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Course : IP cameras, installation, configuration and troubleshooting

Practical course - 2d - 14h00 - Ref. CME
Price : 1560 € E.T.

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This course teaches you how to install, configure and troubleshoot a surveillance camera using the IP protocol. Among other things, you'll learn how to define an addressing plan, the tools offered by manufacturers, and applications for testing and measuring digital video image streams.

Teaching objectives

At the end of the training, the participant will be able to:

- Master the prerequisites, methods and steps required for a VoIP installation or maintenance operation
- Know the main families of IP and analog camera parameters and the chronology of settings
- Know the main mandatory parameters to be set in an IP camera (Onvif's strengths and limitations)
- Get to grips with image enhancement and customization settings for day and/or night.
- Know how to identify OEM software, Onvif and accessories for settings and backups
- Understand the main causes of IP Video malfunctions and how to resolve them.

Intended audience

Operations and maintenance managers and technicians in charge of IP camera installations and/or maintenance.

Prerequisites

Basic knowledge of IP networks, TCP/IP, network architectures. Knowledge equivalent to that provided by the course Video surveillance over IP, deploying a network (ref. VID) desirable.

PARTICIPANTS

Operations and maintenance managers and technicians in charge of IP camera installations and/or maintenance.

PREREQUISITES

Basic knowledge of IP networks, TCP/IP, network architectures. Knowledge equivalent to that provided by the course Video surveillance over IP, deploying a network (ref. VID) desirable.

TRAINER QUALIFICATIONS

The experts leading the training are specialists in the covered subjects. They have been approved by our instructional teams for both their professional knowledge and their teaching ability, for each course they teach. They have at least five to ten years of experience in their field and hold (or have held) decision-making positions in companies.

ASSESSMENT TERMS

The trainer evaluates each participant’s academic progress throughout the training using multiple choice, scenarios, hands-on work and more.
Participants also complete a placement test before and after the course to measure the skills they’ve developed.

Practical details

Hands-on work

Realized on cameras and encoders from several manufacturers and IP network types.

Course schedule

1 Introduction

- Legislation, video surveillance installation requirements, video protection.
- IP video network: components, operation.
- CPU, bandwidth and storage issues.
- Types of IP cameras and encoders.
- Analog and IP camera functions.
- Software for camera configuration.
- IP cameras: strengths and weaknesses.

Demonstration

Connection of several fixed, motorized, varifocal cameras, encoders, NVRs, comparison with analog. Illustration of differences between manufacturers (using videos).

2 Camera selection and configuration

- Sources of information before setting parameters.
- Which camera for which use and which settings?
- Compliance with addressing plan, recording times and capacities.
- Firmware, VMS: factory settings and restoration.
- Network, time and security settings.
- Image settings: exposure, gain, shutter.
- Video stream settings, cropping, bitrates, quality, limits.
- Mask settings, detection zones and events, maintenance.

Hands-on work

Create an addressing and storage plan, connect, detect and make the main IP settings for cameras and IP encoders. Make optical and data rate adjustments.

3 Malfunctions that may occur on initial implementation

- Problem-solving methodology.
- Accessories for work on IP and POE IP networks.
- Networks: physical, transport, network or application, cabling or active elements (power supply, etc.).
- Optical, mechanical and software adjustments, settings, flow rates.
- Linked to servers, video walls and client workstations, recorders.

Hands-on work

Diagnose the possible causes of a breakdown. Replace a camera with an equivalent configuration.

TEACHING AIDS AND TECHNICAL RESOURCES

• The main teaching aids and instructional methods used in the training are audiovisual aids, documentation and course material, hands-on application exercises and corrected exercises for practical training courses, case studies and coverage of real cases for training seminars.
• At the end of each course or seminar, ORSYS provides participants with a course evaluation questionnaire that is analysed by our instructional teams.
• A check-in sheet for each half-day of attendance is provided at the end of the training, along with a course completion certificate if the trainee attended the entire session.

TERMS AND DEADLINES

Registration must be completed 24 hours before the start of the training.

ACCESSIBILITY FOR PEOPLE WITH DISABILITIES

Do you need special accessibility accommodations? Contact Mrs. Fosse, Disability Manager, at psh-accueil@orsys.fr to review your request and its feasibility.

4 Breakdowns during operation

- Sources of information prior to maintenance.
- Monitoring and maintenance technical file.
- Pre-maintenance site audit.
- Detect a drop in system performance.
- Most frequent preventive and corrective operations (cameras, servers, networks, storage).
- MTBF, YFR and spare parts.

Hands-on work

Creation of a site logbook.