

CYBERSECURITY FOR AUTOMATION, CONTROL AND SCADA SYSTEMS (USING THE ANSI/ISA-62443 STANDARDS)

JOHANNESBURG
20 & 21 May 2015

Validation for CPD Points has been
acquired from various Engineering
Institutes in South Africa

A 2-day practical workshop presented by:

**Geoffrey
Chalungumana**



Been to an IDC workshop before?

- Attend this workshop and you'll receive **5% OFF** the registration price!

EARLY BIRD BOOKING OFFER

TOTAL SAVING: R1,468

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engineering knowledge



- Practical Industrial Networking for Engineers and Technicians
- Industrial Network Security for SCADA, Automation, Process Control and PLC Systems
- Practical Troubleshooting and Problem Solving of Industrial Data Communications
- Practical Troubleshooting of TCP/IP Networks

YOU WILL LEARN HOW TO:

- Discuss the principles behind creating an effective long term program security
- Interpret the ANSI/ISA99 industrial security guidelines and apply them to your operation
- Define the basics of risk and vulnerability analysis methodologies
- Describe the principles of security policy development
- Explain the concepts of defence in depth and zone/conduit models of security
- Analyse the current trends in industrial security incidents and methods hackers use to attack a system
- Define the principles behind the key risk mitigation techniques, including anti-virus and patch management, firewalls, and virtual private networks

WHO SHOULD ATTEND:

If you are using any form of communication system this workshop will give you the essential tools in securing and protecting your industrial networks whether they be automation, process control, PLC or SCADA based.

This course is required for the ISA99/IEC 62443 Cybersecurity Fundamentals Specialist Certificate Program.

Anyone who will be designing, installing and commissioning, maintaining, securing and troubleshooting industrial networked sites will benefit including:

- Design engineers
- Electrical engineers
- Engineering managers
- Instrumentation engineers
- Network engineers
- Network system administrators
- Technicians



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Register **NOW**: Email the registration form to us at idc@idc-online.com
For more information contact **011 024 5520/1/2/3/4/5** or visit www.idc-online.com

CYBERSECURITY FOR AUTOMATION, CONTROL, AND SCADA

FREE REFERENCE MANUAL as a hard-copy and eBook

(VALUED AT R560)

Our delegates don't just receive photocopied notes!

You will receive the comprehensive fully illustrated reference manual, as a hard-copy and eBook version, filled with hundreds of pages of tables, charts, figures and handy hints.



ABOUT IDC TECHNOLOGIES

With a portfolio of over 300 workshops specialising in the fields of industrial data communications, electrical and mechanical engineering, automation and control, we have trained over 500,000 engineers, technicians and technologists over the last 20 years.

We have an enthusiastic team of professionals in offices conveniently located around the world, who are committed to providing the highest quality of engineering and technical training.

Visit our **WEB SITE**

www.idc-online.com to download **FREE** software and technical information

ON-SITE TRAINING

All IDC Technologies training workshops are available on an on-site basis, presented at the venue of your choice, saving delegates travel time and expenses, thus providing your company with even greater savings.

SAVE MORE THAN 50% OFF
the per person cost!

CUSTOMISE the training to
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Have the training delivered
WHEN AND WHERE you need it!

For more information or a **FREE** detailed proposal contact **Kevin Baker** via email: training@idc-online.com or call **Thembie Ngwenya** on 011 024 5520/1/2/3

An intensive, practical 2-day workshop presented by **Geoffrey Chalungumana**

Bsc. Electronics and Applied Physics, Msc. Satellite Communication and Microwave



Geoffrey holds a Bsc. degree in Electronics and Applied Physics from the University of Zambia; Msc. degree in Satellite Communication and Microwave Techniques from the Technical University of Graz in Austria; MDP Studies from the University of Pretoria. He is currently doing part time studies for a PHD in Practical Theology and Bible Studies.

In addition to his academic qualifications Geoffrey has done a variety of certificate courses including: Selling Skills; Financial Studies for Engineers; GSM Transmission Techniques; Biomedical courses on life support equipment, Intensive Care Monitors; Project Management; Business Development to name a few.

Geoffrey has a total of 33 years of industrial experience drawn from various engineering and technical industries. These being: TV and Radio Broadcasting; Aviation Telecommunication; Petroleum Industry; Medical and Hospital; Satellite Earth Station Gateway; GSM Transmission; Small Scale Mining; Green Energy Solutions technologies and ICT Consulting.

THE WORKSHOP

The move to using open standards such as Ethernet, TCP/IP, and web technologies in supervisory control and data acquisition (SCADA) and process control networks has begun to expose these systems to the same cyberattacks that have wreaked so much havoc on corporate information systems. This course provides a detailed look at how the ANSI/ISA99 standards can be used to protect your critical control systems. It also explores the procedural and technical differences between the security for traditional IT environments and those solutions appropriate for SCADA or plant floor environments. This workshop will assist managers, system operators and industrial data communications specialists in setting up secure systems.

Topics covered include: introduction and terminology; electronic security; threat sources; understanding the current industrial security environment; how cyberattacks happen; creating a security program; risk analysis; addressing risk with security policy, organization, and awareness; addressing risk with selected security counter measures; addressing risk with implementation measures; monitoring and improving the CSMS.

Pre-requisites

A basic working knowledge of industrial communications and applications is useful.

The fee for each workshop covers all materials including workshop manual, lunches and refreshments

PRACTICAL SESSIONS

This is a practical, hands-on workshop enabling you to work through exercises which reinforce the concepts discussed. Sessions include:

Classroom/Laboratory Exercises:

- **Develop a business case for industrial security**
- **Conduct security threat analysis**
- **Investigate scanning and protocol analysis tools**
- **Apply basic security analysis tools software**

To gain full value from this workshop, please bring your laptop/notebook computer.

SYSTEMS (USING THE ANSI/ISA-62443 STANDARDS)

THE PROGRAM

DAY ONE

REGISTRATION & INTRODUCTION

- Background to workshop
- Overview of basic concepts
- Concepts of physical, operational, and electronic security;
- Defining Cyber Security relating to industrial automation and control systems

TERMINOLOGY, CONCEPTS, MODELS AND METRICS

- Discuss IEC/TS 62443-1-1
- Terminology,
- Concepts and models
- Understanding the Current Industrial Security Environment

SECURITY BASICS

- Networking Basics Part 1
- Networking Basics Part 2
- Industrial Networking
- Network Security Basics
- Network types
- ISO/OSI reference models
- IP addressing
- IT vs. Industrial Control System differences.
- Address security
- Firewalls
- Segmentation
- Encryption
- Secure protocols
- Intrusion detection

DAY TWO

SECURITY MANAGEMENT PROGRAM

- Creating an ICS Security Management Program
- ISA-62443-2-1
- How to create a security program for control systems
- "Cyber Security Management System" (CSMS)
- Elements and requirements:
 - Risk Analysis
 - Addressing the Risk with CSMS
 - Monitoring and Improving the CSMS

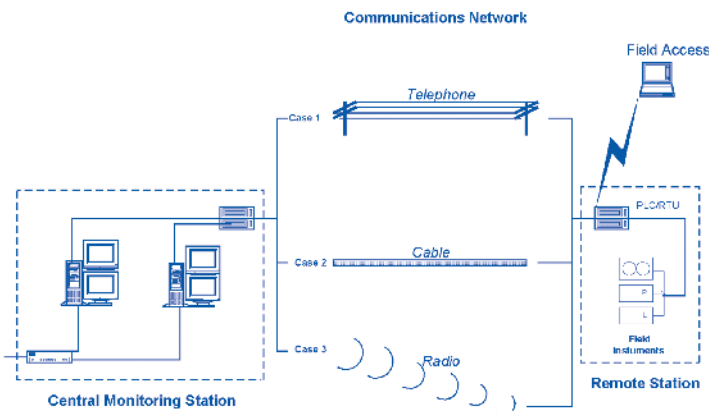
DESIGNING / VALIDATING SECURE SYSTEMS

- Understand how to apply security levels
- Security Lifecycle
- Identify risks and significance
- Study Qualitative/Quantitative risks
- Risk assessments
- Identifying threats
- Security level (SL) definitions

DEVELOPING SECURE PRODUCTS AND SYSTEMS

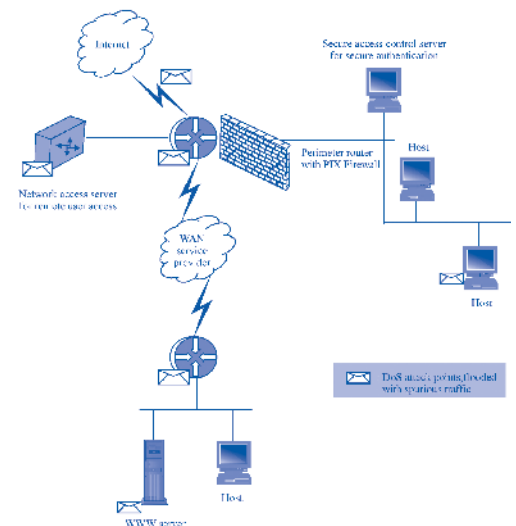
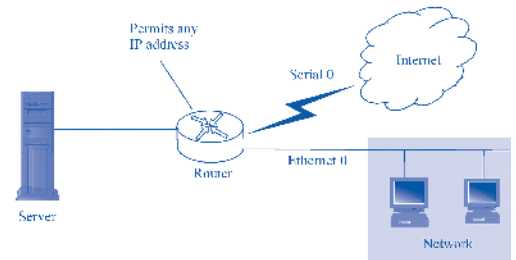
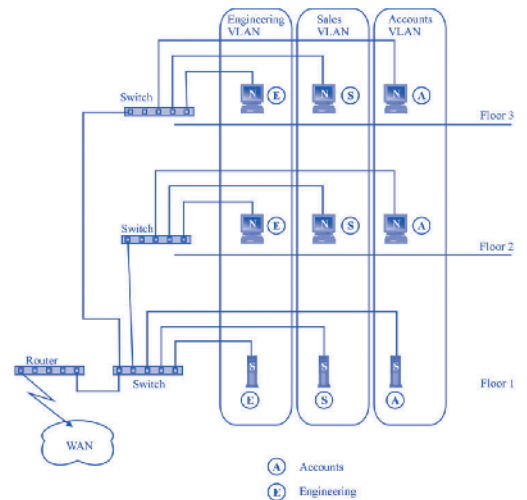
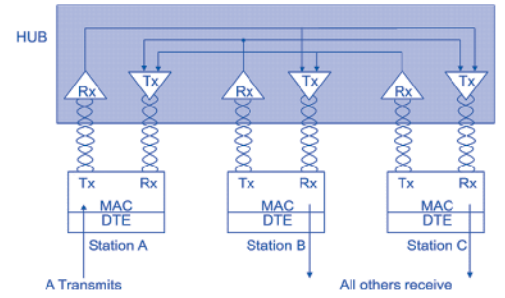
- Software Security Assurance (SSA)
- Control System Security Layers of Responsibility
- Incorporating security
- Integration of security at the various phases of the development lifecycle
- ISA Security Compliance Institute (ICSI)
- ISASecure Certification

SUMMARY, OPEN FORUM AND CLOSING



Includes ISA Standards:

- **ANSI/ISA-62443-1-1 (ANSI/ISA-99.00.01-2007) - Security for Industrial Automation and Control Systems Part 1: Terminology, Concepts & Models (R1469 Value!)**
- **ANSI/ISA-62443-2-1 (ANSI/ISA-99.02.01-2009) - Security for Industrial Automation and Control Systems: Establishing an Industrial Automation and Control Systems Security Program (R2038 Value!)**
- **ANSI/ISA-62443-3-3 - Security for industrial automation and control systems: System security requirements and security levels (R2464 Value!)**



DELEGATE DETAILS

Contact: _____		Company Name: _____	
Company Address: _____			
Suburb: _____	Province: _____	P/Code: _____	
Phone: _____	Fax: _____	Email: _____	
ATTENDEES:	Mr/Ms: _____	Job Title: _____	Email: _____
	Mr/Ms: _____	Job Title: _____	Email: _____
	Mr/Ms: _____	Job Title: _____	Email: _____

Should you have more people interested in attending this workshop, please contact us via email: idc@idc-online.com

WORKSHOP DETAILS

JOHANNESBURG - 20 & 21 May 2015
IDC Technologies, Midrand

**Please register by 29 April
to avoid disappointment**

HOW DID YOU HEAR ABOUT THIS WORKSHOP? (PLEASE TICK)

- Received a brochure in the mail
- Received an email from IDC
- Searched online (Google, Yahoo etc)
- Recommended by a friend/colleague
- Other (please specify) _____

PAYMENT DETAILS

Please Note: Full payment is required prior to the commencement of the workshop.

Workshop Fee R7000 x _____ delegates = R _____

EARLY BIRD BOOKING OFFER: (if booking on or before 22 April 2015)

YES, I qualify and would like to receive my 4 FREE eBooks
PLUS 10% OFF the registration price LESS 10% = R _____

+ VAT = R _____

TOTAL = R _____

I wish to pay by Electronic Bank Transfer

Company Order Number: _____

Please charge my Mastercard Visa Expiry Date: ____/____

Cardholder's Name: _____

Cardholder's Signature _____

On the reverse of your card, above the signature, is a security number. In order to authorise your card transaction, we require the last 3 digits: _____

If the Cardholder's address is not the same as shown above please tick this box:

MORE INFORMATION

I am unable to attend this workshop but please rush me an IDC Technologies workshop directory.

REGISTER NOW:

Fax: (086) 692 4368 or (086) 566 3071

Mail: IDC Technologies
PO Box 389,
Halfway House 1685

Email: idc@idc-online.com

Web Site: www.idc-online.com

ENQUIRIES:
Phone: 011 024 5520/1/2/3/4/5

WORKSHOP DETAILS

- Workshops start at 8:30am and finish at 5:00pm daily.
- Registration is from 8:00am on the first day.
- The workshop fees are per delegate and include a reference manual, handouts, lunches and all refreshments.
- Full payment is required prior to the commencement of the workshop.

EARLY BIRD BOOKING OFFER

Please note that the Early Bird Booking Offer is only available to those registrations received by 22 April 2015 and paid prior to the commencement of the workshop.

CONFIRMATION

Confirmation of receiving your registration will be sent within 48 hours. Official confirmation and details of the workshop will be sent to you prior to the workshop date. Please wait for official confirmation before making accommodation and/or travel arrangements.

CANCELLATION

A fee of 20% will apply for written cancellations received 7-14 days prior to the commencement of the workshop.

Cancellations received less than 7 days prior to the workshop are not refundable, however substitutes are welcome. Full payment will be charged for non-attendance or cancellations that are received in less than 7 days.

PLEASE NOTE

Venues to be confirmed upon registration. Venues are subject to change. Instructors may change without notice. IDC Technologies has no affiliation with suppliers or manufacturers and therefore presents a completely unbiased factual view of the industry.

100% MONEY BACK GUARANTEE

IDC Technologies' engineers have put considerable time and experience into ensuring that you derive the maximum value from each workshop. If you feel by lunch time of the first day

that the workshop is not appropriate, please let us know so that we can arrange a 100% refund of your fee.

CONTINUING PROFESSIONAL DEVELOPMENT (CPD)

Our programmes are designed to meet your continuing professional development requirements. All IDC courses are currently undergoing the CPD accreditation process. Where workshops have already been accredited, you will receive a certificate of attendance documenting the number of CPD hours you have achieved. This serves as important evidence of your continuing professional commitment to your career. Please check with your local office for the accreditation status of the course you wish to attend. As our courses are constantly updated and we are continually developing new workshops, the review process is constant.

www.idc-online.com