

Kepware's KEPServerEX Industrial Internet of Things (IIOT)

Course Description

This comprehensive course provides in-depth knowledge and practical skills in industrial connectivity and data management using Kepware's KEPServerEX. You'll learn how to connect, collect, and manage data from a wide range of industrial devices, optimize your data communications, and harness the power of the Industrial Internet of Things (IIoT) for better decision-making. Gain the expertise needed to excel in the field of industrial automation and data integration.

Audience

This course is designed for industrial engineers, automation professionals, system integrators, and anyone interested in industrial connectivity and data management. It is suitable for both beginners looking to build a strong foundation and experienced professionals seeking to enhance their skills with KEPServerEX.

Pre-requisite Knowledge/Skills

- Basic understanding of industrial automation concepts
- Familiarity with computer systems and networking fundamentals

Course Objectives

By the end of this course, participants will be able to:

- Install and license KEPServerEX for industrial data connectivity.
- Connect and manage various industrial devices, including PLCs and more.
- Optimize data communications and troubleshoot issues effectively.
- Explore OPC and OPC UA technologies for secure data transfer.
- Implement data redundancy and high availability solutions.
- Utilize KEPServerEX for Industrial IoT (IIoT) applications.
- Establish web and database connectivity for efficient data management.
- Integrate KEPServerEX with ThingWorx for advanced IoT solutions.

Course Outline

The course comprises of 8 modules. The duration of the course is 32 hours.

Module 1: Introduction to KEPServerEX

- Understanding the role of KEPServerEX in industrial automation.
- Exploring the KEPServerEX ecosystem.
- Installing and licensing KEPServerEX.

Module 2: Device Connectivity

- Connecting PLCs and various industrial devices.
- Configuring drivers and protocols for device communication.
- Simulating devices for testing and development.

Module 3: OPC and OPC UA

- In-depth exploration of OPC (OLE for Process Control) and OPC UA.
- Implementing secure data transfer with OPC UA.
- Tunneling data for remote communication.

Module 4: KEPServerEX Essentials

- Navigating the KEPServerEX user interface.
- Configuring data sources and tags.
- Data logging and event handling.

Module 5: Diagnostics and Optimization

- Diagnosing and troubleshooting common issues.
- Strategies for optimizing KEPServerEX performance.
- Real-time and historical data analysis.

Module 6: Redundancy and High Availability

- Ensuring data redundancy and fault tolerance.
- Implementing backup strategies.
- Failover and recovery mechanisms.

Module 7: Industrial IoT (IIoT) Integration

- Understanding IIoT in the industrial context.
- Leveraging KEPServerEX for IIoT connectivity.
- IoT data analytics and reporting.

Module 8: Advanced Connectivity

- Connecting to web-based applications and services.
- Integrating KEPServerEX with databases.
- Exploring ThingWorx connectivity for advanced IoT solutions.