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1.0 Overview

1.1 What is the “Identity Manager” about?

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1.1.1 Physical Multiple ECU

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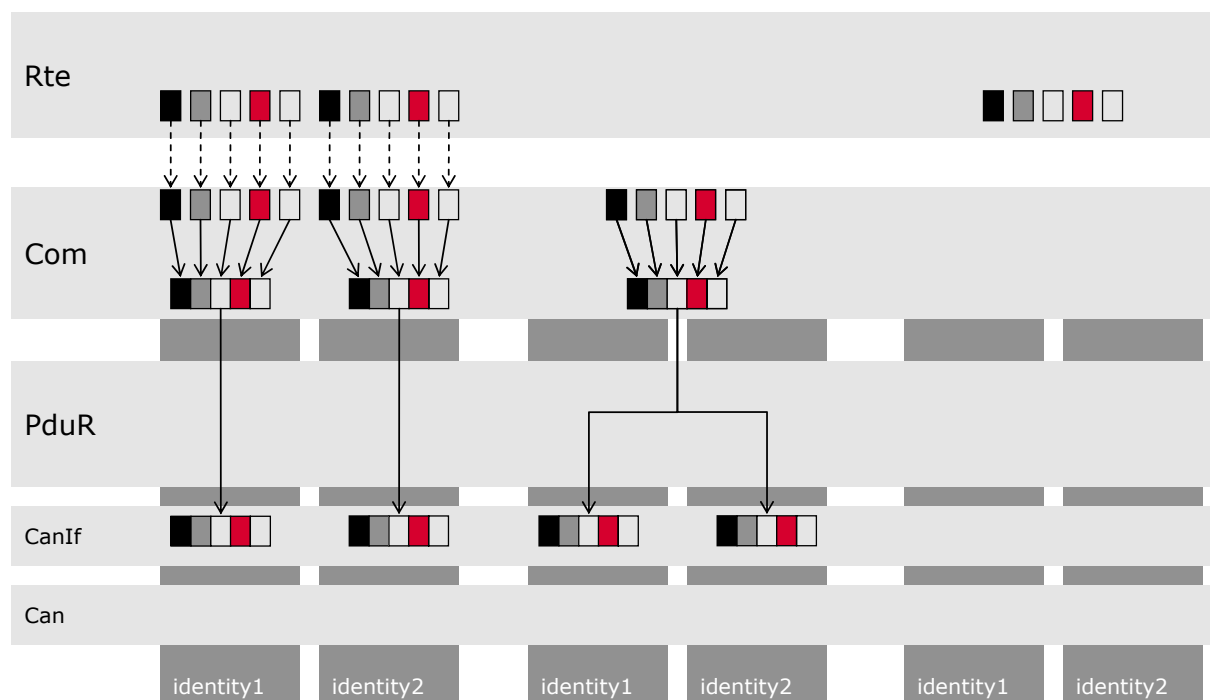
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1.1.2 Multiple Configurations ECU

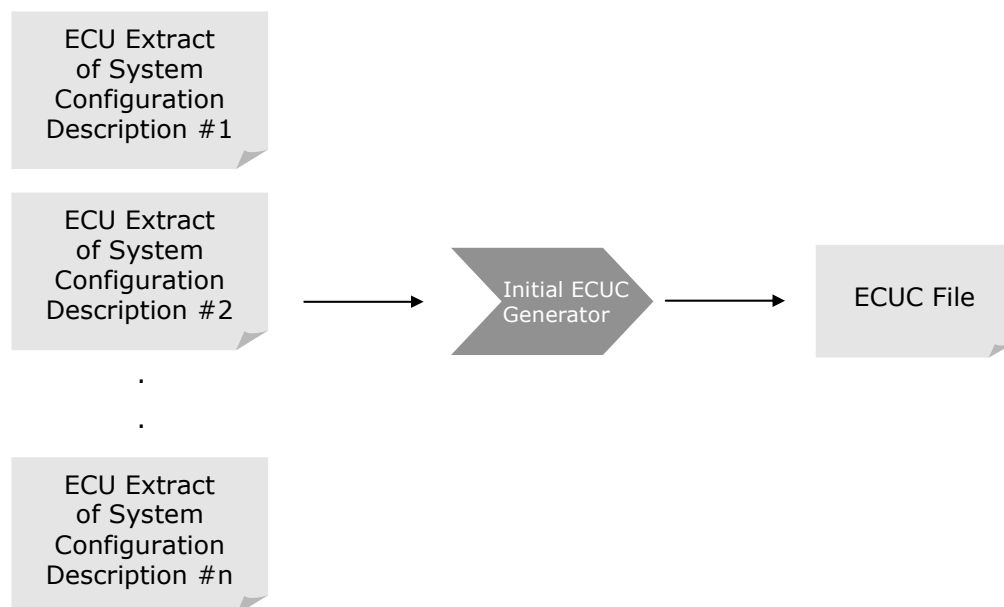
1.1.3 (Virtual Multiple ECU)

1.2 Operation principle of Physical Multiple ECUs



2.0 Configuring a Multiple ECU

2.1 ECUC creation (without overlay)



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DM_FRL.ecuc.arxml

DM_FRL.Initial.ecuc.arxml

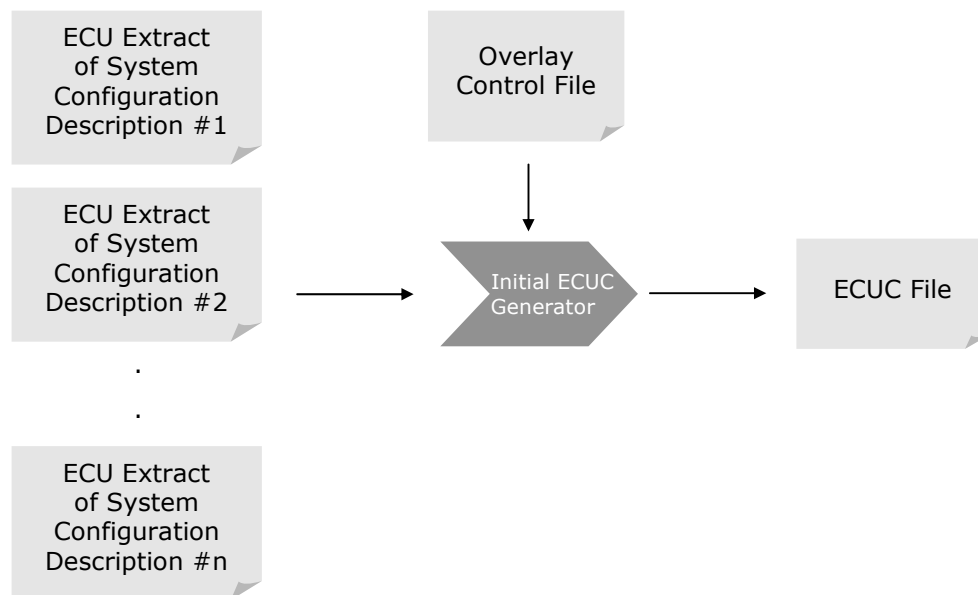
DM_FRL.ecuc.vdsxml

DM_FRL.Error.txt

2.1.1 What happens in the ECUC?

2.2 ECUC Creation (with overlay)

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2.3 Overlay Control File

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2.3.1 Specifying the ECU Extracts to be merged



2.3.2 Specifying the merged ECU instance name

2.3.3 PDU overlay



2.3.4 Signal overlay

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2.3.5 Splitting the direction of PDUs

2.3.6 Example



2.4 ECUC creation using DaVinci Project Assistant

Multiple ECU

7 Input Files

ECU Extract of System Description

☐ Single ECU:

☒ Multiple ECU:

ECUExtract_A.arxml
ECUExtract_B.arxml

Definition File:

D:\MultiECU\ControlFile.mecu

Load an existing mecu file or specify the extracts and create a new one.

Create new Definition File

2.5 Generating the RTE of a Multiple ECU

3.0 Initialization of the BSW

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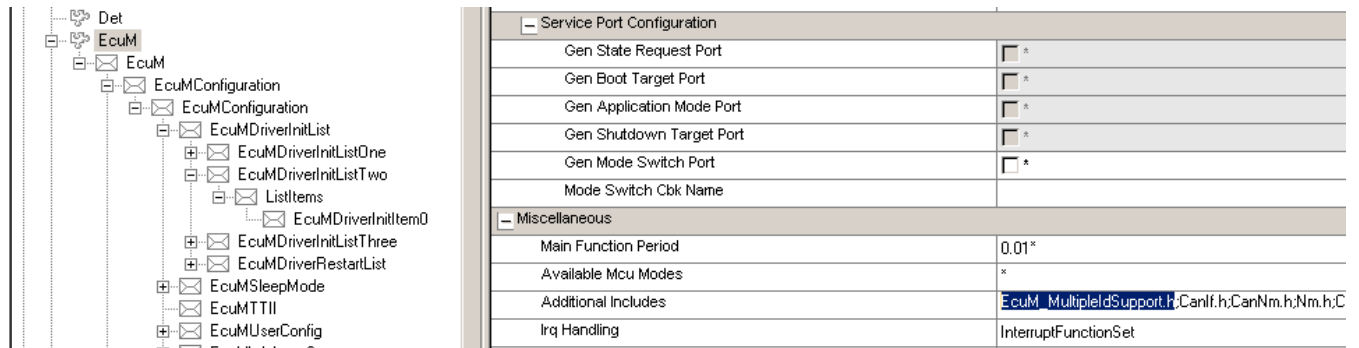
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3.1 Creation of the logic for identity selection

3.2 Prepare the ECUM configuration

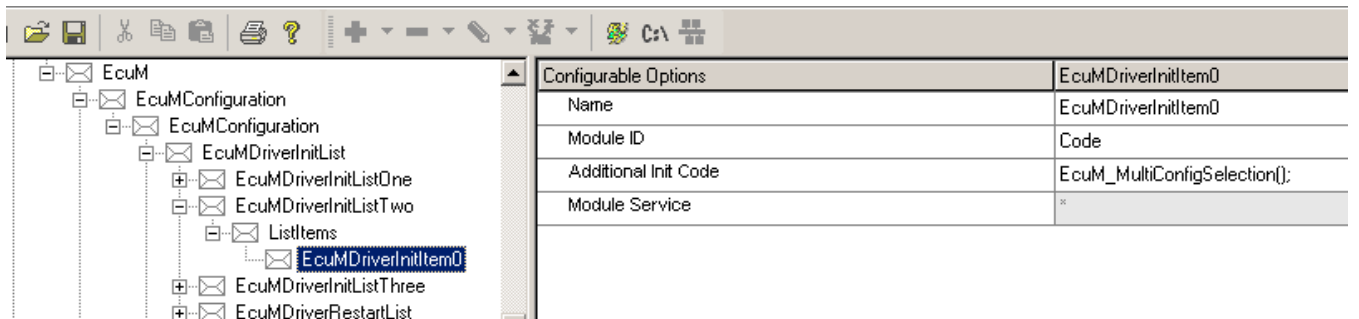
Additional Includes



The screenshot shows the Vector CANape configuration tool. On the left, a tree view displays the ECUM configuration structure. The 'EcuM' node is expanded, showing 'EcuMConfiguration', 'EcuMConfiguration', 'EcuMDriverInitList', 'EcuMDriverInitListOne', 'EcuMDriverInitListTwo', 'ListItems', 'EcuMDriverInitItem0', 'EcuMDriverInitListThree', 'EcuMDriverRestartList', 'EcuMSleepMode', 'EcuMTTII', and 'EcuMUserConfig'. On the right, the 'Service Port Configuration' and 'Miscellaneous' sections are visible. The 'Additional Includes' field is highlighted, showing the path 'EcuM_MultipleIdSupport.h;CanIf.h;CanNm.h;Nm.h;C'.

Service Port Configuration	
Gen State Request Port	<input type="checkbox"/> *
Gen Boot Target Port	<input type="checkbox"/> *
Gen Application Mode Port	<input type="checkbox"/> *
Gen Shutdown Target Port	<input type="checkbox"/> *
Gen Mode Switch Port	<input type="checkbox"/> *
Mode Switch Cbk Name	
Miscellaneous	
Main Function Period	0.01 *
Available Mcu Modes	*
Additional Includes	EcuM_MultipleIdSupport.h;CanIf.h;CanNm.h;Nm.h;C
Irq Handling	InterruptFunctionSet

ECUM Driver Init List Two



The screenshot shows the Vector CANape configuration tool. On the left, a tree view displays the ECUM configuration structure. The 'EcuM' node is expanded, showing 'EcuMConfiguration', 'EcuMConfiguration', 'EcuMDriverInitList', 'EcuMDriverInitListOne', 'EcuMDriverInitListTwo', 'ListItems', 'EcuMDriverInitItem0', 'EcuMDriverInitListThree', and 'EcuMDriverRestartList'. The 'EcuMDriverInitListTwo' node is selected. On the right, the 'Configurable Options' table is visible, showing the configuration for 'EcuMDriverInitItem0'.

Configurable Options	EcuMDriverInitItem0
Name	EcuMDriverInitItem0
Module ID	Code
Additional Init Code	EcuM_MultiConfigSelection();
Module Service	*

3.3 Provide an user defined ECUM initialization function



3.4 Where do I find the initialization structures?

3.5 Overview of BSW module initialization

DCM, CANTP, CANNM, IPDUM, PDUR,

	✓	
	✓	
	✓	
	✓	
		✓
		✓
	✓	
		✓
	✓	

	<input checked="" type="checkbox"/>	
	<input checked="" type="checkbox"/>	
		<input checked="" type="checkbox"/>
		<input checked="" type="checkbox"/>
	<input checked="" type="checkbox"/>	

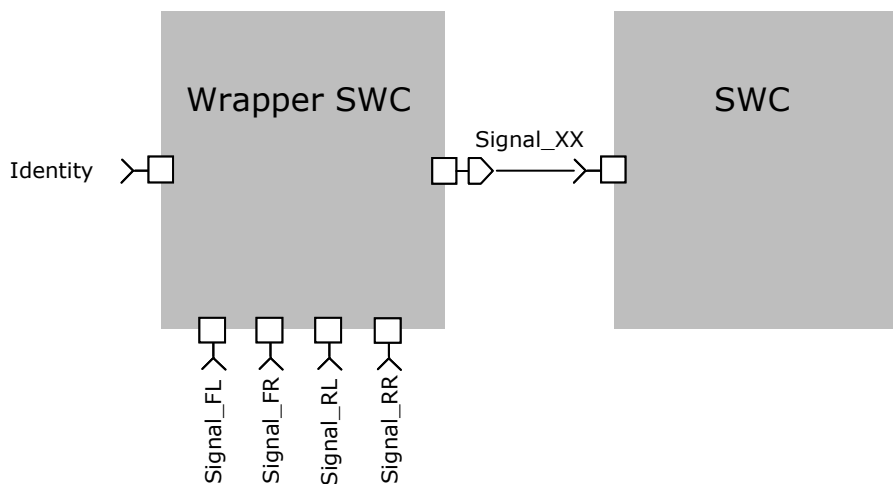
4.0 Diagnostics and Multiple ECU Support

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5.0 Supported use cases

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6.0 Restrictions and limitations



7.0 Additional resources

8.0 Contacts

Germany
and all countries not named below:
Vector Informatik GmbH

France, Belgium, Luxemburg:
Vector France SAS

Sweden, Denmark, Norway,
Finland, Iceland:
VecScan AB

United Kingdom, Ireland:
Vector GB Ltd.

China:

India:

USA, Canada, Mexico:
Vector CANtech, Inc.

Japan:
Vector Japan Co. Ltd.

Korea:
Vector Korea IT Inc.
