

# CANoe/CANalyzer for CANopen

## Agenda VectorAcademy

<b>Delivery Format:</b>	This Course is offered in Classroom Format
<b>Duration:</b>	2 days
<b>Target Group:</b>	CANopen users, developers, system integrators and testers
<b>Prerequisites:</b>	CAN and CANalyzer or CANoe basic knowledge are helpful
<b>Goal:</b>	Acquisition of CANopen basic knowledge, start-up and configuration of CANopen networks, analyzing and measuring with CANoe/CANalyzer, simulating and testing CANopen networks with CANoe

### 1. Introduction to the CAN Protocol

- > Introduction to bus networking
- > Communication mechanisms and properties of the CAN Protocol

### 2. Overview of the CANopen World

- > Application areas
- > Scope of the CANopen protocol and relevant specifications
- > Structure of a CANopen device

### 3. Access to a CANopen Device

- > Power-on procedure and accessing the Object Directory (SDO)
- > Parameter management/parameter storage
- > CANoe/CANalyzer .CANopen for accessing CANopen devices

### 4. Electronic Data Sheet (EDS)

- > File formats and use cases
- > EDS editor CANeds

### 5. Data Exchange in CANopen Networks

- > Configuration and use of Process Data Objects (PDO)
- > Transmission methods
- > Configuration of the communication with CANalyzer .CANopen
- > Safety-critical data exchange with CANopen Safety

### 6. Network Management and Error Detection

- > CANopen master / manager services
- > Network management in CANopen networks
- > Monitoring of CANopen devices
- > Scan of a CANopen network

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### 7. Simulation of CANopen networks with CANoe

- > CANoe .CANopen simulation concept
- > CANopen system variables

### 8. Simulation of CANopen applications with CAPL

- > Brief introduction to the CAPL programming language
- > Overview of CANopen-specific functions

### 9. Overview of testing with CANoe

- > Protocol vs. application tests for CANopen devices
- > Test options in CANoe
- > Test report creation
- > Overview of vTESTstudio

### 10. CANopen tests with CANoe

- > Table-based test of a CANopen device
- > Monitoring of bus communication
- > Test automation for regression tests