

PROFINET Maintenance and Troubleshooting in combination with Certified PROFINET Installers Course (2 days)

Having problems with your PROFINET network? Then this is the training class for you. Learn the skills you need to find and isolate problems fast. At the end of the training, you will be able to maintain, strategically isolate, analyze and solve problems in PROFINET installations. During the class, you will learn and practice how to use the latest PROFINET Troubleshooting tools including Wireshark, Netilities and the permanent network monitor Atlas.

The course is designed for those who install and maintain PROFINET installations. The class provides a mixture of theory and hands-on experience to give you the skill set you need, and the ability to put it into practice immediately. Attendees will learn how to analyze, localize and solve PROFINET problems. The theory covered includes details about cabling, shielding, and grounding. The practical hands-on examples show you how to use various tools to find and fix your problems fast.

Both the course and the instructor have been certified by PROFIBUS PROFINET International (PI) which guarantees high-quality training. The course meets all the requirements of PI's Certified PROFINET Installers course. The course ends with both a written and practical test. Successful students will have their names listed on the PROFINET website as a Certified PROFINET Installer.

Upon completion of this course, the student shall be able to:

- Add devices to an existing PROFINET network
- Install and set up a PROFINET network
- Understand how the network works generally
- Troubleshoot common and uncommon problems

Theory Topics Covered:

- Introduction to Industrial Ethernet
- OSI 7-layer model
- Ethernet Protocols
- Hub, switches, routers and firewalls
- Basic Network design
- Physical layer and installation
- Setting up a PROFINET project
- Diagnostic model
- Fault finding strategies
- Measurement tools

Hands-on Exercises:

- IP addresses and ping
- Wiring lab
- Setting up a switch
- Configuring a PROFINET network
- Diagnostics lab
- Using Wireshark and other troubleshooting tools

Class Day Information:

- Attendees will receive all course notes, writing materials and a certificate. The certificates will depend on passing the final test.
- Attendees will receive a digital copy of 'Catching the process Fieldbus – An introduction to PROFIBUS and PROFINET' co-written by the instructor James Powell
- Class size is limited to a maximum of 10 people to ensure maximum exposure to the training equipment

Training Equipment:

- IO-Controller is Codesys software running on a Raspberry PI. This is using IEC 61131-3 standard programming which makes it perfect for teaching general concepts without getting confused with proprietary software.
- IO-Devices include Helmholz TB-20 IO rack, Wago IO rack, Helmholz 4 port managed switch
- Permanent monitoring system is Atlas by PROCENTEC
- IO-Supervisor/Monitor is Netilities by PROCENTEC
- Protocol Analyzer is Wireshark
- Ethernet cable tester

Instructor:

Your instructor for this course is James Powell, P.Eng., co-author of 'Catching the process Fieldbus – An introduction to PROFIBUS and PROFINET' (published by PROFIBUS and PROFINET International). James has over 20 years of experience with PROFIBUS and over 25 years with Industrial Ethernet and has presented technical training in China, Chile, Argentina, Ecuador, USA, Canada, UK, Germany and the Netherlands. He is a certified PROFIBUS DP, PA and PROFINET network engineer.

Scheduled Classes:

November 9,10, 2020 -Instructor-led online (uncertified)

February 25,26, 2021 - Peterborough, Ontario

On-site classes are also available on demand.

Cost:

\$1995 (in-person, certified version)

\$1895 (instructor-led online, un-certified version)

JCOM Automation is a member of PROFIBUS PROFINET North America and is a certified PROFIBUS and PROFINET training center and Competence Center.

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