Training Courses

catalogue >>
2014 - 2015

Schneider Electric
Using this Catalogue

This catalogue offers more than just an overview of Schneider Electric's scheduled automation training courses and workshops; it also contains valuable information and suggestions on:

- recommended learning paths
- minimum prerequisite knowledge
- objectives of each course
- topics covered
- intended audience
- length of course.

In addition, courses and workshops are grouped into categories and include a training legend to provide a quick visual overview of the essential skills and knowledge targeted for each course; including the type, structure, level and focus of each training course.

**Course Type**

- Indicates a required module of our PlantStruxure™ certification program that provides expertise across the breadth of Schneider Electric solutions.

- Indicates a required module for our SCADA Certification program; recognising those with extensive advanced experience integrating Schneider Electric SCADA solutions.

- Indicates a module based on a mature product that is typically only scheduled 'on demand'.

- LIVE Virtual Classroom allows remote access to the same content and engagement as the classroom.

**Course Structure and Level**

Course structure broken down into percentage practical and theory.

Course complexity or competency level. We recommend that you undertake the necessary prerequisite courses prior to attending.

Course objective and focus. Larger arrows indicate primary focus, while smaller arrows indicate that some time will be spent exploring this aspect during the course.

**Course Focus**

- Course focuses on electrical energy and power concepts.

- Course focuses on topics relevant to the building industry.

**PlantStruxure (SoCollaborative)**

PlantStruxure™ is a collaborative system that allows industrial and infrastructure companies to meet their automation needs and at the same time deliver on growing energy management requirements.

- Safety and system tools
- Networks and communication
- Control
- Software and visualisation

**MachineStruxure (SoMachine)**

MachineStruxure™ is a preferred architectural implementation that has been tested, validated and documented to provide flexibility and optimisation using a single software solution for four hardware control platforms.

- Safety and system tools
- Networks and communication
- Control
- Software and visualisation
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Automation Training Services 5
A Complete Range of Training Services 6

Instructor-Led Training, Workshops, Custom On-Site Training, Online Training, Academic Program, Educational Equipment, Training Partners

Software and Visualisation Courses 12

Networks and Communication Courses 22
Advantys Configurator STB Distributed I/O, Vijeo Citect Architecture and Redundancy, Introduction to Ethernet and TCP/IP, Principles of Industrial Networking, Configuration of Connexium Switches, ConneXium WiFi Switches, Industrial Communication with Unity Pro, Industrial Communication ASi or Legacy

Safety and System Tools Courses 30
Application of Standard Libraries, Introduction to Instrumentation Theory, Practical Aspects of Instrumentation Configuration, Industrial Drive Fundamentals (Altivar), Industrial Drive Communications (Altivar)

PLC and Control Courses 37
Advantys Configurator STB Distributed I/O, Concept Maintenance, Concept Programming, Introduction to Instrumentation and Process Control (HART), PLC7 Pro Programming and Maintenance, SoMachine Configuration, Quantum Ethernet Remote I/O, Unity Pro Programming, Unity Pro Maintenance with Quantum/ Premium/ M340, 984 Ladder Logic - Level 1, 984 Ladder Logic - Level 2, LL984 Editor for Unity for Quantum M580 and M940 PLCs

Telemetry Courses 49
ClearSCADA Configuration, ClearSCADA Create and Configure Crystal Reports, E Series RTU Configuration and Programming, Trio Radio Modem Product Configuration, Understanding DNP3 Protocol

Further Information 55
Certified Education Centres, Course Booking Form, General Terms and Conditions for Training
Schneider Electric and Education

Together, We Build a Future for Young People

Our background in the industrial and commercial sectors and our close collaboration with the educational sector (teachers, students, school boards, school inspectors) shows our willingness to share a global vision of techniques and technologies in the rapidly evolving world of electricity with technical, secondary and higher education.

Our Social Responsibility

We are committed to advancing the successful integration and training of young people. These actions are undertaken in many countries in which Schneider Electric is present and then relayed throughout the world.

Training Solutions

Schneider Electric’s training solutions are continually evolving to ensure that they consistently deliver outstanding results. To make it easier for you, our automation training curriculum is now aligned to the PlantStruxure™ topography, with courses covering software and visualisation, control, networks and communications and safety and system tools.

Terms and Conditions of Training

For our latest training terms and conditions please see our website at: http://www.schneider-electric.com.au/training
Automation Training Services

Today, automation expertise is usually gained over years of experience on the job, with a significant time lag from hire date to useful productivity. However, acquiring the necessary technical skills through training ensures self-sufficiency; with many flow-on benefits, including: reduced downtime, increased safety and productivity and improved bottom line.

Improving and educating our future workforce is everyone’s responsibility. At Schneider Electric we are committed to providing you with comprehensive knowledge of our products through high-quality, interactive education that can immediately be applied in your workplace or institution.

Schneider Electric’s instructor-led courses are designed to empower your engineering and technical workforce with new skills. Automation training courses and programs provide hands-on experience, leaving students feeling confident enough to design and configure their own systems and applications using Schneider Electric products and solutions.

Schneider Electric’s educational methodology has been proven effective through thousands of hours of instruction. Feedback received from customers confirms our success and drives continuous development of our training curriculum. With a team of qualified in-house product trainers in each state, backed up by technical and solution specialists with domain knowledge expertise, Schneider Electric’s educational program delivers the training solutions required in your business.

Our training services include online, standard in-class and customised training sessions. Schneider Electric courses are designed to teach fundamental, theoretical and practical knowledge about our products, systems and the application of technology. There is a strong emphasis on increasing your productivity and helping you better manage your lifecycle costs, enabling you to maintain your competitive advantage.

We offer a broad curriculum that can be tailored to meet your specific requirements. This allows us to adapt training according to your existing projects and create manuals specific to your needs. Whether it’s alignment with your shift requirements, expansion projects or legacy migration strategies, Schneider Electric has the educational services you require.

For more information on Automation Training courses or schedules call 1300 369 233 or visit: www.schneider-electric.com.au/training
A Complete Range of Training Services

Schneider Electric Australia offers a suite of Educational Services designed for end users, engineers, system integrators, equipment manufacturers, panel builders and educational establishments. Our courses and programs provide you with hands-on experience, leaving you feeling confident enough to design and configure your own systems and applications using Schneider Electric products and solutions.

Instructor-Led Training
Schneider Electric’s Educational Services provides multi-level courses for end users, engineers and system integrators. All authorised courses have a limited number of attendees to ensure participating students get the most out of each course and access to an experienced instructor. Each student is allocated a PC, which is pre-configured with relevant applications and other software needed throughout the course.

Custom On-Site Training
Our Schneider Electric Certified Instructors can deliver any of our listed courses on-site at your facility. In addition, we also offer Site Specific Courses where you can include modules relevant to your organisation from any of our existing training courses. For certification purposes, an exam invigilation service can also be provided on-site. You should discuss your requirements with your local Educational Services Manager and see how this might best be accomplished.

Self-Paced Training
The SCADA curriculum of instructor-led courses are also available as Self-Paced Education Kits. This means you can study the material in your own time and at your own pace. These kits include all the materials you would receive if you attended an instructor-led course. The manuals are easy to follow and include exercises throughout to ensure you become familiar with the practical application of SCADA solutions.

Online Training
Our online education modules are designed to provide students with the entry level fundamentals required for our broader industrial automation topics. These free modules act as both a primer for further Instructor-Led In-Class Training Courses, as well as developing knowledge and expertise for anyone involved in the life cycle support of Schneider Electric’s automation and control equipment.

Workshops
We also offer a number of specialised workshops delivered by our technical and solution specialists. These workshops can be delivered at one of our local offices or on-site. Due to the specialist nature of these workshops they are available on request.

LIVE Virtual Classrooms
Schneider Electric is the first to have LIVE Instructor-Led Virtual Classrooms that can be taken remotely with the same content and engagement as in the classroom. LIVE Virtual Classrooms are a convenient option, particularly if you are situated remotely, saving you travel time and expenses. For selected courses marked as “Virtual Classroom capable” you now have that choice. Feel free to ask us for a test drive of our LIVE Virtual Classroom to see if it is right for you.
Educational Equipment
To support our Academic Program, we offer a complete catalogue of Schneider Electric Educational Equipment. For more information or to obtain a copy of the Educational Equipment catalogue, contact your local office, on 1300 369 233 or visit www.schneider-electric.com.au/training.

Training Partners
Delivering on our promise to make energy safe, reliable, efficient, productive and green, Schneider Electric leverage training partners to provide your staff with experiential workshops that support our automation training curriculum. Training partners include the following:

- Edith Cowan University
- Pilbara Institute
- RMIT
- Security Infrastructure Solutions
- SkillsTech Australia
- SolidQ
- University of Sydney School of Chemical and Biomolecular Engineering.

Advanced Tutoring Sessions
Do you need some custom training for a specific project or application? Then how about buying a block of Advanced Tutoring Sessions. Now, thanks to our LIVE Virtual Classrooms, we can provide remote live tutoring that you can use to ask any question you like and have an actual technical presentation and practical session on exactly how to implement the solution. Our trainers will tailor the session to your exact needs and provide you with the chance to configure the solution.

Academic Program
The Academic Program is designed to enable universities, technical colleges and tertiary training centres the ability to get the most out of their software investment. This is achieved by providing students and faculties with access to the industrial automation software and courseware for a nominal fee. This program provides support for the registered faculty, which is a 12 hours a day, five days a week technical support service. Significant benefits for the institution, the instructor and the student make this program exceptional value.

Master Classes
Using our new LIVE Virtual Classrooms Schneider Electric is now happy to offer Master Classes, which are half day topics on specialised areas of our software, products and solution offerings. These classes are the perfect way to educate and motivate even your most advanced staff, allowing them to keep up-to-date with the latest Schneider Electric has to offer.
Certified Training Programs

It can be difficult to compare the skills of one person to another, particularly when hiring new staff. While university degrees indicate what an applicant is capable of, it does not measure an applicant’s skills with regards to designing and implementing industrial applications.

Schneider Electric’s certification programs address this issue. Much like any educational environment, participants in our certification programs will attend classes, study, sit exams and progressively earn recognition in key components of industrial automation.

We currently offer two types of certification:

- **SCADA Certification**
  Provides a structured framework ensuring engineers have extensive experience integrating Schneider Electric SCADA solutions using Vijeo Citect.

- **PlantStruxure™ Certification**
  Certifies technical experts in a wide range of subjects covering the breadth of our evolving PlantStruxure offer, including networking and architecture, PLC and SCADA platforms.

SCADA Certification Program

The SCADA certification program distinguishes and recognises engineers who have demonstrated advanced expertise in the integration of Schneider Electric’s Vijeo Citect SCADA software solutions.

In order to be certified as a Vijeo Citect Certified Engineer (VCCE) candidates must pass the following four exams:

- **Module 1: Configuration**
- **Module 2: Cicode**
- **Module 3: Architecture and Redundancy**
- **Module 4: Customisation and Design**

The SCADA certification program is open to all customers, end users and partners.
PlantStruxure Certification Program

The PlantStruxure Certified Engineer Program distinguishes and recognises engineers skilled in the integration of Schneider Electric PlantStruxure architectures. With this certification, Schneider Electric acknowledges that the certified engineer has mastered the PlantStruxure offer. The engineer should therefore be capable of implementing a powerful solution or application to meet the most demanding requirements.

### Certified Alliance Partner

<table>
<thead>
<tr>
<th>PlantStruxure</th>
<th>Telemetry</th>
<th>SCADA</th>
<th>PES</th>
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<tbody>
<tr>
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<td><img src="logo.png" alt="Schneider Electric" /></td>
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<td><strong>Core Components</strong></td>
<td><strong>Optional Electives</strong></td>
<td><strong>Core Components</strong></td>
<td><strong>Optional Electives</strong></td>
</tr>
<tr>
<td>Vijeo Citect Configuration SAUTR1201</td>
<td>ClearSCADA Configuration SAUTR1216</td>
<td>Vijeo Citect Configuration SAUTR1201</td>
<td>PES Config. PSXWARE*</td>
</tr>
<tr>
<td>Introduction to Ethernet and TCP/IP SAUTR1111</td>
<td>E Series RTU Config. Prog. SAUTR1016</td>
<td>Cicode Programming SAUTR1203</td>
<td>PES Library PSXWARELIB*</td>
</tr>
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<td>Principles of Ethernet Networking SAUTR1112</td>
<td>Trio Radio Modem Product Config SAUTR1116</td>
<td>Vijeo Citect Architecture and Redundancy SAUTR1109</td>
<td>Ethernet Remote IO SAUTR1015*</td>
</tr>
<tr>
<td>Unity Pro Programming SAUTR1003</td>
<td>Understanding DNP3 Protocol SAUTR1115</td>
<td>Vijeo Citect Customisation and Design SAUTR1214</td>
<td></td>
</tr>
<tr>
<td>Industrial Communication with Unity Pro incl. Ethernet SAUTR1102</td>
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</tbody>
</table>

*On demand courses
For more information see our training catalogue:

### External Electives

The certification programme has been enhanced for 2014, to include an elective component. This gives candidates an opportunity to demonstrate competence in a chosen area of specialisation.

### Safety

Professionals working in high risk industries are progressively being required to demonstrate competence when developing, implementing and maintaining safety related systems.

To register go to:
www.iom.invensys.com/AP/Pages/FunctionalSafety-TUV.aspx

### Cyber security

Global Information Assurance Certification (GIAC) was founded in 1999 to validate the skills of information security professionals.

To register go to:
www.giac.org/certifications/get-certified/registration
CCNA
Cisco Certified Network Associate (CCNA) Routing and Switching is a certification programme for entry-level network engineers that helps maximise your investment in foundational networking knowledge and increase the value of your employer’s network.
To register go to:
www.cisco.com/web/learning/certifications/associate/ccna/index.html

Hirschmann Industrial Ethernet CT1, CT2 and CT3
The Hirschmann brand represents experience and expertise in automation technology since pioneering the development of Ethernet as a common standard for industry networks.
To register go to:

How do I get certified?
From 2014, there are two components to the certification:

1. Core examinations on Vijeo Citect, Unity Pro/PAC and Industrial Communications.
2. An elective component chosen from Telemetry, Advanced SCADA, PES, Process Safety, Cyber Security or Networking (Cisco CCNA or Hirschmann).

Core examinations
1. Vijeo Citect (currently based on version 7.30, to be upgraded accordingly).
2. Unity Pro and the Schneider Electric PAC product range (currently based on Unity V7, to be upgraded accordingly).
3. Industrial Communications (familiarity with Industrial Ethernet and Fieldbus Communications).

What if I have previously been certified?
Pre 2014 certifications are valid for a period of two years. Candidates whose certification has expired will be required to:
1. Pass an upgrade examination. This examination contains a selection of questions on all three core subjects (Vijeo Citect, Unity Pro/PAC and Industrial Communications). This will result in provisional certification.
2. Provide evidence of certification in one of the electives listed above, within six months of passing the upgrade examination.

How long will my certification be valid for?
From 2014, certifications will be valid for three years from the examination pass date. Beyond 2014, a credits system will be used. When a certification expires, candidates will have to provide evidence of 300 credit points, which can be earned as follows:

<table>
<thead>
<tr>
<th>Activity</th>
<th>Credits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Passing an upgrade examination</td>
<td>200</td>
</tr>
<tr>
<td>White Paper with focus on elective specialisation</td>
<td>100</td>
</tr>
<tr>
<td>White Paper on core topics</td>
<td>50</td>
</tr>
<tr>
<td>PlantStruxure project case study with focus on elective specialisation</td>
<td>100</td>
</tr>
<tr>
<td>PlantStruxure project case study on core topics</td>
<td>50</td>
</tr>
<tr>
<td>Attendance on Schneider Electric training course</td>
<td>50</td>
</tr>
<tr>
<td>Wiki or Knowledge Base article</td>
<td>50</td>
</tr>
</tbody>
</table>
What training is available to help me prepare?

Schneider Electric offers a wide range of training courses on SCADA, PAC, Networking and other relevant topics. Recommended courses to prepare for the three core components are:

<table>
<thead>
<tr>
<th>Core component</th>
<th>Recommended training course</th>
<th># days</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vijeo Citect</td>
<td>SAUTR 1201 Vijeo Citect Configuration</td>
<td>3</td>
</tr>
<tr>
<td>Unity Pro/PAC</td>
<td>SAUTR 1003 Unity Pro Programming (incl. hardware)</td>
<td>4</td>
</tr>
<tr>
<td>Networking</td>
<td>SAUTR 1112 Principles of Industrial Networking</td>
<td>2</td>
</tr>
<tr>
<td></td>
<td>SAUTR 1102 Industrial Communications with Unity Pro</td>
<td>3</td>
</tr>
</tbody>
</table>

TeXpert Technical Boot Camps

TeXpert is a four-day technical boot camp event, hosted by senior experts from our PlantStruxure Competency Centre team. By offering selected PlantStruxure Certified System Integrators the opportunity to get up close and personal with the PlantStruxure offer we aim to:

- share valuable insights, best practice information and advanced architecture features
- foster important collaboration and networking opportunities.

Our comprehensive agenda has been developed to promote a hands-on and interactive environment, and is structured to allow the freedom to access the information that is most relevant and valuable. Popular topics such as Cyber Security, PlantStruxure PES, Telemetry and Remote SCADA solutions and PlantStruxure libraries are just a few of the areas covered at TeXpert.

The events are limited to a maximum of 10 participants due to the hands-on nature of the sessions, so registration is by invite only and based on “first in, first served”.

![TeXpert Logo](image)
Software and Visualisation Courses
Course Description
The Ampla Performance training program introduces new Ampla users to the basic concepts and methods involved in configuring and using Ampla Studio and Production Analyst to model performance.

Delivery Method (options)
- Two-day instructor-led course, with lunch provided.
- Two-day on-site.
- Two-day LIVE Virtual Classroom.

Audience
- Engineers and system integrators who will be responsible for the design, implementation and maintenance of an Ampla system, as a starting point in their training journey.
- Plant managers, IT managers and operators who will need to get an understanding of Ampla and to maintain an existing Ampla project.

Precursors
- It is essential that students are familiar with Microsoft® Windows operating systems.
- Engineers and system Integrators who will be responsible for the design, implementation and maintenance of an Ampla system, as a starting point in their training journey.
- Plant managers, IT managers and operators who will need to get an understanding of Ampla and to maintain an existing Ampla project.

Ampla Performance Course Outline

Day 1 of 2
The first day introduces participants to the framework of Ampla and covers the following topics:
- Overview of Overall Equipment Effectiveness (OEE) and Energy Efficiency
- Overview of Ampla
- Product Architecture and Building Core Components
- Managing Projects
- Creating a Plant Hierarchy
- Configuring Security
- Configuring Ampla Production
- Production Analyst Client.

Day 2 of 2
On Day Two, participants configure a performance solution for the case study introduced on day one. This entails the following topics:
- Configuring Ampla Downtime
- Configuring Ampla Energy
- Configuring Ampla Metrics
- Production Analyst Client.

Part number: SAUTR1208

Easy ways to register
Web: www.schneider-electric.com.au/training
Email: training.courses@au.schneider-electric.com
Cicode Programming
Two-Day Instructor-Led Course

Course Description
Get insight into the major features of the Cicode language and learn how to apply, formulate and troubleshoot Cicode programming solutions with this totally redesigned course. This hands-on, interactive course is aimed at users with no previous programming experience, and is also useful for experienced users who wish to become familiar with Cicode.

Delivery Method (options)
▪ Two-day instructor-led course, with lunch provided.
▪ Two-day on-site.
▪ Two-day LIVE Virtual Classroom.

Audience
▪ Programmers and non-programmers who want to become familiar with the Cicode language.
▪ Vijeo Citect system integrators and designers.
▪ Technical users who develop and maintain their installed CitectSCADA or Vijeo Citect and control systems.

Precursors
▪ Students must be familiar with Microsoft® Windows operating systems.
▪ It is also recommended that students attend the Vijeo Citect Configuration (SAUTR1201) course prior to attending this course, or have a good working knowledge of Vijeo Citect.
▪ A general understanding of PLC communication is recommended.

Cicode Programming Course Outline

Day 1 of 2
Day one provides an introduction to Cicode and demonstrates how Cicode may be used:
▪ Applying Prototyping Techniques to Model Programming
▪ The Cicode Editor
▪ Formulating Cicode Programming Solutions
▪ Structured Programming Techniques
▪ Error Handling and Debugging.

Day 2 of 2
Day two introduces further Cicode programming techniques. Students will get into a variety of problems and will practice what they learned in day one by implementing programmatic solutions based on broad task descriptions.
Vijeo Citect Configuration
Three-Day Instructor-Led Course

Course Description
Gain insight into Vijeo Citect project design and become familiar with configuration techniques. This interactive course includes practice with plant control, alarms, trending and reporting.

Delivery Method (options)
- Three-day instructor-led course, with lunch provided.
- Three-day on-site.
- Three-day LIVE Virtual Classroom.
- Self Paced Training Kit.

Audience
- Those who want to become familiar with Vijeo Citect project development techniques.
- Vijeo Citect users, including engineering staff, maintenance staff and plant supervisors.
- Technical users who maintain and improve their installed Vijeo Citect and control systems.
- Managers who want more than a basic understanding of Vijeo Citect.
- Vijeo Citect system integrators and designers.

Precursors
- It is essential that students are familiar with Microsoft® Windows operating systems.
- Experience in PLC control system design and/or programming is desirable.

Vijeo Citect Configuration Course Outline
Day 1 of 3
Day one involves introduction to the various components of Vijeo Citect, project design, communications and graphics:
- Citect Configuration Environment
- Managing Projects
- Setting up Communications
- Equipment Hierarchy
- Graphics.

Day 2 of 3
Day two implements various areas of the Vijeo Citect project design, including controls and alarms:
- Operator Input
- Genies and Pop-Up Pages
- Devices
- Events
- Alarms.

Day 3 of 3
Day three continues with the project design elements of Vijeo Citect and introduces methods of reporting and monitoring the system:
- Trends via the Process Analyst
- Page Management
- Reports
- Time Scheduler
- Security.

Part number: SAUTR1201

Easy ways to register
Web: www.schneider-electric.com.au/training
Email: training.courses@au.schneider-electric.com
Vijeo Citect Customisation and Design

Two-Day Instructor-Led Course

Course Description
This interactive course will give you insight into the principles behind customising Vijeo Citect using custom templates, genies and pop-up pages. Expand your knowledge of Vijeo Citect by looking at the new library controls and equipment features. Use ADO.NET functions to efficiently communicate with external databases. You will learn about exchanging data between Vijeo Citect and other applications such as ActiveX® and SQL.

Delivery Method (options)
- Two-day instructor-led course, with lunch provided.
- Two-day on-site.
- Two-day LIVE Virtual Classroom.
- Self Paced Training Kit.

Audience
- Advanced programmers.
- Vijeo Citect system integrators and designers.
- Engineers who will be responsible for the design and maintenance of a Vijeo Citect system.

Precursors
- Students must be familiar with Microsoft® Windows operating systems.
- Students should also have attended the Vijeo Citect Configuration course and either a Cicode Programming or Vijeo Citect Architecture and Redundancy course or have at least six months experience in Vijeo Citect design and programming.

Vijeo Citect Customisation and Design Course Outline

Day 1 of 2
Day one focuses on the details of creating customised pages in your Vijeo Citect project:
- Introduction to Customisation and Design
- Custom Templates
- Smart Genies.

Day 2 of 2
Day two extends the material from day one to improve the operation and management of graphics pages and incorporates some of the most commonly used advanced features including connecting to other applications:
- Smart Pop-Up Pages and Super Genies
- Cicode Forms
- The SQL Interface
- ActiveX Integration
- Course Summary.

Part number: SAUTR1214

Easy ways to register
Web: www.schneider-electric.com.au/training
Email: training.courses@au.schneider-electric.com
Vijeo Citect Upgrade
One-Day Instructor-Led Course (On Demand)

Course Description
Receive an update on Vijeo Citect project design and configuration techniques, including how to implement an upgrade and view the latest product features.

Delivery Method (options)
- One-day (on demand) instructor-led course, with lunch provided.
- One-day on-site.
- One-day LIVE Virtual Classroom.
- Self Paced Training Kit.

Audience
- Those who need to know about new product features in the latest version of Vijeo Citect.
- Vijeo Citect system integrators and designers.
- Technical users of existing Vijeo Citect systems.

Precursors
- Students must be familiar with Microsoft® Windows operating systems.
- At least two years experience in Vijeo Citect design is required.
- This course is primarily intended for persons with strong experience in V6.x.

Vijeo Citect Upgrade Course Outline
This course initially looks at how to install the latest versions of Vijeo Citect and considers any issues with upgrading projects. Most of the time is then spent investigating the features of the new version and how to make best use of them:

- How to Prepare for an Upgrade
- System Requirements
- How to Upgrade the Projects
- Installing Multiple Versions of Vijeo Citect
- Templates
- Graphics Enhancements
- Distributed Processing.

- Tag Extensions
- Server-Side Online Changes
- Equipment and Scheduling
- OPC DA Server
- The SQL Interface
- System Security.

Part number: SAUTR1213

Easy ways to register
Web: www.schneider-electric.com.au/training
Email: training.courses@au.schneider-electric.com
MDT AutoSave Administrator Training

Two-Day On Demand Workshop

Course Description
The AutoSave application is a change management system which automates processes and procedures for real time modifications of both hardware device such as Programmable Process Controllers (PLCs) and software applications such as Vijeo Citect. The MDT AutoSave Administration workshop provides students with practical experience when implementing the AutoSave tool; including installation, configuration and application.

Delivery Method (options)
- Two-day workshop, with lunch provided.
- Two-day on-site.

Audience
- This program is aimed at both system administrators and engineers responsible for the life cycle support and management of AutoSave implementation.

Precursors
- Essential that attendee have a sound working knowledge of Microsoft® XP and Windows 7 operating systems.
- It is also desirable to have familiar knowledge of Microsoft® Windows server environments (Windows 2003 or Windows 2008) and PLCs.

MDT AutoSave Administrator Training Course Outline

Day 1 of 2
Day one covers general configuration and installation procedures; including:

- Overview of MDTAutoSave Architecture:
  - SQL Server, File Systems
- Licensing of MDTAutoSave Structure and Acquisition
- Installation of MDTAutoSave Components:
  - Server, Client, Broker, Modules
- Applying the MDTAutoSave License:
  - Creation of an Admin User
- How MDTAutoSave Manages Software
- Code, Files, Documents
- Configuration of a System to Manage a CitectSCADA Project
- Editing, Versioning, Deployment, Rollback, Comparisons, Reports.

Day 2 of 2
Day two extends the topics covered in day one to include:

- Configuration of a System to Manage Files Using the Universal Module
- Editing, Versioning, Deployment, Rollback, Comparisons, Reports
- Configuration of a System to Manage PLC Code Using Unity Pro to Edit the Project
- Installation of Unity Diff to Perform Comparisons
- Editing, Versioning, Deployment (to Unity Pro and directly to PLC), i Rollback, Comparisons (Html and Unity Diff style), Reports
- Application of Security by Means of MDTAutoSave Users and User Groups.
Vijeo Designer Software (HMI)
An introduction to Human Machine Interface

One-Day Instructor-Led Course

Course Description
This course will provide an overview of the Vijeo Designer software and introduce the various components and operations available to you. We will discuss installation, configuration and implementation of HMI process alarms and data logging.

Participants are required to bring their own laptop to the training. A trial version of the Vijeo Designer software will be provided.

Delivery Method (options)
▪ One-day instructor-led course, with lunch provided.
▪ One-day on-site.

Audience
▪ This course is intended for trades personnel, technicians and engineers who require a working knowledge of the Vijeo Designer programming environment, HMI range and connectivity.

Precursors
▪ General understanding of Programmable Logic Controller (PLC) terminology and good PC knowledge are desirable but not necessary.

Vijeo Designer Software: Introduction to HMI Course Outline
Whether machine manufacturer, operator or user, Vijeo Designer makes things easy for you at all stages of your HMI application life cycles. Learn how to build a complete project:
▪ HMI and PLC Connectivity
▪ Vijeo Designer Application Development
▪ Install, Run and Navigate Vijeo Designer Component
▪ Offline Testing using the Simulator
▪ Managing HMI Remotely
▪ Trending and Logging Data
▪ Understand Hardware Capability
▪ Build an application starting with basic and simple features; progressing to more advanced levels
▪ Set Up, Connect and Download the project using Ethernet or USB cable
▪ Set up Basic Trending and Data Logging.

Part number: SAUTR1401

Easy ways to register
Web: www.schneider-electric.com.au/training
Email: training.courses@au.schneider-electric.com
**Vijeo Designer Software (HMI)**

**Advanced Human Machine Interface**

**One-Day On Demand Workshop**

**Course Description**
This progressive course will further develop your understanding of the Vijeo Designer software and introduce the various components and operations available to you. We will discuss advanced topics including scripting, data logging and resources. Participants are required to bring their own laptop to the training.

A trial version of Vijeo Designer software will be provided.

**Delivery Method (options)**
- One-day workshop, with lunch provided.
- One-day on-site.

**Audience**
- This course is intended for engineers and technicians who require an in-depth knowledge of the Vijeo Designer programming environment, particularly in the areas of advanced functions (such as scripting, data logging and resources).

**Precursors**
- Vijeo Designer Software (HMI): Introduction to Human Machine Interface course (SAUTR1401).
- A good understanding of PLC terminology and PC knowledge.

**Vijeo Designer Software: Advanced (HMI) Course Outline**
Whether machine manufacturer, operator or user, Vijeo Designer makes things easy for you at all stages of your HMI application life cycles. Learn the concepts and implementation of:

- Scripting
- Advanced Communications
- Exporting and Importing Data for Reuse
- Using Resources
- Advanced Security
- Trending and Data Logging
- Generation of Data with Office Tools
- Intelligent Data Service Data Gathering
- Vijeo Design Air Demo for Smartphone or Tablet Access to HMI applications.

**Part number:** SAUTR1405

**Easy ways to register**
Web: www.schneider-electric.com.au/training
Email: training.courses@au.schneider-electric.com
Web Designer and ETG3000 Gateway Services

One-Day On Demand Workshop

Course Description
Configuration, web and HMI functions and services using Web Designer, this software tool enables you to configure web pages and web services embedded within the FactoryCast HMI and Gateway modules.

Delivery Method (options)
▪ One-day workshop, with lunch provided.
▪ One-day on-site.

Audience
▪ This workshop is designed for maintenance and design engineers and OEMs, setting up remote access to PLC and end devices, using embedded web services.

Precursors
▪ General knowledge of PLC and web terminologies.
▪ Knowledge of Schneider Electric industrial automation protocols and Ethernet services.

Web Designer and ETG3000 Gateway Services Course Outline
This course is designed to assist students in becoming proficient with Web Designer. Topics include:
▪ Discuss the Features of the ETG3xxx Product Line
▪ Overview of Different Possible Architectures Available Using ETG3xxx Products
▪ Transparent Gateway, Remote Programming/Setup for Maintenance of Devices Application
▪ Embedded Web Server Remote Diagnostics, Monitoring and Control of Ethernet and Serial Devices
▪ Data Acquisition and Data Processing Using ETG3xxx
▪ Graphic Monitoring and User Web Pages Using ETG3xxx
▪ Local Data Logging and Remote Database Connectivity
▪ Calculation Using Arithmetic and Logic Scripting
▪ Unity Application Browser via HMI FactoryCast Module
▪ Alarming and reporting via Email.

Part number: SAUTR1402

Easy ways to register
Web: www.schneider-electric.com.au/training
Email: training.courses@au.schneider-electric.com
Networks and Communication Courses
Advantys Configurator STB Distributed I/O

One-day Optional Add-on Workshop

Course Description
The objective of this course is to gain knowledge of, and become expert with, Advantys STB Distributed I/O and learn the technical features and possibilities of an Advantys STB solution.

This course may be combined with Industrial Communication (SAUTR1102) to create a four-day workshop.

Delivery Method (options)
One-day optional add-on workshop to the Unity Pro Programming course (SAUTR1003), with lunch provided, one-day on-site.

Audience
- Product application engineers and technical service engineers maintaining Advantys on site.
- Technical support engineer level 1 in automation field supporting Advantys STB and PLC.

Precursors
- Good knowledge of the Advantys STB offer.
- Good knowledge of configuring I/O scanning on a Schneider Electric PLC with Ethernet TCP/IP.

Advantys STB Distributed I/O Course Outline
This course is designed to assist students in becoming proficient with Advantys STB Distributed I/O. Topics covered include:

- STB As A Complete Product Integration Solution
- Discover the Entire Range of the Different Modules and Extensions
- Configuration and Debugging a Complete Island on Ethernet TCP/IP Network
- Importing and Exporting Variables from Advantys to Unity Pro
- Connecting TeSys U in Advantys Island
- Assembly Rules and Restrictions
- CANopen Extension and Enhanced Products
- Run-time Parameters and PKW
- Diagnostics and Feedback
- Reflex actions.

Easy ways to register
Web: www.schneider-electric.com.au/training
Email: training.courses@au.schneider-electric.com
Vijeo Citect Architecture and Redundancy

Two-Day Instructor-Led Course

Course Description
Gain advanced networking skills and knowledge. Discover the new OPC DA Server and alarm server redundancy features. Learn more about online changes, advanced security concepts and connecting to Vijeo Citect remotely through the Web Client.

Delivery Method (options)
▪ Two-day instructor-led course, with lunch provided.
▪ Two-day on-site.

Audience
▪ Network administrators who need to understand how Vijeo Citect is configured on their network.
▪ Vijeo Citect system integrators and designers.
▪ Technical users who maintain and improve their installed Vijeo Citect and control systems.

Precursors
▪ Students must be familiar with Microsoft® Windows operating systems.
▪ It is also recommended that students have attended a Vijeo Citect Configuration (SAUTR1201) course or have at least six months experience in Vijeo Citect design.
▪ Introduction to Ethernet and TCP/IP (or equivalent knowledge).

Vijeo Citect Architecture and Redundancy Course Outline

Day 1 of 2
Day one focuses on the details of networking in Vijeo Citect and the implementation of a fully networked and redundant system:
▪ Introduction to Architecture and Redundancy
▪ Vijeo Citect Architecture
▪ OPC DA Server
▪ Online Changes
▪ Clustered Control System.

Day 2 of 2
Day two incorporates some of the most commonly used advanced features of Vijeo Citect, including remote communications:
▪ Vijeo Citect Redundancy
▪ Web Client
▪ System Security.

Part number: SAUTR1109

Easy ways to register
Web: www.schneider-electric.com.au/training
Email: training.courses@au.schneider-electric.com
Introduction to Ethernet and TCP/IP
One-Day Add-On Instructor-Led Course

Course Description
This course will introduce participants to the fundamentals of Industrial Ethernet Networks. At the end of this course participants will have a sound understanding of Ethernet and how it is deployed in an Industrial Network.

This course has been designed as the prerequisite for all other Ethernet based training courses we provide.

Delivery Method (options)
- One-day instructor-led course, with lunch provided.
- One-day on-site.
- One-day LIVE Virtual Classroom.

Audience
- This course is aimed at engineering and technical staff involved in supporting modern Ethernet based industrial control systems.
- Anyone wanting to understand the basic principals of Industrial Ethernet Networks.

Precursors
- No previous knowledge of the subject is required.
- Students must be familiar with Microsoft® Windows Operating Systems.

Introduction to Ethernet and TCP/IP Course Outline

Day 1 of 1
Day one introduces the fundamentals of Industrial Ethernet Networks including:

- History and Standards
- Physical Installation
- Layer 2 - Data Link Layer
- Network Equipment
- TCP/IP
- Introductory Network Diagnostics
- Introductory Network Troubleshooting
- Introductory Network Mapping
- Introductory Network Packet Capture Techniques.

Part number: SAUTR1111

Easy ways to register
Web: www.schneider-electric.com.au/training
Email: training.courses@au.schneider-electric.com
Principles of Ethernet Networking
Two-Day Instructor-Led Course

Course Description
This course builds on the fundamentals and principles presented in the introduction to Ethernet and TCP/IP training course. This course has been designed to expand the participants knowledge on network design principles, protocols, routing and security. The emphasis is on deploying these principles in an Industrial Ethernet Network.

Delivery Method (options)
- Two-day instructor-led course, with lunch provided.
- Two-day on-site.

Audience
- This course is aimed at engineering and technical staff involved in supporting modern Ethernet-based industrial control systems.

Precursors
- Students must be familiar with Industrial Ethernet Networks. Previous completion of the Ethernet (SAUTR1111) course is highly recommended.
- Students must be familiar with Microsoft® Windows Operating Systems.

Principles of Ethernet Networking Course Outline

Day 1 of 2
Day one focuses on the various infrastructure applications including:
- Industrial Protocols
- TCP/IP Routing
- Network Availability
- Layer 2 Traffic Control.

Day 2 of 2
Day two explores various deployment options including:
- Network Management
- Network Security
- Network Management Tools.

Part number: SAUTR1112

Easy ways to register
Web: www.schneider-electric.com.au/training
Email: training.courses@au.schneider-electric.com
Configuration of Connexium Switches
Two-Day Instructor-Led Course

Course Description
Participants will receive in-depth knowledge on the Connexium Managed Switches, including installation, commissioning and supervision. This training course is both theoretical and practical. The necessary knowledge about functions and deployment possibilities of the switches is taught in individual theory blocks. Each block is followed by practical exercises designed to familiarise participants with the devices through first hand experience.

Delivery Method (options)
- Two-day instructor-led course, with lunch provided.
- Two-day on-site.

Audience
- This course is aimed at engineering and technical staff involved in supporting modern Ethernet based industrial control systems.

Precursors
- Students must be familiar with Industrial Ethernet Networks.
- Previous completion of the CT1 – Ethernet Basics (SAUTR1111) and CT2 – Industrial Networking (SAUTR1112) courses is highly recommended.
- Students must be familiar with Microsoft® Windows Operating Systems.

Configuration of Connexium Switches Course Outline

Day 1 of 2
Day one introduces the Connexium product, including:
- Overview of Connexium Managed Switch Products
- Device Properties e.g. Form Factor, Temperature Ranges, Certifications
- Firmware and Configuration Management
- Switching:
  - Port Configuration
  - Multicast Control
  - VLANs.

Day 2 of 2
Day two introduces further advanced topics including:
- Redundancy:
  - HIPER Ring, Rapid Spanning Tree, DRS Dual Ring RSTP
- Diagnostics:
  - Port Mirroring, Device Status, Event Log
- Security:
  - Port Security, Authentication.
- Advanced:
  - DHCP Relay, Command Line Interface.

Part number: SAUTR1113

Easy ways to register
Web: www.schneider-electric.com.au/training
Email: training.courses@au.schneider-electric.com
Industrial Communication incl. Ethernet (with Unity Pro)  
(Modbus, CANopen, Modbus TCP, EtherNet/IP, Profibus PRM)

Four-Day Instructor-Led Course (On Demand)

Course Description
The objective of this course is to provide students with an understanding of the key communication fieldbuses and networks in the industrial market, including Modbus, CANopen, Ethernet Modbus TCP, EtherNet/IP, and Profibus using the Profibus Remote Master (PRM) Module.

The Advantys STB Distributed I/O System will also be covered.

Delivery Method (options)
• Four-day on-demand workshop, with lunch provided
• Four-day on-site.

Audience
• This course is optimised to suit project, design, commissioning or maintenance engineers; or anyone who needs to implement industrial communication networks.

Precursors
• General knowledge of industrial communication principles.
• Fluent knowledge to configure a PLC using Unity Pro.
• Prerequisite of Unity Pro course.

Industrial Communication Course Outline

Day 1 of 4
Day 1 of 4 introduces principles of industrial communications including:

• What is Communication?
• Industrial Communication
• The OSI Model
• Topologies
• Modbus
• Programming Communication with PLCs
• BMXNOM0200 configuration.

Day 2 of 4
Day 2 of 4 extends the material from day one to include:

• Basic Ethernet Principles
• Networking with Windows
• Protocols
• Ethernet Modbus TCP Configuration with Unity Pro
• I/O Scanning with Unity Pro
• CANopen Configuration with Unity Pro.

Day 3 of 4
Day 3 of 4 continues to extend the concepts covered in the previous days by including:

• Profibus
• Hardware set-up
• PRM Software
• Unity Pro DTM Configuration
• Fieldbus Discovery
• Device Profibus Parameters
• Online Diagnostics
• DP-V1 Acyclic Requests
• EtherNet/ IP Configuration with Unity Pro and BMXNOC0401.

Day 4 of 4
Day four consists of practical workshops that apply the knowledge gained in days 1 to 3, including the configuration of Advantys Distributed I/O and of Ethernet I/Os on Schneider Electric PLCs.

Part number: SAUTR1102

Easy ways to register
Web: www.schneider-electric.com.au/training
Email: training.courses@au.schneider-electric.com
Industrial Communication
ASi or Legacy

One-Day Optional Add-On Workshop

Course Description
The objective of this course is to design, troubleshoot and commission a system using the technical features of one of the following networks:

- Actuator Sensor interface (ASi)
- Modbus Plus (MB+)
- FIP.

The course involves a lot of hands-on experience with equipment to gain an intellectual and practical based knowledge of the system. This course is ideal for engineers involved in migrations from some of the legacy networks like FIP and MB+, as well as existing installations which have machine based networks in them.

Delivery Method (options)
One-day optional add-on workshop to the Industrial Communication (Modbus, CANopen, Proﬁbus, EthernetIP) course (SAUTR1102).

Lunch provided.

- One-day add-on on-site workshop to the Industrial communication (Modbus, CANopen, Proﬁbus, EthernetIP) course (SAUTR1102).

Audience
These optional workshops are optimised to suit maintenance technicians; or anyone who needs to implement industrial communication networks.

Precursors
Participants must have a good working knowledge of PLCs and communications as well as experience in using Unity Pro. This course must be accompanied by the Industrial Communication (SAUTR1102) to form a four-day course.

Industrial Communication ASi or Legacy Course Outline

Option 1
AS Interface Content:

- Introduction to ASi
- ASI Wiring Principles
- The ASI Protocol in Depth
- ASI Safe
- ASI System Design
- Programming ASI with the M340 ASI Master Module Using the B+W ASI Ethernet Gateway
- Troubleshooting ASI.

Option 2
Modbus Plus (MB+) Content:

- Modbus Plus Hardware
- Network Topology
- Peer Cop
- Modbus Plus Status
- Master Block
- Local and Remote Statistics
- MPBSTAT
- Network Bridging
- Distributive Control.

Option 3
FIPIO Content:

- FIPIO Network Dynamics
- FIPIO Hardware and Assembly
- Network Cable and Installation
- Configure Network Devices
- Network Status
- FIPIO Network Debug
- Unity Pro or PL7 Pro Software Tools.

Part number: SAUTR1110

Easy ways to register
Web: www.schneider-electric.com.au/training
Email: training.courses@au.schneider-electric.com
Safety and System Tools Courses
Application of Standard Libraries
One-Day On Demand Workshop

Course Description
This course is aimed at developing an understanding of validated plant solutions libraries available across existing engineering and visualisation products. This workshop objective is to provide practical experience in the use of our libraries to provide all basic, advanced and customised control functions, as well as the interfaces for efficient monitoring and operation of the plant. Libraries standardise the communication and configuration of devices and functional elements within the plant.

Delivery Method (options)
▪ One-day workshop, with lunch provided.
▪ One-day on-site.
▪ One-day LIVE Virtual Classroom.

Audience
▪ This course is aimed at PlantStruxure Certified engineers who intend to implement our TVDA based process control solutions with specific application library requirements.

Precursors
▪ Attendees are expected to have a good knowledge of Citect SCADA/ Vijeo Citect and Unity Pro engineering systems.
▪ Students must be familiar with Microsoft® Windows operating systems.

Application of Standard Libraries Course Outline
This one day workshop is customised to meet your individual requirements. The course is structured to include a combination of the following platforms and associated libraries:

▪ Unity Pro:
  ▪ Fuzzy Control Library
  ▪ Flow Control Library
  ▪ HVAC Library
  ▪ Predictive Control Library
  ▪ TeSys Library
  ▪ Unity Pro/UAG/Plant Solutions/Vijeo Citect:
    ▪ Enhance Process Library
  ▪ Unity Pro/sg2/UAG/Plant Solutions/Vijeo Citect:
    ▪ Device and Process Library.

Part number: SAUTR1303

Easy ways to register
Web: www.schneider-electric.com.au/training
Email: training.courses@au.schneider-electric.com
Introduction to Instrumentation Theory

Two-Day On Demand Workshop

Course Description
This course has been designed as a basic introduction to Instrumentation principles allowing the student to understand the real applications of Instrumentation in the industry. This course is the precursor to the Practical Aspects of Instrumentation Configuration and covers the required theory with practical examples. This course has been designed to provide the basics of Process Instrumentation and Control Theory.

Delivery Method (options)
▪ Two-day on demand workshop, with lunch provided.
▪ Two-day on-site.

Audience
This course is optimised to suit project, design, commissioning or maintenance engineers; or anyone who needs to better understand Instrumentation.

Precursors
None.

Introduction to Instrumentation Course Outline

Day 1 of 2
Day one introduces the key fundamentals of instrumentation including:
▪ Concepts on Instrumentation
▪ Overview of Pressure/Level Instruments.

Day 2 of 2
Day two expands on the material from day one to include:
▪ Overview of Flow Instruments
▪ Overview of Valves
▪ Overview of Temperature Instruments.

Part number: SAUTR1118

Easy ways to register
Web: www.schneider-electric.com.au/training
Email: training.courses@au.schneider-electric.com
Practical Aspects of Instrumentation Configuration

Three-Day On Demand Workshop

Course Description
This course has been designed to focus on the practical hands-on implementation of Instrumentation Configuration. This course has been designed for those that already have an understanding of Instrumentation Theory and would now like to learn more about the application of that knowledge.

Delivery Method (options)
- Three-day instructor-led course, with lunch provided.
- Three-day on-site.

Audience
This course has been designed to provide course attendee’s with actual Instrumentation configuration and best practice installation knowledge. This course is optimised to suit Project, Design, Commissioning or Maintenance Engineers or anyone else wishing to gain a better understanding of Instrumentation.

Precursors
Introduction to Instrumentation Theory Training course or equivalent.

Introduction to Instrumentation and Process Control Course Outline

Day 1 of 3
Day one extends on the topics covered in the Instrumentation Course with practical sessions including:
- Calibrate Instrumentation
- Understand the HART protocol.

Day 2 of 3
Day two continues the practical aspects of instrumentation configuration including how to:
- Configure Instrumentation using HART communicators
- Understand the basics of PID control.

Day 3 of 3
Day three further extends the course with sessions covering:
- Configure a PID control block
- Understand Instrumentation Configuration Best Practice
- Understand Common Problems with Instrumentation Configuration.

Part number: SAUTR1119

Easy ways to register
Web: www.schneider-electric.com.au/training
Email: training.courses@au.schneider-electric.com
Quantum SIL3 Safety Implementation
Two-Day On Demand Workshop

Course Description
The objective of this workshop is to be able to implement a functional safety application using the TUV function blocks and certified Quantum SIL3 hardware.

Participants are required to bring their own laptop, with Unity Pro already installed, to the training.

Delivery Method (options)
- Custom two-day on demand workshop, with lunch provided. Two-day on-site.

Audience
- This course is intended for end-users or system integrator project technical teams responsible for implementing Quantum SIL3 projects.

Precursors
- Must be Certified Functional Safety Expert (CFSE) or equivalent (TUV, ISA or IChemE).

Quantum SIL3 Safety Implementation Course Outline

Day 1 of 2
Day one provides an introduction to functional safety including:
- Safety CPU Project and Architectures
- Hands-on Labs including:
  - Starting a Project
  - Maintenance Mode
  - Safety Mode
  - Application Protection
  - Communication with UMA.

Day 2 of 2
Day two extends the fundamentals covered on day one to include:
- Safety I/O modules
- Hands-on Labs including:
  - High-Availability Blocks
  - Quantum Safety Hot Stand-By System,
  - Hands-On Labs (S_HSBY_SWAP).

Part number: SAUTR1010

Easy ways to register
Web: www.schneider-electric.com.au/training
Email: training.courses@au.schneider-electric.com
Industrial Drive Fundamentals (Altivar)
Two-Day Instructor-Led Course

Course Description
This course aims to provide participants with knowledge of the fundamental concepts of motor control and the practical application of variable speed drives. An understanding of drives is developed before more advanced concepts such as EMC, harmonics and their mitigation solutions are covered. A practical component introduces participants to commissioning Altivar Drives, including the use of SoMove.

Delivery Method (options)
▪ Two-day instructor-led course, with lunch provided.

Audience
▪ Engineering and maintenance personnel.

Precursors
▪ Electrotechnical and automation basics.
▪ Some PC and Microsoft® Windows experience desirable.

Industrial Drives Fundamentals (Altivar) Course Outline

Day 1 of 2
Day one introduces the key components of motor control and drives, including:
▪ Mechanical and Electrical Fundamentals
▪ Soft Starter and Drive Fundamentals
▪ Types of Loads and Operation
▪ Asynchronous Motor Control
▪ EMC and Harmonics.

Day 2 of 2
Day two focuses on practical applications of Altivar Drives, including:
▪ The Altivar Drive Range
▪ Basic Drive Control
▪ Application Functions
▪ Introduction to SoMove
▪ Commissioning Drives with SoMove.

Part number: SAUTR1009

Easy ways to register
Web: www.schneider-electric.com.au/training
Email: training.courses@au.schneider-electric.com
Industrial Drive Communications (Altivar)

One-Day Instructor-Led Course

Course Description
This course is aimed at participants who are familiar with both Altivar Drives and Unity Pro. This course covers industrial communications with Altivar Drives, including both hardware and software. Completion of the course will result in participants having practised and obtained knowledge of commissioning Altivar Drives with CANopen, Modbus (RS485 and TCP) and Ethernet IP communication protocols. Optionally Profibus can be covered in place of CANopen.

Duration
• One-day instructor-led course, with lunch provided.

Audience
• System integrators and engineering personnel.

Precursors
• Required to be familiar with Unity Pro, preferable to have completed the Industrial Communications course SAUTR1102.
• Some PC and Microsoft® Windows experience desirable
• Familiarity with Altivar Drives.

Industrial Drive Communications (Altivar) Course Outline

Day 1 of 1
Introduction to the hardware used and concepts.
• Review of Communication Fundamentals
• Ethernet Options for the Altivar 61 and 71 Range
• Comm Scanner and IO Scanner Concepts
• CiA 402 and IO Profile
• ODVA Profiles.

The practical component includes:
• Implementation of CANopen
• Implementation of Modbus RS485
• Implementation of EthernetIP
• Use of Altivar DTM

The practical component utilised the following software:
• SoMove
• Unity Pro
• Other Tools.

Part number: SAUTR1117

Easy ways to register
Web: www.schneider-electric.com.au/training
Email: training.courses@au.schneider-electric.com
PLC and Control Courses
Advantys Configurator STB Distributed I/O

One-Day Optional Add-On Workshop

Course Description
The objective of this course is to gain the knowledge, and become expert with, Advantys STB distributed I/O and learn the technical features and possibilities of an Advantys STB solution.

This course may be combined with Industrial Communication (SAUTR1102) to create a four-day workshop.

Delivery Method (options)
- One-day optional add-on workshop to the Unity Pro Programming course (SAUTR1003), with lunch provided.
- One-day on-site workshop to the Unity Pro Programming course (SAUTR1003).

Audience
- This course is designed to suit systems integrators, OEMs or anyone who needs to design, implement or maintain Advantys STB Distributed I/O.

Precursors
- Good knowledge of the Advantys STB offer.
- Good knowledge of configuring I/O scanning on a Schneider Electric PLC with Ethernet TCP/IP.

Advantys STB Distributed I/O Course Outline
This course is designed to assist students in becoming proficient with Advantys STB Distributed I/O. Topics covered include:

- STB as a complete product integration solution
- Discover the entire range of the different modules and extensions
- Configuration and debugging a complete island on Ethernet TCP/IP network
- Importing and exporting variables from Advantys to Unity Pro
- Connecting TeSys U in Advantys Island
- Assembly rules and restrictions
- CANopen extension and enhanced products
- Run-time parameters and PKW
- Diagnostics and feedback
- Reflex actions.

Part number: SAUTR1404

Easy ways to register
Web: www.schneider-electric.com.au/training
Email: training.courses@au.schneider-electric.com
Concept Maintenance
(with Quantum/Momentum PLC Hardware)

Three-Day Instructor-Led Course (On Demand)

Legacy Course
Please note that even though this legacy course is still offered to enable you to train
your staff you should contact Schneider Electric for options on an upgrade path for your
hardware to make you Unity Pro compliant. Simple upgrade paths are available for all
legacy hardware offers.

This course aims to provide participants with the knowledge to successfully maintain plant
and systems controlled by Quantum/ Momentum PLCs, which use Concept programming
software. All five IEC programming languages: Sequential Function Chart (SFC), Function
Block Diagram (FBD), Ladder Diagram (LD), Structured Text (ST) and Instruction List (IL)
are covered. Using Derived Function Blocks (DFB) and Derived Data Types (DDT) are also
included. Peer-to-peer communications, along with I/O scanning and global data base
are covered, as are basic troubleshooting procedures.

Delivery Method (options)
- Three-day (on demand) instructor-led course, with lunch provided.
- Three-day on-site.

Audience
- Electrical maintenance personnel.
- Programming engineers.

Precursors
- Basic familiarity with the general principles of PLCs
- Competency in using Microsoft® Windows.

Concept Maintenance Course Outline

Day 1 of 3
Day one focuses on PLC hardware and
an introduction to Concept:
- Setting Up and Wiring Quantum/ Momentum PLC Hardware
- Introduction to Basic Concept procedures and to the Concept PLC Simulators
- The Project Browser and Preferences.

Day 2 of 3
Day two extends the material from
day one to include:
- Variables Editor and Reference Data Editor (RDE) Templates
- Animating, Editing and Saving Programs
- Searching and Replacing Objects
- Programming Using Sequential Function Chart (SFC) Language
- PLC Configuration Screens
- PLC Communication Overview
- Connecting Concept to Quantum/ Momentum PLCs
- Download and Upload Projects
- Online Diagnostics and Troubleshooting.

Day 3 of 3
Day three combines the skills acquired during days one and
Two and includes:
- Function Block Diagram (FBD) Scanning
- Using Derived Function Blocks (DFB) and Derived Data Types (DDT)
- IEC Ladder Diagram (LD) Programming
- Introduction to Structured Text (ST) and to Instruction List (IL) Programming
- Archiving and Exporting Concept Projects.

Part number: SAUTR1007

Easy ways to register
Web: www.schneider-electric.com.au/training
Email: training.courses@au.schneider-electric.com
Concept Programming
(with Quantum/Momentum PLC Hardware)

Four-Day Instructor-Led Course (On Demand)

Legacy Course
Please note that even though this legacy course is still offered to enable you to train your staff please be aware you should contact Schneider Electric for options on an upgrade path for your hardware to make you Unity Pro compliant. Simple upgrade paths are available for all legacy hardware offers.

This course aims to provide participants with the knowledge to successfully design, configure, install, connect, program, commission and document Quantum/ Momentum PLC projects. The implications of IEC61131 are covered, as are all five IEC programming languages: Sequential Function Chart (SFC), Function Block Diagram (FBD), Ladder Diagram (LD), Structured Text (ST) and Instruction List (IL). The course also includes creating and using Derived Function Blocks (DFB) and Derived Data Types (DDT); plus peer-to-peer communications, along with I/O scanning and global data base.

Delivery Method (options)
- Four-day (on demand) instructor-led course, with lunch provided
- Four-day On-Site

Audience
- Project/ design/ programming engineers.
- Electrical maintenance personnel.

Precursors
- Basic familiarity with the general principles of PLCs
- Competency in using Microsoft® Windows.

Concept Programming Course Outline
Day 1 of 4
PLC hardware and an introduction to Concept including:
- Selection, Layout, Installation, Wiring and Configuring Quantum and Momentum PLC Hardware
- Overview of the IEC61131 Standard
- Introduction to Basic Concept Procedures and the Concept PLC Simulators.

Day 2 of 4
- The Variables Editor, Reference Data Editor Templates and the Project Browser
- Animation Editing and Saving Programs
- Searching and Replacing Objects
- Programming Using the Sequential Function Chart (SFC) Language.

Day 3 of 4
- Configuring Digital and Analogue I/O racks, Ethernet, Peer-to-Peer Communications, I/O Scanning and the Global Data Base
- Using Media to Connect Concept to Selected PLCs
- Download and Upload Concept Projects
- Update PLC Modules with Concept’s ExecLoader
- Online Diagnostics and Troubleshooting.

Day 4 of 4
- Function Block Diagram (FBD) Scanning
- Derived Function Blocks (DFB) and Macros
- Creating and Using Derived Data Types (DDT)
- IEC Ladder Diagram (LD) and Non-IEC 984 Ladder Logic Programming
- Introduction to Structured Text (ST) and Instruction List (IL) Programming
- Printing, Archiving and Exporting Projects.

Part number: SAUTR1006

Easy ways to register
Web: www.schneider-electric.com.au/training
Email: training.courses@au.schneider-electric.com
PL7 Pro Programming and Maintenance

Three-Day Instructor-Led Course (On Demand)

Legacy Course
Please note that even though this legacy course is still offered to enable you to train your staff you should contact Schneider Electric for options on an upgrade path for your hardware to make you Unity Pro compliant. Simple upgrade paths are available for all legacy hardware offers.

This course aims to provide participants with the knowledge to successfully set up and operate TSX37 Micro and TSX57 Premium PLC hardware. The four programming languages Grafcet G7, Ladder Diagram (LD), Structured Text (ST) and Instruction List (IL) are covered, as are Standard Function Blocks (SFB), Derived Function Blocks (DFB) and Operate blocks. Communications using various methods are demonstrated. Various PL7 Pro troubleshooting techniques are also included.

Delivery Method (options)
- Three-day (on demand) instructor-led course, with lunch provided.
- Three-day on-site.

Audience
- Electrical engineers.
- Electrical maintenance personnel.

Precursors
- Basic familiarity with the general principles of PLCs
- Competency in using Microsoft® Windows.

PL7 Pro Programming and Maintenance Course Outline

Day 1 of 3
Day one focuses on PLC hardware and an introduction to PL7 Pro:
- Overview of TSX37 Micro and TSX57 Premium Hardware
- The PL7 Pro I/O Address Numbering System
- Overview of the Use of PL7 Pro’s Project Browser
- Introduction to Basic PL7 Pro Procedures
- Downloading the PL7 Pro Application to the PLC and Running it.

Day 2 of 3
Day two extends the material from day one to include:
- Setting Up PL7 Pro and the Access Security Manager
- Application Browser
- Programming Using the G7 Grafcet Language
- Programming Comparison and Operate Blocks
- Configuring Digital and Analogue I/O Racks, Ethernet, Peer-to-Peer Communications and I/O Scanning
- Connecting PL7 Pro to Micro/Premium PLCs Via Various Media
- Download and Upload Projects
- Online Diagnostics and Troubleshooting.

Day 3 of 3
Day three combines the skills acquired during days one and two and includes:
- Introduction to Structured Text (ST) and to Instruction List (IL) Programming
- Setting Up and Programming Communications
- Creating and Using Derived Function Blocks (DFB)
- An Overview of the PL7 Pro Operating System (OS) Loader
- Application-Specific Modules
- An Overview of PRODYN Run-Time Screens
- PL7 Pro Documentation.

Part number: SAUTR1008

Easy ways to register
Web: www.schneider-electric.com.au/training
Email: training.courses@au.schneider-electric.com
SoMachine Configuration

Three-Day On Demand Workshop

Course Description
This course instructs the student on the configuration, programming and operation of the SoMachine target platforms including M238, M241, M258, M251, ATV-IMC & HMISCU. The SoMachine software package is used for program development. This is a hands-on technical training with many supporting exercises. Basic programming of the XBTGC HMI is also covered. This course assumes prior Vijeo Designer experience and does not focus on Vijeo Designer screen development.

Participants are required to bring their own laptop to the training.

Delivery Method (options)
- Three-day workshop, with lunch provided.
- Three-day on-site.

Audience
- This course is intended for OEM engineers and technicians who are responsible for programming and configuring control and automation equipment using SoMachine.

Precursors
- Students should have knowledge of PLC programming.
- Students should attend Industrial Communication (SAUTR1102) workshop prior to attending SoMachine Configuration.
- SoMachine e-learning is strongly recommended.

SoMachine Configuration Course Outline

Day 1 of 4
Day one provides an introduction to key concepts including:
- Introduction to SoMachine
- SoMachine at a Glance
- Project Management
- Controller I/O Configuration
- Controller Programming.

Day 2 of 4
Day two further develops the fundamentals in day one. Topics include:
- Data Types
- Programming Languages
- CoDeSys Libraries
- Online Configuration and Events Tasks.

Day 3 of 4
Day three introduces more advanced topics, including:
- Online Services and Debugging
- Modbus Communications
- HSC Functions and Frequency Generator
- CANopen and Remote I/O.

Day 4 of 4
- Simple Motion Using PTO and CAN
- XBTGT and HMISCU
- Web Services.

Easy ways to register
Web: www.schneider-electric.com.au/training
Email: training.courses@au.schneider-electric.com

Part number: SAUTR1406
Course Description
This course aims to provide students with the knowledge required to successfully implement Ethernet Remote I/O architectures with either Quantum or M580 platforms. Time is spent learning how to optimise performance.

Delivery Method (options)
One-day optional add-on workshop to the Unity Pro Programming course (SAUTR1003). Lunch provided.
- On-day add-on workshop on-site.

Audience
- This course is aimed at engineering and technical staff involved in supporting modern Ethernet based industrial control systems.

Precursors
- Students should be familiar with basic networking terminology and Microsoft® Windows.
- Students are required to have completed Unity Pro Programming (SAUTR1003) course.
- Students should be competent with industrial automation concepts including an understanding of PLC and PAC control systems concepts.

Quantum Ethernet Remote I/O Course Outline
Provides an introduction to key concepts including:
- Configure a simple Ethernet IO architecture with 140 CRP 31200, 140 CRA 31200 and BMX CRA 31200/31210 or BME CRA31210 under Unity Pro.
- Understand the principle of a high capacity architecture with switches.
- Integrate sub-rings with dual ring switches.
- Make distributed IO participate in the remote IO network without losing performances.
- Understand the determinism and calculate application response time.
- Compare the performances with S908 remote IO.
- Implement a hot standby architecture.

Part number: SAUTR1015

Easy ways to register
Web: www.schneider-electric.com.au/training
Email: training.courses@au.schneider-electric.com
Unity Pro Programming (incl. Hardware)

Four-Day Instructor-Led Course

Course Description
This course aims to provide participants with the knowledge to successfully design, configure, install, connect, program, commission and document M580/Quantum/Premium/M340 PLC projects using Unity Pro programming software. The implications of IEC61131 are covered, as are all five IEC programming languages: Sequential Function Chart (SFC), Function Block Diagram (FBD), Ladder Diagram (LD), Structured Text (ST) and Instruction List (IL). Creating and using Derived Function Blocks (DFB) and Derived Data Types (DDT) are fully covered. Peer-to-peer communications, along with I/O scanning and global data base are also included.

Delivery Method (options)
- Four-day instructor-led course, with lunch provided.
- Four-day on-site.
- Two-day Unity Pro Introduction LIVE Virtual Classroom

Audience
- Project/design/programming engineers.
- Electrical maintenance personnel.

Precursors
- Basic familiarity with the general principles of PLCs.
- Competency in using Microsoft® Windows.

Unity Pro Programming (including hardware) Course Outline

Day 1 of 4
Day one focuses on PLC hardware and an introduction to Unity Pro:
- Quantum, M580, Premium and M340 Hardware
- Overview of the IEC61131 Standard
- Introduction to Unity Pro Procedures
- The Unity Pro PLC Simulator.

Day 2 of 4
Day two extends the material from day one to include:
- The Data Editor and Animation Tables
- The Project Browser, and Settings
- Editing and Saving Projects
- Searching and Replacing Objects
- Sequential Function Chart (SFC).

Day 3 of 4
Day three continues to extend the material by including:
- Hardware and Comms Configuration
- Downloading and Uploading Projects
- OS Loader and Unity Loader
- Online Diagnostics and Troubleshooting.

Day 4 of 4
Day four combines the skills acquired during days one to three and includes:
- Function Block Diagram (FBD)
- Derived Function Blocks (DFB)
- Ladder Diagram (LD)
- Textual Languages
- Archiving, Exporting and Printing.

Part number: SAUTR1003

Easy ways to register
Web: www.schneider-electric.com.au/training
Email: training.courses@au.schneider-electric.com
Unity Pro Maintenance with Quantum/M580/Premium/M340

Three-Day Instructor-Led Course

Course Description
This course aims to provide participants with the knowledge to successfully maintain plant and systems controlled by M580/Quantum/Premium/M340 PLCs, which use Unity Pro programming software. All five IEC programming languages: Sequential Function Chart (SFC), Function Block Diagram (FBD), Ladder Diagram (LD), Structured Text (ST) and Instruction List (IL) are covered. Using Derived Function Blocks (DFB) and Derived Data Types (DDT) are also included. Peer-to-peer communications, along with I/O scanning and global data base are also covered, as are basic troubleshooting procedures.

Duration
Three-day instructor-led course, with lunch provided.

Audience
- Electrical maintenance personnel.
- Also suitable for programming engineers

Precursors
- Basic familiarity with the general principles of PLCs
- Competency in using Microsoft® Windows.

Unity Pro Maintenance Course Outline

Day 1 of 3
Day One focuses on PLC hardware and an introduction to Unity Pro:
- Setting Up and Wiring M580/Quantum/Premium/M340 PLC Hardware
- Introduction to Basic Unity Pro Procedures and to the Unity Pro PLC Simulator
- Project Settings and the Project Browser.

Day 2 of 3
Day two extends the material from day one to include:
- Data Editor and Animation Tables
- Animating, Editing and Saving Programs
- Searching and Replacing Objects
- Programming using Sequential Function Chart (SFC) Language
- PLC Configuration Screens
- PLC Communications
- Connecting Unity Pro to PLCs Using Various Media
- Download and Upload Projects
- Online diagnostics.

Day 3 of 3
Day three combines the skills acquired during days one and two and includes:
- Function Block Diagram (FBD) Scanning
- Using Derived Function Blocks (DFB) and Derived Data Types (DDT)
- IEC Ladder Diagram (LD) Programming
- Introduction to Structured Text (ST) and Instruction List (IL) Programming
- Archiving and Exporting Unity Pro Projects.

Part number: SAUTR1004

Easy ways to register
Web: www.schneider-electric.com.au/training
Email: training.courses@au.schneider-electric.com
984 Ladder Logic – Level 1

Four-Day Instructor-Led Course

Legacy Course
Please note that even though this legacy course is still offered to enable you to train your staff, please be aware you should contact Schneider Electric for options on an upgrade path for your hardware to make you Unity Pro compliant. Simple upgrade paths are available for all legacy hardware offers. Please note the LL984 Editor for Unity for Quantum and M340 PLCs training course provides a simple upgrade path to Unity Pro.

The course aims to develop in the participant the skills and knowledge needed to maintain and fault find a Modicon programmable controller system on a typical application. Emphasis is placed on creating programs using the basic instruction set.

Delivery Method (options)
- Four-day instructor-led course, with lunch provided.
- Four-day on-site.

Audience
- Project/design/programming engineers electrical maintenance personnel.

Precursors
- Basic familiarity with the general principles of PLCs
- Competency in using Microsoft® Windows.

984 Ladder Logic – Level 1 Course Outline

Day 1 of 4
Day one focuses on hardware and software setup:
- Modicon System Hardware
- Modicon Series Controllers
- Local I/O
- Remote I/O
- I/O Modules.

Day 2 of 4
Day two focuses on the basic instructions, Timer and Counters and Forcing:
- Configuring the Controller, Traffic-Copping (I/O Mapping) the Controller

Day 3 of 4
Day three focuses on maintenance activities searching and fault finding and we introduce arithmetic Instructions ADD & SUB and analog input and analog output routines:
- Basic Instruction Set, Up/Down Counters, Timers, Common Control, Techniques
- Add, Subtract, Multiply, Divide Practical
- Practical exercises.

Day 4 of 4
Day four continues arithmetic instructions MUL and DIV then introduce the data transfer instructions including the BLKM Instruction:
- Theory of Operation, Table to Register, Register to Table, Table to Table,
- Block Move, Practical Exercises.

Easy ways to register
Web: www.schneider-electric.com.au/training
Email: training.courses@au.schneider-electric.com

Part number: SAUTR1013
984 Ladder Logic - Level 2
Four-Day Instructor-Led Course

Legacy Course
Please note that even though this legacy course is still offered to enable you to train your staff, be aware you should contact Schneider Electric for options on an upgrade path for your hardware to make you Unity Pro compliant. Simple upgrade paths are available for all legacy hardware offers. The LL984 Editor for Unity for Quantum and M340 PLCs training course provide a simple upgrade path to Unity Pro.

The course aims to develop in the participant the skills and knowledge needed to maintain and fault find a Modicon programmable controller system on a typical application. Emphasis is placed on creating programs using the more advanced instruction set.

Delivery Method (options)
- Four-day instructor-led course on-site, with lunch provided.

Audience
- Project/design/programming engineers.
- Electrical maintenance personnel.

Precursors
- Basic familiarity with the general principles of PLCs
- Competency in using Microsoft® Windows.

984 Ladder Logic Course - Level 2 Course Outline

Day 1 of 4
Day one reviews the basic instruction set. Introducing the NOBT, NCBT, RBIT, SBIT Instructions. Timers and Counters and the Calculation instruction set, including the Equation Network:

Day 2 of 4
Day two focuses on the Data Transfer Instructions BLKM, T->T, R->T and T->R instructions. Data Matrix instructions AND, OR, XOR, COMP, CMPR, MBIT, SENS, BROT; including practical exercises:
- Logic And, Logical Or, Logical Exclusive Or, Complement, Compare, Modify Bit, Sense Bit, Bit Rotate
- Macros, Libraries, Documentation Import/Export.

Day 3 of 4
Day three focuses on Indirect transfer functions, FIN, FOUT, SRCH and exercises that include all of the instructions learnt so far:
- DX Moves
- Theory of Operation, Table to Register, Register to Table, Table to Table, Block Move, First In, First Out, Search.

Day 4 of 4
Day four focuses on the Communications and PID instructions:
- Closed Loop Control
- Theory of Operation, PID2 Block, Practical Exercise
- Modbus Plus
- Theory of Operation, System Topology, MSTR Read Function, MSTR Write Function, Practical Exercise No. 4, Peer Cop, BM85 Configuration.

Part number: SAUTR1014

Easy ways to register
Web: www.schneider-electric.com.au/training
Email: training.courses@au.schneider-electric.com
LL984 Editor for Unity for Quantum and M340 PLCs

One-Day Optional Add-On Workshop

Course Description
The course covers the new 6th Unity language LL984 (984 Ladder Logic), which is the traditional Modicon PLC programming language. This course thus supports LL984 applications for Quantum as well as M340 platforms as targets. The course provides an overview of the migration and modernisation paths between control applications developed in the older Modicon software packages (Modsoft, Concept, and ProWorX) using 984 ladder logic, and Schneider Electric’s present and future PLC software Unity Pro.

Delivery Method (options)
- One-day add-on workshop on-site, to the Unity Pro Programming course (SAUTR1003), with lunch provided.

Audience
- For customers wishing to migrate their legacy Modicon 984LL applications seamlessly into compatible Unity PLC Platforms.

Precursors
- Competency in using Microsoft® Windows.
- This course is only run as an optional extension workshop to the Unity Pro Programming course (SAUTR1003).

LL984 editor for Unity for Quantum and M340 PLC Course Outline
This one day course focuses on 984 Ladder Logic for the Modicon Quantum and M340 series of PLCs and includes:
- overview of compatible hardware
- import of Modsoft, Concept (also hybrid), ProWorx NxT and ProWorx32 applications
- 984 instruction set as well as selected loadables
- timers, counters, matrix functions, SKP, MSTR (for Quantum), EMTH, PCFL & DISA
- STAT, XMIT (for Quantum)
- smart HW configuration import
- fully automatic via mapping tables
- customisable with partial import wizard structure
- segments and networks
- segment scheduling
- sub-routines (JSR, LAB, RET) in Unity
- symbols, descriptors, short and long comments
- keep register information as documentation: %MW1 is used instead of 40001 as address, but 40001 can be displayed
- programming with mnemonics
- button bar and quick bar to access all LL984 instructions quickly
- four user definable views
- equation networks are available as special LL984-network using ST for the equation
- multiple network monitoring and editing.

Note: IEC Languages will NOT be covered in this class.

Part number: SAUTR1012
Telemetry Courses
ClearSCADA Configuration

Four-Day Instructor-Led Course

Course Description
This training course provides attendees with hands-on experience configuring and using ClearSCADA software. Each participant will have a SCADAPack RTU to use during a range of exercises that are designed to allow hands-on activity based learning of the various components that make up a SCADA host system.

Delivery Method (options)
- Four-day instructor-led course, with lunch provided
- Four-day on-site
- Four-day LIVE Virtual Classroom

Audience
- Those who want to become familiar with ClearSCADA project development techniques.
- ClearSCADA users, including engineering staff, maintenance staff and plant supervisors.
- Technical users who maintain and improve their installed ClearSCADA and control systems.
- Managers who want more than a basic understanding of ClearSCADA.
- ClearSCADA system integrators and designers.

Precursors
- It is essential that students are familiar with Microsoft® Windows operating systems.
- Experience in PLC control system design and/or programming is desirable.
- It is recommended that students have experience in E Series RTU Configuration or should have attended E Series RTU Programming course (SAUTR1016).

ClearSCADA Configuration Course Outline

Day 1 of 4
Day one introduces ClearSCADA, including:
- Course Overview
- Installation
- Introduction to Clear SCADA
- A First Configuration
- Animating Mimics.

Day 2 of 4
Day two introduces key topics, including:
- Trends
- Templates and Instances
- Embedded Mimics and Animated Symbols
- User Commands.

Day 3 of 4
Day three introduces more advanced topics:
- System Configuration
- Security
- WebX Clients
- System Architecture and Redundancy.

Day 4 of 4
Day four introduces:
- Reports
- Client Side Scripting
- Communications Diagnostics
- Alarm Redirection.

Part number: SAUTR1216

Easy ways to register
Web: www.schneider-electric.com.au/training
Email: training.courses@au.schneider-electric.com
ClearSCADA Create and Configure Crystal Reports

Two-Day Instructor-Led Course

Course Description
The ClearSCADA Crystal Reports course is designed to provide an introduction to the creation and configuration of Crystal Reports and the interaction between the Crystal Reports development environment and ClearSCADA software.

Delivery Method (options)
- Two-day instructor-led course, with lunch provided.
- Two-day on-site.
- Two-day LIVE Virtual Classroom.

Audience
- SCADA engineers, managers, system integrators and any other SCADA related personnel who intend using Crystal Reports with ClearSCADA.

Precursors
- An understanding of SCADA concepts would be useful. PLC and RTU experience is not required. Prior exposure to ClearSCADA would be beneficial.
- Should have attended ClearSCADA Configuration (SAUTR1216).

ClearSCADA Create and Configure Crystal Reports Course Outline

Day 1 of 2
Day one focuses on the creation of Crystal Reports:
- Introduction/Course Overview
- Installation/Configuration
- Connecting to a Data Source (ODBC)
- Report Creation Basics
- Record Selection
- Report Formatting
- Group Selection
- Summary Fields
- Charts.

Day 2 of 2
Day two looks at how to configure reports including:
- Review Day One
- Parameterised Reports
- Report Sections
- Report Templates
- Creating Formulas
- Subreports.

Part number: SAUTR1217

Easy ways to register
Web: www.schneider-electric.com.au/training
Email: training.courses@au.schneider-electric.com
E Series RTU Configuration and Programming
Three-Day Instructor-Led Course

Course Description
This course provides a thorough tour of the E-Series Configurator and ISaGRAF IEC61131-3 programming environment including a demonstration of the steps required to create a project. Using the Workbench to establish a connection with a SCADAPack controller. The created project is used throughout the training session as programs created in the IEC61131-3 programming languages are added to the project.

Delivery Method (options)
- Three-day instructor-led course, with lunch provided.
- Three-day on-site.

Audience
- SCADA engineers, managers, system integrators, engineering and maintenance personnel.

Precursors
- It is essential that students are familiar with Microsoft® Windows operating systems.

E Series RTU Configuration and Programming Course Outline

Day 1 of 3
Day one introduces the key concepts for E Series RTU, including:
- SCADAPack hardware
- Series 5000 I/O modules
- Firmware Loader
- Communications Ports
- Point Browser
- TCP/IP Configuration
- Binary and Analog Point Configuration.

Day 2 of 3
Day two continues the topics from day one including:
- DNP Communications and Events
- DNP Routing
- Command Line Diagnostics
- IEC-61131 Programming Overview
- ISaGRAF Workbench Overview
- Ladder Diagram Editor
- Function Block Diagram Editor
- Custom Function Blocks
- Structured Text Editor.

Day 3 of 3
Day three focuses on RTU communications including:
- Protocol Communication
- ISaGRAF Programs
- Additional Function Blocks.

Part number: SAUTR1016

Easy ways to register
Web: www.schneider-electric.com.au/training
Email: training.courses@au.schneider-electric.com
Trio Radio Modem Product Configuration

Three-Day Instructor-Led Course

Course Description
Gain insight into the essentials of data radio systems, planning and configuration techniques for the implementation of a reliable radio modem network that can be built across vast areas. This interactive course includes practical demonstrations with Trio licensed and license free wireless data modems (depending on the selected option) for a variety of complex and critical SCADA and Telemetry Systems. These products provide both last mile and long distance communications for Point to Point and Point to Multipoint data applications.

This course can also be run as a two or three day on-site workshop to provide students with detailed hands-on access to the Trio radios.

Delivery Method (options)
Three options available as either Instructor-led course, with lunch provided or on-site:
SAUTR1116_1 – all three days.
SAUTR1116_2 – days one and two (licensed).
SAUTR1116_3 – days one and three (license free).

Audience
▪ System integrators and designers who want to become familiar with radio technology, systems and design.
▪ Radio users, including engineering staff, maintenance staff and plant supervisors who want to optimise system design and get full potential of their system.
▪ Managers who want an understanding of data radio technology.

Precursors
▪ A basic understanding of SCADA and Telemetry concepts would be desirable but not essential

Trio Radio Modem Product Configuration Course Outline

Day 1 of 3
Day one introduces the essentials of Radio:
▪ System Planning and Coverage Prediction
▪ Radio Spectrum
▪ SID Codes, MultiStream Collision Avoidance, ARQ and IP Routing
▪ Dynamic RF Speed
▪ Installation, Commissioning, Maintenance and Trouble Shooting
▪ TVIEW+ Diagnostics.

Day 2 of 3
Day two product specific option
Licensed Radio:
▪ E Series Ethernet and Serial
▪ M Series – Serial
▪ Q Range - Ethernet/Serial.

Day 3 of 3
Day three product specific option
License Free Radios:
▪ J Series – Ethernet and Serial
▪ K Series Serial
▪ Frequency Hopping Spread Spectrum Topologies.

Note: customer hands-on participation with the Trio radios is limited in our off-site customer training courses on days two and or three. We recommend you take the on-site workshop options should you want significant practical experience with the Trio radios.

Easy ways to register
Web: www.schneider-electric.com.au/training
Email: training.courses@au.schneider-electric.com
Understanding DNP3 Protocol
Two-Day Instructor-Led Course

Course Description
The DNP3 training course is designed to provide the trainee with comprehensive technical understanding of the DNP3 protocol. Fundamentals of the protocol such as the object library, message structure and transactions, and Master-Slave communication issues are covered.

Duration
Two-day instructor-led course with lunch provided.

Audience
- SCADA engineers, managers, system integrators, engineering and maintenance personnel.

Precursors
- A basic understanding of SCADA/Telemetry concepts would be desirable. RTU and PLC programming experience would also be an advantage but not essential.
  - Application Layer Concepts
  - + Object Library
  - + Object Flags
  - + Internal Indicators
  - + Unsolicited Messages
  - - Transport functions
  - - Link Layer.

Understanding DNP3 Protocol Course Outline

Day 1 of 2
Day one introduces the DNP3 protocol including:
- Introduction to DNP3
- DNP DATA Transfer Concept
- DNP Events
- DNP3 Data Types (formats)
- DNP Architectures
- Master/Slave
- DNP Routing
- DNP Concentrator
- Multiple Masters
- Peer-to-Peer
- DNP3 Message Structure.

Day 2 of 2
Day two extends the concepts introduced on day one including:
- DNP3 Message Transactions
- Time Synchronisation
- DNP Subset Levels
- DNP3 Over IP Networks
- DNP Security.

Easy ways to register
Web: www.schneider-electric.com.au/training
Email: training.courses@au.schneider-electric.com
Further Information
Certified Education Centres

All of our courses, unless otherwise indicated, commence at 8.45am with registrations, for a 9.00am start. Our classes finish at 5.00pm with breaks for lunch, plus morning and afternoon refreshments. Should you have any special dietary requirements please advise at the time of booking.

New South Wales - Head Office
Trainer: David Mackay
78 Waterloo Road
North Ryde, NSW, 2113.  +61 2 9125 8474

New South Wales - Newcastle
Trainer: Brad Hosken
76 Munibung Road
Cardiff, NSW, 2285.  +61 2 4941 1211

Queensland - Eagle Farm
Trainer: Ash Khan
80 Schneider Road
Eagle Farm, QLD, 4009.  +61 7 3635 7841

Victoria - Notting Hill
Trainers: Glen Brown and John Keys
1 Acacia Place
Notting Hill, VIC, 3168.  +61 3 9558 9876

Western Australia - Balcatta
Trainer: Doug Connell
10 Harris Road
Malaga, WA, 6090.  +61 8 9344 2727

Regional Locations
Adelaide: 33-37 Port Wakefield Rd, Gepps Cross, SA, 5094.
Canberra: 8 Brindabella Circuit, Brindabella Business Park, Majura, ACT, 2609.
Launceston: Unit 23/34 Innocent Street Kings Meadows, TAS, 7249.
Riverina: 303 North Street Albury, NSW, 2640.
Townsville: 736-740 Ingham Road Mount Louisa, QLD, 4814.
Cairns: 132 Scott Street, Cairns, 4870.
Gold Coast: Unit 7, 82-86 Minnie Street, Southport, QLD, 4215.
Darwin: 16 Albatross Street Winnellie, NT, 0820.

Our regional locations are carefully selected to meet demand. Contact us for more information on 1300 369 233 or training.courses@au.schneider-electric.com
Course Booking Form

To book one of Schneider Electric's Automation Training courses simply complete this form and send a scanned copy to training.courses@au.schneider-electric.com.

Alternatively, visit www.schneider-electric.com.au/training and complete the booking request form online.

Course Details

Course Name: ____________________________________________
Course Location: _________________________________________
Course Date: _____________________________________________

Contact Details

Given Name: _____________________________________________
Surname: ________________________________________________
Position in Company: _____________________________________
Company: _______________________________________________
Contact Name: ___________________________________________
Email: _________________________________________________
Address: _______________________________________________
Suburb: _________________________________________________
State: __________________________________________________
Post Code: ______________________________________________
Country: _________________________________________________
Telephone: _____________________________________________
Fax: ____________________________________________________

Payment

Course Cost (AUD$): ______________________________________

Payment/ Credit Card Type: 

☐ Purchase Order ☐ Cheque ☐ Master Card ☐ VISA ☐ Diners ☐ AMEX

PO Number or Cheque Number or Credit Card Number: ________________________________________

Name on Credit Card: _____________________________________
Credit Card Expiry (MM/YYYY): ______________________________

Comments

____________________________________________________________________________________
General Terms and Conditions for Training

Applications for Enrolment
Registration, together with payment, should be made 10 working days prior to the course commencement date via online at www.schneider-electric.com.au/training or via the methods specified on the Course Enrolment Form.

Confirmation of acceptance will be made 10 working days prior to the course commencement date by email, fax or mail.

Waiting list - if a class is filled, you will be placed on the waiting list or offered a later course. In any event, you will be kept notified of your status.

Tuition Fee
Course fees are payable in advance. A cheque, credit card or purchase order made out to Schneider Electric for the full amount of tuition must accompany the enrolment application.

The supplying of all course writing materials, all relevant technical reference material, lunches, refreshments, and the use of training equipment are included in the tuition fee.

All course fees are inclusive of GST. Prices are shown in Australian dollars and are subject to change without notice.

Provisional reservations without payment are subject to cancellation ten working days prior to the course commencement date in order to accommodate those on the waiting list.

Requests for cancellation of a confirmed registration, or transferring to another course, must be made in writing and acknowledged by Schneider Electric. Full refund of course fees will be given for cancellations received up to 10 working days prior to course commencement. The full course fee will be charged for cancellations received within 10 working days prior to course commencement. Suitable replacements are welcome, provided they register prior to commencement on the first day of the course.

Endorsement and Public Statements
You must not directly or indirectly represent that you are endorsed, certified, sponsored, approved or affiliated with Schneider Electric in any way as a result of attending any training provided by Schneider Electric.

Copyright
Course documentation, hand-outs, software programmes and any other teaching aids provided as part of the course are subject to the normal laws of Copyright. Attendance at a course does not confer any right to reproduce such information, or to disclose it to a third party, without the prior written permission of Schneider Electric (Australia) Pty Ltd. No audio or visual recording of Schneider Electric training courses, or of Schneider Electric personnel teaching such courses, may be taken or reproduced electronically without prior written consent.

Expenses
Trainees are to pay their own travel, hotel and living expenses.

Hotel and Local Transportation
Information on local hotels and transportation is available upon request.

General
Insufficient enrolment - Schneider Electric reserves the right to cancel any course. In this event, you will be notified immediately, and either fully refunded, or the tuition applied to a future course.

It is the responsibility of your organisation to ensure that the trainees attending have sufficient prior knowledge and experience to benefit from attendance at the course. Please note the prerequisites shown in the detailed descriptions of the courses.

On-site courses - for further information and costings, please submit
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- email training.courses@au.schneider-electric.com

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