Document Title	SWS_LINNetworkManagement: Complete Change Documentation 4.3.0 - 4.3.1
Document Owner	AUTOSAR
Document Responsibility	AUTOSAR
Document Identification No	695

Document Status	Final
Part of AUTOSAR Standard	Classic Platform
Part of Standard Release	4.3.1

Table of Contents

1 SWS_LINNetworkManagement

1.1 Specification Item ECUC_LinNm_00002

Trace References:

none

Content:

Container Name	LinNmChannelConfigLinNmChannelConfig
Description	This container contains the channel specific configuration parameter of the LinNm.
Configuration Parameters	

Included parameters:

Included Parameters	
Parameter Name	SWS Item ID
LinNmNodeDetectionEnabled	ECUC_LinNm_00030
LinNmNodeIdEnabled	ECUC_LinNm_00031
LinNmTimeoutTime	ECUC_LinNm_00027
LinNmComMNetworkHandleRef	ECUC_LinNm_00014

Included containers:

No Included Containers

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

1.2 Specification Item ECUC_LinNm_00020

Trace References:

none

Content:

Name	LinNmNodeDetectionEnabledLinNmGlobalConfig.LinNmNodeDetectionEnabled		
Parent Container	LinNmGlobalConfig		
Description	Pre-processor switch for enabling the Node Detection feature. Tags: atp.Status=obsolete		
Multiplicity	1 0..1		
Type	EcucBooleanParamDef		
Default value	–		
Post-Build Variant Value	false		
Value Configuration Class	Pre-compile time	X	All Variants
	Link time	–	
	Post-build time	–	
Scope / Dependency	scope: local		

RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

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

  Problem description:

  The following attributes are NmEcu global:
  nmRepeatMsgIndEnabled
  nmNodeDetectionEnabled
  nmNodeIdEnabled

  This attributes should be configurable per channel.

  Agreed solution:

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

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

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

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

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

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

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

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

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

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

BUILD

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

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

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

Move ECUC_UdpNm_00015 UdpNmRepeatMsgIndEnabled from UdpNmGlobalConfig to UdpNmChannelConfig and change Value Configuration Class to Pre-compile time -> VARIANT-PRE-COMPILE / Link time -> VARIANT-LINK-TIME, VARIANT-POST-BUILD
Move ECUC_UdpNm_00007 UdpNmNodeDetectionEnabled from UdpNmGlobalConfig to UdpNmChannelConfig and change Value Configuration Class to Pre-compile time -> VARIANT-PRE-COMPILE / Link time -> VARIANT-LINK-TIME, VARIANT-POST-BUILD
Move ECUC_UdpNm_00008 UdpNmNodeIdEnabled from UdpNmGlobalConfig to UdpNmChannelConfig and change Value Configuration Class to Pre-compile time -> VARIANT-PRE-COMPILE / Link time -> VARIANT-LINK-TIME, VARIANT-POST-BUILD

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

Introduce new optional parameters in FrNmChannelConfigs (same properties as in NmGlobalFeatures container):
FrNm:FrNmChannelConfig:FrNmChannel:FrNmSourceNodeIdentifierEnabled
FrNm:FrNmChannelConfig:FrNmChannel:FrNmNodeDetectionEnabled

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

plate::NetworkManagement::NmCluster

Move ECUC_FrNm_00040 FrNmNodeDetectionEnabled from 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

1.3 Specification Item ECUC_LinNm_00021

Trace References:

none

Content:

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

RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

- RfC #75405: [NmIf] make "[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

1.4 Specification Item ECUC_LinNm_00030

Trace References:

none

Content:

Name	LinNmNodeDetectionEnabledLinNmChannelConfig.LinNmNodeDetectionEnabled
Parent Container	LinNmChannelConfig
Description	Pre-processor switch for enabling the Node Detection feature.
Multiplicity	0..1

Type	EcucBooleanParamDef		
Default value	–		
Post-Build Variant Value	false		
Value Configuration Class	Pre-compile time	X	All Variants
	Link time	–	
	Post-build time	–	
Scope / Dependency	scope: local		

RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

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

  Problem description:

  The following attributes are NmEcu global:
  nmRepeatMsgIndEnabled
  nmNodeDetectionEnabled
  nmNodeIdEnabled

  This attributes should be configurable per channel.

  Agreed solution:

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

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

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

-upstream-mapping for Nm:NmGlobalConfig:NmGlobalFeatures:(NmNodeIdEnabled|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 FrNmSourceNodeIdentifierEnabled is set to TRUE."
Change SWS_FrNm_00245 Return Value description E_NOT_OK to "Getting of the node identifier of the local node has failed or is not configured for this network handle."
Change SWS_FrNm_00046 to "The function FrNm_GetLocalNodeIdentifier shall provide the node identifier configured for the local host node (FrNmNodeId) if FrNmSourceNodeIdentifierEnabled is set to TRUE."
Change SWS_FrNm_00242 Return Value description E_NOT_OK to "Getting of NM PDU Data has failed or is not configured for this network handle."
Change SWS_FrNm_00265 to "The function FrNm_GetPduData shall get the whole NM PDU data out of the most recently received NM message if FrNmControlBitVectorEnabled or FrNmSourceNodeIdentifierEnabled or FrNmUserDataEnabled is set to TRUE."

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

BW-C-Level:

Application	Specification	Bus
1	4	1

1.5 Specification Item ECUC_LinNm_00031

Trace References:

none

Content:

Name	LinNmNodeIdEnabledLinNmChannelConfig.LinNmNodeIdEnabled
Parent Container	LinNmChannelConfig
Description	Pre-processor switch for enabling transmission of the source node identifier in NM messages.
Multiplicity	0..1
Type	EcucBooleanParamDef
Default value	–
Post-Build Variant Value	false

Value Configuration Class	Pre-compile time	X	All Variants
	Link time	–	
	Post-build time	–	
Scope / Dependency	scope: local		

RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

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

  Problem description:

  The following attributes are NmEcu global:
  nmRepeatMsgIndEnabled
  nmNodeDetectionEnabled
  nmNodeIdEnabled

  This attributes should be configurable per channel.

  Agreed solution:

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

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

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

  -upstream-mapping for Nm:NmGlobalConfig:NmGlobalFeatures:(NmNodeIdEnabled|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 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 SWS_LinNm_00029

Trace References:

none

Content:

The following errors shall be detectable by the LinNm depending on its build version (development).

Type or error	Relevance	Related error code	Error Value
API service used without module initialization	Development	LINNM_E_NO_INIT UNINIT	0x01
API service called with wrong channel handle	Development	LINNM_E_INVALID_CHANNEL	0x02
Null pointer has been passed as an argument.	Development	LINNM_E_PARAM_POINTER	0x12
LinNm initialization has been failed, e.g. selected configuration set doesn't exist.	Development	LINNM_E_INIT_FAILED	0x13
API call with invalid Parameter	Development	LINNM_E_INVALID_PARAMETER	0x14

RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

- RfC #59085: Rollout of 'Runtime errors'

  Problem description:

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

  Agreed solution:

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

  Notes:
  - It is not enough just to migrate the error from one classification table to another. Please also check the related requirements (and background information) which is referring to that error and adapt them if needed.
  - The review task of the ITs shall be done by the WP to which the specification "belongs".

  *** BSW UML Model ***
  SWS_CanNm:
  ———-
  Chapter 8.6.1 Optional Interfaces:
  Add within SWS_CanNm_00325 the API function Det_ReportRunTimeError

  SWS_LinIf:
  ———-
  SWS_LinIf_00359: add Det_ReportRuntimeError

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

  *** ECUC XML ***
  Not affected. No configuration of runtime error reporting required (see SWS BSW General).
  –Last change on issue 59085 comment 88–

  BW-C-Level:

Application	Specification	Bus
1	4	1

1.7 Specification Item SWS_LinNm_00034

Trace References:

none

Content:

If default development error detection is enabled and the input arguments to LinNm API services are invalid then the LinNm module shall report respective errors to Default Error Tracer and return without any action.

RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

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

  Problem description:

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

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

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

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

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

  Agreed solution:

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

  Blueprint/Example:

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

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

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

the development error to be traced to a specific core. c(SRS_BSW_00337)

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

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

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

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

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

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

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

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

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

BW-C-Level:

Application	Specification	Bus
1	1	1

1.8 Specification Item SWS_LinNm_00037

Trace References:

none

Content:

If default development error detection is enabled and the LinNm module is not initialized then all the LinNm API services (except LinNm_Init and LinNm_GetVersionInfo) shall report an error LINNM_E_NO_INIT UNINIT to Default Error Tracer and return without any action.

RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

- RfC #59085: Rollout of 'Runtime errors'

  Problem description:

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

  Agreed solution:

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

Notes:
- It is not enough just to migrate the error from one classification table to another. Please also check the related requirements (and background information) which is referring to that error and adapt them if needed.
- The review task of the ITs shall be done by the WP to which the specification "belongs".

*** BSW UML Model ***
SWS_CanNm:
———-
Chapter 8.6.1 Optional Interfaces:
Add within SWS_CanNm_00325 the API function Det_ReportRunTimeError

SWS_LinIf:
———-
SWS_LinIf_00359: add Det_ReportRuntimeError

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

*** ECUC XML ***
Not affected. No configuration of runtime error reporting required (see SWS BSW General).
–Last change on issue 59085 comment 88–

BW-C-Level:

Application	Specification	Bus
1	4	1

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

  Problem description:

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

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

  "default error" should always be followed by "tracer", otherwise, "development

error" is probably the right term.

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

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

Agreed solution:

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

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

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

- "module raises the development error XXX_E_TRANSITION"
- "The DET provides services to store development errors"

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

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

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

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

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

to "Default Error Tracer"

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

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

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

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

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

BW-C-Level:

Application	Specification	Bus
1	1	1

1.9 Specification Item SWS_LinNm_00038

Trace References:

none

Content:

If default development error detection is enabled and the input argument nmChannel Handle has an invalid value then the network handle services shall report an error LINNM_E_INVALID_CHANNEL to Default Error Tracer and return without any action.

Note: The network handle is invalid if it is different from allowed configured values.

RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

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

  Problem description:

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

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

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

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

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

  Agreed solution:

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

  Blueprint/Example:
  - sub chapter is now called "7.x Default errors"
  - "[SWS_xxx_yyyyy]
  In case default error detection is enabled for the xxxx module: The xxxx module shall check API parameters for validity and report detected errors to the DET. ()"
  - "[SWS_xxx_yyyyy]
  If default error detection is enabled: the function shall check that the service xxx_Init was previously called. If the check fails, the function shall raise the default error XXX_E_NOT_INITIALIZED otherwise (if DET is disabled) return E_NOT_OK. ()"

- "In case default errors are enabled,..."
- "module raises the Default error XXX_E_TRANSITION"
- "The DET provides services to store default errors"
...

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

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

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

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

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

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

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

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

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

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

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

BW-C-Level:

Application	Specification	Bus
1	1	1

1.10 Specification Item SWS_LinNm_00069

Trace References:

none

Content:

If default development error detection is enabled by LINNM_DEV_ERROR_DETECT (configuration parameter), then for all LinNm API services validity check of input parameters shall be made.

RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

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

  Problem description:

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

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

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

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

  The parameter switches on/off the developement error detection. The DET

does not need to be detected and can be present even when the parameter is set to false.

Agreed solution:

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

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

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

Solution for SWS_RTE:
– SWS_RTE —
- Change 4.8 Default errors to 4.8 Development errors
- Change "Errors which can occur at runtime in the RTE are classified as default errors" to "Errors which can occur at runtime in the RTE are classified as development

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

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

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

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

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

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

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

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

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

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

BW-C-Level:

Application	Specification	Bus
1	1	1

1.11 Specification Item SWS_LinNm_00163

Trace References:

none

Content:

If default development error detection is enabled and the input argument version-info has null pointer then the service LinNm_GetVersionInfo() shall report an error LINNM_E_PARAM_POINTER to Default Error Tracer and return without any action.

RfCs affecting this spec item between releases 4.3.0 and 4.3.1:

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

Problem description:

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

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

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

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

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

Agreed solution:

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

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

The correct text would be:
- sub chapter is called "7.x Development errors"
- "[SWS_xxx_yyyyy]
In case development error detection is enabled for the xxxx module: The xxxx

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

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

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

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

SRS_FlashTest:
- In chapter "6.1 Functional Requirements": Rename "Development Error Tracer" to "Default Error Tracer"

- In chapter "7 References":
Rename "Development Error Tracer" to "Default Error Tracer"
Rename "AUTOSAR_SWS_DevelopmentErrorTracer" to "AUTOSAR_SWS_DefaultErrorTracer"

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

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

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

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

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

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

BW-C-Level:

Application	Specification	Bus
1	1	1