



Industrial Networking (CT2)

Industrial networks must connect an ever increasing number of technologies and users - while at the same time becoming more flexible.

To keep pace with the growing size and performance requirements of these complex networks, system administrators and support technicians need comprehensive technical and practical knowledge about IP communication, multicasting and network Security.

Target Group

Technology training course for System Engineers, Network Designers, and Support Technicians who are building, supporting, or migrating an Industrial Ethernet network.

Prerequisites

Basic knowledge is required, for example previous attendance of the „Industrial Ethernet (CT1)“ course. If available, the participant should bring a laptop with Ethernet connection and an operating system CD. Administrator rights are required.

Objective

This course builds on the experience gained from „Industrial Ethernet (CT1)“, providing network experts with intensive theoretical and practical knowledge about TCP/IP, IP communication and multicasting.

A special emphasis is placed on deploying TCP/IP and multicasting in complex industrial environments. This enables the participants to provide comprehensive support, both for demanding projects and their daily work.

Languages

- CT2e English
- CT2f French
- CT2d German
- CT2n Dutch
- CT2p Portuguese
- CT2es Spanish

Duration

3 Days
9:00 – 16:30

Schedule / Location / Price

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Recommended for the Hirschmann™ Industrial Network Professional certification examination.

Seminar Content

Internet Protocol

- IP Packet
- IP-Addresses
- Netmask
- Classless Inter Domain Routing (CIDR)
- DiffServ

IP communication

- Address Resolution Protocol (ARP)
- Static Routing

Multicasting

- Multicast Addresses
- Mapping IP addresses to MAC addresses
- IGMP

TCP and UDP

- Datagrams
- Ports

Applications

- SNMP
- IEEE1588 Precision Time Protocol
- DHCP with Option 82
- SNMP



Network Requirements of Industrial Protocols

- ProfiNet
- Ethernet/IP
- Modbus/TCP

Security

- 802.1x
- Radius
- Network Address Translation
- Portforwarding
- Access Control Lists