Build Variant Multiplicity | true |

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| Multiplicity Configuration Class | Pre-compile time | X | VARIANT-PRE-COMPILE, VARIANT-LINK-TIME, VARIANT-POST-BUILD |
|---|---|---|---|
| | Link time | − | |
| | Post-build time | − | |
| Configuration Parameters | | | |

## Included parameters:

| Included Parameters | |
|---|---|
| Parameter Name | SWS Item ID |
| CanNmActiveWakeupBitEnabled | ECUC_CanNm_00084 |
| CanNmAllNmMessagesKeepAwake | ECUC_CanNm_00068 |
| CanNmBusLoadReductionActive | ECUC_CanNm_00042 |
| CanNmCarWakeUpBitPosition | ECUC_CanNm_00075 |
| CanNmCarWakeUpBytePosition | ECUC_CanNm_00076 |
| CanNmCarWakeUpFilterEnabled | ECUC_CanNm_00077 |
| CanNmCarWakeUpFilterNodeId | ECUC_CanNm_00078 |
| CanNmCarWakeUpRxEnabled | ECUC_CanNm_00074 |
| CanNmImmediateNmCycleTime | ECUC_CanNm_00057 |
| CanNmImmediateNmTransmissions | ECUC_CanNm_00056 |
| CanNmMsgCycleOffset | ECUC_CanNm_00029 |
| CanNmMsgCycleTime | ECUC_CanNm_00028 |
| CanNmMsgReducedTime | ECUC_CanNm_00043 |
| CanNmMsgTimeoutTime | ECUC_CanNm_00030 |
| CanNmNodeDetectionEnabled | ECUC_CanNm_00088 |
| CanNmNodeId | ECUC_CanNm_00031 |
| CanNmNodeIdEnabled | ECUC_CanNm_00090 |
| CanNmPduCbvPosition | ECUC_CanNm_00026 |
| CanNmPduNidPosition | ECUC_CanNm_00025 |
| CanNmPnEnabled | ECUC_CanNm_00066 |
| CanNmPnEraCalcEnabled | ECUC_CanNm_00067 |
| CanNmPnHandleMultipleNetworkRequests | ECUC_CanNm_00073 |
| CanNmRemoteSleepIndTime | ECUC_CanNm_00023 |
| CanNmRepeatMessageTime | ECUC_CanNm_00022 |
| CanNmRepeatMsgIndEnabled | ECUC_CanNm_00089 |
| CanNmTimeoutTime | ECUC_CanNm_00020 |
| CanNmWaitBusSleepTime | ECUC_CanNm_00021 |
| CanNmComMNetworkHandleRef | ECUC_CanNm_00018 |
| CanNmPnEraRxNSduRef | ECUC_CanNm_00079 |

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Included containers:

| Included Containers | | |
| --- | --- | --- |
| Container Name | Multiplicity | Scope / Dependency |
| CanNmRxPdu | 1..* | This container is used to configure the Rx PDU properties that are used for the CanNm Channel. |
| CanNmTxPdu | 0..1 | This container contains the CanNmTx ConfirmationPduId and the CanNmTx PduRef. |
| CanNmUserDataTxPdu | 0..1 | This optional container is used to configure the UserNm PDU. This container is only available if CanNmCom 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

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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

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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 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 |


## 1.4   Specification Item ECUC_CanNm_00029

**Trace References:**

**Content:**

| Name | CanNmMsgCycleOffset |
|---|---|
| Description | Time offset in the periodic transmission node. It determines the start delay of the transmission. Specified in seconds. |
| Multiplicity | 1 |
| Type | EcucFloatParamDef |
| Range | [0 .. 65.535] |
| Default value | – |
| Post-Build Variant Value | true |

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| 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: Parameter value < CanNmMsgCycleTime This parameter is only valid if CanNmPassiveModeEnabled is False. | | |

**RfCs affecting this spec item between releases 4.3.0 and 4.3.1:**

- RfC #76839: [CanNm] Typo: CanMsgCycleTime instead of CanNmMsgCycleTime

**Problem description:**

There's a typo in Scope/Dependency of ECUC_CanNm_00029 CanNmMsgCycle-Offset:
(current) dependency: Parameter value < CanMsgCycleTime
(must be) dependency: Parameter value < CanNmMsgCycleTime

**Agreed solution:**

Change description of ECUC_CanNm_00029
from
< dependency: Parameter value < CanMsgCycleTime
to
> dependency: Parameter value < CanNmMsgCycleTime

**BW-C-Level:**

| Application | Specification | Bus |
|---|---|---|
| 1 | 1 | 1 |

## 1.5   Specification Item ECUC_CanNm_00083

**Trace References:**

**Content:**

| Name | CanNmNodeIdEnabledCanNmGlobalConfig.CanNmNodeIdEnabled |
|---|---|
| Parent Container | CanNmGlobalConfig |
| Description | Pre-processor switch for enabling the source node identifier. 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: ECU dependency: calculationFormula = Equal(NmNodeIdEnabled) | | |

**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 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

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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

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Remove SWS_CanNm_00272


=== SWS UdpNm ===
Remove SWS_UdpNm_00135
Remove SWS_UdpNm_00139
Change SWS_UdpNm_00119 to "If UdpNmNodeDetectionEnabled is set to TRUE and Repeat Message Request bit is received in the Normal Operation State, UdpNm shall enter Repeat Message State. (SRS_Nm_00153)"
Change SWS_UdpNm_00111 to "If UdpNmNodeDetectionEnabled is set to TRUE and Repeat Message Request bit is received in the Ready Sleep State, UdpNm shall enter Repeat Message State. (SRS_Nm_00153)"
Change SWS_UdpNm_00120 to "If UdpNmNodeDetectionEnabled is set to TRUE and function UdpNm_RepeatMessageRequest is called in the Normal Operation State, UdpNm shall enter Repeat Message State. (SRS_Nm_00153)"
Change SWS_UdpNm_00121 to "If UdpNmNodeDetectionEnabled is set to TRUE and function UdpNm_RepeatMessageRequest is called in the Normal Operation State, UdpNm shall set the Repeat Message Bit. (SRS_Nm_00153)"
Change SWS_UdpNm_00112 to "If UdpNmNodeDetectionEnabled is set to TRUE and function UdpNm_RepeatMessageRequest is called in the Ready Sleep State, UdpNm shall enter Repeat Message State. (SRS_Nm_00153)"
Change SWS_UdpNm_00113 to "If UdpNmNodeDetectionEnabled is set to TRUE and function UdpNm_RepeatMessageRequest is called in the Ready Sleep State, UdpNm shall set the Repeat Message Bit. (SRS_Nm_00153)"
Change SWS_UdpNm_00107 to "If UdpNmNodeDetectionEnabled is set to TRUE UdpNm shall clear the Repeat Message Bit when leaving Repeat Message State."
Change SWS_UdpNm_00014 to "If UdpNmNodeDetectionEnabled and UdpNmRepeatMsgIndEnabled are set to TRUE and Repeat Message Request bit is received, UdpNm module shall call the callback function Nm_RepeatMessageIndication. (SRS_Nm_00153)"
Change SWS_UdpNm_00138 to "The service call UdpNm_GetPduData shall provide whole payload (Source Node ID, Control Bit Vector and User Data) of the most recently received Network Management PDU if UdpNmNodeDetectionEnabled or UdpNmUserDataEnabled or UdpNmNodeIdEnabled is set to TRUE." and move this requirement to chapter "8.3.12 UdpNm_GetPduData"
Change SWS_UdpNm_00375 to "If UdpNm_GetPduData is called in the context of Nm_CarWakeUpIndication and if UdpNmNodeDetectionEnabled or UdpNmUserDataEnabled or UdpNmNodeIdEnabled is set to TRUE, UdpNm shall return the PDU data of the PDU that causes the call of Nm_CarWakeUpIndication."
Change SWS_UdpNm_00219 Return Value description E_NOT_OK to "Getting of the node identifier out of the most recently received NM PDU has failed or is not configured for this network handle."
Change SWS_UdpNm_00132 to "The service call UdpNm_GetNodeIdentifier shall

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

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

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

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

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


=== SWS FrNm ===

Remove SWS_FrNm_00170

Remove SWS_FrNm_00172

Remove SWS_FrNm_00228

Remove SWS_FrNm_00266

Remove SWS_FrNm_00267

Remove SWS_FrNm_00268

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

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

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

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

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

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

SourceNodeIdentifierEnabled is set to TRUE."

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

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

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

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

=== SWS LinNm ===
–Last change on issue 75405 comment 51–

**BW-C-Level:**

| Application | Specification | Bus |
|---|---|---|
| 1 | 4 | 1 |

## 1.6   Specification Item ECUC_CanNm_00088

**Trace References:**

**Content:**

| Name | CanNmNodeDetectionEnabledCanNmChannelConfig.CanNmNodeDetectionEnabled |
|---|---|
| Parent Container | CanNmChannelConfig |
| Description | Precompile time switch to enable the node detection feature. |
| 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: ECU dependency: Only valid if CanNmNodeIdEnabled is set to TRUE If CanNmPassive ModeEnabled == True then CanNmNodeDetection = 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

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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

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Remove SWS_CanNm_00270
Remove SWS_CanNm_00272


=== SWS UdpNm ===

Remove SWS_UdpNm_00135

Remove SWS_UdpNm_00139

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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

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


=== SWS FrNm ===

Remove SWS_FrNm_00170

Remove SWS_FrNm_00172

Remove SWS_FrNm_00228

Remove SWS_FrNm_00266

Remove SWS_FrNm_00267

Remove SWS_FrNm_00268

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

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

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

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

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

Change SWS_FrNm_00047 to "The function FrNm_GetNodeIdentifier shall

provide the node identifier from the most recently received NM-message if FrNm-SourceNodeIdentifierEnabled is set to TRUE."

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

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

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

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

=== SWS LinNm ===
–Last change on issue 75405 comment 51–

**BW-C-Level:**

| Application | Specification | Bus |
|---|---|---|
| 1 | 4 | 1 |

## 1.7   Specification Item ECUC_CanNm_00089

**Trace References:**

**Content:**

| Name | CanNmRepeatMsgIndEnabledCanNmChannelConfig.CanNmRepeatMsgIndEnabled |
|---|---|
| Parent Container | CanNmChannelConfig |
| Description | Enable/disable the notification that a RepeatMessageRequest bit has been received. |
| Multiplicity | 1 |
| Type | EcucBooleanParamDef |
| Default value | – |
| Post-Build Variant Value | false |

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| 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: ECU dependency: calculationFormula = If (CanNmPassiveModeEnabled == False) then Equal(NmRepeatMsgIndEnabled) 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

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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

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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."

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

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

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

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

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

=== SWS FrNm ===
Remove SWS_FrNm_00170
Remove SWS_FrNm_00172
Remove SWS_FrNm_00228
Remove SWS_FrNm_00266
Remove SWS_FrNm_00267
Remove SWS_FrNm_00268

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

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

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

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

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

Change SWS_FrNm_00047 to "The function FrNm_GetNodeIdentifier shall

provide the node identifier from the most recently received NM-message if FrNm-SourceNodeIdentifierEnabled is set to TRUE."

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

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

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

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

=== SWS LinNm ===
–Last change on issue 75405 comment 51–

**BW-C-Level:**

| Application | Specification | Bus |
|---|---|---|
| 1 | 4 | 1 |

## 1.8   Specification Item ECUC_CanNm_00090

**Trace References:**

**Content:**

| Name | CanNmNodeIdEnabledCanNmChannelConfig.CanNmNodeIdEnabled |
|---|---|
| Parent Container | CanNmChannelConfig |
| Description | Pre-processor switch for enabling the source node identifier. |
| 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: ECU dependency: calculationFormula = Equal(NmNodeIdEnabled) | | |

**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.

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=== 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."

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

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

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

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

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

=== SWS FrNm ===

Remove SWS_FrNm_00170

Remove SWS_FrNm_00172

Remove SWS_FrNm_00228

Remove SWS_FrNm_00266

Remove SWS_FrNm_00267

Remove SWS_FrNm_00268

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

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

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

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

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

Change SWS_FrNm_00047 to "The function FrNm_GetNodeIdentifier shall

provide the node identifier from the most recently received NM-message if FrNm-SourceNodeIdentifierEnabled is set to TRUE."

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

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

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

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

=== SWS LinNm ===

–Last change on issue 75405 comment 51–

**BW-C-Level:**

| Application | Specification | Bus |
|---|---|---|
| 1 | 4 | 1 |

## 1.9   Specification Item SWS_CanNm_00002

**Trace References:**

**Content:**

If CanNm is not initialized a call of any CanNm function (except CanNm_Init) shall be rejected and E_NOT_OK shall be returned if the API has a return value. If development error detection is enabled (CanNmDevErrorDetect is set to TRUE) it shall report CANNM_E_NO_INIT UNINIT to the DET.

**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

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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

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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 |

## 1.10    Specification Item SWS_CanNm_00014

**Trace References:**

SRS_Nm_00153

**Content:**

If the node detection functionality is enabled and if CanNmNodeDetectionEnabled and CanNmRepeatMsgIndEnabled is enabled, the are set to TRUE and the Repeat Message Request bit is received CanNm module shall call the callback function Nm_RepeatMessageIndication upon each reception of the RepeatMessageRequest bit.

**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

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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 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."

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### === 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 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-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 |

## 1.11   Specification Item SWS_CanNm_00091

**Trace References:**

SRS_Nm_00050

**Content:**

When CanNm_GetState is called CanNm shall return the current NM state and mode.

**RfCs affecting this spec item between releases 4.3.0 and 4.3.1:**

- RfC #75265: [CanNm]: Missing requirement for API CanNm_GetState

  **Problem description:**

  There is no explicit requirement for API CanNm_GetState.
  Requirement is also needed to trace SRS_Nm_00050.

  **Agreed solution:**

  add a new requirement to state that API shall return current state and mode in chapter 7.2:
  [SWS_CanNm_xxxx1]: When CanNm_GetState() is called CanNm shall return the current NM state and mode.

  Link requirement to SRS_Nm_00050.
  –Last change on issue 75265 comment 2–

  **BW-C-Level:**

  | Application | Specification | Bus |
  |---|---|---|
  | 1 | 1 | 1 |

## 1.12   Specification Item SWS_CanNm_00107

**Trace References:**

**Content:**

When Repeat Message State is left and if the option If CanNmNodeDetectionEnabled is enabled, the set to TRUE CanNm module shall clear the Repeat Message Bit when leaving the Repeat Message State.

**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

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+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

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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

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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_CanNm_00111

**Trace References:**

SRS_Nm_00153

**Content:**

At If CanNmNodeDetectionEnabled is set to TRUE and Repeat Message Request Bit Indication is received in the Ready Sleep State, the CanNm module shall enter the Repeat Message State.

**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

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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."

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=== 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 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 |

## 1.14    Specification Item SWS_CanNm_00112

**Trace References:**

SRS_Nm_00153

**Content:**

At Repeat Message Request (If CanNmNodeDetectionEnabled is set to TRUE and function CanNm_RepeatMessageRequest ) is called in the Ready Sleep State, the CanNm module shall enter the Repeat Message State.

**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

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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 |

## 1.15   Specification Item SWS_CanNm_00113

**Trace References:**

SRS_Nm_00153

**Content:**

At Repeat Message Request (If CanNmNodeDetectionEnabled is set to TRUE and function CanNm_RepeatMessageRequest ) is called in Ready Sleep State the CanNm module shall set the Repeat Message Bit.

**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.

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**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:**

| Application | Specification | Bus |
|---|---|---|
| 1 | 4 | 1 |

## 1.16   Specification Item SWS_CanNm_00119

**Trace References:**

SRS_Nm_00153

**Content:**

At If CanNmNodeDetectionEnabled is set to TRUE and Repeat Message Request Bit Indication is received in the Normal Operation State, the CanNm module shall enter the Repeat Message State.

**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 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 UdpNmNodeI-
dEnabled 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 |

## 1.17 Specification Item SWS_CanNm_00120

**Trace References:**

SRS_Nm_00153

**Content:**

At Repeat Message Request (If CanNmNodeDetectionEnabled is set to TRUE and function CanNm_RepeatMessageRequest ) is called in the Normal Operation State, the CanNm module shall enter the Repeat Message State.

**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 |

## 1.18  Specification Item SWS_CanNm_00121

**Trace References:**

SRS_Nm_00153

**Content:**

At Repeat Message Request (If CanNmNodeDetectionEnabled is set to TRUE and function CanNm_RepeatMessageRequest ) is called in the Normal Operation State the CanNm module shall set the Repeat Message Bit.

**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

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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 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 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 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 |

# 1.19   Specification Item SWS_CanNm_00132

**Trace References:**

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SRS_Nm_02506

**Content:**

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.

**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

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+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

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=== 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_CanNm_00133

**Trace References:**

**Content:**

The service call CanNm_GetLocalNodeIdentifier shall provide the node identifier configured for the local host node if CanNmNodeIdEnabled 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.

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**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-

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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:**

| Application | Specification | Bus |
|---|---|---|
| 1 | 4 | 1 |

## 1.21   Specification Item SWS_CanNm_00135

**Trace References:**

SRS_Nm_00153

**Content:**

Support of Repeat Message Request Bit and Repeat Message State Request shall be statically configurable with use of the CanNmNodeDetectionEnabled switch (configuration parameter).

**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 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 |


## 1.22   Specification Item SWS_CanNm_00138

**Trace References:**

**Content:**

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 CannNmUserDataEnabled or CanNmNodeIdEnabled 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

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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

+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 |

## 1.23 Specification Item SWS_CanNm_00145

**Trace References:**

**Content:**

If AUTOSAR CanNm is not initialized the CanNm module shall not prohibit bus traffic.

**RfCs affecting this spec item between releases 4.3.0 and 4.3.1:**

- RfC #77947: [CanNm] Remove superfluous requirement SWS_CanNm_00145

  **Problem description:**

  Following requirement cannot be realized by CanNm:
  [SWS_CanNm_00145] If AUTOSAR CanNm is not initialized the CanNm module shall not prohibit bus traffic.()

  CanNm has no direct influence on bus traffic. Therefore this requirement shall be removed.

  **Agreed solution:**

  Remove SWS_CanNm_00145

  **BW-C-Level:**

  | Application | Specification | Bus |
  |---|---|---|
  | 1 | 1 | 1 |

## 1.24    Specification Item SWS_CanNm_00191

**Trace References:**

**Content:**

Each CanNm function that is not executed due to missing initialization of CanNm shall return E_NOT_OK to the calling function if applicable.  If development error detection is enabled (CanNmDevErrorDetect is set to TRUE) the corresponding error CANNM_E_NO_INIT UNINIT shall be reported to DET.

**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 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 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 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 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 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 |

## 1.25   Specification Item SWS_CanNm_00193

**Trace References:**

SRS_Nm_00137

**Content:**

When the NM-Timeout Timer expires in the Repeat Message State and development error
detection is enabled (CanNmDevErrorDetect is set to TRUE), the CanNm module shall
report CANNM_E_NETWORK_TIMEOUT to the DET.

**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 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
UdpNm:UdpNmGlobalConfig:UdpNmNodeDetectionEnabled

Introduce new optional parameters in UdpNmChannelConfig (same properties
as in UdpNmGlobalConfig container):
UdpNm:UdpNmGlobalConfig:UdpNmChannelConfig:UdpNmNodeIdEnabled
UdpNm:UdpNmGlobalConfig:UdpNmChannelConfig:UdpNmRepeatMsgIndEnabled
UdpNm:UdpNmGlobalConfig:UdpNmChannelConfig:UdpNmNodeDetectionEnabled

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

Move ECUC_UdpNm_00015 UdpNmRepeatMsgIndEnabled from 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_00007 UdpNmNodeDetectionEnabled from UdpNmGlob-
alConfig 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_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 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)"

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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 |


## 1.26   Specification Item SWS_CanNm_00194

**Trace References:**

SRS_Nm_00137

**Content:**

When the NM-Timeout Timer expires in the Normal Operation State and development errir detection is enabed (CanNmDevErrorDetect is set to TRUE), the CanNm module shall report CANNM_E_NETWORK_TIMEOUT to the DET.


**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

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+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 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 UdpNmNodeI-dEnabled 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 |

## 1.27 Specification Item SWS_CanNm_00195

**Trace References:**

**Content:**

When a CanNm service with an invalid PDU ID is called, the called function shall not be executed and it shall return E_NOT_OK to the calling function if applicable. If development error detection is enabled (CanNmDevErrorDetect is set to TRUE) the corresponding error CANNM_E_INVALID_CHANNEL PDUID shall be reported to DET.

**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

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+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

Document ID 695: ChangeDocumentation

=== 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 |

## 1.28 Specification Item SWS_CanNm_00219

**Trace References:**

**Content:**

| Service name: | CanNm_GetNodeIdentifierCanNm_GetNodeIdentifier | |
|---|---|---|
| Syntax: | Std_ReturnType CanNm_GetNodeIdentifier(<br>NetworkHandleType nmChannelHandle,<br>uint8* nmNodeIdPtr<br>) | |
| Service ID[hex]: | 0x06 | |
| Sync/Async: | Synchronous | |
| Reentrancy: | Reentrant | |
| Parameters (in): | nmChannelHandleCanNm_GetNode Identifier.nmChannelHandle | Identification of the NM-channel |
| Parameters (inout): | None | |
| Parameters (out): | nmNodeIdPtrCanNm_GetNode Identifier.nmNodeIdPtr | Pointer where node identifier out of the most recently received NM PDU shall be copied to |

| Return value: | Std_ReturnType | E_OK: No error E_NOT_OK: Getting of the node identifier out of the most recently received NM PDU has failed or is not configured for this network handle. |
|---|---|---|
| Description: | Get node identifier out of the most recently received NM PDU. | |

**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:**

| Application | Specification | Bus |
|---|---|---|
| 1 | 4 | 1 |

# 1.29   Specification Item SWS_CanNm_00220

**Trace References:**

**Content:**

| Service name: | CanNm_GetLocalNodeIdentifierCanNm_GetLocalNodeIdentifier | |
|---|---|---|
| Syntax: | Std_ReturnType CanNm_GetLocalNodeIdentifier( NetworkHandleType nmChannelHandle, uint8* nmNodeIdPtr ) | |
| Service ID[hex]: | 0x07 | |
| Sync/Async: | Synchronous | |
| Reentrancy: | Reentrant | |
| Parameters (in): | nmChannelHandleCanNm_GetLocal NodeIdentifier.nmChannelHandle | Identification of the NM-channel |
| Parameters (inout): | None | |
| Parameters (out): | nmNodeIdPtrCanNm_GetLocalNode Identifier.nmNodeIdPtr | Pointer where node identifier of the local node shall be copied to |
| 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. |

Document ID 695: ChangeDocumentation

| Description: | Get 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" 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:**

| Application | Specification | Bus |
|---|---|---|
| 1 | 4 | 1 |

# 1.30  Specification Item SWS_CanNm_00221

**Trace References:**

**Content:**

| Service name: | CanNm_RepeatMessageRequestCanNm_RepeatMessageRequest | |
|---|---|---|
| Syntax: | Std_ReturnType CanNm_RepeatMessageRequest(<br>NetworkHandleType nmChannelHandle<br>) | |
| Service ID[hex]: | 0x08 | |
| Sync/Async: | Asynchronous | |
| Reentrancy: | Reentrant (but not for the same NM-channel) | |
| Parameters (in): | nmChannelHandleCanNm_Repeat MessageRequest.nmChannelHandle | 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 Bit has failed or is not configured for this network handle. |
| Description: | Set Repeat Message Request Bit for NM PDUs transmitted next on the bus. | |

**RfCs affecting this spec item between releases 4.3.0 and 4.3.1:**

Document ID 695: ChangeDocumentation

● 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

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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

+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

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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."

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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 |


## 1.31    Specification Item SWS_CanNm_00222

**Trace References:**

**Content:**

| Service name: | CanNm_GetPduDataCanNm_GetPduData | |
|---|---|---|
| Syntax: | Std_ReturnType CanNm_GetPduData( NetworkHandleType nmChannelHandle, uint8* nmPduDataPtr ) | |
| Service ID[hex]: | 0x0a | |
| Sync/Async: | Synchronous | |
| Reentrancy: | Reentrant | |
| Parameters (in): | nmChannelHandleCanNm_GetPduData.nmChannelHandle | Identification of the NM-channel |
| Parameters (inout): | None | |
| Parameters (out): | nmPduDataPtrCanNm_GetPduData.nmPduDataPtr | 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: | Get the whole PDU data out of the most recently received NM PDU. | |


**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

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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:**

| Application | Specification | Bus |
|---|---|---|
| 1 | 4 | 1 |

## 1.32 Specification Item SWS_CanNm_00270

**Trace References:**

SRS_Nm_02506

**Content:**

Configuration of CanNm_GetNodeIdentifier: Optional (Only available if CanNmNodeIdEnabled 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

Document ID 695: ChangeDocumentation

=== 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 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 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 |

## 1.33 Specification Item SWS_CanNm_00272

**Trace References:**

**Content:**

Configuration of CanNm_GetLocalNodeIdentifier: Optional (Only available if CanNmNodeIdEnabled is set to TRUE.).

**RfCs affecting this spec item between releases 4.3.0 and 4.3.1:**

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

  **Problem description:**

  The following attributes are NmEcu global:
  nmRepeatMsgIndEnabled
  nmNodeDetectionEnabled
  nmNodeIdEnabled

  This attributes should be configurable per channel.

  **Agreed solution:**

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

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


  === EcuC NmIf ===
  set the atpStatus to obsolete and make them optional for the following parameters:
  Nm:NmGlobalConfig:NmGlobalFeatures:NmNodeIdEnabled
  Nm:NmGlobalConfig:NmGlobalFeatures:NmRepeatMsgIndEnabled
  Nm:NmGlobalConfig:NmGlobalFeatures:NmNodeDetectionEnabled

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

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


  === EcuC CanNm ===
  set the atpStatus to obsolete and make them optional for the following parameters:
  CanNm:CanNmGlobalConfig:CanNmNodeIdEnabled
  CanNm:CanNmGlobalConfig:CanNmRepeatMsgIndEnabled

CanNm:CanNmGlobalConfig:CanNmNodeDetectionEnabled

Introduce new optional parameters in CanNmChannelConfig (same properties as in CanNmGlobalConfig container):
CanNm:CanNmGlobalConfig:CanNmChannelConfig:CanNmNodeIdEnabled
CanNm:CanNmGlobalConfig:CanNmChannelConfig:CanNmRepeatMsgIndEnabled
CanNm:CanNmGlobalConfig:CanNmChannelConfig:CanNmNodeDetectionEnabled

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

Move ECUC_CanNm_00005 CanNmRepeatMsgIndEnabled from CanNGlobalConfig to CanNmChannelConfig and change Value Configuration Class to Pre-compile time -> VARIANT-PRE-COMPILE / Link time -> VARIANT-LINK-TIME, VARIANT-POST-BUILD
Move ECUC_CanNm_00007 CanNmNodeDetectionEnabled from CanNGlobalConfig to CanNmChannelConfig and change Value Configuration Class to Pre-compile time -> VARIANT-PRE-COMPILE / Link time -> VARIANT-LINK-TIME, VARIANT-POST-BUILD
Move ECUC_CanNm_00083 CanNmNodeIdEnabled from CanNGlobalConfig to CanNmChannelConfig and change Value Configuration Class to Pre-compile time -> VARIANT-PRE-COMPILE / Link time -> VARIANT-LINK-TIME, VARIANT-POST-BUILD

=== EcuC UdpNm ===
set the atpStatus to obsolete and make them optional for the following parameters:
UdpNm:UdpNmGlobalConfig:UdpNmNodeIdEnabled
UdpNm:UdpNmGlobalConfig:UdpNmRepeatMsgIndEnabled
UdpNm:UdpNmGlobalConfig:UdpNmNodeDetectionEnabled

Introduce new optional parameters in UdpNmChannelConfig (same properties as in UdpNmGlobalConfig container):
UdpNm:UdpNmGlobalConfig:UdpNmChannelConfig:UdpNmNodeIdEnabled
UdpNm:UdpNmGlobalConfig:UdpNmChannelConfig:UdpNmRepeatMsgIndEnabled
UdpNm:UdpNmGlobalConfig:UdpNmChannelConfig:UdpNmNodeDetectionEnabled

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

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

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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.

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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

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 |

## 1.34   Specification Item SWS_CanNm_00274

**Trace References:**

**Content:**

Configuration of CanNm_RepeatMessageRequest: Optional (Only available if CanNm
NodeDetectionEnabled 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" 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

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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."
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 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 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 UdpNmNodeI-dEnabled 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 |

## 1.35 Specification Item SWS_CanNm_00276

**Trace References:**

**Content:**

Configuration of CanNm_GetPduData: Optional (Only available if CanNmNodeDetection Enabled or CanNmUserDataEnabled or CanNmNodeIdEnabled is set to TRUE).

**RfCs affecting this spec item between releases 4.3.0 and 4.3.1:**

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

  **Problem description:**

  The following attributes are NmEcu global:
  nmRepeatMsgIndEnabled
  nmNodeDetectionEnabled
  nmNodeIdEnabled

  This attributes should be configurable per channel.

  **Agreed solution:**

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

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

  === EcuC NmIf ===
  set the atpStatus to obsolete and make them optional for the following parameters:
  Nm:NmGlobalConfig:NmGlobalFeatures:NmNodeIdEnabled
  Nm:NmGlobalConfig:NmGlobalFeatures:NmRepeatMsgIndEnabled
  Nm:NmGlobalConfig:NmGlobalFeatures:NmNodeDetectionEnabled

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

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


=== EcuC CanNm ===
set the atpStatus to obsolete and make them optional for the following parameters:
CanNm:CanNmGlobalConfig:CanNmNodeIdEnabled
CanNm:CanNmGlobalConfig:CanNmRepeatMsgIndEnabled
CanNm:CanNmGlobalConfig:CanNmNodeDetectionEnabled

Introduce new optional parameters in CanNmChannelConfig (same properties as in CanNmGlobalConfig container):
CanNm:CanNmGlobalConfig:CanNmChannelConfig:CanNmNodeIdEnabled
CanNm:CanNmGlobalConfig:CanNmChannelConfig:CanNmRepeatMsgIndEnabled
CanNm:CanNmGlobalConfig:CanNmChannelConfig:CanNmNodeDetectionEnabled

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

Move ECUC_CanNm_00005 CanNmRepeatMsgIndEnabled from CanNGlobalConfig to CanNmChannelConfig and change Value Configuration Class to Pre-compile time -> VARIANT-PRE-COMPILE / Link time -> VARIANT-LINK-TIME, VARIANT-POST-BUILD
Move ECUC_CanNm_00007 CanNmNodeDetectionEnabled from CanNGlobalConfig to CanNmChannelConfig and change Value Configuration Class to Pre-compile time -> VARIANT-PRE-COMPILE / Link time -> VARIANT-LINK-TIME, VARIANT-POST-BUILD
Move ECUC_CanNm_00083 CanNmNodeIdEnabled from CanNGlobalConfig to CanNmChannelConfig and change Value Configuration Class to Pre-compile time -> VARIANT-PRE-COMPILE / Link time -> VARIANT-LINK-TIME, VARIANT-POST-BUILD


=== EcuC UdpNm ===
set the atpStatus to obsolete and make them optional for the following parameters:
UdpNm:UdpNmGlobalConfig:UdpNmNodeIdEnabled
UdpNm:UdpNmGlobalConfig:UdpNmRepeatMsgIndEnabled
UdpNm:UdpNmGlobalConfig:UdpNmNodeDetectionEnabled

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

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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."

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 |

## 1.36   Specification Item SWS_CanNm_00308

**Trace References:**

SRS_BSW_00301

**Content:**

Det.h shall be included for interfacing the DET if DET usage is configuredDefault Error Tracer.

**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

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+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

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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 |

# 1.37    Specification Item SWS_CanNm_00316

**Trace References:**

**Content:**

Development Error Types

| Type or error | Related error code | Error Value |
|---------------|--------------------|-------------|
| API service used without module initialization | CANNM_E_NO_INIT UNINIT | 0x01 |
| API service called with wrong channel handle | CANNM_E_INVALID_CHANNEL | 0x02 |
| API service called with wrong PDU-ID | CANNM_E_INVALID_PDUID | 0x03 |
| Reception of NM PDUs in Bus-Sleep Mode. | CANNM_E_NET_START_IND | 0x04 |
| CanNm initialization has failed, e.g. selected configuration set doesn't exist. | CANNM_E_INIT_FAILED | 0x05 |
| NM-Timeout Timer has abnormally expired outside of the Ready Sleep State; it may happen: (1) because of Bus-Off state, (2) if some ECU requests bus communication or node detection shortly before the NM-Timeout Timer expires so that a Network Management PDU can not be transmitted in time; this race condition applies to event-triggered systems | CANNM_E_NETWORK_TIMEOUT | 0x11 |
| Null pointer has been passed as an argument | CANNM_E_PARAM_POINTER | 0x12 |
| DeInit API service called when not all CAN networks are in Bus Sleep mode | CANNM_E_NOT_IN_BUS_SLEEP | 0x13 |

**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

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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."

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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 |

## 1.38    Specification Item SWS_CanNm_00317

**Trace References:**

**Content:**

Runtime Error Types

| Type or error | Related error code | Error Value |
|---|---|---|
| Reception of NM PDUs in Bus-Sleep Mode. | CANNM_E_NET_START_IND | 0x04 |
| NM-Timeout Timer has abnormally expired outside of the Ready Sleep State; it may happen:<br><br>(1) because of Bus-Off state, (2) if some ECU requests bus communication or node detection shortly before the NM-Timeout Timer expires so that a Network Management PDU can not be transmitted in time; this race condition applies to event-triggered systems | CANNM_E_NETWORK_TIMEOUT | 0x11 |

**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 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

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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 |

## 1.39   Specification Item SWS_CanNm_00324

**Trace References:**

**Content:**

| API function | Description |
|---|---|
| Det_ReportRuntimeError | Service to report runtime errors. If a callout has been configured then this callout shall be called. |
| Nm_BusSleepMode | Notification that the network management has entered Bus-Sleep Mode. |
| Nm_NetworkMode | Notification that the network management has entered Network Mode. |
| Nm_NetworkStartIndication | Notification that a NM-message has been received in the Bus-Sleep Mode, what indicates that some nodes in the network have already entered the Network Mode. |
| Nm_PrepareBusSleepMode | Notification that the network management has entered Prepare Bus-Sleep Mode. |

**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".

Document ID 695: ChangeDocumentation

\*\*\* 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 |


## 1.40   Specification Item SWS_CanNm_00336

**Trace References:**

**Content:**

When the CanNm module successfully receives a Network Management PDU (call of
CanNm_RxIndication) in the Bus-Sleep Mode, the CanNm module shall report the error
CANNM_E_NET_START_IND to DET if development error detection is enabled (CanNm
DevErrorDetect is set to TRUE)the DET.


**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 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 SystemTem-

plate::NetworkManagement::NmCluster

Move ECUC_LinNm_00021 from LinNmGlobalConfig to LinNmChannelCon-
fig
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–

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## 1.41    Specification Item SWS_CanNm_00407

**Trace References:**

**Content:**

If CanNm_GetPduData is called in the context of Nm_CarWakeUpIndication , and if Cann NmNodeDetectionEnabled or CanNmUserDataEnabled or CanNmNodeIdEnabled is set to TRUE CanNm shall return the PDU data of the PDU that causes the call of Nm_Car WakeUpIndication.

**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

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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

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+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."

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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

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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:**

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