

## OPC UA – Basics and Configuration (IK-OPCUA1E)

### Short Description

This training offers you a detailed introduction into the basic concepts of the OPC UA system and its interfaces. You will learn the terminology behind the abstract model and test and deepen your understanding of it with several OPC UA capable components. You will learn about the most important OPC UA servers and clients in the SIMATIC product portfolio and will configure and program them in practical exercises. A continuous exercise concept will lead you gradually to a communication model that is solely based on OPC UA communication.

### Objectives

At the end of this training you will be familiar with the basics, the terminology and the data models of OPC UA in the automation environment. You will understand the interaction of its components and be able to configure the most important OPC UA servers and clients of the SIMATIC product portfolio.

### Target Group

Automation engineers  
Programmers  
Commissioning engineers

### Content

Introduction to OPC  
Infrastructure of OPC UA  
Security of OPC UA  
Information model, data access types and profiles of OPC UA  
SIMATIC controllers as OPC UA servers and clients:  
Configuring the OPC UA server  
Programming OPC UA methods  
Programming an OPC UA client  
OPC UA Companion Specifications and modeling the server interface with SiOME  
SIMATIC HMI products as OPC UA servers and clients  
SIMATIC HMI Comfort/Mobile Panel  
SIMATIC WinCC Runtime Advanced  
SIMATIC WinCC Runtime Professional  
SIMATIC NET OPC Server  
Standard OPC UA clients (UaExpert, OPC Scout)  
Performance of OPC UA connections  
Diagnostics and debugging of OPC UA components

### Prerequisites

Basic knowledge of network engineering  
Knowledge according to TIA-PRO1 or TIA-SERV1

### Note

The course teaching and material language is English. The material is provided for students in electrical form as pdf document.

### Type

Face-to-face training

### Duration

4 days

### Language

en

### Fee

1,760 EUR