

# CANape with XCP on FlexRay

<b>Duration:</b>	1 day
<b>Target group:</b>	CANape user in a FlexRay network
<b>Prerequisites:</b>	basic knowledge of CANape

## 1 Topologies and Signal Transmission (1.0h)

Goal: Gain familiarity with physical topologies and signal transmission  
Contents: FlexRay topologies, layout of FlexRay ECUs, signal representation, termination

## 2 Synchronization in FlexRay (1.5 h)

Goal: Learn about initial synchronization and resynchronization  
Contents: Wakeup, startup, coldstart node, synchronization process and time hierarchy, exercise

## 3 Communications Structure and Bus Access (1.0 h)

Goal: Build knowledge of FlexRay communication  
Contents: TDMA (Time Division Multiple Access), communication cycle, static and dynamic data transmission segment and network idle time, FlexRay frame, scheduling, key schedule and frame parameters, cycle multiplexing, exercise

## 4 Introduction to FIBEX (0.5 h)

Goal: Learn about organization and description of FlexRay parameters in the FIBEX uniform exchange format  
Contents: Viewing elements of a network description in the FIBEX Explorer, describing signals, frames and ECUs in a FlexRay network, exercise

## 5 XCP on FlexRay (1,5 h)

Goal: Build knowledge of XCP communication in a FlexRay network  
Contents: LPDU\_IDs, node address for XCP (NAX), configurable FlexRay buffers

## 6 Bandwidth Management in FlexRay (1,0 h)

Goal: Introduce to the bandwidth management in FlexRay  
Contents: Specific XCP commands for Assigning / Deassigning of a FlexRay buffer, Concatenation Mode, exercises

## 7 Questions, Suggestions, Requests (0,5 h)

Goal: Clarification of open issues and open discussion as feedback for Vector