



Control Specialists Ltd



A PI-Certified Competency and Training Center

PROFINET Commissioning & Maintenance

A one-day course designed as an add-on to the Certified PROFINET Installer Course covering the practical techniques of fault finding on "operational" PROFINET networks.

Who is this course aimed at?

The one-day Certified PROFINET Installer Course gives an excellent introduction to PROFINET technology and how to properly layout and install networks. The verification and fault-finding methods taught are however generally limited to non-operational networks and static testing.

The Certified PROFINET Engineer Course covers the full in-depth theory and practice of PROFINET operation and fault-finding. Although it is desirable to have one or two fully qualified PROFINET Engineers, it is by no means essential that all maintenance personnel be so highly trained.

The PROFINET Commissioning and Maintenance course provides an intermediate level of training for technicians and engineers who are involved with commissioning, health checking and fault finding on operational PROFINET systems.

What does the course cover?

This is a practical course based around a working PROFINET network. Each pair of students has a rack of 3 multi-vendor devices and a switch together with a laptop. Prior to creating a network of up to 18 IO devices and 8 switches controlled by a Siemens PLC, the students will use the CODESYS PLC development software together with a RASPBERRY PI to configure a smaller network of their own and in doing so gain a better understanding of the role of a GSDML file.

Techniques taught on the course includes diagnostics provided by PLC's, Switches and Permanent network monitors. It purposely avoids the use of telegram analysers like Wireshark which are covered in detail in the Certified PROFINET Engineer Course.

The course covers how to health check a working PROFINET system and quickly troubleshoot and locate problems. The course is very practical, based on hands-on exercises using a working system on which faults can be systematically introduced.

Current alerts					Refresh
Search:					Entries: 15
Type	Device	Event	Date		
Status change	rack04.dev2 00:30:DE:04:83:22, 192.168.0.42	Device failure	19.11.2016 15:28:42.566		
Status change	rack04.dev2 00:30:DE:04:83:22, 192.168.0.42	Component frame gaps	19.11.2016 15:28:36.178		
Status change	rack04.dev3 00:AD:45:8B:41:8D, 192.168.0.43	Component frame gaps	19.11.2016 15:28:35.678		
Status change	main.sw1 00:0E:8C:9B:94:BD, 192.168.0.1	Device failure	19.11.2016 15:26:39.329		
Status change	main.sw1 00:0E:8C:9B:94:BD, 192.168.0.1	Jitter	19.11.2016 15:26:39.329		
Status change	cpu315-pn 00:0E:8C:FE:75:E2, 192.168.0.2	Device failure	19.11.2016 15:26:39.325		
Status change	csiv03f F0:1F:AF:69:8B:28, 192.168.0.200, Auto: F156:55AD:05A9:5A53	Network	19.11.2016 15:05:36.400		
Status change	csiv03f F0:1F:AF:69:8B:28, 192.168.0.200, Auto: F156:55AD:05A9:5A53	Network	19.11.2016 15:03:45.399		
Status change	rack05.sw1 24:EA:4D:20:01:D3, 192.168.0.60	Jitter	19.11.2016 15:03:26.412		

Why must I do the Installer Course first?

The Maintenance Course teaches how to find and locate faults in working PROFINET systems; however the technician must have a good understanding of the types of faults that can occur and their causes. The Certified PROFINET Installer Course provides the basic grounding which is essential to understanding the more advanced techniques covered in this course.

The course is available for on-site delivery and at selected locations around the country for up to 12 people and online in an instructor-led format for groups of 3 (assuming some pre-knowledge of industrial ethernet networks). The course can also be delivered overseas providing a cost-effective alternative to sending staff to the UK.



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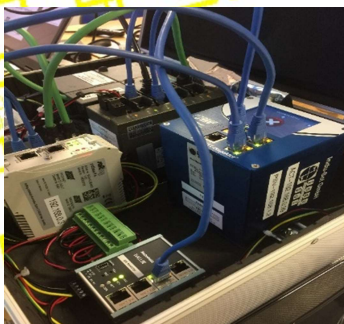


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As an optional addition to the on-site training, we can offer half a day of on-plant training for the engineers who take the Installer and Maintenance Course. This can involve supervised checking of a working system at the customer's site.



Course options

Because this course is not certified or accredited by PROFIBUS and PROFINET International, the syllabus can be altered and optimised to meet your exact requirements.

TOPICS Covered

- An Introduction to ETHERNET
- Industrial ETHERNET Protocols
- An Introduction to PROFINET
- IO Controllers, IO Devices and Switches.
- Network Configuration and EDS Files (including CodeSys and Siemens TIA Portal)
- Real-time and acyclic communication
- Installation and Operational Qualification of a PROFINET Network.
- Network Diagnostic Tools

Booking Information – for dates, costs and booking information, please contact:



Control Specialists Ltd

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Control Specialists Ltd are a PROFIBUS and PROFINET International Competency Centre (PICC) as well as a PROFIBUS and PROFINET International Training Centre (PITC). We also provide site-based support on PROFINET networks as well as training and support on PROFIBUS, ETHERNET IP, AS-I, CAN, IO-LINK and EMC Awareness for industrial automation systems.,

Peter Thomas of Control Specialists Ltd is the Technical Officer of PI UK and the Chairman of the PITC working group which, amongst other things, is responsible for defining the learning outcomes of PI-certified training courses.