

CANoe/CANalyzer for Ethernet Compact

Agenda VectorAcademy

Delivery Format:	This course is offered in Remote Format
Duration:	15 hours
Target Group:	Users of CANoe/CANalyzer.Ethernet
Prerequisites:	Fundamental knowledge of serial bus communication and basic knowledge of CANoe/CANalyzer is an advantage
Goal:	Knowledge about physical layers and protocols used for automotive Ethernet. Knowledge about the CANoe.Ethernet features for analysis, simulation and a short introduction to programming in CAPL.

1. Ethernet Fundamentals, OSI Layers 1 to 4

- > Physical Layers
- > Ethernet and IP basics
- > Introduction to TCP and UDP

2. Introduction CANalyzer/CANoe .Ethernet

- > Introduction to CANoe/CANalyzer.Ethernet
- > Initiation of an Ethernet network
- > Measurement and analysis with CANoe/CANalyzer.Ethernet

3. Application Protocols for Automotive Use: DoIP

- > Introduction to DoIP
- > DoIP in CANoe
- > Using CANoe as DoIP Tester

4. Application Protocols for Automotive Use: AUTOSAR PDU, SOME/IP

- > AUTOSAR PDU implementation in CANoe
- > Service Oriented Architecture (SOA) in the vehicle
- > Introduction to SOME/IP
- > Using CANoe for SOME/IP

5. Application Protocols for Automotive Use: TSN / Simulation with CANoe

- > Introduction to Time Sensitive Networking (TSN)
- > Introduction to CANoe Simulation
- > Working with Interaction Layers

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6. CAPL for CANoe.Ethernet

- > Introduction to CAPL programming
- > CAPL in the context of Ethernet
- > Summary of all 6 remote sessions
- > Q & A
- > Feedback

Valid for 2021

CANoe/CANalyzer for Ethernet [compact]

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Delivery Format:	This Course is offered in Classroom Format or Remote Format
Duration:	Classroom: 3 days Remote: 18 hours
Target Group:	Users of CANoe/CANalyzer.Ethernet
Prerequisites:	Basic knowledge about CANoe/CANalyzer is helpful
Goal:	Knowledge of different physical layers and the protocols for Ethernet in the vehicle, Introduction to the measurement of the Ethernet communication with CANoe and CANalyzer Option Ethernet, Overview of security concepts. Brief introduction to simulation with CANoe and CAPL programming

- 1. Ethernet Fundamentals, OSI Layers 1 to 4 | 3.0 h**
 - > Physical Layers
 - > Ethernet and IP basics, analysis in CANoe
 - > Introduction to TCP and UDP, analysis in CANoe
- 2. Introduction CANalyzer/CANoe.Ethernet | 2.0 h**
 - > Introduction to CANoe/CANalyzer.Ethernet
 - > Initiation of an Ethernet network
- 3. Application Protocols for Automotive Use: AUTOSAR PDU, SOME/IP | 2.0 h**
 - > AUTOSAR PDU implementation in CANoe
 - > Filtering, Logging and Offline Analysis
 - > Service Oriented Architecture (SOA) in the vehicle
 - > Introduction to SOME/IP
 - > Using CANoe for SOME/IP
- 4. Application Protocols for Automotive Use: DoIP | 3.0 h**
 - > Introduction to DoIP
 - > DoIP in CANoe
 - > CANoe as DoIP Tester
- 5. Security | 1,0 h**
 - > Security Fundamentals (TLS)
 - > DoIP via "Secured Channel" with CANoe and Security Manager
- 6. Application Protocols for Automotive Use: TSN | 1.0 h**
 - > Introduction to Time Sensitive Networking (TSN)

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7. Simulation with CANoe | 3,0 h

- > Introduction to CANoe Simulation
- > Sending options (Stimulation)
- > Working with Interaction Layers
- > Creating Panels and Signal Generators

8. Introduction CAPL for CANoe.Ethernet | 3.0 h

- > Introduction to CAPL programming
- > CAPL in the context of Ethernet
- > Signal-oriented CAPL
- > Service-oriented CAPL

Valid from 2022