

## Siemens S7 PROFINET Network

### Course Description

This training course provides you the ability to design, commissioning and sustaining of an S7 Industrial Ethernet and PROFINET networks. The course uses a 'hands-on' practical approach to reinforce the theoretical aspects of the training.

### Target Audience

Programmers, commissioning engineers, service personal and configuring engineers.

### Pre-requisites

- Basic computer skills with Windows 7 very helpful.
- knowledge of PLC level (1) and level (2) training course.

### Duration

- **Class room:** 3 days, 7 hours/day.
- **On line:** 7 days, 3 hours/day.

## Course Outline

- Basics of Industrial Ethernet.
- Basics of PROFINET IO, RT&IRT.
- PROFINET IO with configuring and programming.
- Commissioning the media redundancy.
- Plant-wide engineering & diagnostics in the TIA Portal.
- Introduction to the integrated Web-services in the PROFINET devices.
- Data communication Controller / Controller with:
  - an S7 connection to the S7 communication blocks, PUT/GET, BSEND/BRECEIVE
  - Ethernet connections (ISO on TCP, TCP, UDP) to the T-communication blocks, T-Send/T-Receive
- Extensive practical examples with exercises.

## Course Agenda

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| <b>Day 1</b> | <ul style="list-style-type: none"> <li>• Introduction to SIMATIC Net - Industrial Ethernet</li> <li>• Network Components and Installation Guidelines</li> <li>• Overview of Industrial Twisted Pair Networks</li> <li>• Industrial Twisted Pair Network Components</li> </ul>                                   |
| <b>Day 2</b> | <ul style="list-style-type: none"> <li>• PROFINET IO device types: IO controller, IO device, IO supervisor.</li> <li>• Examples for remote I/O.</li> <li>• Configure PROFINET network.</li> </ul>   |
| <b>Day 3</b> | <ul style="list-style-type: none"> <li>• CPU to CPU PROFINET communication.</li> <li>• S7 connection to the S7 communication blocks, PUT/GET, BSEND/BRECEIVE</li> <li>• Ethernet connections (ISO on TCP, TCP, UDP) to the T-communication blocks, T-SEND/T-RECEIVE</li> <li>• Troubleshoot network.</li> </ul> |

### Note: -

This course could be applied on SIMATIC Manager or TIA Portal