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Session Tracks

New for 2017! Sessions are organized by their main track and, if applicable, by sub-tracks listed after the session descriptions.

- APPLICATION & CASE STUDIES
- CONTROL
- INFORMATION
- NETWORKS & SECURITY
- PROCESS
- SAFETY
- SYSTEM
- TECHNOLOGY & SERVICES
- VISUALIZATION
Session Descriptions

APPLICATION & CASE STUDIES

AP04  Colorado State University Brews Up Modern DCS for Students 1 hour
The new Fermentation Science and Technology program at Colorado State University features two on-campus breweries designed to operate like commercial breweries – including automation and information solutions. Partnering with Malisko Engineering, the university implemented PlantPAx®, leveraging FactoryTalk® software for advanced reporting, offering scalability for program expansions and real-world experience for students.

AP05  Enbridge Energy Taps FactoryTalk® Historian to Pump Out Manageable, Actionable Information 1 hour
Enbridge Energy operates the longest oil and liquids transportation system in the world. To gather and manage data from pump sites across North America, the company deployed a scalable FactoryTalk® Historian system to automatically interpret and integrate tags from hundreds of field controllers, and centrally-manage system-wide configuration changes for accurate real-time information on performance.

AP08  Flavor-Maker Boosts Consistency with Modern Production Systems, Thin-client HMI 1 hour
Givaudan is upgrading systems in North America and Asia to improve consistency across flavor production sites. Using modern control architecture with ThinManager®, the company is rolling out over 100 HMs, cutting install time from days to minutes, nearly eliminating HMI failures and associated downtime, building collaboration between teams globally, and adding the capability for supervisors to shadow operators while troubleshooting.

AP11  CPwE Helps Jack Daniels Cut Downtime, Start Connected Enterprise Journey 1 hour
A disparate network architecture and communication outages led to downtime and production loss at a Jack Daniels bottling facility. By transitioning to a scalable, secure plantwide CPwE architecture, Jack Daniels cut downtime, improved the diagnostics available to operations and maintenance personnel, and prepared to connect enterprise and process networks.

AP13  New Information-enabled Platform Attracts Significant Global Business Growth for LEWA 1 hour
LEWA’s Bioprocess Group helps its customers keep pace with the critical demand for increased information to ensure regulatory compliance and consistency. By transitioning to an integrated control and information solution from Rockwell Automation, the company has quickly designed, deployed and supported new chromatography systems at over 30 locations.

AP14  Water Pollution Agency Saves Millions with DCS Upgrade, Analytics Software 1 hour
Monterey Regional Water Pollution Control Agency, a leader in beneficial reuse of domestic wastewater, needed improved regulatory compliance and system reliability at its recycled water facility. After migrating to PlantPAx® DCS and FactoryTalk® Analytics software, the agency realized a five-year ROI, simplified regulatory reporting, and solved system-wide pressure control issues, saving millions of dollars.

AP16  Mullins Foods Products Gains Production Efficiencies with MES 1 hour
Mullins Food Products needed to increase production without expanding their plant’s footprint, and to gain greater visibility into each batch of their nearly 250 sauces. By integrating the control layer with CPAwSuite® information software, the company has saved over a million dollars per year by better managing materials and their process, and providing operators with actionable information.

AP17  Battery-free, Info-enabled AGVs Bring Portable Assembly Lines to Automotive Industry 1 hour
Automotive manufacturing traditionally requires significant, sunk capital investment. RedViking battery-free automated guide vehicles make it possible to reconfigure, reuse and scale entire production lines. Powered by Rockwell Automation® control solutions, RedViking AGVs offer on-board power, measurable data on OEE, MTBF and MTTR, and the ability to connect AGVs into enterprise information systems.

AP18  SPH Sine Pharmaceutical Laboratories Adds Precision To The Recipe 1 hour
Made in China 2025 inspires manufacturers to adopt leading-edge technology that reduces reliance on manual processes and their potential for error. SPH Sine Pharmaceutical Laboratories selected PharmaSuite® MES from Rockwell Automation to standardize and track their microbe building and solid preparation processes. The system is poised to reduce human error, meet new regulatory requirements and boost productivity.

AP19  Sonoco Eliminates Manual Reporting and Increases Global Collaboration 1 hour
Sonoco, a packaging solutions company, was struggling with an outdated quality management system. The company partnered with Stone Technologies to upgrade to a system based on FactoryTalk® Historian SE software that acquires and aggregates real-time and static test data. The solution allows Sonoco quality data scientists to compare test results globally and eliminates manual, paper-based archives and reporting.
Treasury Wine Estates Uncorks Value of Premium Wines With MES

Treasury Wine Estates produces close to one million bottles of wine a day at their Australian packaging facility. A legacy MES at the site limited insight and control of work order details. With a new bottling line, the company replaced the old system, integrating ControlLogix® controllers with MES and manufacturing intelligence solutions from Rockwell Automation to boost inventory accuracy to nearly 100 percent and reduce downtime.

Bussmann by Eaton

Bussmann by Eaton: Short Circuit Currents and Their Impact on Electrical Equipment and SCCR

A Rockwell Automation customer, with panel SCCR of just 5,000 amps, faced projects requiring 65,000 amp SCCR. Working with Bussmann by Eaton circuit protection experts, an SCCR analysis identified component changes needed without impacting the panel layout or material costs.

STOBER

STOBER Drives™: Integrating STOBER Drives Hollow Bore Motors into Your Kinetix® System

STOBER Drives™ will introduce the hollow bore series of servo motors that will allow you to increase machine dynamics and reduce space. These motors integrate easily into Kinetix® 5700/6500. Applications and motion analyzer will be reviewed.

Stratus Technologies

Stratus Technologies: Three Rivers Water Authority Modernization

In 2016, an aging Bristol Babcock SCADA system was replaced with Rockwell Automation® PlantPAx® supplied by Advanced Electrical Technologies. Thin clients and virtual machines running on a Stratus ftServer based IDC delivered a blazing fast SCADA interconnectivity and reduced TCO.
Session Descriptions

CONTROL

CL01  Studio 5000 Logix Designer®: Overview  1 hour
Want to learn more about Rockwell Software® Studio 5000 Logix Designer® and see how new productivity features can improve your design experience? This session will show how new capabilities enable scalable solutions, efficient project design, effective content management, quicker downtime recovery and collaborative engineering workflows.

CL02  Studio 5000 Logix Designer®: Demo & Discussion  2 hours
Do you want more than an overview, but don’t want to dive right into a lab? If so, this demo and discussion is for you. This session combines presentation with instructor-led demonstration of the new Studio 5000 Logix Designer® productivity features along with best practices for programming your applications. There is no better way to quickly see and learn what this powerful new release has to offer.

CL03  Studio 5000 Logix Designer®: Basics Lab  2 hours
Are you new to Logix programming or want a quick refresher on the basics? This session will provide an overview of the core capabilities offered in Studio 5000 Logix Designer® and highlight the importance of good design practices. Mastering these fundamentals will ensure a good design and prepare you for the advanced session!

CL04  Studio 5000 Logix Designer®: Advanced Lab  2 hours
So you’ve got the basics, now let’s take it to the next level with this advanced Logix session. This pick-and-choose lab will allow you to explore topics of interest and quickly see how capabilities add the most value to your design. By the end of this session, you will be on your way to becoming an expert!

CL05  Studio 5000® Application Code Manager: Introduction and Demonstration  1 hour
This session combines presentation with instructor-led demonstration of Application Code Manager (ACM) capability. This session will cover how to quickly build your automation projects using reusable code stored in libraries. See how configuration, not programming, is used by selecting library objects (control modules, equipment’s modules, etc.) and providing configuration data, such as object name and description (i.e. V100, Tank 100 Inlet Valve), equipment set points, control interlocks, conditional inclusion (i.e. Has Diagnostics), etc. Once all the configuration, not programming is provided you will initiate a project build (ACD file) that you will be able to download to a controller to run. In addition, this lab will provide you the opportunity to create a new library object that includes Logix, FactoryTalk® View SE, FactoryTalk® Historian and FactoryTalk® Alarms and Events content. Work with ACM Library Designer and Library Object Manager to build and publish library objects into the ACM database. Create highly parameterized library objects for modular reuse and flexibility.

CL06  Studio 5000® Application Code Manager Project Execution and Library Management: Lab  2 hours
Quickly build your automation projects using the Rockwell Automation® Application Code Manager. This lab will provide you the opportunity to create project content by selecting library objects (control modules, equipment’s modules, etc.) and providing configuration data, such as object name and description (i.e. V100, Tank 100 Inlet Valve), equipment set points, control interlocks, conditional inclusion (i.e. Has Diagnostics), etc. Once all the configuration, not programming is provided you will initiate a project build (ACD file) that you will be able to download to a controller to run. In addition, this lab will provide you the opportunity to create a new library object that includes Logix, FactoryTalk® View SE, FactoryTalk® Historian and FactoryTalk® Alarms and Events content. Work with ACM Library Designer and Library Object Manager to build and publish library objects into the ACM database. Create highly parameterized library objects for modular reuse and flexibility.

CL07  Studio 5000® Application Code Manager with Machine Builder Libraries: Lab  2 hours
Experience how to instantiate Machine Builder Libraries from Application Code Manager and features such as hardware abstraction, virtualization and enhanced diagnostics.

CL08  Design For Reuse: Increase Your Productivity with Modular Programming  2 hours
Modular programming is a way to increase your productivity by using reusable logic and objects. This session will cover the basics of modular programming from development to deployment. Come see what Rockwell Automation has to offer! The session includes both instructor-led demonstrations as well as hands-on activities.

CL09  CompactLogix™ 5380 Controller: Hands-on Experience  1 hour
Looking for high performance in a small controller form factor? Come experience the scalability of our Integrated Architecture® system with the CompactLogix™ 5380 controller and Compact 5069 I/O, all presented and navigated using the new PanelView™ 5500 operator interface.
**CL10**  CompactLogix™ 5480 Controller: Hands-on Experience  
1 hour
This session will introduce and demonstrate the capabilities of our new CompactLogix™ 5480 controller. Learn the power of Logix and Windows in one controller. The presentation will cover target applications, teaching the value provided by the features.

**SYSTEM**

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**CL11**  Hazardous Area Applications: Advantages of Intrinsically Safe Distributed I/O  
1 hour
Intrinsic safety is a commonly used explosion protection method. This presentation will review key considerations for equipment in hazardous areas and specifically illustrate the advantages of using intrinsically safe 1719 Ex I/O as a solution for explosion protection.

**SYSTEM**  **PROCESS**

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**CL12**  Smart Devices: Helping Design, Operate and Maintain The Connected Enterprise  
1 hour
Smart devices deliver real-time control and information that feeds up through your smart connected plant. This session will give an overview of how our smart “edge” devices help contribute to the success of your operations during the design, operation and maintenance of your operations.

**SAFETY**  **NETWORKS & SECURITY**

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**CL13**  Smart Sensing: Hands-on Lab  
2 hours
This lab highlights Allen-Bradley® smart sensors and how they enable The Connected Enterprise by providing seamless visibility of your processes through the Integrated Architecture®. Attendees will experiment with these new Allen-Bradley sensing technologies and find out how they can apply specific features to solve sample applications.

**SYSTEM**  **NETWORKS & SECURITY**

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**CL14**  Integrated Motion on EtherNet/IP: Solution Overview  
1 hour
This session introduces the latest additions to the Integrated Motion on EtherNet/IP product portfolio, and a preview of upcoming products and features. New products that will be highlighted include the ControlLogix® 5580 controller, 5069 Compact I/O™ platform, Kinetix® 5700 servo drives, iTRAK® intelligent transportation system, VPC line of motors, and the PowerFlex® 527 AC drive. A demonstration of the design, configuration, programming, and commissioning of an Integrated Motion on EtherNet/IP system will highlight the key new features of the system.

**SYSTEM**  **SAFETY**

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**CL15**  Integrated Motion on EtherNet/IP: Basic Lab  
2 hours
Learn how to configure, program and commission a CompactLogix® 5370 controller with integrated motion on EtherNet/IP using the new Kinetix® 5500 servo drives and PowerFlex® 527 variable frequency drives.

**SYSTEM**  **SAFETY**

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**CL16**  Integrated Motion on EtherNet/IP: Advanced Lab  
2 hours
This hands-on lab showcases how our Integrated Architecture® system takes motion to the next level. This session will be based on the new ControlLogix® 5580 controller, 5069 Compact I/O™ and Kinetix® 5700 servo drives and demonstrates how they combine to boost motion performance to unprecedented levels.

**SYSTEM**  **SAFETY**

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**CL17**  Enhancements in Induction Motor Control Performance with TotalFORCE™ Technology  
2 hours
This session will introduce you to TotalFORCE™ technology—new control capabilities for PowerFlex® 755T drives that responds to changes in operating conditions with adaptive control and provides real-time monitoring of drive components and motor health. Learn how these smart devices can help keep you producing and prevent downtime.

**TECHNOLOGY & SERVICES**

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**CL18**  What’s New in Connected Components Workbench™ Software?  
1 hour
Learn about the new features in Connected Components Workbench™ software which assist in reducing design and setup time of small machine applications by being able to configure and program multiple devices in the same project. This includes Micro800® Controllers, PanelView™ 800 Graphic Terminals, PowerFlex® Drives and Guardmaster® safety products.

**SYSTEM**

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**CL19**  Connected Components Workbench™ Software Lab  
2 hours
This lab will provide hands-on experience with basic programming of a Micro800® controller, a PowerFlex® Drive and the PanelView™ 800 Graphic Terminal. You will learn about the new features in Connected Components Workbench™ software such as sockets programming, run mode address change, and improved cross-reference browser.

**SYSTEM**
Session Descriptions

**CONTROL (CONT.)**

  1 hour
  This session demystifies the oft-overlooked functions and complexities of the power and temperature control loop with special consideration for SCR power efficiency, accuracy, reliability, I/O compatibility, connectivity, ease of integration with tools like an AOP, and overall intuitive system use.

* **CL21**  Molex: Using Simulation Software to Optimize Control System Deployment and Commissioning  
  1 hour
  Utilizing I/O Simulation allows for control system errors to be swiftly identified in a non-field environment, allowing new processes to be implemented and commissioned quickly and accurately thereby avoiding the high cost of production downtime.

**INFORMATION**

**IN01**  Driving Positive Business Outcomes with Information Solutions  
  1 hour
  Learn how Information Solutions help to maximize the value of production operations in any industry. New offerings help you connect people, processes and technology in ways never before possible. Explore how innovative operations management solutions, scalable analytics tools, a collaboration app, and connected services work together in a Connected Enterprise.

**VISUALIZATION**

**IN02**  FactoryTalk® VantagePoint® EMI: Analytics in 50  
  1 hour
  What kind of analytics are possible within FactoryTalk® VantagePoint® now that FactoryTalk® Historian includes Asset Framework and Event Frames? In just 50 minutes, learn how to perform basic analytics and develop content for mobile devices, tablets or at your desktop with ControlLogix®, FactoryTalk Historian, VantagePoint EMI and an information engineer.

**IN03**  Gain Meaningful Insights to Production by Associating Multiple Data Sources  
  1 hour
  Gaining analytics insights that extend beyond single-equipment performance requires looking at multiple sources of data in a combined way. It’s becoming common for companies to look at manufacturing data combined with safety, product field performance, warranty data, and other non-traditional content. Learn how to build a strategy through actual examples.

**IN04**  FactoryTalk® VantagePoint® EMI Lab: Introduction to Analytics  
  2 hours
  Learn how to take advantage of The Connected Enterprise by integrating and accessing data from Rockwell Automation systems with FactoryTalk® VantagePoint® EMI. In this introductory lab, you’ll explore the key building blocks and analytic capabilities of FactoryTalk VantagePoint, and build a mobile dashboard using data from FactoryTalk® Historian’s Asset Framework.
IN05  FactoryTalk® VantagePoint® EMI Lab: Advanced Analytics  2 hours
Learn how to leverage FactoryTalk® VantagePoint® EMI to turn raw data into actionable information including trends, golden batches and dashboards. This session includes FactoryTalk® Historian Asset Framework and Event Frames, SQL CLR, Eventing and SQL Reporting Services, post-SQL processing, SQL CLR application, model building techniques and others.

IN06  FactoryTalk® Historian Site Edition: Architectures and Design Considerations  2 hours
Let us help you better understand the design and operational characteristics of a site-level historian solution based on OSI PI Server technology. Advanced topics include interface redundancy and high availability.

IN07  FactoryTalk® Historian SE: Basic Lab on Data Collection and Reporting  2 hours
Experience FactoryTalk® Historian SE firsthand as you learn the basic elements of system configuration, data collection and reporting tools. In this lab, we will explore Asset Framework as a mechanism for structuring your data to better align with the equipment (or assets), and how to build reports in FactoryTalk® VantagePoint®.

IN08  FactoryTalk® Historian Site Edition: Advanced Lab  2 hours
Choose your favorite(s): Topics include configuring interface redundancy and data buffering, tools and methods for backfilling data into the archive, and, new this year, using Asset Framework and Event Frames for reporting in VantagePoint®. Attendees should have a working understanding of FactoryTalk® Historian SE to maximize the experience.

IN09  Energy Analytics Using FactoryTalk®  2 hours
Learn how to utilize FactoryTalk® EnergyMetrix, FactoryTalk® Historian and FactoryTalk® VantagePoint® to reduce costs and improve energy efficiency in your facility. You’ll learn basic EnergyMetrix configuration and various techniques to develop analytics using FactoryTalk Historian and FactoryTalk VantagePoint.

IN10  Overall Equipment Energy Efficiency (OE³)  1 hour
Learn how to apply standard techniques for determining equipment efficiency that you can factor into energy analytics. You will learn how to determine what percentage of your energy consumption results in productive versus non-productive consumption.

IN11  Achieve Your Connected Enterprise Vision with Scalable Operations Management  1 hour
Traditional operations management is often an all-in, enterprise-wide solution. Learn how many smart manufacturers are starting small, addressing specific manufacturing challenges like quality, machine performance or track/trace and genealogy. They’re implementing scalable, fit-for-purpose apps at a machine or work area, then scaling to a full MES as they realize ROI.

IN12  Increase Operations Efficiency and Profitability Using Configurable Workflows  2 hours
Smart manufacturers are addressing specific production challenges using fit-for-purpose applications that scale easily for improved ROI and flexible deployment. Learn how to use the Production app to manage build plans and track materials and consumptions using configurable workflows.

IN13  Increase Operational Flexibility With Data-driven Decisions for Easier Compliance  2 hours
Smart manufacturers are addressing specific production challenges using fit-for-purpose applications that scale easily for improved ROI and flexible deployment. Learn how the Quality app provides automated information gathering and reporting to help you achieve regulatory compliance, enforce quality standards and easily configure quality recipes and escalation plans.
IN14  Better Manage OEE for More Efficient and Profitable Operations  2 hours

Smart manufacturers are addressing specific production challenges using fit-for-purpose applications that scale easily for improved ROI and flexible deployment. You’ll learn how to measure and analyze performance so you can take appropriate corrective action to maximize operations.

IN15  Scalable Analytics Overview  1 hour

In an Industrial Internet of Things, is your aim to collect data or to gain insight? Learn how FactoryTalk® Analytics tools speed time to insight by connecting to and modeling processes, then validating, calculating and presenting actionable insights to key stakeholders at all levels of an organization and operation.

IN16  Performance and Analytics Cloud for Machine Builders  1 hour

Learn how the new FactoryTalk® Analytics for Machines software provides machine builders with information they need to help their end users run their machines at top performance. Review challenges faced by both machine builders and end users and understand how this cloud-based information solution enables both partners to maximize value.

IN17  Health and Diagnostics at Your Fingertips  1 hour

Learn how to apply our analytics appliance to real-world scenarios to diagnose issues and make your engineers more productive. You’ll see how easy and intuitive the product is to use, and have a chance to interact with the Shelby bot built inside!

IN18  eRPortal Software: Leveraging The Connected Enterprise and Maximizing Machine Uptime  1 hour

Using eRPortal’s condition based Workflow and CMMS™ software solutions, PlantPAx®/FactoryTalk® tags trigger predictive work orders and notifications, FactoryTalk® ProductionCentre® and FactoryTalk View operators create work orders, move assets to off-line or down states and trigger upcoming PMs. And Rockwell Automation Distributor stocking levels are exposed, based on the geographic location of work orders, facilitating immediate procurement of non-stocked items required.

IN19  Microsoft: Industrial Analytics with Rockwell Automation – Power BI, Azure, Machine Learning and BOTS  1 hour

This session will provide you with a quick overview of several key Microsoft analytics technologies, and how they’re being applied in manufacturing to address a wide array of challenges. We’ll also review how these technologies are being integrated into the Rockwell Automation portfolio and some use cases for them. This will be a joint presentation between Microsoft and Rockwell Automation.

IN20  OSIsoft: Operational Data Infrastructure for The Connected Enterprise  1 hour

Optimized for manufacturing data collection from Rockwell Automation centric controls, machines and work cells with seamless integration to an OSIsoft Enterprise Infrastructure are designed to empower personnel at all levels with insight and analytics to more effectively address productivity, quality, environmental, energy and other business improvement initiatives.

IN21  Softing: Purpose-built Data Exchange Modules for ControlLogix®  1 hour

Modules optimized for database to ControlLogix® data exchange or for providing OPC UA Server connection augment The Connected Enterprise with complementary connectivity. Learn about Softing’s tManager and OPC UA Server modules in this session.

IN22  Spectrum Controls: Power Monitoring of Single Phase Loads for Your ControlLogix® Controller  1 hour

Measure real-time power consumption or production for electric arc furnace electrodes, glass furnace electrodes, large motors, solar power systems, wind turbines, etc. Wherever you have a ControlLogix® I/O rack you can now monitor up to eight single phase installations with a single module.

IN23  SyTech: Automate Regulatory and Compliance Reports  1 hour

Are you tired of spending valuable time each month creating regulatory reports? Do you need operational information to help improve the overall plant efficiency? This session demonstrates how XLReporter is used in industry, such as regulatory reports for Water/Wastewater.
**NETWORKS & SECURITY**

**NS01  Fundamentals of EtherNet/IP**
**Network Technology**

2 hours

Learn the capabilities and features of EtherNet/IP, including an overview of networking technology and terminology. Learn how the Common Industrial Protocol (CIP) fully uses the Open Systems Interconnection (OSI) reference model and the value of supporting standard Ethernet and Internet Protocol (IP) network technology.

**NS02  Design Considerations for Reliable**
**EtherNet/IP Networking**

2 hours

This discussion will review the considerations to help you design and deploy a scalable, reliable, safe and future-ready EtherNet/IP network infrastructure. Topics will include segmentation techniques, data prioritization, resiliency, structure and hierarchy. A prior understanding of general Ethernet concepts, or attendance of the NS01 - Fundamentals of EtherNet/IP Network Technology session is recommended.

**NS03  Fundamentals of CIP (EtherNet/IP)**
**Packet Delivery Process**

2 hours

Have you ever wondered how a CIP packet traverses a switched and routed network infrastructure? This discussion reviews the encapsulation/decapsulation process and network services such as ARP required to successfully deliver a CIP packet across a network infrastructure. A prior understanding of general Ethernet concepts, or attendance of the NS01 - Fundamentals of EtherNet/IP Network Technology session is recommended.

**NS04  Improve Visibility and Diagnostics of Your**
**Network with Network Management Software**

1 hour

In this session, learn about the new Network Management Software (NMS) from Rockwell Automation can help improve your industrial network visibility and troubleshooting procedures by providing intuitive network information within context of the automation system designed for the non-IT personnel. Easily discover plant floor assets, automatically create “as-built” topology of managed switches and devices, with live device centric views for real-time configuration. In addition, NMS can monitor the network for alarms, events and audits which are automatically captured and can provide for easy historical analysis. This session combines presentation with an instructor-led demonstration of NMS.

**NS05  Building Converged Plantwide Ethernet**
**Architectures**

1 hour

Learn why and how to use reference architectures to build a scalable, reliable, safe, secure and future-ready network infrastructure. This discussion provides an overview of the Cisco and Rockwell Automation® Converged Plantwide Ethernet (CPwE) architectures. Learn what defines a reference architecture, why they’re important and how these architectures combined with products, services and solutions support successful deployment of The Connected Enterprise. A prior understanding of general Ethernet concepts, or attendance of the NS01 - Fundamentals of EtherNet/IP Network Technology session is recommended.

**NS06  Deploy Resilient Network Architectures**
**for The Connected Enterprise**

2 hours

Optimization of your plant-wide architecture requires a network infrastructure that is scalable, reliable, safe, secure and future-ready. Learn about the Cisco and Rockwell Automation® CPwE resiliency framework and multiple resiliency protocols, including DLR, REP, VSS, StackWise, PRP, and others using Stratix® and Catalyst switches. Prior attendance of the NS05 - Building Converged Plantwide Ethernet Architectures session is recommended.

**NS07  Deploying 802.11 Wireless Networks in**
**Converged Plantwide Ethernet (CPwE) Architectures**

2 hours

Plant-wide architectures increasingly use IEEE 802.11 wireless networks for critical Industrial Automation and Control System (IACS) applications. This discussion reviews the wireless LAN (WLAN) design and implementation considerations within the Cisco and Rockwell Automation® CPwE architectures. Learn about the CPwE WLAN framework, Unified vs. autonomous WLAN, EtherNet/IP application consideration for wireless media, and Stratix® 5100 Access Point (AP) / Workgroup Bridge (WGB).

**NS08  Identity, Mobility and Location-based**
**Services in Converged Plantwide Ethernet (CPwE)**
**Architectures**

1 hour

Mobile platforms and applications play a critical role in The Connected Enterprise. A defense-in-depth security approach requires enforcement of authentication and authorization policies for users of mobile devices running applications such as FactoryTalk® TeamONE™. This discussion reviews the use cases and design considerations to successfully deploy Identity and Mobility Services within the Cisco and Rockwell Automation® CPwE architecture using the Cisco Identity Services Engine (ISE) and Unified WLAN. It also introduces Location-based Services for mobile devices using Cisco wireless infrastructure.

SYSTEM

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**Session Descriptions**

**NETWORKS & SECURITY (CONT.)**

**NS09** Applying EtherNet/IP Network Features for High Performance Machine-level Architectures  
2 hours
This discussion reviews the considerations in successful design and deployment of high-performance EtherNet/IP features such as: Gigabit Ethernet, Direct Device Level Ring (DLR) to meet machine level network topology needs, Network Address Translation (NAT) to enable application code reuse. Discussions will also include recommendations for architectures that include real-time applications such as motion control and switch selection considerations. A prior understanding of general Ethernet concepts, or attendance of the NS01 - Fundamentals of EtherNet/IP Network Technology session is recommended.

**NS10** Infrastructure as a Service (IaaS), Optimizing Your Capital with Pre-engineered Solutions  
1 hour
This session will demonstrate how pre-engineered solutions offered as a service can provide proven Industrial Data Center and IT/OT network packages with minimal capital expenditure. Gain understanding of how IaaS eases the burden of maintenance, administration, warranty, and software license management. Learn how the services offered with pre-engineered solutions minimizes risk in all phases of a project’s lifecycle.

**NS11** Build Your Skills on Designing Cell/Area Zones with Hands-on eLearning  
2 hours
Cisco, Panduit and Rockwell Automation have collaborated to develop an industrial network design eLearning training program to help teach the critical design skills needed to build your plantwide network. In this session, you will get a brief introduction on the importance of designing a robust cell/area zone from the course authors. The majority of the time will be hands-on learning, where you can select from a variety of topics featured in the new course, including wireless, segmentation, and network topologies.

**NS12** Basic Stratix® Switch and EtherNet/IP Features in Converged Plantwide Ethernet (CPwE) Architectures  
2 hours
This hands-on lab will cover a variety of techniques and best practices using EtherNet/IP, including Stratix® 5700 and Stratix® 8000 hardware familiarization. It will demonstrate how to configure Stratix switches using the Device Manager, the AOP and controller tags in Studio 5000®, and how to use the Stratix FactoryTalk® View faceplates for diagnostics. It will also show configuration and diagnostics of a Device Level Ring (DLR) Topology.

**NS13** Advanced Stratix® Switch and EtherNet/IP Features in Converged Plantwide Ethernet (CPwE) Architectures  
2 hours
This hands-on lab will cover some of the advanced Stratix® switch features such as Network Address Translation (NAT), VLAN segmentation, Connected Routing, and switch resiliency and security. A prior knowledge of the basic EtherNet/IP and Stratix switch features, or attendance of the NS12 - Basic Stratix Switch and EtherNet/IP Features in Converged Plantwide Ethernet (CPwE) Architectures lab is recommended.

**NS14** Cyber Security - Where and Why Do I Start?  
1 hour
Securing The Connected Enterprise requires a holistic defense-in-depth approach. This discussion will address various system level scenarios with consideration to the attack continuum: prevent, detect, and respond. Attendees will better understand how to best utilize the breadth of solutions offered by Rockwell Automation and our partners. In addition, learn about developing standards and regulations around security and the Rockwell Automation approach for building security into their products.

**NS15** Logix Security for Machine Builders and End Users  
1 hour
Studio 5000 Logix Designer® is introducing a new way to control access to selected routines and add-on instructions using software licensing technology. Additionally, FactoryTalk® Security can now be used by machine builders and end users to enforce policies for accessing controllers and content. Come and learn about these new capabilities.

**NS16** Deploy Secure Network Architectures for The Connected Enterprise  
2 hours
Protecting industrial control and automation system (IACS) assets requires a holistic defense-in-depth security approach, which addresses internal and external security threats. This discussion reviews the security design and implementation considerations within the Cisco and Rockwell Automation® CPwE reference architectures. Learn about the architectural security framework, identity services, IDMZ, Stratix® 5950 and Cisco Adaptive Security Appliance (ASA) firewall solutions to help you improve the availability, integrity and confidentiality of your network architecture. Prior attendance of the NS05 - Building Converged Plantwide Ethernet Architectures session is recommended.

With continuing convergence of plant-floor EtherNet/IP and enterprise Ethernet networks, there are opportunities for better business decisions but also challenges associated with cyber security. Because of the openness of EtherNet/IP networks, configuration and architectural design must be secured and hardened. Plant-wide deployment of the Stratix® 5950 security appliance helps to secure and harden EtherNet/IP networks and creates smaller zones of trust. In this advanced hands-on lab, the Stratix 5950 will be configured to restrict and inspect EtherNet/IP network traffic using Industrial Firewall (IFW) and CIP Deep Packet Inspection (DPI™) technologies. Lab content will also review considerations to develop an industrial security policy for plant-wide architectures.

Security Features for OEMs to Manage Policies and Protect Intellectual Property 2 hours

This scenario-based session will explain a variety of OEM-based security concerns addressed by the latest hardware and software feature enhancements. These features will help machine builders protect their Intellectual Property and enforce policies for accessing controllers on deployed machines.

Introduction to the Design and Implementation of FactoryTalk® Security in a Distributed Control System 2 hours

Learn how to design and build a FactoryTalk® Security infrastructure to secure and manage access and resources in your control system. In this lab you will learn how to: configure FactoryTalk Security for the first time after a default installation; configure users and groups, system policies, and secured actions in the FactoryTalk® Administration Console to manage access control and permissions; and have an opportunity apply basic security restrictions to Studio 5000 Logix Designer® projects. Topics include introduction to FactoryTalk® Directory, user/group management, setting security policies in the FactoryTalk Directory, and understanding Single Sign On.

Advanced Design, Management, and Implementation of FactoryTalk® Security in a Distributed Control System 2 hours

In this lab, you will take an existing FactoryTalk® Security configuration and extend that functionality to implement new roles and responsibilities within distributed FactoryTalk® solutions. You will also be able to pick from several common security scenarios, explore solutions to and make decisions on how to proceed to protect their distributed control system and intellectual property contained in Studio 5000 Logix Designer®, FactoryTalk® View, and FactoryTalk® AssetCentre. Topics include multiple methods for securing Studio5000 Logix Designer projects and content, Guest Access, Temporary User Access and Privilege Escalation, FactoryTalk® View SE Runtime Security, Change Management for ControlLogix® Programmable Automation Controllers.

Cisco: Digital Manufacturing Solutions in Practice 1 hour

See how Cisco solutions have been implemented around the world to improve asset availability, performance, and quality. Understand the customer challenges experienced through real case studies and how they were overcome to achieve outstanding business outcomes. Converged Plantwide Ethernet (CPwE), Connected Factory, Factory Wireless and other solutions will be covered.

Claroty: Getting Deep Packet Inspection (DPI™) to Work for You 1 hour

Today the OT environment faces many challenges: an increasing density of connected devices on the plant floor, evolving threats, and the increasing complexity of skillset required to manage cyber risk. These challenges require visibility across all levels of the OT environment, anomaly detection with actionable alerts designed to reduce mean time to respond and recover from events that may impact your OT systems.

Data-Link Group: SCADA Installations: Unique Topography + Wireless I/O = User Satisfaction 1 hour

A significant advancement has been the incorporation of wireless communications for transferring I/O data. By rethinking options for I/O SCADA projects, short and long-range wireless data transfer that is robust and reliable can be done using a flexible topology.
**Session Descriptions**

**NETWORKS & SECURITY (CONT.)**

* **NS24**  **HMS Industrial Networks: Optimize Your Remote Access Solution with eWON Cosy**  
  1 hour  
  Discover how to reduce machine downtime, provide enhanced customer support, and cut maintenance costs. Learn how to properly configure your eWON Cosy for remote PLC troubleshooting and programming.

* **NS25**  **Owl Computing: Data Diode Cybersecurity Protects and Replicates FactoryTalk® Historian**  
  1 hour  
  Owl Computing worked together with a distributor to provide a data diode-based cyber security solution for the Department of Energy. Operating in The Connected Enterprise, a data diode was used to replicate the FactoryTalk® Historian and protect against all cyber threats.

* **NS26**  **Panduit: Best Practices for Network Design and Deployment and Success Stories**  
  1 hour  
  Learn the vital importance of the underlying network infrastructure for industrial automation and how best to design and implement it. Learn what are the many considerations and necessary elements of its design, both logical and physical. Then, from real world experience, learn what are the best practices for coupling the logical and physical design, managing the entire project lifecycle – from assessment to design to deployment and leveraging the ecosystem made up of Distributors, Installers, Integrators, Rockwell Automation, Cisco and Panduit to deliver a robust network fabric solution, locally and globally.

* **NS27**  **Phoenix Digital: Delivering Redundant, Fast and Highly-available Industrial Networking Systems**  
  1 hour  
  This presentation will provide examples of high-availability servers used along with redundant, high-availability networking hardware that fosters acceptance within the maintenance and operations staff to deliver more connected devices with minimal complexity, high-availability and improved security.

* **NS28**  **ProSoft Technology: Phased Modernization Techniques: Modernize on Your Maintenance Budget**  
  1 hour  
  Sustaining operations of your existing system is critical to maintain profitability. Learn how ProSoft Technology can help extend the life of your existing Remote I/O network by upgrading existing drives, PanelView™ and FLEX™ I/O adapters to EtherNet/IP with minimal scheduled downtime and without modifying the PLC code.

* **NS29**  **Tempered Networks: Simplify and Secure ICS Networks with Crypto Identities**  
  1 hour  
  Overcome age-old networking and security challenges by giving your devices and endpoints a unique crypto-identity (CID), instead of using spoofable IP addresses. Instantly provision, connect, disconnect, revoke or quarantine any connected resource through simplified point-and-click orchestration of CIDs at scale.

* **NS30**  **Tripwire, Inc: Unobtrusive Cyber Security with Tripwire and Rockwell Automation® Asset Center**  
  1 hour  
  This session discusses the three keys to ICS security success; an approach that enhances the reliability and resiliency of systems without jeopardizing safety or availability. Learn how the Tripwire and Rockwell Automation integration helps industrial organizations reduce cyber security and compliance risk.
PR01  PlantPAx® System - What’s New & What’s Next  1 hour
In this session, you will hear a brief overview of the PlantPAx® distributed control system. You will then discover the latest release of features. Each feature will be detailed in full including the benefits of the modern DCS approach compared to traditional DCS systems.

PR02  Defining and Sizing PlantPAx® Systems - Best Practices and What’s Coming  1 hour
Proper use of the PlantPAx® System Estimator helps ensure your system is designed for optimal performance. In this session you will learn about the latest tools, capabilities and guidelines provided by Rockwell Automation to help you define and size the appropriate PlantPAx system architecture based on your project requirements. We will review the latest system and architecture rules, as tested in our characterization lab. We’ll also examine new capabilities offered in the PlantPAx System Estimator including the use of new capabilities such as MCC integration and advanced sizing features to help you carry out and confirm proper sizing for new systems as well as system expansions. You will also get a preview of upcoming features that will provide you more flexibility to define and size systems for a wider range of system requirements.

PR03  Implementation of PlantPAx® Systems - Best Practices and What’s New  2 hours
Engineering efficiency and consistent delivery are key topics for implementing any DCS successfully. Learn how to bring the Rockwell Automation® Modern DCS to the market faster using the latest capabilities and guidelines for implementation of the PlantPAx® Modern DCS. This session covers ways to deploy your PlantPAx system efficiently using tools that increase productivity, and leverage best practices from field experience. See the new capabilities provided by the latest PlantPAx System release and get a preview of what’s coming in future releases.

PR04  Exploring the Functionality of the Rockwell Automation® Library of Process Objects  2 hours
The Rockwell Automation® Library of Process Objects lets you quickly develop process solutions with rich functionality and known performance. In this session, objects in the library and their functions within a typical process control system will be presented, common library features such as modes, alarms, and features for operations, maintenance and engineering personnel will be explained and new features for the 3.5 library release will be highlighted. Walk away knowing how to more effectively develop, operate and maintain process systems.

PR05  Development and Management with the Rockwell Automation® Library of Process Objects  1 hour
Get your products to market faster using new tools that simplify the creation and deployment of library components. See how some features of the library and new creation tools and graphical configuration tools will help reduce the work required when adding, configuring, and maintaining your application library content. Topics will include deploying library content using enhancements to Logix Designer, as well as new tools available to simplify the customization of that content for your project.

PR06  PlantPAx® Process Application Development  2 hours
In this hands-on lab, we will focus on control and visualization aspects of PlantPAx® DCS. Here you will develop a process application using PlantPAx Process Strategies. Once you have completed the setup of your controller and HMI, you will continue to build out your application by adding and configuring controller code and FactoryTalk® View SE graphical elements from the Rockwell Automation® Library of Process Objects v3.5. Come and learn about how PlantPAx 4.0 leverages Studio 5000 Architect®, Logix Designer features such as the Logical Organizer and Program Parameters and FactoryTalk View SE features such as Alarm grouping and Alarm Roll-up.

PR07  Saving Time: Tools to Help Deploy and Maintain a PlantPAx® DCS  2 hours
In this hands-on lab, we will focus on the use of the PlantPAx® Alarms Builder and Tag Data Edit Tool. In performing this lab, you will gain additional experience with techniques that improve productivity and efficiencies in process application development. Come and learn how this tool saves you time, helps you decrease errors and helps you promote consistency to your customers and users.

PR08  Administration and Maintenance of PlantPAx® Systems - Best Practices and What’s New  1 hour
Are you looking for guidance on keeping your system current and healthy? Learn the latest guidelines and tools for the administration and maintenance of the PlantPAx® System. See new guidance and tools being provided this year and get a preview of what’s coming in future releases.
Session Descriptions

**PROCESS (CONT.)**

**PR09  Deploy and Manage a Virtualized PlantPAx® System** 1 hour

Virtualization has become a clear path towards increasing the life of your control system and facilitating your ability to maintain it and secure it. Additionally, the ability to confidently deploy a virtualized PlantPAx® system is increasingly important as we look for ways to optimize computing resources and increase system uptime. In this session, you will learn about how to deploy and manage a complete virtualized PlantPAx system using the PlantPAx Virtual Image Templates, VMware vSphere and the proper Microsoft and Rockwell Automation licenses.

We will review available tools and documentation as we deploy a demo system and address common concerns surrounding this great technology. This session is designed to help you consider a virtual architecture as you approach your next control system deployment.

**SYSTEM**

**PR10  Securing and Connecting Your PlantPAx® Systems to the Enterprise: Best Practices** 1 hour

Integrating your PlantPAx® systems with your enterprise enables better visibility and collaboration that can help improve your bottom line. In this session, you will learn best practices to make this integration happen, including standard reference architectures and the latest in security and application guidelines. Discover how these capabilities align with The Connected Enterprise, as well as implications of establishing an enterprise data infrastructure and/or cloud-based applications.

**SYSTEM**

**PR11  Build a Connected Enterprise with Smart Information Through PlantPAx® Field Device Networks** 1 hour

Learn how smarter field devices can improve system output. Leveraging The Connected Enterprise and smarter field devices can improve understanding of how your plant is performing, making productivity adjustments easier to find, and improving overall system uptime and output. PlantPAx® field device networks are a key component to The Connected Enterprise and can simplify integration and provide key data and make instrument replacement easy and fast.

**SYSTEM**

**PR12  Plantwide Control with PlantPAx® DCS Integration of PowerFlex® Drives and CENTERLINE® MCCs** 1 hour

Better and smarter information is key, and access to information is reliant on how your process control system integrates with smart devices. This session will highlight the premier integration experience of PlantPAx® with our power control devices – including PowerFlex® drives and CENTERLINE® MCCs – and how this not only reduces your time and effort to get your system configured, but can provide operational benefits as well.

**CONTROL  SYSTEM**

**PR13  High Availability in Process Control Systems** 1 hour  
In this session, you will learn how to achieve the high availability in PlantPAx® system that best matches your needs, from the I/O level up to the supervisory level.

**CONTROL  SYSTEM**

**PR14  Batch Management: Overview and What’s New and What’s Next** 1 hour

The Rockwell Automation® modern batch solution leads to new productivity gains through ground breaking new products. This session explores the features and all new capabilities of FactoryTalk® Batch Version 13 software. It also provides an overview of new offerings such as controller-based sequencing with the SequenceManager™ solution and new mobility capabilities with FactoryTalk® Batch View™ software. The session will also provide a preview of upcoming features and capabilities of the Rockwell Automation portfolio of batch and sequencing products.

**SYSTEM**

**PR15  Enhance Operating Effectiveness with New FactoryTalk® Batch View and eProcedure®** 2 hours

Modern batch systems provide for new flexibility and improved workflows through intuitive, dynamic interfaces. Learn new ways to increase operational flexibility through the new mobile enabled FactoryTalk® Batch View™ offering from Rockwell Automation. Set up and use the new FactoryTalk Batch View product to control batches, change active steps, and perform manual instructions through eProcedure®.

**SYSTEM**

**PR16  Controller-based Batching Using SequenceManager™** 2 hours

Modern batch systems must account for the growing need for architecture flexibility, true distribution of control, and scalable solutions. SequenceManager™ provides batch sequencing in the Logix family of controllers, adding power capability closer to the process, and opening new possibilities for skids, off network systems, and single unit control. This session will allow you to configure and run SequenceManager in Logix Designer, ViewSE, and deploy batch reports.

**SYSTEM**
PR17  Truly Distributed Batch: Deploying Controller-based Sequences with FactoryTalk® Batch  
2 hours

Modern batch systems must provide for flexible architecture and distribution of batch execution. SequenceManager™ opens new possibilities for skids, off network systems and single unit control. Learn how to integrate these systems to a plantwide batch system by utilizing SequenceManager sequences in the controller with the all new FactoryTalk® Batch 13.

SYSTEM

PR18  Alarm Management with PlantPAx®  
2 hours

This hands-on lab will use the capabilities of PlantPAx® Alarm Builder to exchange alarm information with our new Encompass™ Partner Exida’s software package, SILAlarm. You will examine and correct poorly defined alarms in an existing PlantPAx® system by performing an Alarm Rationalization exercise that will result in the creation of a Master Alarm Database. Through this lab you will ultimately improve alarm performance by applying concepts defined in the ISA 18.2 standard.

SYSTEM

PR19  PlantPAx® MPC: Optimization in the Logix Chassis For Easy Deployment  
2 hours

The operational benefits realized from Model Predictive Control (MPC) are significant and show rapid project returns. This lab will familiarize users with the Rockwell Automation® new Logix chassis-embedded MPC product, which helps to improve overall production line performance on quality, energy, capacity and yield. The user will have two options to select either how to build and implement this powerful, simpler to use, embedded MPC or how to leverage the new Process Library MPC Accelerator tools to support deployment.

SYSTEM

PR20  Real Time Energy Optimization: Dispatch Chillers, Pumps, Turbines, Boilers and Compressors Intelligently and Automatically  
1 hour

FactoryTalk® Analytics Real Time Optimization uses equipment models trained to match your plant automatically to select what units to run and how hard to meet your utility demand at minimum cost. This unique analytics product includes data reconciliation to manage missing or imperfect measurements, demand forecast models to calculate optimal dispatch over time avoiding too-frequent start or stops, and current pricing forecast as available to run equipment to a true optimum within operating limits. With very powerful optimization capabilities, automated scheduled model retraining means it is installed once fairly simply and takes care of itself over its lifecycle. There is nothing like this on the market to assure the right answer, over time to minimize energy costs with achievable targets at a centralized utility plant. It’s been deployed in both open- and closed-loop optimization solutions and tends between a 10-30% specific energy savings depending on decision complexity and optimization compliance.

INFORMATION SYSTEM

PR21  Process Safety Standards Review and an Application of the OptiSIS® Solution  
2 hours

This two-part session will first interpret the latest Standards and Certifications for Safety Instrumented Systems (SIS) and how Safety Integrity Levels (SIL) are calculated in various applications and industries. Then we will explore the OptiSIS® Packaged Solution which simplifies the deployment of SIS as a pre-built and pre-programmed system configured using cause and effect programming. We will have live units to help students walk through the configuration of a simple safety instrumented function.

SYSTEM

PR22  Migration Tools to Convert Your Legacy DCS and PLC-5® Systems to the PlantPAx® System  
1 hour

Are today’s optimization and innovation demands hampered by your old process control system? Is support for your legacy DCS diminishing? This session will explore the advantages of migrating your legacy DCS or PLC-5® – systems to the PlantPAx® system. You will learn about tools that are available from Rockwell Automation that can help you migrate your systems at a pace that’s comfortable for you.

CONTROL SYSTEM
Session Descriptions

**PROCESS (CONT.)**

*PR23*  Project Design Considerations for Integration of OEM Skid Equipment with PlantPAx® DCS  1 hour
Skid integration can cost as much as 50-70% of the skid acquisition costs. Learn best practices of how to plan and specify OEM skids based on your requirements to reduce these costs and ensure successful projects. Gain practical advice of how to leverage the modular capabilities of the system to implement integration for improved operations and to enable The Connected Enterprise.

**CONTROL SYSTEM**

*PR24*  Exploring New Features that Allow for Simulation and Offline Development Opportunities for Your PlantPAx® DCS  1 hour
This presentation will explore the features to connect non-production systems to your PlantPAx® DCS, such as a simulation system for FAT, Operator Training, and sandbox development systems. We will explore just-released capabilities for the Advanced Safety platform as well as the emulation capabilities for core process controllers.

**CONTROL SYSTEM**

*PR25*  Control Station: PID Controller Tuning: Addressing Sticky, Sluggish and Troublesome Loops  1 hour
Certain process dynamics are especially difficult to correct via tuning. This presentation explores those dynamics, how they hamper the controller’s response, and alternative approaches for addressing them. Included are real-world examples from basic materials, oil and gas, and consumer products.

*PR26*  Hardy Process: Checkweigher, Easy to Maintain, Modify and Integrate into a Connected Enterprise  1 hour
Hardy’s new checkweigher family delivers Open Source, Off-the-Shelf and Seamless Integration. By leveraging the Rockwell Automation® Premier Integration model, customers can maintain/enhance their checkweights to meet future needs. Using Studio 5000® environment and Allen-Bradley® hardware, equipment data, control and analytics are seamlessly integrated into plant-level and enterprise networks with all tags visible and available.

*PR27*  Mynah Technologies: Process Simulation... It’s More than Just Operator Training  1 hour
This presentation examines how the Mimic Lifecycle Dynamic Simulator and the PlantPAx® Virtual Plant can be used for control system testing, operator training, and more. New functionality in Mimic and Studio 5000® Logix Emulate™ to support projects will be discussed.

*PR28*  Pepperl+Fuchs: Introducing WirelessHART with EtherNet/IP Gateway and Add-On Profile  1 hour
WirelessHART is the only wireless standard approved for the process industry. This presentation will give an overview of the new WirelessHART technology and introduce the WirelessHART EtherNet/IP gateway and how it integrates into ControlLogix.*
SAFETY

SF01 Advanced Programming Techniques for Integrated Safety Applications 2 hours

Complex control applications involving safety, discrete, motion, information, and other disciplines are often best addressed using integrated programmable automation control systems. This lab will review considerations and advanced techniques for programming integrated programmable automation control systems (GuardLogix®) to address safety and productivity issues.

CONTROL

SF02 Developing Safety Applications Using Guardmaster® 440C-CR30 Software Configurable Safety Relay 2 hours

Small to intermediate safety applications are often addressed using configurable safety relays. This lab will introduce you to the Guardmaster® 440C-CR30 Software Configurable Safety Relay – built to meet PLe/SIL 3 requirements, and featuring 22 embedded safety I/O points, and EtherNet/IP for communicating diagnostic information to a Logix controller.

CONTROL

SF03 Safety System Connectivity: Reducing Costs, Downtime, and Injuries 2 hours

Connectivity is critical to keeping workers safer and more productive. In this lab, you’ll learn programming tips for safety devices in GuardLogix®, use of AOP’s for Safety Devices, design requirements for integrating additional CIP safety enabled devices, and the impact to the safety integrity of the system.

NETWORKS & SECURITY

SF04 Functional Safety Standards and the Changing Compliance Landscape 1 hour

This session will introduce you to functional safety standards and requirements that apply to automation equipment. Many are driven by the European Machinery Directive but are globally accepted. Understand the range of safety standards, their application, assignment of risk and performance levels, and tools available to help calculate machinery safety data.

SF05 Safety System Development Process and Configuration Tools Overview 1 hour

This session will show you how to dramatically reduce development time of safety systems using the Safety lifecycle and tools from Rockwell Automation. You’ll determine return on investment for safety projects, design safety systems and functions, select appropriate safety devices, and ensure that your system meets global safety standards.

CONTROL

SF06 Introduction to Machine Risk Assessment and Functional Specification Development 1 hour

Risk assessments are the basis for determining risks and corresponding mitigation. By properly identifying risks, more effective and suitable methods of safeguarding measures can be implemented. This session will showcase the process of performing plantwide audits and machinery risk assessments, and use of available tools to streamline the process.

CONTROL

SF07 Machinery Safety Control Selection: Relays to Integrated Control 1 hour

This session will cover the selection of Allen-Bradley® safety control solutions from relays to integrated control – including selection criteria for specific applications ranging from simple to complex, and tools to expedite and document the process.

CONTROL

SF08 Safety System Functional Design Considerations 1 hour

This session will review safety system design and functional specification focusing on safety function device and methodology selection. If you’ve ever wondered how best to safeguard a machine or to control access – light curtain? safety mat? scanner? – this session will cover key considerations to help ensure optimal safety and productivity.

SF09 Legal Considerations for Safety 1 hour

An ineffective safety solution can carry serious legal consequences for manufacturers and machine builders. Effective risk management practices should include potential legal considerations where worker safety is involved. This session will provide insight on best legal practices for safety automation, including considerations for product liability, compliance and documentation.
Session Descriptions

SAFETY (CONT.)

SF10  Improving Productivity Using Contemporary Safety Designs  
1 hour
As manufacturers look for innovative ways to improve productivity and reduce downtime, minimizing lockout/tagout with alternative measures can help them protect their workforce and improve productivity. Find out how designing machinery and control systems to take full advantage of these technologies can help you differentiate yourself from the competition.

CONTROL

SF11  Connecting Your Enterprise: Measures to Improve Both Safety and Productivity  
1 hour
As the manufacturing workforce evolves, safety and productivity risks increase. Improving both operational excellence and worker safety are paramount to addressing these risks. This session will discuss how identifying clusters of safety issues by geography or machine type, safely improving machinery throughput and plant performance can help address these key issues provided EHS and Engineering collaborate to formalize engineering requirements and processes.

INFORMATION

* SF12  Exida: Importance of ISA84/IEC61511’s Operation and Maintenance Requirements for SIS  
1 hour
Discusses how testing and documenting the performance of the SIS (failures, spurious trips, repair/replacements, proof testing results) is essential to ensuring that it is able to fulfill its designed functional safety requirements and to preventing systematic issues.
**SYSTEM**

**SY01** What’s New in the Integrated Architecture® System Hardware?  
This session introduces the new key products and features recently released and is a preview of future enhancements to the Integrated Architecture® system. Topics covered include updates to our Logix controllers, I/O, networking, safety and motion products.

**CONTROL INFORMATION**

**SY02** What’s New in the Integrated Architecture® System Software?  
Attend this session to learn about latest developments to Studio 5000®, our automation engineering and design environment. Hear where we are going, and how they can help reduce your engineering time, reduce risk, and increase your productivity.

**CONTROL INFORMATION**

**SY03** Studio 5000 Architect®: Introduction and Demonstration  
Attend this session to learn about Studio 5000 Architect®, the central point within the Studio 5000® environment. The session will cover what Architect is, where it is going, and how it can save time performing tasks with multiple controllers, HMI devices and applications.

**CONTROL**

**SY04** Studio 5000 Architect®: Building Your System Hands-on Lab  
This hands-on lab will introduce Studio 5000 Architect®, the central point within Rockwell Software® Studio 5000®. Learn how Studio 5000 Architect helps you build a system that includes FactoryTalk® View, PanelView™ Plus terminals, and Logix Controllers.

**CONTROL**

**SY05** TeamONE™ Application Platform: Hands-on Experience  
This interactive session will introduce and give first-hand experience of key features in the new FactoryTalk® TeamONE™ application platform. See how the “app” can help drive better team collaboration, monitor critical alarms and events, access latest device trends and gain insight through real-time analytics. This is a "BYOD" session so bring your own device and download the FactoryTalk TeamONE app beforehand to get the most from the session.

**CONTROL INFORMATION**

**SY06** ThinManager® Delivering and Managing The Connected Enterprise: Introduction  
ThinManager® is a powerful platform designed to simplify the way productivity content is delivered, and devices are managed within manufacturing environments. Learn how ThinManager can revolutionize everything from the plant floor to the control room, change the way you view mobility in those areas, and deliver and manage The Connected Enterprise today. In addition, this session will reveal what to look for in the 10.0 release due out later this year.

**CONTROL INFORMATION**

**SY07** ThinManager® Architecture and Best Practices: Discussion  
ThinManager® greatly simplifies content delivery and device management, but architecting such a system does not have to be challenging. This session will present ThinManager architectures and discuss best practices to assist you with your ThinManager deployments in The Connected Enterprise. Note: SY06 - ThinManager Delivering and Managing The Connected Enterprise: Introduction is a prerequisite for this session.

**CONTROL INFORMATION**

**SY08** ThinManager® Experience the Platform’s Power and Simplicity: Basic Lab  
This lab introduces the primary building blocks of the ThinManager® platform while demonstrating its ease of use and flexible content delivery options within a FactoryTalk® environment. This session includes hands on training with the latest Rockwell Automation® industrial grade box thin client, the VersaView® S200.

**CONTROL INFORMATION**

**SY09** ThinManager® From New Server to Completed Deployment: Advanced Lab  
This lab will start with a fresh Windows Server 2012 R2 build and work through all of the steps necessary, including installing and configuring Remote Desktop Services, to build a complete ThinManager® deployment. Along the way, you will also be introduced to some advanced ThinManager features. Note: SY08 - ThinManager Experience the Platform’s Power and Simplicity: Basic Lab is a prerequisite for this lab.

**CONTROL INFORMATION**

**SY10** RAPID Line Integration™ Solution Overview with Demo  
This session combines presentation with presenter-led demonstration of the RAPID Line Integration™ Solution. Gain a better understanding of how RAPID can help to enable manufacturers to improve line integration and production of discrete manufacturing production by improving cost and time savings to start-up lines, achieving a standardized approach for plant floor data access, visibility, best practices, and potentially increasing production by driving Overall Equipment Effectiveness information to provide actionable information to the operators on the plant-floor. Reduce customization and “black box” applications that reduce data access and life-cycle management.

**CONTROL**
### Session Descriptions

#### SYSTEM (CONT.)

**SY11** Leverage Virtual Design to Build a Better System  
1 hour  
Virtual design can help to compress development cycles, accelerate time to market, decrease commissioning costs, and mitigate risk. This session will cover topics on concurrent development of electrical, mechanical, and control systems as well as powerful new operator training solutions available from Rockwell Automation and its partners. Change how you build your next automation system.

**SY12** Virtual Plant Design with Arena® Simulation  
1 hour  
Need to understand how a new piece of equipment will impact plant performance? Want to better understand how line changes will impact throughput? Come and see how Arena® simulation tools enable you to build plant models and gain insights that help meet application requirements and avoid costly mistakes. This demo and discussion will feature real applications and the latest new features.

**SY13** FactoryTalk® AssetCentre: Overview  
1 hour  
Learn about FactoryTalk® AssetCentre core functionality including version control, audit information, security, reporting and automated backup and compare of devices including ControlLogix®, CompactLogix™, PowerFlex®, and PanelView™ Plus. Discover how FactoryTalk® AssetCentre’s asset inventory crawler mobile client and Product Compatibility and Download Center engagement can empower asset lifecycle decision making.

**SY14** FactoryTalk® AssetCentre: Basic Lab  
2 hours  
Learn about the core functionality of FactoryTalk® AssetCentre in a hands-on environment. You will learn how to interact with the FactoryTalk AssetCentre application, as well as how to design the foundation of a successful asset management system.

**SY15** FactoryTalk® AssetCentre: Advanced Lab  
2 hours  
Choose FactoryTalk® AssetCentre topics that are of the most interest to you in a free form environment. Available topics include: what’s new with Asset Inventory and Mobile Client technology, capturing and reporting on diagnostics from FactoryTalk View, version control of project files, designing a security model, configuration and implementation of a disaster recovery strategy, and the maintenance and configuration of process instrumentation.

#### CONTROL

**SY16** MagneMotion® and iTRAK® Independent Cart Technology: Introduction  
1 hour  
Independent cart technology is up-ending traditional motion control paradigms and Rockwell Automation is leading the industry with this new breed of motion control systems. Come learn about how these solutions will be cornerstones in the factory of the future allowing unprecedented flexibility and speed on machines, without increasing machine size.

**SY17** MagneMotion® and iTRAK® Independent Cart Technology: Hands-on Experience  
2 hours  
This session will go beyond the value of independent cart technology and offer a chance for a self-guided demonstration and programming of a MagneMover® Lite in the Studio 5000® environment. You will also have a chance to get close up with an iTRAK® demonstration and the opportunity to understand more about the integration with Logix and handle the physical components.

**SY18** Integrated Architecture® Tools: Introduction  
1 hour  
Get an overview of the latest developments that Rockwell Automation is making to the suite of Integrated Architecture® software tools that simplify sizing, selection, bill of materials creation, configuration and programming. Discover the benefits of Integrated Architecture Builder, Motion Analyzer, ProposalWorks™ and more.

**SY19** Integrated Architecture® Tools: Basic Lab  
2 hours  
Develop basic competency in using “Popular Configs,” Integrated Architecture® Builder (IAB), Motion Analyzer, ProposalWorks™ to develop an automation project and output reports. You will learn how to configure systems in IAB, size a drive in Motion Analyzer and assemble a bill of materials in ProposalWorks.

**SY20** Integrated Architecture® Tools: Advanced Lab  
2 hours  
This self-guided lab provides more hands-on time and allows a closer look at whatever interests you the most. Choose from labs on Integrated Architecture® Builder, Motion Analyzer, ProposalWorks™, the Drives and Motion Accelerator toolkit, plus a host of other tools that help develop automation projects. A basic working knowledge of the tools is required.
SY21  Optimize ControlLogix® Performance for FactoryTalk® Client Applications  2 hours

Provide hands-on system interaction, with FactoryTalk® client applications requesting data from a ControlLogix® controller. Configuration techniques will be examined which can impact system performance. Examples will be shown using Task Monitor, Counter Monitor, and other tools to measure communication throughput and evaluate performance with FactoryTalk client applications.

CONTROL INFORMATION

SY22  FactoryTalk® System Design Overview  2 hours

This session is a high-level overview of best practices when architecting a FactoryTalk® system. FactoryTalk components covered will include the FactoryTalk® Services Platform, View SE, AssetCentre, Historian SE, and VantagePoint. Please have a basic knowledge of how controller design (see SY21 - Optimize ControlLogix® Performance for FactoryTalk Client Applications) and network design (see NS05 - Building Converged Plantwide Ethernet Architectures) affect a FactoryTalk system. Some application-level recommendations will be discussed, but will not be the focus of the session.

CONTROL INFORMATION

SY23  Using the new Logix Tag-based Alarms in Logix Controllers to Reduce Engineering Time  1 hour

Learn how to use Logix Tag-based alarms in ControlLogix® and CompactLogix™ to drastically reduce the engineering time of your manufacturing control and FactoryTalk® View HMI application. Logix Tag-based alarms combine the flexibility of tag-based alarms with the speed and precision of Logix Instruction-based alarms.

VISUALIZATION INFORMATION

SY24  Optimizing System Communications with RSLinx®, FactoryTalk® and OPC  2 hours

Learn best practices for using RSLinx® and FactoryTalk® and OPC connectivity software to provide HMI, MES and Historical data access to Logix controllers. Topics covered will include an overview of connectivity software products, OPC communications, the impact data collection has on the control application and highlight new communications capabilities.

CONTROL INFORMATION

SY25  ControlFLASH Plus™ – Overview and Demo of the Next Generation ControlFLASH™  1 hour

This session will introduce and demonstrate the capabilities of ControlFLASH Plus™. Learn how the next generation of ControlFLASH™ will provide better usability, make you more productive and simplify your experience with managing firmware products’ lifecycle. Whether you are an OEM, SI or end-user, you will find this session beneficial to you.

CONTROL

SY26  Integration of Power Protection Devices Using IEC 61850 Protocol  2 hours

With the control of electrical power substations becoming a more important automation discipline to address, this session will focus on the use of the IEC-61850 protocol and how we integrate electrical devices into the automation architecture. See a demonstration of a new integration interface and the ease of getting a unified network with a streamlined visual and reporting system.

CONTROL

SY27  Integrating CENTERLINE® Motor Control Centers with Studio 5000® and IntelliCENTER® Software  2 hours

Experience the ease of integrating CENTERLINE® Motor Control Centers (MCCs) with EtherNet/IP and their associated components – PowerFlex® drives and E300™ Electronic Overload Relays. Streamline your workflow by leveraging the simplified integration of IntelliCENTER® software and Studio 5000 Logix Designer® to simplify device configuration and reduce commissioning time and errors.

CONTROL

SY28  Moving Toward a Connected Enterprise by Modernizing Your Control and Information Systems: Overview  1 hour

Modernization of control systems that provide access to actionable information for more informed business decisions, faster performance for more throughput and more agility via greater capacity. This session will describe many of the tools, utilities, and services available to help you analyze, plan, and execute your modernization strategies.

CONTROL

SY29  Moving Toward a Connected Enterprise by Modernizing Your Control and Information Systems: Hands-on Lab  2 hours

Users of legacy control systems such as MicroLogix™, SLC™ and PLC-5® Controllers, PanelView™ Electronic Operator Interface, and RSView*32 would benefit from attending this lab as it covers tips and tools that help when migrating to ControlLogix®, PanelView™ Plus 7, and FactoryTalk® View SE. Topics include Selection Tools, Bill of Material conversion, Code Translation tools, and other useful advice.

CONTROL

SY30  Dialight: AOPs and AOIs to Streamline Lighting Network Integration with Rockwell Automation  1 hour

This test bench demo session builds on last year’s introduction to industrial LED lighting integration with Rockwell Automation, introducing Add-On Profile (AOP) and Add-On Instruction (AOI) that make integrating lighting systems with Rockwell Automation simple, fast and convenient.
Session Descriptions

SYSTEM (CONT.)

* SY31  SeQent: Does Your FactoryTalk® to You?  1 hour
Learn how to get your FactoryTalk®-ing by utilizing SeQent’s two-way enabled platform that interfaces with FactoryTalk® View SE and OPC in order to distribute Alarms and Events in real-time to your visual, mobile and Motorola MOTOTRBO devices.

* SY32  WIN-911: Next Generation Alarming  1 hour
We are going to introduce our next gen solution and new license levels, as well as how we are uniquely integrated into FTAE and how to set up, deploy and manage.

* SY33  Zebra Technologies: Plant and Asset Visibility Enabled by PLC Connectivity and Smart Sensing  1 hour
Zebra Technologies is making it easier and less costly to integrate best-in-class barcode scanning and label printing into EtherNet/IP connected PLC controlled systems. “Always on” sensing technologies with sophisticated analytics can increasingly monitor physical processes and assets in real-time.

TECHNOLOGY & SERVICES

TS01  Remote Access and Monitoring of Connected IoT Assets  1 hour
This session will detail how you can bring distributed knowledge and actionable alerts for your automation assets through remote access and monitoring services to minimize downtime and increase asset utilization by leveraging your connected plant.

TS02  Predictive Maintenance Solutions – No Time for Downtime?  1 hour
Are you looking for ways to reduce unplanned downtime? Are you performing unnecessary preventive maintenance? Come learn how advanced predictive maintenance technology can help you reduce and possibly eliminate costly downtime by telling you when and where to perform preventative maintenance activities. Then learn how Rockwell Automation services can help both implement the solution on premise or manage the solution for you in the Cloud.

INFORMATION

TS03  Using the FactoryTalk® Cloud to Get Ahead  1 hour
See how easy it is to connect an asset to the FactoryTalk® Cloud through our secure gateway, and begin to collect and visualize the performance data you need to meet your remote asset management goals.

INFORMATION

TS04  Industrial Security Through Anomaly Detection: What’s Happening on Your Industrial Network?  1 hour
Do you have plant floor cyber security initiatives that need a solution? Do you lack depth of visibility into what’s happening on your plant floor network? Come learn about the latest advancements in Industrial Network Anomaly Detection that will ensure you have access to actionable information regarding both your industrial network traffic and networked assets. Then learn how Rockwell Automation services can get your solution up and running and transferred to you or your IT department. Finally, learn how Rockwell Automation can monitor your industrial network allowing you both peace of mind and availability to focus on getting product out of the door.

NETWORKS & SECURITY

TS05  Efficiently Developing a Machine Safety Solution with RASWin Software  2 hours
This hands-on lab will allow participants to take a journey through the safety lifecycle using RASWin (Risk Assessment Software) and Safety Automation Builder. The session will show the importance and value of a regimented safety process by conceptually performing a risk assessment and developing a safety solution with hardware selections.

SAFETY
**TS06  Asset Intelligence - Transforming the Value of Maintenance & Storeroom!** 1 hour

Our world is moving faster with more information and workload than we can manage, so are you ready to get out of the chaos? Step through an MRO journey where you can act on Asset Intelligence to improve plant productivity; utilizing smart devices, reliability professionals and asset strategies.

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**TS07  Creating the Modernization Plan that Works for You** 1 hour

Modernizing your control systems to take advantage of The Connected Enterprise can be challenging. Prioritizing needs, adhering to schedules and maintaining production with limited CAPEX can create paralysis. This session focuses on the continuum of assessing your modernization needs, tools and packages available to help modernize your operations, as well as a unique option to modernize without a capital investment.

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**TS08  An Educated Customer is a Repeat Customer** 1 hour

Customers return to partners who deliver value at the Total Cost of Ownership (TCO) level. A significant portion of that value is optimized or lost based on the customer’s workforce being able to operate, maintain, and troubleshoot their purchases. Learn how Rockwell Automation® Training Services can support you at a component level, system level, or application-specific training level. You’ll hear real world examples of customers maximizing value and optimizing production through the skill level of their workforce.

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**TS09  Digital Transformation is Revolutionizing Manufacturing and Industrial Operations** 1 hour

Manufacturing has had a long history of change and technology has played a central role in driving innovations from steam powered machines to industrial automation, to collaborative robots. Over the next decade, digital technologies will take this innovation to another level and will help power the 4th Industrial Revolution. Companies will be able to integrate the entire lifecycle of their automation systems and reimagine nearly any aspect of their operations, from virtualized design processes to self-aware and system-aware machines, to devices and machines that can collaborate with each other. Digitization of manufacturing impacts every aspect of operations and supply chains. Becoming a digital business is a journey and businesses must first achieve an end-to-end integration of their data. This requires the integration of industrial software and automation, the expansion of communications networks and security, and the use of business-specific industrial services. Join us in this session to discuss the ever growing value of Digitization and Smart Manufacturing strategies in the market and pragmatic steps that can be implemented to begin your journey.

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**TS10  View Designer Product Research Lab** 2 hours

You will have the opportunity in this unique lab to challenge yourself, help improve View Designer, and learn from product experts. The lab will feature a series of hands-on, goal-directed activities for intermediate to advanced users of visualization products. Prior experience with View Designer is helpful, but not required.

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**TS11  Studio 5000 Architect® Product Research Lab** 2 hours

In this unique lab, you will have the opportunity to challenge yourself, help improve Architect, and learn from product experts. The lab will feature a series of hands-on, goal-directed activities for intermediate to advanced Logix Designer users.

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**TS12  User Experience at Rockwell Automation** 2 hours

Learn how Rockwell Automation uses specific User Experience methods to meet your needs. Then learn how to use these methods in your own designs to delight your users! This interactive session will provide hands-on experience in user-centered design.

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**TS13  TeamONE™ – A Software Startup Inside of Rockwell Automation** 1 hour

Get an insider’s view on how the FactoryTalk® TeamONE™ uses lean startup principles to deliver high quality software. Learn about our iterative development process and how input from users like you is a critical part of our Build-Measure-Learn cycles. This session will provide you with an opportunity to help guide the future of TeamONE by providing feedback on current and planned features, and you’ll learn how to make the most of all that TeamONE offers.

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**TS14  Product Compatibility and Download Center (PCDC)** 1 hour

Find product downloads (firmware, software, other files) and determine product compatibility. This session lets you explore PCDC features, with a focus on product updates and replacements. Try the new features, including subscriptions and notifications, product lifecycle status, BOM import, and advanced search.
Session Descriptions

TECHNOLOGY & SERVICES (CONT.)

* TS15  EPLAN: An Integrated, Interdisciplinary Engineering Solution: From Pre-planning to Production 1 hour
Greatly reduce your engineering efforts and improve your project quality with data transparency and consistency with an integrated, interdisciplinary engineering solution that takes you from preplanning, through basic and detail engineering, to production and assembly. The EPLAN Platform can help by automating your design processes through automatic generation of engineering documentation.

* TS16  RF Ideas: The Big Difference: Controlled Authorization with Badges vs. User Name and Password 1 hour
Use of user names and passwords to authorize workers on the automation line is fraught with challenges, duplicate authorizations, forgotten passwords and lack of quality reporting. Leverage your existing badge technology to streamline authorization and gain insight to line activities.

VISUALIZATION

VZ01  What’s New and What’s Next in Visualization at Rockwell Automation 1 hour
Discover the newly-released features of Visualization software and what’s ahead for the upcoming year. This session will show how new capabilities enable scalable solutions, efficient product design, access to real-time information, and improve operator effectiveness.

VZ02  Introductory Lab for Machine-level HMI with FactoryTalk® View Machine Edition and PanelView™ Plus 7 2 hours
If you are new to FactoryTalk® View Machine Edition and the PanelView™ Plus 6/7, or just need a refresher on the basics, this hands-on lab allows you to learn about the basic capabilities and features of FactoryTalk® Machine Edition application using a pick-and-choose format. Topics include creating an application, working with displays, global objects, and tags, using parameters, testing and running the application, applying graphic animations, using language switching, and remote connectivity using FactoryTalk® ViewPoint. See how features like search and replace tag and text, tag cross-reference, and other design-time enhancements can help you to get more work done in less time.

VZ03  Process Applications for Machine-level HMI with FactoryTalk® View Machine Edition and PanelView™ Plus 7 2 hours
Learn how FactoryTalk® View Machine Edition and PanelView™ Plus can be used to meet process application needs. See how new features are securing the application, using electronic signature, monitoring operator actions, and features like trending, recipes, data logging, Rockwell Automation® process faceplates, and the Application Documenter can be applied to process applications. Suggested prerequisite: VZ02 - Introductory Lab for Machine-level HMI with FactoryTalk View Machine Edition and PanelView Plus 7.
VZ04  Advanced Lab for Machine-level HMI with FactoryTalk® View Machine Edition and PanelView™ Plus 7  2 hours
If you are an experienced FactoryTalk® View Machine Edition application developer, this session allows you to pick-and-choose from subjects related to more advanced capabilities. Topics include: designing reusable faceplates and global objects, working with Logix Extended Tag properties and run-time language switching, applying ActiveX controls in an application, and creating a context-sensitive alarm system. Suggested prerequisite: VZ02 - Introductory Lab for Machine-level HMI with FactoryTalk View Machine Edition and PanelView™ Plus 7.

VZ05  Architecting a Distributed HMI System  2 hours
More and more customers are turning to a distributed FactoryTalk® View Site Edition solution for their supervisory visualization needs. This workshop will cover how best to align the services, communications, and visualization layers of a system to meet your needs. To put these concepts into practice, plan to attend the hands-on lab VZ06 - FactoryTalk View SE Configuration and Maintenance.

VZ06  FactoryTalk® View SE Configuration and Maintenance  2 hours
If you need to configure and maintain a distributed FactoryTalk® View Site Edition system, this hands-on lab is where you can learn and practice your skills. Topics include architecture components that make up a FactoryTalk® View SE system, how they fit together, and capabilities available to maintain and troubleshoot the system. Suggested prerequisite: VZ05 - Architecting a Distributed HMI System.

VZ07  Introductory Lab for Distributed HMI with FactoryTalk® View Site Edition  2 hours
If you are new to FactoryTalk® View Site Edition and FactoryTalk® ViewPoint, this hands-on lab allows you to learn about the basic capabilities and features of a FactoryTalk View SE application for both desktop and mobile. You will build a simple application from the beginning. Topics include creating an application, adding displays, working with tags and animations, basic alarming, trending, and mobility. This lab will give you a solid understanding of how a View SE HMI application works, how you can extend it mobile devices. You will be able to easily proceed to a more advanced lab like VZ08 - FactoryTalk View Site Edition: What’s New in v9.0!

VZ08  FactoryTalk® View Site Edition: What’s New in v9.0!  2 hours
If you are an experienced FactoryTalk® View Site Edition application developer, this lab session focuses on the features of latest release, FactoryTalk® View 9.0. The topics will give you hands-on instruction for topics such as: TrendPro, RecipePro+, ControlLogix® Extended Properties, Alarming enhancements, Graphics and animation, and Mobility enhancements. Suggested prerequisite: VZ07 - Introductory Lab for Distributed HMI with FactoryTalk View Site Edition.

VZ09  Implementing FactoryTalk® Alarms and Events  2 hours
A robust alarming capability is critical to any HMI system. The alarm system in FactoryTalk® View Site Edition, FactoryTalk® Alarms and Events, delivers industry-leading capabilities for any size system. This hands-on lab focuses on how to best implement and configure FactoryTalk Alarms and Events with FactoryTalk View Site Edition and Logix Controllers. Users will explore how to leverage the data analytic capabilities of FactoryTalk® VantagePoint® to bring alarm data from a controller to the information layer making the enterprise truly connected.

VZ10  How to Improve Plant Operations Through Better HMI Graphics  1 hour
Plant operators are required to make decisions everyday in production facilities which can directly influence profitability, either by the normal running of the plant or by reacting swiftly to the unusual, protecting material, product, equipment and personnel. These decisions need to be based on clear information from your visualization systems. Learn how to produce graphics that deliver meaningful and detailed information so operators can run the plant at the most efficient level. You will also learn what graphic designs work best at keeping your plant operatives informed of the plant status at a glance to enable them to make those right decisions.

VZ11  Modernizing Your HMI  1 hour
Keeping your HMI current means greater security, better usability, and more flexibility for your system. Whether you're new to the Rockwell Automation® family of visualization solutions or are an expert, in this session you will learn about the modern capabilities of a Rockwell Automation® HMI system, whether you're interested in distributed, machine level, or mobile solutions. We will discuss the benefits of modernizing your system by migrating, upgrading or implementing new capabilities found in the latest versions.
Session Descriptions

**VISUALIZATION (CONT.)**

**VZ12  Designing Machine-level HMI with Studio 5000 View Designer® Demonstration**  
1 hour  
This session will introduce you to the new PanelView™ 5500 hardware and Studio 5000 View Designer® software. You will learn how easy it is to create, download, and run an application as well as see some of the more powerful capabilities of the new platform. You will also get an early look at new features coming later this year.

**VZ13  Introductory Lab for Designing Machine-level HMI with PanelView™ 5500 and Studio 5000 View Designer®**  
2 hours  
Learn how easy it is to create, download, and run a PanelView™ 5500 project using the new Studio 5000 View Designer® software. This lab will introduce you to topics such as setting up a project, creating screens, animating graphic elements, setting up navigation, setting up basic security, taking advantage of pre-defined project content, and downloading to a terminal.

**VZ14  Advanced Lab for Designing Machine-level HMI with PanelView™ 5500 and Studio 5000 View Designer®**  
2 hours  
Learn how to take advantage of more powerful, advanced capabilities of the new PanelView™ 5500 terminals and Studio 5000 View Designer® software. Topics you’ll explore include creating re-usable screens, using custom press/release actions, customizing pre-defined project content, using advanced features of state tables, configuring high-speed HMI buttons, and configuring custom element-based security. You will also learn about new features released late last year including creating your own custom Toolbox elements using Add-On Graphics and showing content in multiple languages using runtime language switching. Suggested prerequisite: VZ13 - Introductory Lab for Designing Machine-level HMI with PanelView 5500 and Studio 5000 View Designer.

**VZ15  Benefits of Tethered Operator Interface Terminals**  
1 hour  
Come check out the latest in MobileView™ tethered operator terminals. You’ll learn about typical use cases, configuring tips and tricks, application design considerations, and much more.

**VZ16  Designing Your HMI for Mobility**  
1 hour  
Thinking about taking your HMI mobile? Come experience FactoryTalk® ViewPoint on your mobile device! Make your operators more productive by providing an interface for status indicators, machine control, data trends, and alarm information! In this session, let’s discuss the options for mobile application design and the best practices for designing your mobile graphics.