

Autosar Adaptive Platform

Agenda VectorAcademy

Delivery Format:	This Course is offered in Classroom or Remote Format
Duration:	Classroom: 2.5 days Remote: 20 hours.
Target Group:	Project Leaders, ECU Developers of automobile suppliers and OEMs
Prerequisites:	Knowledge about software development for automotive systems, Basics of C++, Basic exposure to POSIX systems. Basics of Classic Autosar Concepts: https://elearning.vector.com/mod/page/view.php?id=437
Goal:	General view of Autosar Adaptive Platform, Handling of Adaptive AUTOSAR solution

1. Overview and Objectives

- > Motivation and aims
- > Organization and schedule

2. Methodology

- > Overview and data exchange formats

3. AUTOSAR Adaptive Application

- > Basic principles and technical concepts
- > AUTOSAR design elements

4. Execution Managements

- > Adaptive AUTOSAR startup behavior
- > Function groups and the machine states

5. Service Oriented communication

- > Service oriented communication principles
- > Service Discovery

6. Communication Management

- > Architecture

7. Manifest

- > Methodology Workflow
- > AUTOSAR Manifest file types

8. Persistency

- > Key value storage
- > File Proxy storage

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9. Diagnostics Management

- > Unified Diagnostics Services
- > Event Memory Management

10. Update and Config Management

- > Software package
- > Software cluster

11. Introduction AUTOSAR Adaptive in Practice

- > Recapitulation Adaptive Platform
- > Exercise: development environment

12. Introduction to Adaptive MICROSAR (with Exercise)

- > The DaVinci Adaptive Tool Suite
- > Using the DSL to work with ARXML models
- > Automation, assistants and code generation
- > Working with an AUTOSAR Adaptive ECU

13. Execution Management Exercise

- > Create your first DaVinci Adaptive project
- > Get familiar with machine state and execution manager
- > Enhance the application client to report the application state to the EM

14. Middleware Exercise (Provider and Consumer)

- > Short introduction into ara::com and service oriented communication
- > Introduction into the calculator example for this training
- > Extend an existing Adaptive Application
- > Configure manifests and generate new interface
- > Implement skeleton and proxy
- > Run and debug Adaptive Application

15. Persistency Exercise

- > Data storage with AUTOSAR Adaptive
- > Extend an existing Adaptive Application to save data in volatile memory