



2018 PRODUCT AND SYSTEM TECHNICAL TRAINING COURSE CATALOG

MOTOROLA SOLUTIONS EDUCATION SERVICES
NORTH AMERICA



WELCOME

Choosing Motorola Solutions is only the beginning.

Next: Get trained on Motorola Solutions' latest innovations and improve your proficiency with our expanding training portfolio!

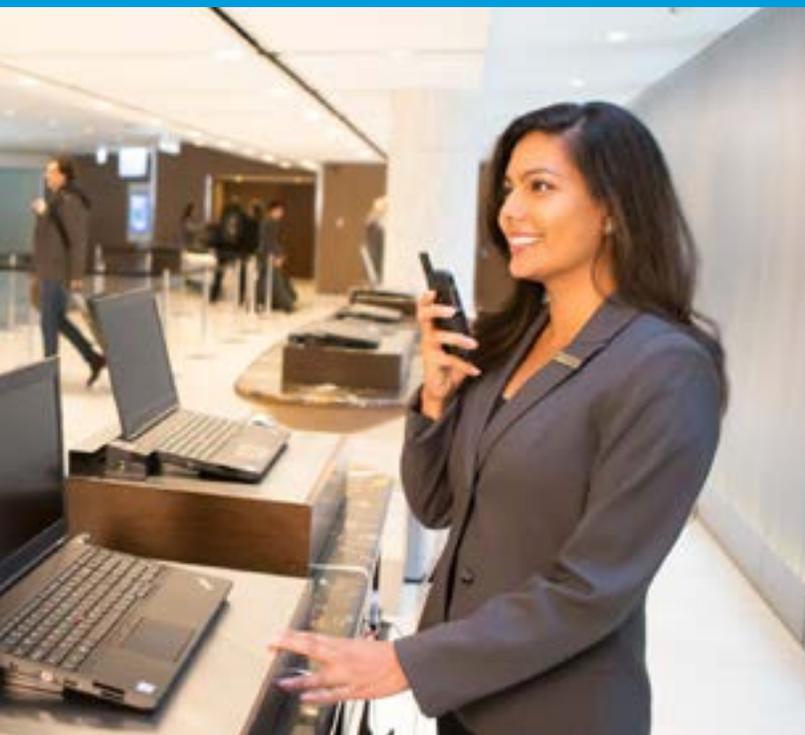
With versatile training solutions and best practices from our expert instructors and designers, you can increase the return on your technology investment throughout the product and system lifecycle.

Motorola Solutions Education Services provides your organization with one-stop shopping and end-to-end training support: from needs analysis and consultancy to course development, customization, delivery, and logistics.

Let us work with your team to ensure that your organization configures, operates and maintains your products and systems to effectively and efficiently meet your specific needs.

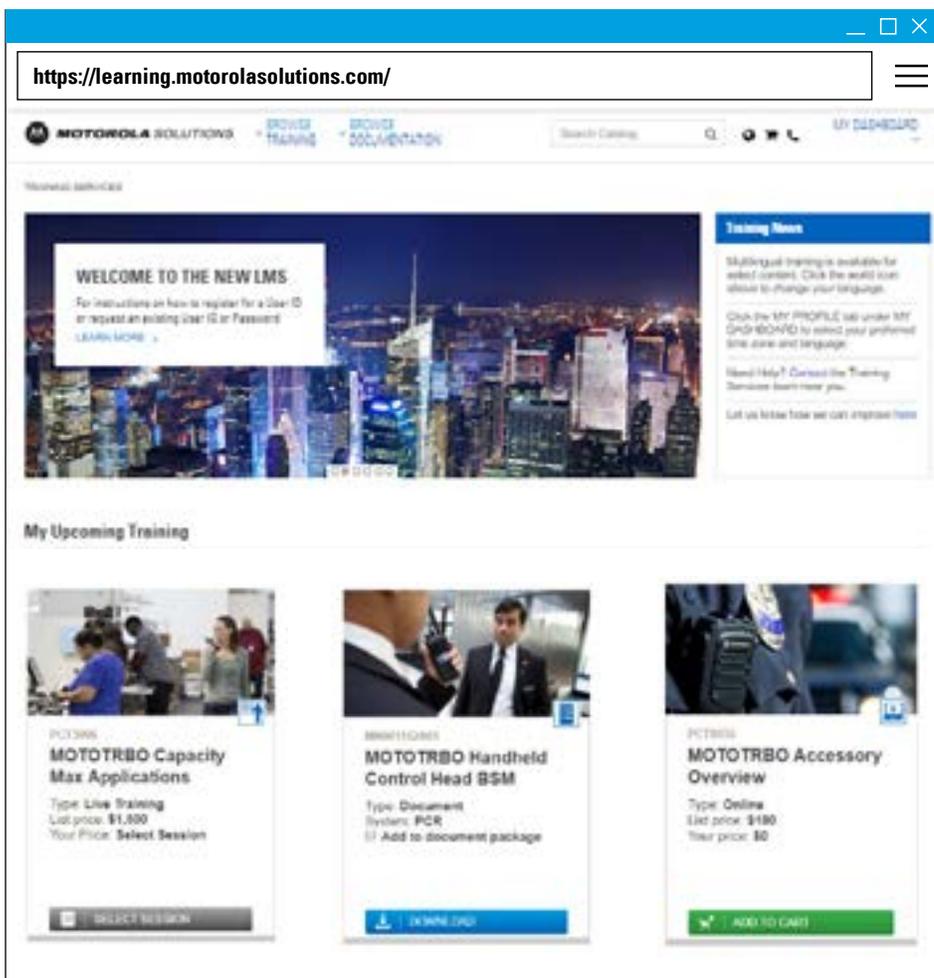
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GENERAL INFORMATION

A NEW INTERACTIVE LEARNING MANAGEMENT SYSTEM... DESIGNED FOR YOU!



USE THE SEARCH BOX OR FILTERS FEATURE TO QUICKLY AND EASILY SEARCH FOR TRAINING OR DOCUMENTATION

VIEW YOUR HISTORY AND UPCOMING TRAINING ON YOUR PERSONALIZED DASHBOARD

RECEIVE REMINDER NOTIFICATIONS OF UPCOMING TRAINING OR CHANGES TO YOUR TRAINING

EASILY LOCATE AND DOWNLOAD DOCUMENTS

KEEP UP-TO-DATE WITH TRAINING NEWS AND ANNOUNCEMENTS

GENERAL INFORMATION

For information on prerequisites and to register for courses visit the LMS at: [LEARNING.MOTOROLASOLUTIONS.COM](https://learning.motorolasolutions.com)

For general information, contact North America Education Services help desk at: (800) 247-2346, option 4 or training.na@motorolasolutions.com

HOW TO REGISTER

THE LEARNING MANAGEMENT SYSTEM (LMS)

The LMS is your valuable resource to see the latest courses, descriptions, requirements, dates and locations.

If you are a Motorola Solutions Customer who already has a Motorola Solutions Login ID, you can go to the **Enroll in a Course** section for further instructions.



SET UP A NEW USER ACCOUNT AND PASSWORD

CREATE A MOTOROLA SOLUTIONS LOGIN ID:

- Visit: <https://learning.motorolasolutions.com>
- Click **LOG IN**
- At the bottom of the dialog screen **Click Register**
- Complete the required information on the form
- Click **Submit**
- A confirmation email will be sent following your submission
- Additional instructions for activating your account will be provided by email in 1-3 business days

**LOOK FOR THIS ICON
THROUGHOUT THE
CATALOG FOR EASY
ACCESS TO THE LMS**



TO ENROLL IN A COURSE (ONCE YOU HAVE AN LMS ACCOUNT)

ENROLL IN A COURSE:

- Visit: <https://learning.motorolasolutions.com>
- Click on **LOG IN**
- Enter your Log In ID and Password and Click **LOG IN**
- If you have forgotten your User ID or Password, click **Forgot User ID** or **Forgot Password**
- Find a training course by clicking **Browse Training** at the top of the screen or use the **Search Catalog** feature

QUESTIONS ABOUT YOUR ACCOUNT OR A COURSE?

Your help desk information can be located in the top, right hand corner of the catalog pages. You can also [click here](#) to view the help desk contact information in your region.

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TRAINING OPTIONS, POLICIES AND REQUIREMENTS

TRAINING OPTIONS

INSTRUCTOR-LED TRAINING

Resident training consists of regularly scheduled classes conducted at one of the Motorola Solutions Technical Training Centers. The centers are set up so students can immerse themselves in the subject matter, with limited distractions. They receive substantial time for hands on training that enables them to develop creative solutions for unique problems. Resident training includes a diverse customer base; therefore, the classroom equipment is modeled upon a standard configuration. In addition, some courses include media-based activities that are facilitated by the instructor. Advance registration is required.

ON-SITE TRAINING AT YOUR LOCATION

All course titles can be delivered at your location, taught by our knowledgeable instructor staff. For more information on our on-site delivery options, contact your Account Manager.

ONLINE SELF-PACED AND VIRTUAL CLASSROOM

Online Self-Paced learning allows you to gain foundational knowledge on a variety of topics using your own computer, at your own schedule. Virtual Classroom Learning offers scheduled instructor-led courses in an on-line virtual environment. Select courses from the recommendations listed in the Training Roadmaps from each product area of the catalog, or simply based upon your own personal need. Just look for courses with the Online Self-paced or Virtual Classroom icon.



UNDERSTANDING THE ICONS



INSTRUCTOR-LED



ONLINE, SELF-PACED



OPTIONAL COURSE



VIRTUAL CLASSROOM



TEST



POLICIES AND REQUIREMENTS

CANCELLATION AND RESCHEDULING BY THE STUDENT

Customer cancellation or rescheduling made less than 30 days prior to the class start date will be subject to the full course tuition.

CANCELLATION AND RESCHEDULING BY MOTOROLA SOLUTIONS

Motorola Solutions reserves the right to change or cancel classes up to 10 business days prior to the class start date. You will be notified at that time of such change or cancellation.

PROFESSIONALISM

Students are expected to maintain professional conduct and dress at all times. Class dress is casual, but smart. For safety and security reasons, we cannot permit shorts, thong type sandals, or tank tops in the classroom.

LAPTOP REQUIREMENTS

Some of our classes may require students to bring their laptops to the classroom so that they may utilize an electronic copy of the class material. Please review your enrollment confirmation email for specific requirements for your class.

TRAINING CONTENT AND STRATEGY DISCLAIMER

All of Motorola Solutions training classes are designed to support and align with the Motorola Solutions Service strategy for each product. This strategy may include a combination of (but not limited to) processes, procedures, recommendations, and instructor experiential advice which may involve repair, replacement, and or recovery of hardware, software, or firmware of Motorola Solutions products. The repair, replacement, or recovery of these products may vary from product to product. Motorola Solutions reserves the right to change the structure and content of all courses at any time.

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PRICING AND HELPFUL INFORMATION

FOR QUESTIONS AND ASSISTANCE

Call the Education Services help desk at:
800-247-2346

Monday – Friday,
8:00 a.m. – 5:00 p.m. Central Time

or email us at:
training.na@motorolasolutions.com

HOW TO MAKE PAYMENTS WHEN ENROLLING IN A COURSE

HOW TO MAKE PAYMENTS WHEN REGISTERING

For your convenience we accept the following methods of payment:

- Credit Card
- Purchase Order
- Company Check
- Training Banks

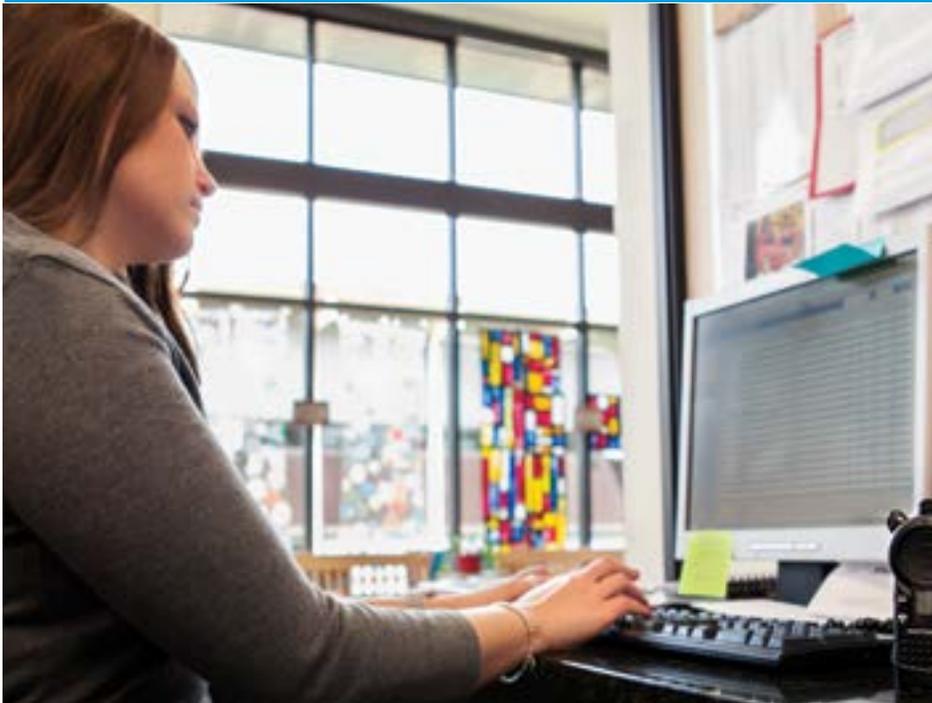
If prepayment is required to secure your registration, it must be received by Motorola Solutions 30 days prior to your attendance.

Contact the help desk above for assistance with payments and P.O. specifications.

All pricing listed is US dollars.



DOWNLOAD THE NORTH AMERICA TRAINING SCHEDULE AND PRICE SHEET



SCHEDULE AND PRICE SHEET

Click on the above download link to access the schedule and pricing file or visit: www.motorolasolutions.com/nalearnschedule2018

To view the most current details for any of our courses, please register for an account (see Page 4) and log into the Motorola Solutions Learning Management System (LMS) at: learning.motorolasolutions.com or call us at (800) 247-2346, option 4.

TRAINING BANKS

Whether you're a technician, system manager or radio user, you rely on Motorola Solutions Education Services to obtain the necessary knowledge to get the full potential out of your Motorola Solutions equipment. The Motorola Solutions Training Bank is a discounted, pre-paid, non-expiring debit account that allows you to budget up front for your training needs. Training Banks can be applied towards all training options including, Instructor-Led Tailored Field Courses.

There are several benefits to Training Banks including:

- Allows you to budget up front for training needs
- Provides cost savings through discounted pricing tiers to maximize your training investment
- Does not require multiple POs, thus reducing internal approval cycle time and paperwork
- Training Banks do not expire

For more information, please visit us on the web at motorolasolutions.com/amlearn or email us at training.na@motorolasolutions.com.

Note: Training Banks are only applicable to non-federal government customers.

OPERATOR TRAINING



OPERATOR TRAINING

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THE SUCCESSFUL IMPLEMENTATION OF YOUR COMMUNICATIONS SYSTEM DEPENDS ON CONFIDENT USERS OF THE SYSTEM.

- Users of your mobile and portable radios require training on their units to understand its basic operation, features and functions
- Dispatchers of your consoles require training to understand basic operation, features and functions
- Management personnel require training on the Motorola Solutions applications

TRAIN THE TRAINER

With this option, Motorola Solutions trains people you have identified as qualified instructors so that they in turn can train each individual user in your organization. These classes are typically done on site using your equipment. The interactive End User Tool Kit (iEUTK) and/or tailored end user materials can be utilized.

AUDIENCE

This course is geared for customers who have an experienced, dedicated training staff in their organization. This course concentrates on specific product features and how it relates to the training process.

COURSE OVERVIEW

This course provides the customer's identified training personnel knowledge and practice applying training techniques that will enable them to successfully train their students. Trainers will use simulation, facilitation and hands-on activities to facilitate learning events supported by tailored training materials and job aides. Students will become proficient in discussing common tasks associated with the operation of the customer's radios and consoles as identified by the customer's needs analysis.

Note: This course is presented as customer specific and will cover pertinent information on customer equipment.

REQUISITE KNOWLEDGE

Previous training experience and radio system knowledge is a must.

TO REQUEST FIELD TRAINING, PLEASE CONTACT YOUR ACCOUNT MANAGER.

Note: The interactive End User Tool Kit (iEUTK) is not sold as a standalone product but included with our instructor-led, Train-The-Trainer or Operator Training.

OPERATOR TRAINING

With this option, the users within your organization are trained by a Motorola Solutions instructor. These classes are typically done on site using your equipment. The interactive End User Tool Kit (iEUTK) and/or tailored end user materials support this training option.

CONSOLES TRAINING

These courses provide operators and supervisors with an introduction to the basic operation, administration and feature functionality of the Console Systems. Through facilitation and hands-on practice, users learn to perform tasks that are associated with their organization's particular system.

- Overview of console configuration
- Console dispatcher and supervisor operation
- Alias Management
- Messaging

SUBSCRIBER TRAINING

These courses provide radio users with an introduction to their radios, a review of their radio's basic functionality by means of job aides tailored to exactly how they use their radios. Through facilitation and hands-on practice, users learn to perform common tasks associated with their radio configuration.

- Overview of radio configuration
- General radio operations

COURSES FOR END USERS:

CONSOLES:

- MCC 7000 Series Dispatch Console Administrator
- MCC 7000 Series Dispatch Console Operator
- MKM 7000 Console Alias Manager
- MOTOBRIDGE IP Dispatch Console Operator
- MOTOBRIDGE Administration Control Panel (ACP)
- MCD 5000 Operator

MOBILES AND PORTABLES:

- APX™ Series
- MOTOTRBO™ Series
- XTL™/XTS Series
- SL Series
- LEX Series

OTHERS:

- Si500 Body Worn Camera
- Sr600 In-Vehicle Camera
- CommandCentral Vault
- WAVE

COURSES

USING THE TRAINING ROADMAPS

The test icon  found in the roadmaps indicates that a post test will be administered after the online overview course is completed. The test is intended to determine that participants have the requisite knowledge necessary to continue on with the remainder of the curriculum.





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**THE LEARNING
MANAGEMENT
SYSTEM (LMS)**

To register for a course, go to learning.motorolasolutions.com

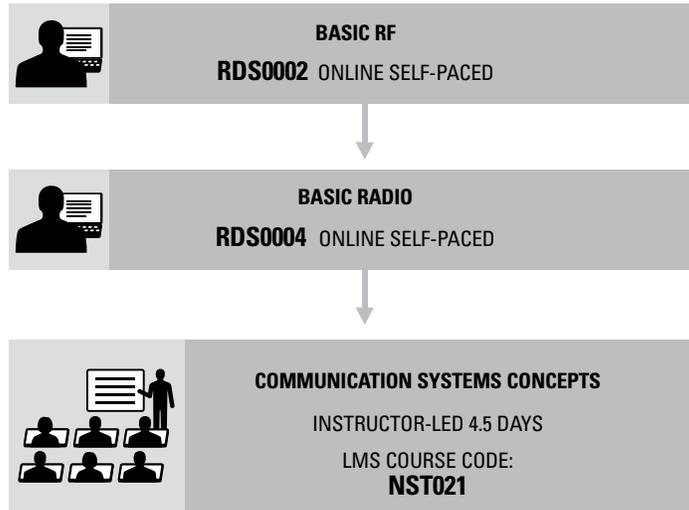
RADIO SOLUTIONS FOUNDATIONAL

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RF FUNDAMENTALS

RF BASICS / RADIO SYSTEM BASICS



CURRICULUM COMPLETE

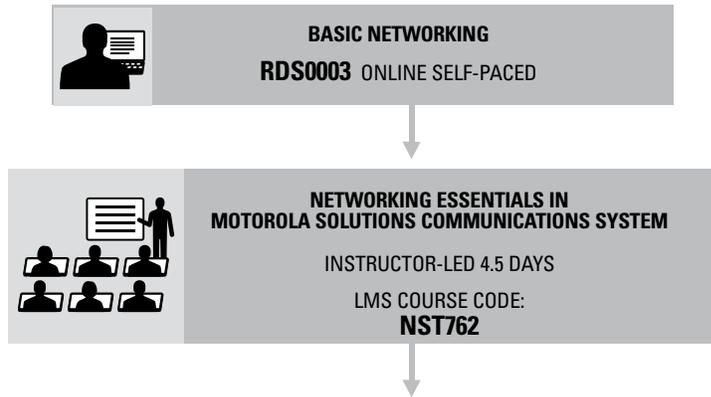
PARTICIPANT HAS RF KNOWLEDGE REQUIRED FOR ADVANCING TO MORE COMPLEX TECHNICAL TRAINING COURSES.

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IP/NETWORKING FUNDAMENTALS



CHOOSE ONE OF THE FOLLOWING COURSES BELOW ACCORDING TO YOUR SOLUTION SYSTEM

ASTRO® 25 SYSTEM



ASTRO® 25 SYSTEMS APPLIED NETWORKING

INSTRUCTOR-LED 4.5 DAYS

LMS COURSE CODE:
NWT003

OR

MOTOTRBO™ SYSTEM



MOTOTRBO™ SYSTEMS APPLIED NETWORKING

INSTRUCTOR-LED 3.5 DAYS

LMS COURSE CODE:
PCT2007

OR

LTE SYSTEM



PUBLIC SAFETY LTE APPLIED NETWORKING

INSTRUCTOR-LED 4.5 DAYS

LMS COURSE CODE:
LTE2007

CURRICULUM COMPLETE

PARTICIPANT HAS IP PROTOCOLS AND NETWORKING SKILLS TO USE MOTOROLA SOLUTIONS SYSTEMS REQUIRING ADVANCED TECHNICAL TRAINING.

[CLICK HERE TO GO TO
PAGE 19 FOR MORE
DETAILS ON ASTRO® 25](#)

[CLICK HERE TO GO TO
PAGE 48 FOR MORE
DETAILS ON MOTOTRBO™](#)

[CLICK HERE TO GO TO
PAGE 57 FOR MORE
DETAILS ON LTE](#)

RADIO SOLUTIONS FOUNDATIONAL

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BASIC RF

COURSE OVERVIEW

This course emphasizes the concepts behind RF Systems theory and operation. Topics include basic radio transmitters and receivers, RF propagation, modulation, antenna systems, transmission lines and data-communications.

AUDIENCE

Technical staff who need to understand Communication Systems Concepts including basic radio, RF propagation, modulation, antenna systems, transmission lines and data-communications.

COURSE OBJECTIVES

After completing this course, the student will be able to:

- Describe electrical principles, including direct and alternating current.
- Describe the basic structure of radio transmitters and receivers.
- Describe the operation of the antenna system.
- Identify different types of transmission media.
- Describe RF propagation and understand system gains in a link budget.

REQUISITE KNOWLEDGE

None



ONLINE, SELF-PACED
LENGTH: 2 HOURS
LMS COURSE CODE:
RDS0002

BASIC RADIO

COURSE OVERVIEW

The purpose of this course is to provide the student with the basic, foundational land mobile two-way radio knowledge required when working with Motorola Solutions. This course is ideal for all people who sell or service land mobile two-way radios and it was especially designed to meet the needs of the MR Channel and Motorola Solutions employees.

AUDIENCE

Technical staff who need to understand basic two-way radios

COURSE OBJECTIVES

After completing this course, the student will be able to:

- Define what a two-way radio is.
- Describe two-way radio components.
- Describe communication types.
- List and describe ways of expanding coverage.
- Describe analog and digital solutions.
- Describe how transmit and receive processes work in conventional and trunked two-way radio.
- Define system scalability.
- Identify the considerations to implementing a two-way radio.
- List the characteristics of single-site, single-zone and multi-zone systems.
- Explain the concept of two-way radio security.
- Describe the open standards for the following technologies: APCO P25, TETRA and DMR.

REQUISITE KNOWLEDGE

Completion of the following course(s) or equivalent experience:

- Basic RF (RDS0002)



ONLINE, SELF-PACED
LENGTH: 4 HOURS
LMS COURSE CODE:
RDS0004

BASIC NETWORKING

COURSE OVERVIEW

This course provides a detailed description of the fundamentals of system networking. Topics include the OSI seven layer model, bridges and switches, IP and routing, applications and security.

AUDIENCE

Engineers who need to understand the essentials of system networking.

COURSE OBJECTIVES

After completing this course, the student will be able to:

- Identify the Elements and Interconnectivity of a basic network
- Define the OSI and TCP/IP Models
- Define the advantages of different Network Layout Options
- List the Physical and Data-Link Layers of the OSI and TCP/IP Models
- Define the Network and Transport Layers of the OSI and TCP/IP Models
- Identify the Service Layers within the OSI and TCP/IP Model
- Define the concept of Network Security.
- Identify standards organizations

REQUISITE KNOWLEDGE

None



ONLINE, SELF-PACED
LENGTH: 1 HOUR
LMS COURSE CODE:
RDS0003



[CLICK HERE TO VIEW THE SCHEDULE AND PRICE SHEET](#)

RADIO SOLUTIONS FOUNDATIONAL

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RF FOR RADIO PROFESSIONALS

COURSE OVERVIEW

This course emphasizes the concepts behind RF Systems theory and operation. Topics include basic radio transmitters and receivers, RF propagation, modulation, antenna systems, transmission lines and data-communications.

AUDIENCE

Technical staff, who need to understand Communication Systems Concepts including basic radio, RF propagation, modulation, antenna systems, transmission lines and data-communications.

COURSE OBJECTIVES

Course consists of six modules: Advanced RF: Introduction, Transmission Lines, RF Hardware Filters, RF Performance, Test Equipment, and Troubleshooting. By the end of the course, you will be able to:

- Describe basic circuit-related phenomena and elements
- Describe the filtering process and types of RF filters List,
- Describe and compare digital modulation schemes
- List common frequency spectrum bands and describe their common uses
- Describe the transmission line theory
- Provide the rules for cable selection, routing and installation
- List advanced RF hardware filters, and provide their descriptions
- Discuss RF performance issues
- List and describe transmitter performance parameters
- List and describe receiver performance parameters
- List and describe common test equipment
- Describe the RF troubleshooting process

REQUISITE KNOWLEDGE

RF and radio basic knowledge or completion of RDS0002 and RDS0004 is highly recommended



ONLINE, SELF-PACED
LENGTH: 3 HOURS
LMS COURSE CODE:
RDS2012

INTRO TO R56

COURSE OVERVIEW

The purpose of this course is to present a high level overview of the RF site design and construction process, in line with the guidelines listed in Motorola Solutions' Standards and Guidelines for Communication Sites (R56) manual.

AUDIENCE

Technical Associates who need to use the R56 processes.
Anyone who needs a technical introduction to the R56 processes.

COURSE OBJECTIVES

After completing this course, the student will be able to:

- Describe the site design and development tasks needed to meet R56 requirements.
- Describe the building and shelter design and installation tasks needed to meet R56 requirements.
- Identify the proper external and internal grounding tasks needed to meet R56 requirements.
- Identify transient voltage surge suppression needs that meet R56 requirements.
- Minimize the impact of RF Site Interference, in line with R56 requirements.
- Identify the equipment installation tasks needed to meet R56 requirements.

REQUISITE KNOWLEDGE

None



ONLINE, SELF-PACED
LENGTH: 1 HOUR
LMS COURSE CODE:
NST9252

SITE INSTALLATION PRACTICES WORKSHOP (R56)

COURSE OVERVIEW

The Site Installation Practices Workshop (R56) course is designed to present the standards and guidelines for installing a Motorola Solutions communication system. Participants will understand how a properly installed system can help to ensure a safe and efficient communications system, reducing system down time.

AUDIENCE

Technical System Managers and Technicians

COURSE OBJECTIVES

After completing this course, the student will be able to:

- List the purposes of grounding and evaluate their importance in terms of personal safety and effective system installation and protection
- Apply principles of basic electronics to the installation standards found in the R56 manual
- Determine how an effectively installed ground system provides protection for a communication system from a lightning strike or electrical anomalies
- List the minimum requirements and specifications for the external and internal ground system
- List the minimum requirements and specifications for installation equipment, cables and documentation for a reliable communication system installation
- Investigate sources for possible solutions to various installation scenarios

REQUISITE KNOWLEDGE

Completion of the following course(s) or equivalent experience:

- Graduate of a basic electronics course or equivalent experience.



INSTRUCTOR-LED
LENGTH: 3.5 DAYS
LMS COURSE CODE:
NST925

RADIO SOLUTIONS FOUNDATIONAL

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R56 STANDARDS UPDATE

COURSE OVERVIEW

The R56 Standards and Guidelines for Communication Sites is in the process of being updated for 2017. This course will cover all updates and is intended for individuals who have recently completed, or recertified their R56 certification. It will provide insight and understanding on the changes and their impact on the documented standard.

AUDIENCE

Electronics Equipment Technicians who are responsible for the installation or inspection of communications equipment. Communication Site Installers (R56) and Communication Site Installation inspectors (CSII)

COURSE OBJECTIVES

After completing this course, the student will be able to:

- Be familiar with a current glossary of terms
- Understand changes and their relationship to the manual and certification
- Be aware of high level R56 Standards manual updates by chapter

REQUISITE KNOWLEDGE

Individuals must hold a valid R56 or CSII certification or have completed all necessary coursework prior to attending this course.



INSTRUCTOR-LED

LENGTH: 1 DAY

LMS COURSE CODE:

NST9256

SERVER & VIRTUALIZATION FOUNDATION

COURSE OVERVIEW

This course prepares students to configure a server hardware platform for virtualization. The course covers managing the hardware using BIOS and iLO, installing the ESXi 5.5 hypervisor, creating and provisioning virtual machines, installing client and server operating systems in the virtual machines, installing VMware Tools in the guest operating systems, and maintaining virtual machines using snapshots and OVF packages. Hands-on lab exercises provide experience with the entire installation and provisioning process.

AUDIENCE

Technical Personnel, Employees, Partners, Customers

COURSE OBJECTIVES

After completing this course, the student will be able to:

- Describe the relationship between virtualization and hardware resources
- Manage server hardware using BIOS and iLO
- Install ESXi on the server hardware
- Create and provision Virtual Machines using vSphere
- Install a guest operating systems in a Virtual Machine
- Install VMware Tools on the guest OS
- Configure VM startup and shutdown order
- Create and manage snapshots
- Migrate virtual machines using OVF packages

REQUISITE KNOWLEDGE

Completion of the following course(s) or equivalent experience:

- Comp-TIA Server+ Certification or equivalent



INSTRUCTOR-LED

LENGTH: 3 DAYS

LMS COURSE CODE:

SRV1010

COMMUNICATION SYSTEMS CONCEPTS

COURSE OVERVIEW

The Communication Systems Concepts course emphasizes the concepts behind RF Systems theory and operation. Major topics covered include:

- RF System Operation, including talkaround, repeater operation, and types of signaling used in RF Systems
- A basic walkthrough of building a communication system from 'Simplex', to 'Half Duplex', 'Voting Systems', and 'Simulcast' is done, emphasizing the improvements in communication obtained with each step
- Trunking Operation, including Smartzone operation
- Types of modulation used in RF System operation, including ASTRO. Radio frequency path including the antenna and transmission line
- Decibels and their uses on the job. RF Propagation/ RF Interference
- Basic Troubleshooting practices from the system perspective

AUDIENCE

General

COURSE OBJECTIVES

After completing this course, the student will be able to:

- Define terms commonly used in two-way communication systems
- Effectively use two-way radio communication systems knowledge to troubleshoot typical two-way communication radio systems
- Develop requirements for a two-way radio system by establishing programming and protocol requirements as requested
- Improve skills in the interpretation of typical two-way radio checks of the receiver, transmitter and the antenna system to troubleshoot a two-way radio communication system
- Use decibels to interpret the radio frequency path and antenna system to describe expected radio communication system performance and troubleshooting

REQUISITE KNOWLEDGE

Completion of the following course(s) or equivalent experience:

- Knowledge of basic electronics
- Experience using standard communication test equipment



INSTRUCTOR-LED

LENGTH: 4.5 DAYS

LMS COURSE CODE:

NST021

RADIO SOLUTIONS FOUNDATIONAL

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NETWORKING ESSENTIALS IN MOTOROLA SOLUTIONS COMMUNICATIONS EQUIPMENT

COURSE OVERVIEW

The Networking Essentials in Motorola Solutions Communications Equipment course provides the technician with the essential elements of networking required for the installation and maintenance of most Motorola Solutions communications systems. The course includes ample hands-on and basic troubleshooting on network elements.

AUDIENCE

System Technicians

COURSE OBJECTIVES

After completing this course, the student will be able to:

- Recall basic network terminology
- Compare basic configuration types, both logical and physical
- Describe the basic OSI (Open System Interconnect) model compared with the TCP/IP model
- Construct a basic LAN with a Windows Server Domain Controller and workstations
- Examine the interaction between the routers through their configurations
- Use common network commands to simulate traffic and validate connectivity and routing

REQUISITE KNOWLEDGE

Completion of the following course(s) or equivalent experience:

- An understanding of the basic Motorola Solutions Communications Systems is highly recommended
- Basic familiarization with computer operating systems is required
- A basic knowledge of networking is helpful and recommended



INSTRUCTOR-LED
LENGTH: 4.5 DAYS
LMS COURSE CODE:
NST762

BRIDGING THE KNOWLEDGE GAP FOR ASTRO® 25 – TECHNICIAN

COURSE OVERVIEW

This seven-module course is designed to bring Technicians from different technical backgrounds and experience levels to a common starting point for the ASTRO® 25 curriculum. This course provides seven modules from the basic concepts of radio communication systems and computer networking features, through the evolution that led to the ASTRO® 25 trunking system's architecture.

AUDIENCE

This course is intended for System Technicians, and other ASTRO® 25 system users who are new to trunked radio systems. Also those with experience in non-IP-based radio systems like SmartNet and SmartZone.

COURSE OBJECTIVES

After completing this course, the student will be able to:

- Explain the different radio system concepts as applied to conventional and trunked systems
- Compare analog radio communication signaling to ASTRO® 25 radio communications signaling
- Identify different communication concepts using representative block diagrams of the respective systems
- Compare radio system communication concepts using representative block diagrams of the respective systems
- Compare how voice and data, information flow through different radio communication system types and how the signaling information controls that flow of information
- Describe the features of each radio communication system in terms of advantages and disadvantages

REQUISITE KNOWLEDGE

None



ONLINE, SELF-PACED
LENGTH: 4 HOURS
LMS COURSE CODE:
ACT100E

BRIDGING THE KNOWLEDGE GAP FOR ASTRO® 25 – SYSTEM ADMINISTRATOR

COURSE OVERVIEW

This five-module course is designed to bring Administrators from different technical backgrounds and experience levels to a common starting point for the ASTRO® 25 curriculum. This course provides seven modules from the basic concepts of radio communication systems and computer networking features, through the evolution that led to the ASTRO® 25 trunking system's architecture.

AUDIENCE

System Administrators who are new to trunked radio systems. Also those with experience in non-IP-based radio systems like SmartNet and SmartZone.

COURSE OBJECTIVES

After completing this course, the student will be able to:

- Identify different communication concepts using representative block diagrams of the respective systems
- Compare radio system communication concepts using representative block diagrams of the respective systems.
- Compare how voice and data information flows through different radio communication system types, and how the signaling information controls that flow of information
- Describe the features of each radio communication system in terms of advantages and disadvantages
- Explain the Trunked Radio System Concepts

REQUISITE KNOWLEDGE

None



ONLINE, SELF-PACED
LENGTH: 4 HOURS
LMS COURSE CODE:
ACT101E

RADIO SOLUTIONS FOUNDATIONAL

For information on prerequisites and to register for courses visit the LMS at: LEARNING.MOTOROLASOLUTIONS.COM

For general information, contact North America Education Services help desk at: (800) 247-2346, option 4 or training.na@motorolasolutions.com

ASTRO® 25 SYSTEMS APPLIED NETWORKING

COURSE OVERVIEW

The ASTRO® 25 Systems Applied Networking course provides technicians with the necessary networking information required for understanding the network components installed in modern Motorola Solutions communications systems. The course includes familiarization with basic networking concepts, and the networking components deployed in the ASTRO SmartZone System and ASTRO® 25 System..

AUDIENCE

Technical System Managers and Technicians

COURSE OBJECTIVES

After completing this course, the student will be able to:

- Recall basic network concepts
- Identify the various system network components
- Define the LAN topologies for each system
- Define the WAN topologies for each system
- Diagram SNMP deployment throughout the system
- Identify the HP switches and Motorola Solutions series routers
- Perform backup, restore, and recovery procedures of routers and LAN switches
- Identify network security components and concepts in an ASTRO® 25 system

REQUISITE KNOWLEDGE

Networking Essentials in Motorola Solutions Communications Equipment (NST762)

MOTOTRBO™ SYSTEMS APPLIED NETWORKING

COURSE OVERVIEW

The MOTOTRBO™ Systems Applied Networking provides technicians with the necessary information required for understanding the typical networking requirements for implementing a variety of MOTOTRBO™ solutions. The course includes familiarization/review of basic networking concepts and MOTOTRBO™-specific networking requirements. This course will focus on specific configurations for IP Site Connect, Linked Capacity Plus, and Connect Plus trunking systems.

AUDIENCE

Technical System Managers and Technicians

COURSE OBJECTIVES

After completing this course, the student will be able to:

- Recall Basic Networking Concepts
- Identify recommended network components for MOTOTRBO™ systems
- Define LAN/WAN topologies for MOTOTRBO™ systems
- Perform backup, restore and recovery of recommended network components
- Identify network security concepts for MOTOTRBO™ systems

REQUISITE KNOWLEDGE

Networking Essentials in Motorola Solutions Communications Equipment (NST762)

PUBLIC SAFETY LTE APPLIED NETWORKING

COURSE OVERVIEW

The Public Safety LTE Applied Networking course covers the operation and maintenance of Motorola Solutions-supplied network transport equipment used in a PS LTE network. Participants will learn the operation and replacement tasks required to maintain Layer 2 switches, Layer 3 switches, the NTP server, firewalls, and other devices which provide backhaul transport and connectivity services in the network. This lab-based course offers students practice with critical maintenance procedures on standalone equipment without impacting network operation.

AUDIENCE

Customer System Managers, Customer Network Transport Technical Staff, MSI employees

COURSE OBJECTIVES

After completing this course, the student will be able to:

- Check and manage status of LTE network transport devices
- Upgrade and downgrade device firmware or operating system
- Backup and restore device configuration
- Replace device hardware
- Validate and troubleshoot device operation

REQUISITE KNOWLEDGE

none



INSTRUCTOR-LED
LENGTH: 4.5 DAYS
LMS COURSE CODE:
NWT003



INSTRUCTOR-LED
LENGTH: 3.5 DAYS
LMS COURSE CODE:
PCT2007



INSTRUCTOR-LED
LENGTH: 4.5 DAYS
LMS COURSE CODE:
LTE2007



ASTRO® 25 SYSTEMS PORTFOLIO



ASTRO® 25 IV&D SYSTEM COURSES

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**THE LEARNING
MANAGEMENT
SYSTEM (LMS)**

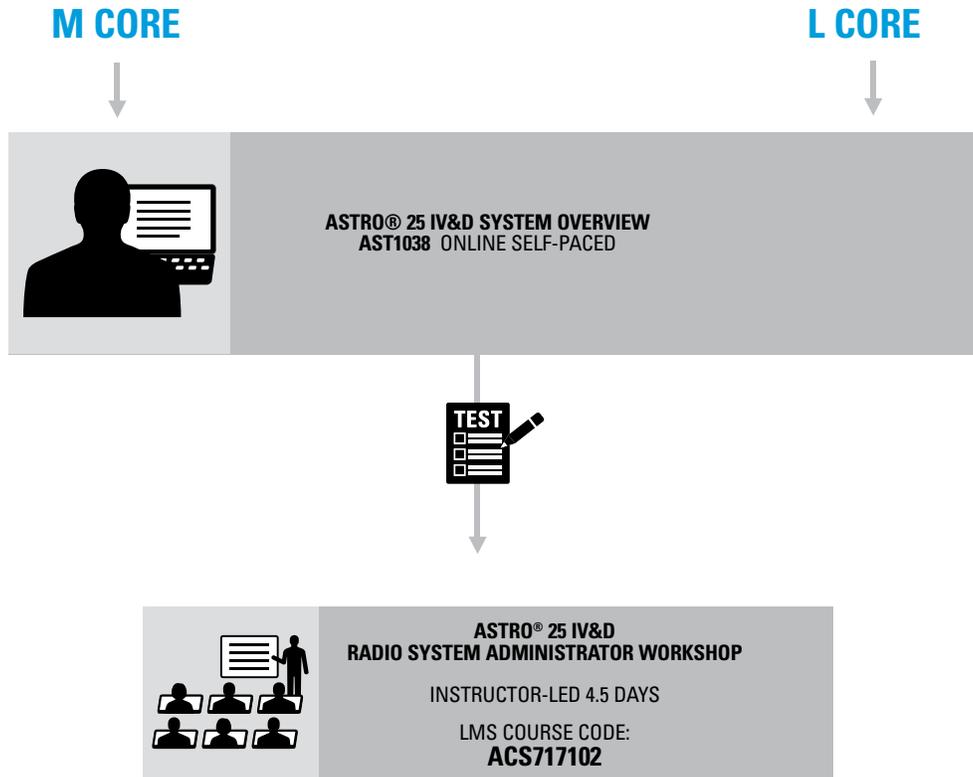
To register for a course, go to
learning.motorolasolutions.com

ASTRO® 25 IV&D SYSTEM COURSES (CONTINUED)

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ASTRO® 25 IV&D RADIO SYSTEM ADMINISTRATOR



RECOMMENDED CURRICULUM IS COMPLETE

PARTICIPANT SHOULD BE ABLE TO CARRY OUT ADMINISTRATIVE TASKS IN THE ASTRO® 25 IV&D SYSTEM SUCH AS: PROVISIONING SUBSCRIBERS AND TALK GROUPS, GENERATING HISTORICAL REPORTS, CONTROLLING DEPLOYED SUBSCRIBERS AND MANAGING NETWORK ELEMENT CONFIGURATIONS. PARTICIPANT UNDERSTANDS FACTORS OF SYSTEM CONFIGURATION THAT IMPACT ASTRO® 25 SYSTEM MANAGEMENT.



**OPTIONAL TRAINING
ROADMAP AVAILABLE.
[CLICK ON THIS LINK TO
GO TO PAGE 26 FOR
ADDITIONAL DETAILS.](#)**

RADIO SOLUTIONS ASTRO® 25 IV&D SYSTEMS

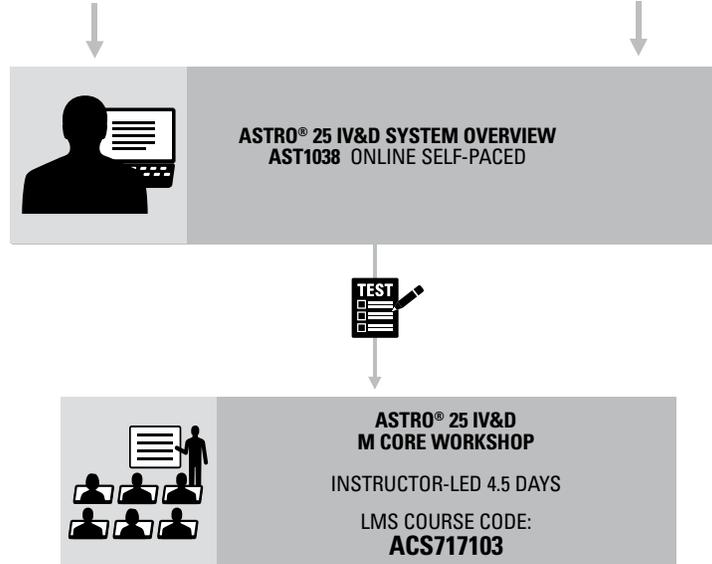
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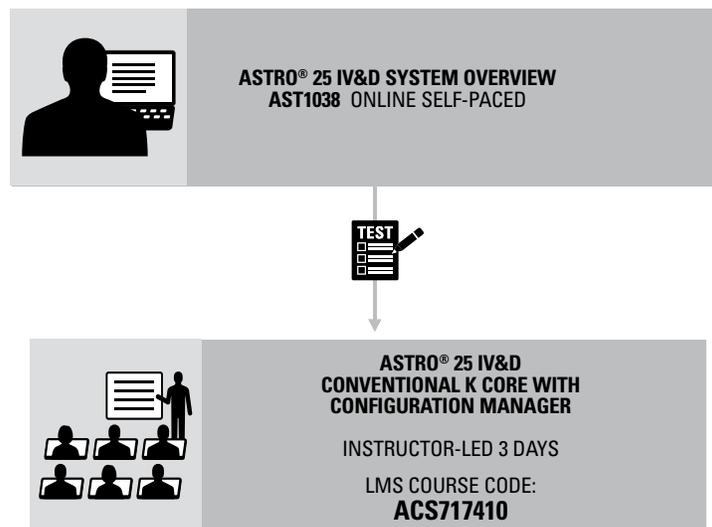
ASTRO® 25 IV&D M/L CORE TECHNICIAN

M CORE

L CORE



ASTRO® 25 IV&D K CORE TECHNICIAN



RECOMMENDED CURRICULUM IS COMPLETE

PARTICIPANT SHOULD UNDERSTAND ASTRO® 25 M CORE COMPONENTS, VIRTUAL SERVERS AND SERVICE STRATEGY. PARTICIPANT CAN INTERPRET SYSTEM ALARMS, PROPOSE SOLUTIONS FOR SYSTEM FAILURES, AND AS WELL AS RESTORING EQUIPMENT TO PROPER FUNCTIONALITY.



OPTIONAL TRAINING
ROADMAP AVAILABLE.
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ASTRO® 25 IV&D REPEATER SITE TECHNICIAN (GTR)

M CORE

L CORE



ASTRO® 25 IV&D SYSTEM OVERVIEW
AST1038 ONLINE SELF-PACED



ASTRO® 25 IV&D
GTR 8000 REPEATER SITE WORKSHOP
INSTRUCTOR-LED 3 DAYS
LMS COURSE CODE:
ACS717208

RECOMMENDED CURRICULUM IS COMPLETE

PARTICIPANT CAN MAINTAIN AN ASTRO® 25 REPEATER SITE INCLUDING: GTR8000 BASE STATION, GCP8000 SITE CONTROLLER AND OTHER SITE EQUIPMENT.
*PARTICIPANT PERFORMS ALIGNMENTS TROUBLESHOOTING AND FIELD REPLACEMENT OF SITE DEVICES DURING COURSE.



**OPTIONAL TRAINING
ROADMAP AVAILABLE.
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ASTRO® 25 IV&D IP SIMULCAST SITE TECHNICIAN

M CORE

L CORE



ASTRO® 25 IV&D SYSTEM OVERVIEW
AST1038 ONLINE SELF-PACED



ASTRO® 25 IV&D
IP BASED DIGITAL SIMULCAST WORKSHOP

INSTRUCTOR-LED 3 DAYS

LMS COURSE CODE:
ACS717217

RECOMMENDED CURRICULUM IS COMPLETE

PARTICIPANT SHOULD BE ABLE TO MAINTAIN AN ASTRO® 25 REPEATER SITE INCLUDING THE GTR8000 BASE STATION, GCP8000 SITE CONTROLLER, SITE COMPARATOR AND OTHER SITE EQUIPMENT.



OPTIONAL TRAINING
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ASTRO® 25 IV&D CONVENTIONAL RF SITE TECHNICIAN

M CORE



ASTRO® 25 IV&D SYSTEM OVERVIEW
AST1038 ONLINE SELF-PACED

K CORE



ASTRO® 25 IV&D
CONVENTIONAL RF SITE WORKSHOP

INSTRUCTOR-LED 3 DAYS

LMS COURSE CODE:

ACS717440

RECOMMENDED CURRICULUM IS COMPLETE

PARTICIPANT SHOULD BE ABLE TO MAINTAIN AN ASTRO® 25 REPEATER SITE INCLUDING THE GTR8000 BASE STATION, GCP8000 SITE CONTROLLER, SITE COMPARATOR AND OTHER SITE EQUIPMENT.



**OPTIONAL TRAINING
ROADMAP AVAILABLE.
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RADIO SOLUTIONS ASTRO® 25 IV&D SYSTEMS

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ASTRO® IV&D OPTIONAL TRAINING CURRICULUM

Motorola Solutions offers optional training for those participants who have completed their ASTRO® 25 curriculum and want to learn more about their system's infrastructure and/or features.

Select the training course below applicable to your system.

DYNAMIC SYSTEM RESILIENCE ASTRO® 25 IV&D DYNAMIC SYSTEM RESILIENCE ONLINE SELF-PACED ACS715023 	SMART X TO SUPPORT CIRCUIT-BASED RF SITES ASTRO® 25 IV&D INTERFACING SMARTZONE 3600 SYSTEMS ONLINE SELF-PACED ACS713360 	NETWORK SECURITY ASTRO® 25 IV&D INFORMATION ASSURANCE ONLINE SELF-PACED ACS713211 	TELEPHONE INTERCONNECTION ASTRO® 25 IV&D ENHANCED TELEPHONE INTERCONNECT ONLINE SELF-PACED ACS715480 	
SECURITY PATCH MANAGEMENT ASTRO® 25 IV&D SECURITY PATCH MANAGEMENT INSTRUCTOR-LED AST2001 	SYSTEMS FLEETMAPPING ASTRO® 25 IV&D ISYSTEMS FLEETMAPPING INSTRUCTOR-LED RDS1017 	RADIO AUTHENTICATION ASTRO® 25 IV&D RADIO AUTHENTICATION INSTRUCTOR-LED AST2038 	INFORMATION ASSURANCE WORKSHOP ASTRO® 25 IV&D INFORMATION ASSURANCE WORKSHOP INSTRUCTOR-LED ASC716600 	DOMAIN CONTROLLER ADMINISTRATION ASTRO® 25 IV&D DOMAIN CONTROLLER ADMINISTRATION INSTRUCTOR-LED AST2015 

RADIO SOLUTIONS ASTRO® 25 IV&D SYSTEMS

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ASTRO® 25 IV&D SYSTEM OVERVIEW

COURSE OVERVIEW

The ASTRO® 25 IV&D System Overview course will provide participants with knowledge and understanding of the ASTRO® 25 IV&D system. This course will address M, L and K Core systems. System architecture, components and features will be explained. In addition, RF and console sites and their architecture, features and components will be discussed. Finally, call processing for voice and mobile data applications will be covered, and an introduction to applications available in the ASTRO® 25 system will be provided.

AUDIENCE

Core Technicians, Site Technicians, Console Technicians, Core Managers.

COURSE OBJECTIVES

After completing this course, the student will be able to:

- Understand the general architecture of an ASTRO® 25 IV&D Radio System
- Understand key features of available in the ASTRO® 25 IV&D Radio System
- Understand the components of the ASTRO® 25 Zone Core
- Understand site components in the ASTRO® 25 system
- Understand the features, capabilities and components of the MCC7000 series dispatch consoles
- Understand concepts of Mobility and Call Processing in the ASTRO25
- Understand the applications for managing the ASTRO® 25 system

REQUISITE KNOWLEDGE

None



ONLINE, SELF-PACED
LENGTH: 4 HOURS
LMS COURSE CODE:
AST1038

NEW FEATURES INTRODUCTION FOR ASTRO® 25 IV&D SYSTEMS

COURSE OVERVIEW

This course describes the new features introduced in the ASTRO® 25 7.17 system release. These features are broadly classified into migration related features, efficiency and safety related features, resilience and reliability related features, network management and design related features, system capacity related features and inter-system communication related features. Optional features are introduced along with standard enhancements in this release.

AUDIENCE

System Administrators, System Technicians, Field Technicians, Application Users

COURSE OBJECTIVES

After completing this course, the student will be able to:

- Describe the standard enhancements in the ASTRO® 25 7.17 system release
- Describe optional enhancements in the ASTRO® 25 7.17 system release
- Describe the key optional features available in the ASTRO® 25 7.17 system release

REQUISITE KNOWLEDGE

Completion of the following course(s) or equivalent experience:

- ASTRO® 25 IV&D Curriculum (Release 7.9 or later) or equivalent knowledge for supported job role



VIRTUAL CLASSROOM
LENGTH: 2 HOURS
LMS COURSE CODE:
AST1029

ASTRO® 25 IV&D M CORE WORKSHOP

COURSE OVERVIEW

The ASTRO® 25 IV&D with M Core course teaches troubleshooting skills and best practices for the Trunked Large Systems. The course also focuses on gathering and analyzing system information to implement appropriate action(s) that return a system to full operational status.

AUDIENCE

M Core Master Site Technicians

COURSE OBJECTIVES

After completing this course, the student will be able to:

- Describe the ASTRO® 25 IV&D System architecture
- Identify the functional and radio subsystems that comprise the ASTRO® 25 IV&D System
- Explain and discuss call flow and data flow through ASTRO® 25 IV&D M Core devices and their subsystems
- Perform recommended routine maintenance procedures for ASTRO® 25 IV&D M Core
- Utilize the troubleshooting tools to diagnose a fault and restore the ASTRO® 25 IV&D M Core to the level of the Motorola Solutions-supported service strategy

REQUISITE KNOWLEDGE

Completion of the following course(s) or equivalent experience:

- Bridging the Knowledge Gap for ASTRO® 25 – Technician (ACT100E)
- Networking Essentials in Communication Equipment (NST762)
- ASTRO® 25 Systems Applied Networking (NWT003)

Required:

- ASTRO® 25 IV&D System Overview (AST1038)



INSTRUCTOR-LED
LENGTH: 4.5 DAYS
LMS COURSE CODE:
ACS717103

RADIO SOLUTIONS ASTRO® 25 IV&D SYSTEMS

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ASTRO® 25 IV&D CONVENTIONAL K CORE WITH CONFIGURATION MANAGER

COURSE OVERVIEW

The ASTRO® 25 IV&D Conventional with K Core and Configuration Manager course teaches advanced troubleshooting skills and best practices for the ASTRO® 25 IV&D Conventional K Core. It also focuses on administrator functions and how to use the ASTRO® 25 IV&D Configuration Manager applications. A technical **introduction** to the MCC 7000 series consoles as used within the ASTRO® 25 IV&D Conventional K Core, including some administrator functions, is also provided. Learning activities focus on gathering and analyzing system information to implement the appropriate actions that return a system to full operational status.

AUDIENCE

Master Site Technicians, System Administrators, Technical System Administrators, System Technicians and other Application Users

COURSE OBJECTIVES

After completing this course, the student will be able to:

- Understand key physical and functional characteristics of K Core conventional system.
- Perform tasks necessary to install K Core conventional system components.
- Perform configuration steps for K Core conventional system components.
- Understand available maintenance tools and indicators in K Core conventional system.

REQUISITE KNOWLEDGE

Completion of the following course(s) or equivalent experience:

- Bridging the Knowledge Gap – System Administrators (ACT101E)
- Networking Essentials in Communication Equipment (NST762)
- ASTRO® 25 Applied Networking (NWT003)
- ASTRO® 25 IV&D System Overview (AST1038)



INSTRUCTOR-LED
LENGTH: 3 DAYS
LMS COURSE CODE:
ACS717410

ASTRO® 25 IV&D RADIO SYSTEM ADMINISTRATOR WORKSHOP

COURSE OVERVIEW

This workshop covers administrator functions for an ASTRO® 25 IV&D System. Learning activities in this course focus on how to use the different ASTRO® 25 IV&D System Management applications. Participants will be provided with an opportunity to discuss how to structure their organization and personnel for optimal ASTRO® 25 IV&D system use.

AUDIENCE

System Administrators, Technical System Administrators, System Technicians, and other Application Users

COURSE OBJECTIVES

After completing this course, the student will be able to:

- Describe the relationship between radio programming, console administration and system management, and the impact of this relationship on system planning
- List the network management tools applicable at each phase of the system life cycle
- Use the report and real-time data to monitor performance and make adjustments necessary to maintain acceptable system performance levels
- Identify the advantages and disadvantages of options available for the configuration of system infrastructure and user parameters

REQUISITE KNOWLEDGE

Completion of the following course(s) or equivalent experience:

- Bridging the Knowledge Gap – System Administrators (ACT101E)
- Networking Essentials in Communication Equipment (NST762)
- ASTRO® 25 Applied Networking (NWT003)
- ASTRO® 25 IV&D System Overview (AST1038)



INSTRUCTOR-LED
LENGTH: 4.5 DAYS
LMS COURSE CODE:
ACS717102

ASTRO® 25 SYSTEMS FLEETMAPPING

COURSE OVERVIEW

This workshop addresses topics necessary for the effective planning and mapping of an ASTRO® 25 IV&D radio system. During this course, the participants will learn about ASTRO® 25 features, capabilities, and restrictions in order to effectively plan and prepare for a new or upgraded ASTRO® 25 system.

AUDIENCE

Pre-sale customers, new system managers, system planning personnel

COURSE OBJECTIVES

After completing this course, the student will be able to:

- Discuss what a fleetmap is and why one is needed.
- Discuss the methodologies used to configure radio users and groups with the goal of optimizing the system resources.
- Describe the content to assist with fleetmapping decisions.
- Discuss frequency band plan organization and management.
- Describe basic planning requirements and complete a simple Fleetmap information template.
- Complete worksheets required to create a Fleetmap based on sample operational requirement information.

REQUISITE KNOWLEDGE

None



INSTRUCTOR-LED
LENGTH: 4.5 DAYS
LMS COURSE CODE:
RDS1017

RADIO SOLUTIONS ASTRO® 25 IV&D SYSTEMS

For information on prerequisites and to register for courses visit the LMS at: LEARNING.MOTOROLASOLUTIONS.COM

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ASTRO® 25 SECURITY PATCH MANAGEMENT

COURSE OVERVIEW

Provide Motorola Solutions ASTRO® 25 Land Mobile Radio (LMR) system administrators the information to access and patch their radio system infrastructure, update antivirus definitions, review log files and understand account management.

AUDIENCE

M Core Master Site Technicians

COURSE OBJECTIVES

After completing this course, the student will be able to:

- Successfully access servers in the M-Core
- Successfully patch their radio system infrastructure
- Update Anti-virus (A/V) Definitions for their radiosystem infrastructure
- Perform basic review of UNIX logs
- Create user and group accounts
- Assist with basic tasks in Account Management on the LMR system

REQUISITE KNOWLEDGE

Completion of the following course(s) or equivalent experience:

- ASTRO® 25 IV&D M Core Workshop (ACS717103)



INSTRUCTOR-LED
LENGTH: 4 DAYS
LMS COURSE CODE:
AST2001

ASTRO® 25 RADIO AUTHENTICATION

COURSE OVERVIEW

This course describes the Radio Authentication feature and defines the HW/SW components in the Radio Authentication system. In addition the course describes the Radio Authentication process, discusses the various Keys uses in Radio Authentication. The students will understand how to provision and distribute relevant Keys using the AuC Client GUI to access the AuC Server. Students will understand how to enable Radio Authentication in the System via the AuC Client and how to configure the KVL 4000 for Radio Authentication and manage subscribers from the AuC Client.

AUDIENCE

Customer Administrators or Technicians.

COURSE OBJECTIVES

After completing this course, the student will be able to:

- Describe Radio Authentication features and HW/SW components
- Describe the Radio Authentication process. Discuss the Keys used in Radio Authentication
- Provision and Distribute relevant Keys. Describe the AuC Client GUI
- Enable Radio Authentication in the System. Configure the KVL 4000 for Radio Authentication
- Manage Subscribers from the AuC Client. Discuss Radio Authentication functionality in a DSR system

REQUISITE KNOWLEDGE

Completion of the following course(s) or equivalent experience:

- AAE1400 - Radio Authentication e-learning course.
- Radio System Administration or equivalent knowledge of the Provisioning Manager, ZoneWatch, Historical Reports, ATIA Log Viewer, Unified Event Manager (UEM), Unified Network Configurator (UNC).

Required:

Access to customer ASTRO25 Radio System, AuC Server/Client is required. Customer to provide working Motorola Solutions' portable radio(s) capable of placing calls on the System, access to working AuC client/server along with admin login credentials, access to a working KVL4000 key loader that can upload keys to the AuC server.



INSTRUCTOR-LED
LENGTH: 2 DAYS
LMS COURSE CODE:
AST2038

ASTRO® 25 INFORMATION ASSURANCE WORKSHOP

COURSE OVERVIEW

Information Assurance (IA) refers to securing radio network access, protecting the privacy of network traffic using encryption, and assuring the integrity of data sent through the radio network or stored in the radio network. IA procedures and protocols offer FIPS-compliant techniques designed to harden the network. In this lab-based class, IA features are applied to network transport equipment by configuring HP switches, Motorola Solutions network routers, and firewalls in the classroom. Site level and zone core IA features are illustrated on the customer system or, by remotely accessing the Motorola Solutions Solutions OneLE ASTRO® 25 system.

AUDIENCE

System Technician and Managers.

COURSE OBJECTIVES

After completing this course, the student will be able to:

- Identify and describe the various Information Assurance (IA) features available in the
- ASTRO® 25 IV&D network.
- Identify the system locations and scope of protection offered by IA features in the network.
- Harden ASTRO® 25 networks using Information Assurance (IA) features.
- Configure and restore IA features on HP switches and Motorola Solutions network routers.
- Configure site level IA features using the CSS or UNC.
- Manage zone core level IA features.
- Manage and check the configuration of firewalls in the ASTRO® 25 network.

REQUISITE KNOWLEDGE

Completion of the following course(s) or equivalent experience:

- NST762 Networking Essentials in Communications Equipment
- NWT003 ASTRO® 25 Applied Networking
- ACS71X103 ASTRO® 25 M-Core Workshop



INSTRUCTOR-LED
LENGTH: 4.5 DAYS
LMS COURSE CODE:
ASC716600

 [CLICK HERE TO VIEW THE SCHEDULE AND PRICE SHEET](#)

RADIO SOLUTIONS ASTRO® 25 IV&D SYSTEMS

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ASTRO® 25 IV&D SECURE COMMUNICATIONS WORKSHOP

COURSE OVERVIEW

This workshop describes planning, installation, configuration, operations, and troubleshooting of Secure Communications within the ASTRO® 25 IV&D System.

AUDIENCE

System Technicians, System Administrators, Technical System Managers

COURSE OBJECTIVES

After completing this course, the student will be able to:

- Plan, organize, and implement Secure Communications in an ASTRO® 25 IV&D system
- Install and configure a Key Management Facility (KMF) system and related components
- Demonstrate centralized key management using Over-the-Air-Rekeying (OTAR)
- Perform System Administrator functions using the KMF server and KMF client
- Troubleshoot installation and configuration problems for the KMF server, KMF client, and KMF database
- Implement end-to-end encryption using the MCC 7500 console subsystem

REQUISITE KNOWLEDGE

Completion of the following course(s) or equivalent experience:

- Bridging the Knowledge Gap for ASTRO® 25 (ACT100E or ACT101E)
- Networking Essentials in Communication Equipment (NST762)



INSTRUCTOR-LED
LENGTH: 4.5 DAYS
LMS COURSE CODE:
ACS717207

ASTRO® 25 IV&D IP BASED DIGITAL SIMULCAST WORKSHOP

COURSE OVERVIEW

The ASTRO® 25 IV&D IP Based Digital Simulcast workshop provides an understanding of the components that comprise the ASTRO® 25 IV&D IP Simulcast subsystem, and how they operate in conjunction with each other. The workshop also explains the tools and methods available for troubleshooting components within the IP Based Simulcast subsystem.

AUDIENCE

Simulcast Site Technicians

COURSE OBJECTIVES

After completing this course, the student will be able to:

- Recognize the flow of message and control data within an ASTRO® 25 IV&D IP Digital Simulcast subsystem
- Identify the major components and connections within an ASTRO® 25 IV&D IP Digital Simulcast subsystem prime and remote sites
- Recognize how calls are processed within an ASTRO® 25 IV&D IP Digital Simulcast subsystem
- Perform maintenance and troubleshooting of select components in an ASTRO® 25 IV&D IP Digital Simulcast subsystem

REQUISITE KNOWLEDGE

Completion of the following course(s) or equivalent experience:

- Bridging the Knowledge Gap for ASTRO® 25 – Technician (ACT100E)
- Networking Essentials in Communication Equipment (NST762)
- ASTRO® 25 Systems Applied Networking (NWT003)

Required:

- ASTRO® 25 IV&D System Overview (AST1038)



INSTRUCTOR-LED
LENGTH: 3 DAYS
LMS COURSE CODE:
ACS717217

ASTRO® 25 IV&D GTR 8000 REPEATER SITE WORKSHOP

COURSE OVERVIEW

This workshop describes the components in the ASTRO® 25 IV&D System Repeater Site with GTR 8000 expandable site subsystem. This course also presents how the GTR 8000 expandable site subsystem operates and explains the tools and methods available for troubleshooting components within the subsystem.

AUDIENCE

GTR 8000 Site Technicians

COURSE OBJECTIVES

After completing this course, the student will be able to:

- Describe the ASTRO® 25 IV&D Repeater Site with GTR 8000 Expandable Site Subsystem configurations and components
- Identify the GCP 8000 Site Controller functions and configuration requirements
- Describe the connections and interfaces to the GCP 8000
- Diagnose and troubleshoot the GCP 8000
- Describe the functionality of the GTR 8000 Expandable Site Subsystem
- Configure and troubleshoot the ASTRO® 25 Repeater Site with GTR 8000 Expandable Site Subsystem
- Configure and troubleshoot the Network Transport subsystem

REQUISITE KNOWLEDGE

Completion of the following course(s) or equivalent experience:

- Bridging the Knowledge Gap for ASTRO® 25 – Technician (ACT100E)
- Networking Essentials in Communication Equipment (NST762)
- ASTRO® 25 Systems Applied Networking (NWT003)

Required:

- ASTRO® 25 IV&D System Overview (AST1038)



INSTRUCTOR-LED
LENGTH: 3 DAYS
LMS COURSE CODE:
ACS717208

 [CLICK HERE TO VIEW THE SCHEDULE AND PRICE SHEET](#)

RADIO SOLUTIONS ASTRO® 25 IV&D SYSTEMS

For information on prerequisites and to register for courses visit the LMS at: LEARNING.MOTOROLASOLUTIONS.COM

For general information, contact North America Education Services help desk at: (800) 247-2346, option 4 or training.na@motorolasolutions.com

ASTRO® 25 IV&D CONVENTIONAL RF SITE WORKSHOP

COURSE OVERVIEW

The ASTRO® 25 IV&D Conventional RF Site workshop describes the components in the different ASTRO® 25 IV&D Conventional RF Sites topologies. This course also presents how the different ASTRO® 25 IV&D Conventional RF Sites topologies operate and explains the tools and methods available for troubleshooting components within the different ASTRO® 25 IV&D Conventional RF Sites topologies.

AUDIENCE

Site Technicians

COURSE OBJECTIVES

After completing this course, the student will be able to:

- Understand key physical and functional characteristics of conventional site.
- Perform tasks necessary to install conventional site components.
- Perform configuration steps for conventional site components.
- Understand available maintenance tools and indicators in conventional site.

REQUISITE KNOWLEDGE

Completion of the following courses or equivalent knowledge:

- Bridging the Knowledge Gap – System Administrators (ACT101)
- Networking Essentials in Communication Equipment (NST762)
- ASTRO® 25 Applied Networking (NWT003)
- ASTRO® 25 IV&D System Overview (AST1038)



INSTRUCTOR-LED
LENGTH: 3 DAYS
LMS COURSE CODE:
ACS717440

ASTRO® 25 DOMAIN CONTROLLER ADMINISTRATION

COURSE OVERVIEW

This workshop covers the administrator and management functions in the ASTRO® 25 Domain Controller and how these functions affect both users and computers in the ASTRO® 25 system. Learning activities in this course focus on how to use the Domain Controllers to authenticate, administer, and authorize users and devices in the ASTRO® 25 System. Group Policies and Organizational Units, RADIUS, and DNS structure will be addressed during this course.

AUDIENCE

Console Technicians, System Managers

COURSE OBJECTIVES

After completing this course, the student will be able to:

- Understand the Domain Controller server platform
- Understand the DNS Hierarchy in the ASTRO® 25 system
- Implement RADIUS authentication in applicable devices in an ASTRO® 25 system.
- Use Active Directory to control users in the ASTRO® 25 system.
- Understand Group Policy objects and how they impact users in the ASTRO® 25 Domain.

REQUISITE KNOWLEDGE

Completion of the following course(s) or equivalent experience:

- ASTRO® 25 IV&D System Overview (AST1038)



INSTRUCTOR-LED
LENGTH: 3 DAYS
LMS COURSE CODE:
AST2015

INTELLIGENT MIDDLEWARE 5.2 OPERATION AND ADMINISTRATION

COURSE OVERVIEW

The purpose of this course is to provide the steps to operate and maintain a customer's IMW system within their Motorola Solutions system (ASTRO, Dimetra, LTE).

AUDIENCE

Partners/Resellers and customers who would be responsible for the operation and maintenance of a customer's IMW system within their Motorola Solutions systems (ASTRO, Dimetra, LTE).

COURSE OBJECTIVES

After completing this course, the student will be able to:

- Describe IMW features.
- Perform installation of IMW.
- Configure an IMW system.
- Identify the IMW tools to administer the system.
- Perform routine administration.
- Perform troubleshooting.
- Understand system-specific considerations.

REQUISITE KNOWLEDGE

None



INSTRUCTOR-LED
LENGTH: 2 DAYS
LMS COURSE CODE:
RDS2025



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RADIO SOLUTIONS ASTRO® 25 IV&D SYSTEMS

For information on prerequisites and to register for courses visit the LMS at: LEARNING.MOTOROLASOLUTIONS.COM

For general information, contact North America Education Services help desk at: (800) 247-2346, option 4 or training.na@motorolasolutions.com

ASTRO® 25 ISSI 8000 / CSSI 8000 FEATURE OVERVIEW

COURSE OVERVIEW

The ISSI 8000 / CSSI 8000 Feature Overview self-paced course describes the optional Inter-RF Subsystem Interface available in an ASTRO® 25 IV&D System. It presents a description of the feature, its benefits and components, call processing scenarios, and an overview of the installation process.

AUDIENCE

System Managers, Technical System Managers, System Technicians, Application Users

COURSE OBJECTIVES

After completing this course, the student will be able to:

- Describe the ISSI 8000 / CSSI 8000 feature
- Describe the components of the ISSI 8000 / CSSI 8000 feature
- Describe the communication scenarios if this feature is enabled
- Follow the installation and configuration process if this feature is added to an ASTRO system

REQUISITE KNOWLEDGE

Completion of the following course(s) or equivalent experience:

- Bridging the Knowledge Gap for ASTRO® 25 – Technician (ACT100E)

Required:

- ASTRO® 25 IV&D System Overview (AST1038)



ONLINE, SELF-PACED
LENGTH: 4 HOURS
LMS COURSE CODE:
AST2005

ASTRO® 25 IV&D DYNAMIC SYSTEM RESILIENCE

COURSE OVERVIEW

The ASTRO® 25 IV&D Dynamic System Resilience (DSR) Overview is a self-study training course intended to provide a technical overview of DSR. The course describes how DSR adds a geographically separate backup for the Master Site to protect against a catastrophic failure.

AUDIENCE

System Administrators, System Technicians, Field Technicians

COURSE OBJECTIVES

After completing this course, the student will be able to:

- Differentiate between a non-DSR Master Site and a DSR Master Site

Describe the DSR components, operation and functionality of each of the following services:

- Voice
- Data
- Network Management
- Network Transport
- IP Services
- MOSCAD

REQUISITE KNOWLEDGE

Completion of the following course(s) or equivalent experience:

- ASTRO® 25 IV&D System Overview (AST1038)



ONLINE, SELF-PACED
LENGTH: 2 HOURS
LMS COURSE CODE:
ACS715023

ASTRO® 25 IV&D INTERFACING SMARTZONE 3600 SYSTEMS

COURSE OVERVIEW

ASTRO® 25 IV&D Trunked System - Interfacing SmartZone 3600 Systems with SmartX is designed to allow communication between subscriber radios at existing 3600 RF sites and an ASTRO® 25 IV&D system. It is based on the Voice Processor Module hardware platform and enables the continued use of 3600 RF sites and subscriber radios with the release of ASTRO® 25 7.7 or higher. This self-study training course is intended to provide information related to the installation and functionality of, including the hardware and software associated with, the SmartX Site Converter in the ASTRO® 25 IV&D.

AUDIENCE

System Administrators, System Technicians, Field Technicians

COURSE OBJECTIVES

After completing this course, the student will be able to:

- Describe the SmartX Site Converter and its operation within the system
- Identify the major components and functionality.
- Know the requirements and components necessary to install a SmartX Site Converter

REQUISITE KNOWLEDGE

None



ONLINE, SELF-PACED
LENGTH: 1 HOUR
LMS COURSE CODE:
ACS713360



[CLICK HERE TO VIEW THE SCHEDULE AND PRICE SHEET](#)

RADIO SOLUTIONS ASTRO® 25 IV&D SYSTEMS

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ASTRO® 25 IV&D ENHANCED TELEPHONE INTERCONNECT

COURSE OVERVIEW

This web based course describes the functionality and the hardware and software associated with the Enhanced Telephone Interconnect feature in the ASTRO® 25 IV&D System.

AUDIENCE

System Technicians, System Administrators

COURSE OBJECTIVES

After completing this course, the student will be able to:

- Identify the function and major components for the Enhanced Telephone Interconnect feature
- Define the operation of the Enhanced Telephone Interconnect feature within the system
- Configure the Enhanced Telephone Interconnect equipment
- Troubleshoot the Enhanced Telephone Interconnect equipment

REQUISITE KNOWLEDGE

Completion of the following course(s) or equivalent experience:

- Bridging the Knowledge Gap for ASTRO® 25 (ACT100E or ACT101E)
- Networking Essentials in Communication Equipment (NST762)



ONLINE, SELF-PACED
LENGTH: 2 HOURS
LMS COURSE CODE:
ACS715480

SYSTEM OVERVIEW FOR ASTRO® 25 IV&D INFORMATION ASSURANCE

COURSE OVERVIEW

This web based course describes the functionality and the hardware and software associated CNI Network Security in the ASTRO® 25 IV&D System.

AUDIENCE

System Administrators, System Technicians, Field Technicians

COURSE OBJECTIVES

After completing this course, the student will be able to:

- Define network security and its functions
- List the network security components of an ASTRO® 25 IV&D system
- Define the functions, components and operation of the Core Server Management Server (CSMS)
- Identify the functions, components and operation of the Interface Barrier (NIB)
- Identify the functions, components and operation of the border router and the peripheral network router

REQUISITE KNOWLEDGE

Completion of the following course(s) or equivalent experience:

- Bridging the Knowledge Gap for ASTRO® 25 (ACT100E or ACT101E)
- Networking Essentials in Communication Equipment (NST762)
- ASTRO® 25 Systems Applied Networking (NWT003)

Required:

Take one of the following depending on system supporting:

- ASTRO®25 IV&D with M Core System Overview (ACS11200-E)
- ASTRO®25 IV&D Conventional with M Core Overview (ACS11420-E)
- ASTRO®25 IV&D with L Core System Overview (ACS11430-E)
- ASTRO®25 IV&D Conventional with K Core System Overview (ACS11400-E)



ONLINE, SELF-PACED
LENGTH: 2 HOURS
LMS COURSE CODE:
ACS713211

STANDALONE GTR8000 CONVENTIONAL BASE RADIO

COURSE OVERVIEW

This course is designed to give the participants the ability to align, troubleshoot and repair the Standalone GTR8000 Base Station/Repeater to Motorola Solutions recommended service levels.

Emphasis is placed on the use of Configuration Service Software (CSS) and its role in configuration, maintenance, diagnostics, alignments, and optimization of the Standalone GTR8000 Base Radio/ Repeater

AUDIENCE

Maintenance Technicians

COURSE OBJECTIVES

After completing this course, the student will be able to:

- Understand basic concepts of the various radio systems supported by the GTR8000 Conventional Base Radio
- Identify the equipment modules of the GTR8000 Conventional Base Radio
- Operate and perform routine maintenance on the GTR8000 Conventional Base Radio
- Understand basic operational theory of GTR8000 Conventional Base Radio components
- Configure the GTR8000 Conventional Base Radio using Configuration Service Software (CSS)
- Identify the different backplane connections on the GTR8000 Conventional Base Radio
- Perform calibration and alignment adjustments for the GTR8000 Conventional Base Radio
- Troubleshoot problems and identify/replace faulty modules in the GTR8000 Conventional Base Radio

REQUISITE KNOWLEDGE

Completion of the following course(s) or equivalent experience:

- General RF Knowledge and Skills
- Basic Knowledge of Two-Way Radio systems



ONLINE, SELF-PACED
LENGTH: 2 HOURS
LMS COURSE CODE:
AST2006

HELPING



PEOPLE

BE THEIR



BEST



IN THE



MOMENTS

THAT MATTER





DISPATCH CONSOLE PORTFOLIO

OPERATIONAL COMMAND AND CONTROL FROM
MULTIPLE POINTS, AT MULTIPLE LEVELS

MCC 7100



MCC 7500



MCC 7500e



MCD 5000





CONSOLE COURSES

ASTRO® 25 IV&D SYSTEM OVERVIEW (AST1038) [38](#)

ASTRO® 25 DOMAIN CONTROLLER ADMINISTRATION (AST2015) [38](#)

MCC 7000 SERIES DISPATCH CONSOLES WORKSHOP (CON012) [38](#)

ASTRO® 25 NICE LOGGER INTEGRATION (AST1002) [39](#)

MCD 5000 TECHNICAL WORKSHOP (RDS1022) [39](#)

* PLEASE NOTE:

MCC 7000 Series Dispatch Consoles Workshop (CON012) focuses on the consoles application in an M- or L-Core System.



**THE LEARNING
MANAGEMENT
SYSTEM (LMS)**

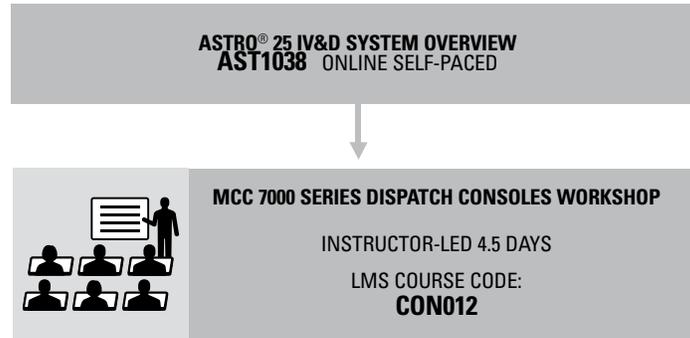
To register for a course, go to learning.motorolasolutions.com

RADIO SOLUTIONS CONSOLES

For information on prerequisites and to register for courses visit the LMS at:
LEARNING.MOTOROLASOLUTIONS.COM

For general information, contact North America Education Services help desk at:
(800) 247-2346, option 4 or training.na@motorolasolutions.com

CONSOLES TECHNICAL TRAINING CURRICULUM



CURRICULUM COMPLETE

PARTICIPANT CAN MAINTAIN A MCC 7000 DISPATCH CONSOLE SITE INCLUDING: CONSOLE PC, VPM, CC GW'S AND AUX I/O SERVERS.
*PARTICIPANT PERFORMS TROUBLESHOOTING AND REPLACEMENT OF SITE DEVICES DURING COURSE.

OPTIONAL CONSOLE TRAINING

MCD 5000 TECHNICAL WORKSHOP	ASTRO® 25 NICE LOGGER INTEGRATION	ASTRO® 25 DOMAIN CONTROLLER ADMINISTRATION
INSTRUCTOR-LED 3 DAYS	INSTRUCTOR-LED 4.5 DAYS	INSTRUCTOR-LED 3 DAYS
RDS1022	AST1002	AST2015

RADIO SOLUTIONS CONSOLES

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ASTRO® 25 IV&D SYSTEM OVERVIEW

COURSE OVERVIEW

The ASTRO® 25 IV&D System Overview course will provide participants with knowledge and understanding of the ASTRO® 25 IV&D system. This course will address M, L and K Core systems. System architecture, components and features will be explained. In addition, RF and console sites and their architecture, features and components will be discussed. Finally, call processing for voice and mobile data applications will be covered, and an introduction to applications available in the ASTRO® 25 system will be provided.

AUDIENCE

Core Technicians, Site Technicians, Console Technicians, Core Managers.

COURSE OBJECTIVES

After completing this course, the student will be able to:

- Understand the general architecture of an ASTRO® 25 IV&D Radio System
- Understand key features of available in the ASTRO® 25 IV&D Radio System
- Understand the components of the ASTRO® 25 Zone Core
- Understand site components in the ASTRO® 25 system
- Understand the features, capabilities and components of the MCC7000 series dispatch consoles
- Understand concepts of Mobility and Call Processing in the ASTRO25
- Understand the applications for managing the ASTRO® 25 system

REQUISITE KNOWLEDGE

None



ONLINE, SELF-PACED
LENGTH: 4 HOURS
LMS COURSE CODE:
AST1038

ASTRO® 25 DOMAIN CONTROLLER ADMINISTRATION

COURSE OVERVIEW

This workshop covers the administrator and management functions in the ASTRO® 25 Domain Controller and how these functions affect both users and computers in the ASTRO® 25 system. Learning activities in this course focus on how to use the Domain Controllers to authenticate, administer, and authorize users and devices in the ASTRO® 25 System. Group Policies and Organizational Units, RADIUS, and DNS structure will be addressed during this course.

AUDIENCE

Console Technicians, System Managers

COURSE OBJECTIVES

After completing this course, the student will be able to:

- Understand the Domain Controller server platform
- Understand the DNS Hierarchy in the ASTRO® 25 system
- Implement RADIUS authentication in applicable devices in an ASTRO® 25 system.
- Use Active Directory to control users in the ASTRO® 25 system.
- Understand Group Policy objects and how they impact users in the ASTRO® 25 Domain.

REQUISITE KNOWLEDGE

Completion of the following course(s) or equivalent experience:

- ASTRO® 25 IV&D System Overview (AST1038)



INSTRUCTOR-LED
LENGTH: 3 DAYS
LMS COURSE CODE:
AST2015

MCC 7000 SERIES DISPATCH CONSOLES WORKSHOP



COURSE OVERVIEW

This course familiarizes participants with installation, configuration, management and repair of MCC 7000 series dispatch consoles, Archiving Interface Servers, AUX I/O servers, and Conventional Channel Gateways. The focus is on a detailed discussion of console hardware and the installation and configuration of the MCC 7000 series consoles which consist of the MCC 7100 and MCC 7500 dispatch console.

AUDIENCE

System Administrators, Console Technicians

COURSE OBJECTIVES

After completing this course, the student will be able to:

- Install and configure the hardware and software components of the MCC 7000 Series Dispatch Consoles Subsystem
- Perform MCC 7000 Series site connectivity and bandwidth management
- Perform System Administrator functions using the MCC 7000 Series Administrator software
- Troubleshoot installation and configuration problems for the MCC 7000 Series Dispatch Consoles

REQUISITE KNOWLEDGE

Completion of the following course(s) or equivalent experience:

- Bridging the Knowledge Gap (ACT100E or ACT101E)
- Networking Essentials in Communication Equipment (NST762)
- ASTRO® 25 Systems Applied Networking (NWT003)

Required:

- ASTRO® 25 IV&D System Overview (AST1038)



INSTRUCTOR-LED
LENGTH: 4.5 DAYS
LMS COURSE CODE:
CON012



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RADIO SOLUTIONS CONSOLES

For information on prerequisites and to register for courses visit the LMS at: LEARNING.MOTOROLASOLUTIONS.COM

For general information, contact North America Education Services help desk at: (800) 247-2346, option 4 or training.na@motorolasolutions.com

ASTRO® 25 NICE LOGGER INTEGRATION

COURSE OVERVIEW

This workshop covers the tasks and knowledge to implement a NICE logging solution in an ASTRO® 25 system. Learning activities in this course focus on both initial installation and configuration, and operation and troubleshooting the components after installation. Participants will be provided with an opportunity to demonstrate, with available lab equipment, tasks required to install and maintain the related subsystem components.

AUDIENCE

Console Technicians, System Managers

COURSE OBJECTIVES

After completing this course, the student will be able to:

- Describe the functionality of the different components and applications required for NICE Radio logging
- Install and configure required components into an ASTRO® 25 system
- Perform administrative tasks necessary for operation of the logging solution
- Use system tools and applications to identify potential causes of failure of the logging solution

REQUISITE KNOWLEDGE

Completion of the following course(s) or equivalent experience:

- ASTRO® 25 IV&D System Overview (AST1038)
- MCC7000 Series Dispatch Console Workshop (CON012)

MCD 5000 TECHNICAL WORKSHOP

COURSE OVERVIEW

This workshop supports those that install, configure, or support the MCD 5000 Deskset. This three day training course will cover installation procedures for the MCD5000 Deskset, Radio Gateway Unit (RGU), and connectivity to different station types. Configuration and programming of the MCD5000 and its supporting equipment will be covered through discussion and hands- on lab activities. Troubleshooting and maintenance techniques will be addressed to the Motorola Solutions recommended service level.

AUDIENCE

Console Technicians, System Managers

COURSE OBJECTIVES

After completing this course, the student will be able to:

- Identify the MCD 5000 System Components and functions
- Install MCD 5000 Deskset
- Install Radio Gateway Units
- Configure MCD 5000 subcomponents
- Troubleshoot the MCD 5000 System to Motorola Solutions recommended service levels
- Configure MCD 5000 with the Operations and Management Center (OMC), as applicable.
- Use the Administrator Control Panel (ACP) to configure an MCD 5000 System with OMC.
- Describe the function of the MCD 5000 Deskset
- Describe all tasks on the MCD 5000 Deskset
- Discuss MCD 5000 Deskset Basic Operations

REQUISITE KNOWLEDGE

Completion of the following course(s) or equivalent experience:

- Communication Systems Concepts (NST021)



INSTRUCTOR-LED
LENGTH: 4.5 DAYS
LMS COURSE CODE:
AST1002



INSTRUCTOR-LED
LENGTH: 3 DAYS
LMS COURSE CODE:
RDS1022



[CLICK HERE TO VIEW THE SCHEDULE AND PRICE SHEET](#)



SUBSCRIBER COURSES

CPS PROGRAMMING AND TEMPLATE BUILDING (ADT001V)	<u>43</u>
XTS/XTL TECHNICAL SUBSCRIBER ACADEMY (ADST005)	<u>43</u>
APX™ CPS PROGRAMMING AND TEMPLATE BUILDING (APX7001V)	<u>44</u>
APX TECHNICAL SUBSCRIBER ACADEMY (APX010)	<u>44</u>
APX™ RADIO MANAGEMENT WORKSHOP (RDS2017)	<u>45</u>
MOTOTRBO™ SUBSCRIBER AND REPEATER TECHNICAL SERVICE ACADEMY (TBO300)	<u>45</u>
SI500 RADIO MANAGEMENT R2.X (PSA1053)	<u>46</u>

THE APX RADIO TECHNICAL ACADEMY AND THE XTS/XTL RADIO TECHNICAL ACADEMY

These “academy” style technical training courses are designed to provide technicians handling install, configuration, maintenance and troubleshooting support on APX or XTS/XTL subscribers, with a broader and deeper view of the APX radio and XTS/XTL radio. In addition to focusing on the capability, function and features of the APX and XTS/XTL radios as well as the detailed theory of operation of those radios, these academies will continue to focus on the correct procedures used to complete radio performance checks, radio alignment, maintenance and troubleshooting. They will also highlight other useful skills. These radio academies will include lecture and lab work on topics such as: Radio Flashing, Encryption (including configuring radios for OTAR), Programming Over P25 (POP 25), Advanced System Key Management, Vacuum and Submersibility testing, Mobile radio installation, Multiple Control Head configuration and many other special setup or configuration modes.

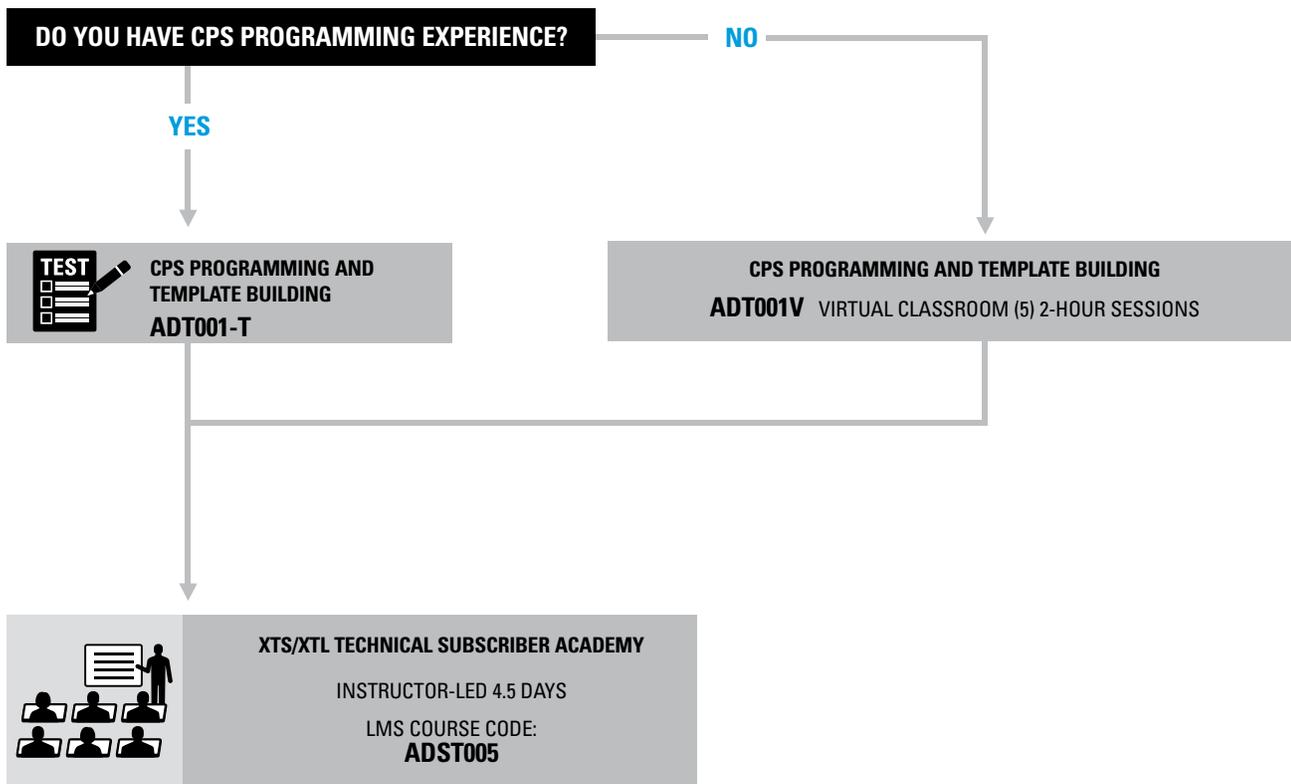
NOTE: As new APX models are released, they will be addressed during the APX Academy training. This approach provides technicians the expertise they need to work on the whole family of radios.

RADIO SOLUTIONS SUBSCRIBERS

For information on prerequisites and to register for courses visit the LMS at: LEARNING.MOTOROLASOLUTIONS.COM

For general information, contact North America Education Services help desk at: (800) 247-2346, option 4 or training.na@motorolasolutions.com

XTS/XTL SUBSCRIBER FAMILY



CURRICULUM COMPLETE

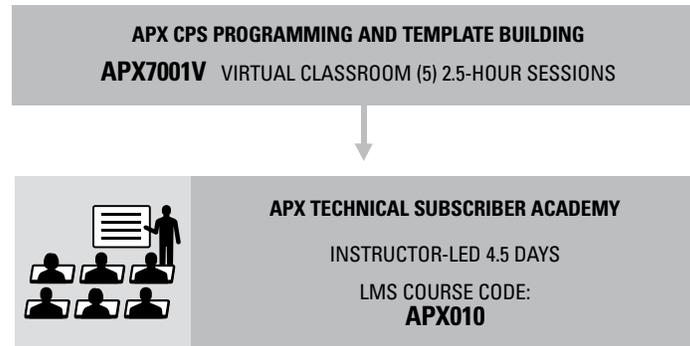
PARTICIPANT WILL BE ABLE TO PROGRAM, DEVELOP FLEET TEMPLATES, AND PERFORM MAINTENANCE ON ALL MEMBERS OF THE APX FAMILY OF RADIOS. MAINTENANCE WILL INCLUDE TESTING, ALIGNMENTS, DISASSEMBLY/RE-ASSEMBLY, SUBMERSIBILITY TEST, MOBILE RADIO INSTALLATION, AND TROUBLESHOOT TO THE BOARD LEVEL.

RADIO SOLUTIONS **SUBSCRIBERS**

For information on prerequisites and to register for courses visit the LMS at:
LEARNING.MOTOROLASOLUTIONS.COM

For general information, contact North America Education Services help desk at:
[\(800\) 247-2346, option 4](tel:8002472346) or training.na@motorolasolutions.com

APX SUBSCRIBER FAMILY



CURRICULUM COMPLETE

PARTICIPANT SHOULD BE ABLE TO PROGRAM, DEVELOP FLEET TEMPLATES, AND PERFORM MAINTENANCE ON ALL MEMBERS OF THE XTS/XTL FAMILY OF RADIOS. MAINTENANCE WILL INCLUDE TESTING, ALIGNMENTS, DISASSEMBLY/RE-ASSEMBLY, SUBMURGIBILITY TEST, MOBILE RADIO INSTALLATION, AND TROUBLESHOOT TO THE BOARD LEVEL.

RADIO SOLUTIONS SUBSCRIBERS

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CPS PROGRAMMING AND TEMPLATE BUILDING

COURSE OVERVIEW

This course provides communications management personnel and technicians with the knowledge and tools needed to program the radio units in the most efficient way depending on the system, features and options they require. The parameters and exercises shown in the class apply to a wide number of portable and mobile radios, including XTS 5000, XTS 3000, XTS 2500, XTS 1500, XTL 5000, XTL 2500, XTL 1500, MTS 2000, MCS 2000, the SPECTRA family, and the Professional Series.

AUDIENCE

Radio Technicians, System Managers

COURSE OBJECTIVES

After completing this course, the student will be able to:

- Program the basic parameters of any radio using the Customer Programming Software (CPS)
- Program the specific parameters of any radio related with the system where the user is going to work: conventional, single site trunking, Simulcast, AMSS, SmartZone or ASTRO® 25
- Demonstrate knowledge of the options and features that can be programmed in a radio
- Create templates for the programming of subscribers in a system

REQUISITE KNOWLEDGE

Completion of the following course(s) or equivalent experience:

- Basic features and options of two-way radios basic concepts of trunking



VIRTUAL CLASSROOM
LENGTH: (5) 2-HOUR SESSIONS
LMS COURSE CODE: ADT001V

XTS/XTL TECHNICAL SUBSCRIBER ACADEMY

COURSE OVERVIEW

Participants will learn the capabilities, features and functions of the XTS/XTL family of radios as well as how to correctly complete performance checks, radio alignments, disassembly/reassembly, maintenance and troubleshooting. This academy will also focus on the detailed theory of operation. The XTS/XTL Academy will also cover in detail: Radio Flashing, Encryption, Key Loading (Including configuring the XTS/XTL radio for OTAR), Programming over P25 (Over the Air Programming), Advanced System Key Management, Vacuum and Submersibility Testing, Mobile Radio Installation and many other special setup or configuration modes with the radios. In addition to lecture, large amounts of hands-on, scenario based lab work will be used to reinforce knowledge transfer.

AUDIENCE

Radio Technicians

COURSE OBJECTIVES

After completing this course, the student will be able to:

- Distinguish between the features and specifications of the XTS and XTL 5000 radios
- Verify the correct operations of the XTS and XTL 5000 radios by completing Performance Checks and Alignment procedures
- Maintain and troubleshoot an XTS and XTL 5000 radios
- Disassemble and reassemble the radios using the documented procedures
- Verify the housing integrity of an XTS 5000R portable radio
- Flash upgrade an XTS and an XTL 5000 Radio
- Interpret the circuit theory of operation and use this information to isolate faults found at both the board and the component level

REQUISITE KNOWLEDGE

Completion of the following course(s) or equivalent experience:

- Communication Systems Concepts (NST021)
- Basic Radio (ARDS004)
- Theory of Radio Operations (RCS003E)

AND

- CPS Programming and Template Building Overview (ADT001V)

OR

- Test Out CPS Programming and Template Building (ADT001-T)



INSTRUCTOR-LED
LENGTH: 4.5 DAYS
LMS COURSE CODE: ADST005

 [CLICK HERE TO VIEW THE SCHEDULE AND PRICE SHEET](#)

RADIO SOLUTIONS SUBSCRIBERS

For information on prerequisites and to register for courses visit the LMS at:
LEARNING.MOTOROLASOLUTIONS.COM

For general information, contact North America Education Services help desk at:
[\(800\) 247-2346, option 4](tel:800-247-2346) or training.na@motorolasolutions.com

APX™ CPS PROGRAMMING AND TEMPLATE BUILDING

COURSE OVERVIEW

The APX CPS Programming and Template Building course provides communications management personnel and technicians with the knowledge and training necessary to build templates and program the APX family of radios in the most efficient way possible.

AUDIENCE

Radio Technicians, System Managers

COURSE OBJECTIVES

After completing this course, the student will be able to:

- Build the APX family of programming templates using the APX CPS Programming Software
- Program the specific parameters related to the various system types in which the subscriber unit will operate: Conventional, Single Site Trunking, Simulcast, SmartZone or ASTRO® 25 IV&D TDMA and ASTRO® 25 IV&D X2
- Demonstrate knowledge of the APX CPS navigation, tools, options and features that make efficient programming of the radio possible
- Demonstrate a complete understanding of the various APX CPS programming efficiency tools, such as: Cloning, Drag and Drop, Codeplug Comparison Tool, Radio Flashing, Advance System Key Administrator, Codeplug Merging and many others

REQUISITE KNOWLEDGE

Completion of the following course(s) or equivalent experience:

- Experience with the basic features and options of two-way radios and the basic concepts of trunking



VIRTUAL CLASSROOM

LENGTH: (5) 2.5-HOUR SESSIONS

LMS COURSE CODE:
APX7001V

APX™ TECHNICAL SUBSCRIBER ACADEMY

COURSE OVERVIEW

Participants will learn the capabilities, features and functions of the APX family of radios as well as how to correctly complete performance checks, radio alignments, disassembly/reassembly, maintenance and troubleshooting. This academy will also focus on a detailed theory of operation for the APX family of radios. The APX Academy will also cover in detail: Radio Flashing, Encryption, Key Loading (Including configuring the APX radio for OTAR), Programming over P25 (Over the Air Programming), Advanced System Key Management, Vacuum and Submersibility Testing, APX Mobile Radio Installation and many other special setup or configuration modes with the radios. In addition to lecture, large amounts of hands-on with scenario based lab work will be used to reinforce knowledge transfer. This academy will cover in detail all models within the APX family of radios.

AUDIENCE

Radio Technicians

COURSE OBJECTIVES

After completing this course, the student will be able to:

- Distinguish between the features and specifications of all available radios within the APX family of subscribers
- Verify the correct operation of the various radios within the APX family of subscribers by completing Performance Checks and Alignment procedures
- Maintain and troubleshoot radios within the APX family of subscribers
- Disassemble and reassemble various APX subscriber radios using the documented procedures

- Verify the housing integrity of an APX portable radio
- Flash upgrade the various radios within the APX family of subscribers
- Interpret the circuit theory of operation and use this information to isolate faults found at both the board and the component level

REQUISITE KNOWLEDGE

Completion of the following course(s) or equivalent experience:

- Communication Systems Concepts (NST021)
- Basic Radio (ARDS004)
- Theory of Radio Operations (RCS003E)

Required:

- APX CPS Programming and Template Building (APX7001V)



INSTRUCTOR-LED

LENGTH: 4.5 DAYS

LMS COURSE CODE:
APX010



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RADIO SOLUTIONS SUBSCRIBERS

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APX™ RADIO MANAGEMENT WORKSHOP

COURSE OVERVIEW

Participants will learn the capabilities, features, and functions of the APX™ Radio Management Suite. This course will cover an APX CPS overview, APX Radio Management Overview, Basic Networking Primer, ASTRO® 25/CEN Networking and UNS Overview, and APX Radio Management Installation, Configuration, and Operations. In addition, the course will contain labs that will focus on installation, configuration, and operation using both wired and POP25 updates to APX Subscriber radios in both a LAN and WAN environment.

AUDIENCE

Radio Technicians, System Managers, Radio Programmers

COURSE OBJECTIVES

After completing this course, the student will be able to:

- Describe the APX Radio Management Suite operations and required software and hardware components
- Describe all deployment options for APX Radio Management Suite
- Configure a basic APX Radio Management system using a single PC, multiple PCs on a LAN, and multiple PCs on a WAN.
- Troubleshoot common APX Radio Management Installation, configuration, and operation issues
- Use Best Practices to implement and optimize Radio Management Performance

REQUISITE KNOWLEDGE

Completion of the following course(s) or equivalent experience:

- APX™ CPS Programming and Template (APX7001V Building)



INSTRUCTOR-LED
LENGTH: 2.5 DAYS
LMS COURSE CODE: **RDS2017**

MOTOTRBO™ SUBSCRIBER AND REPEATER TECHNICAL SERVICE ACADEMY

COURSE OVERVIEW

Participants will learn the capabilities, features and functions of the MOTOTRBO™ family of radios and repeaters as well as how to correctly complete performance checks, radio alignments, disassembly/reassembly, maintenance, and troubleshooting. This Academy will also focus on the detailed theory of operation. In addition to lecture, large amounts of hands on, scenario based lab work will be used to reinforce knowledge transfer. This Academy will cover in detail different models within the MOTOTRBO™ family of radios and repeaters.

AUDIENCE

Radio Technicians

COURSE OBJECTIVES

After completing this course, the student will be able to:

- Distinguish between the features and specifications of the MOTOTRBO™ portable and mobile radios and repeaters
- Verify the correct operations of the MOTOTRBO™ radios and repeaters by completing Performance Checks and Alignment procedures
- Maintain and troubleshoot MOTOTRBO™ radios and repeaters
- Disassemble and reassemble the radios using the documented procedures

REQUISITE KNOWLEDGE

Completion of the following course(s) or equivalent experience:

- CEDMEL2000 - Introduction to MOTOTRBO™ Systems for Technicians



INSTRUCTOR-LED
LENGTH: 3.5 DAYS
LMS COURSE CODE: **TBO300**

 [CLICK HERE TO VIEW THE SCHEDULE AND PRICE SHEET](#)

RADIO SOLUTIONS **SUBSCRIBERS**

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Si500 RADIO MANAGEMENT R2.X

COURSE OVERVIEW

This course provides an overview and presentation of the basic functions available in Radio Management tool from the perspective of Si devices management. It includes video simulations of typical operations performed in Radio Management on Si devices, together with useful tips and practical examples.

AUDIENCE

Radio Management users

COURSE OBJECTIVES

After completing this course, the student will be able to:

- Describe the Radio Management application and its features.
- Lead users through their first logging.
- Demonstrate typical operations performed in Radio Management on Si devices.

REQUISITE KNOWLEDGE

None



ONLINE, SELF-PACED
LENGTH: 1 HOUR
LMS COURSE CODE:
PSA1053



MOTOTRBO™ SYSTEMS PORTFOLIO



MOTOTRBO™ COURSES

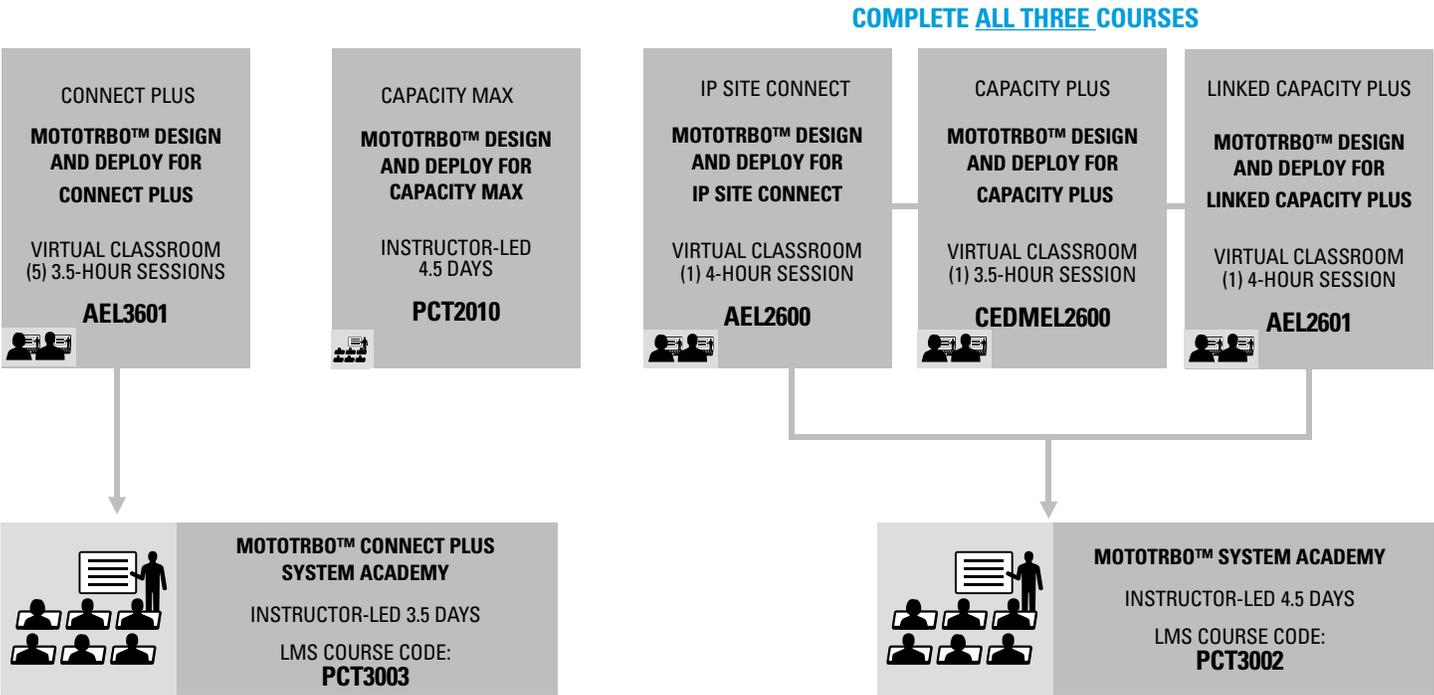
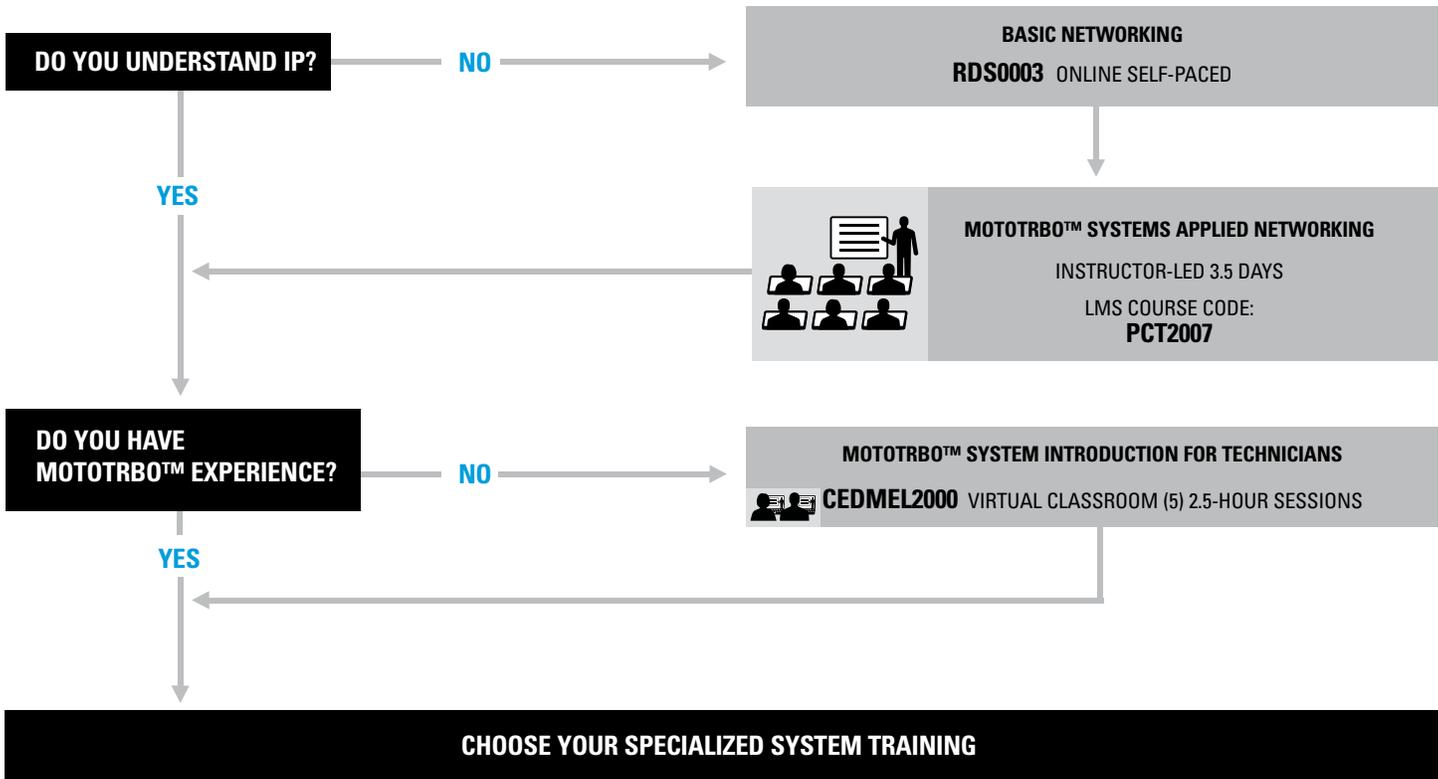
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**THE LEARNING
MANAGEMENT
SYSTEM (LMS)**

To register for a course, go to
learning.motorolasolutions.com

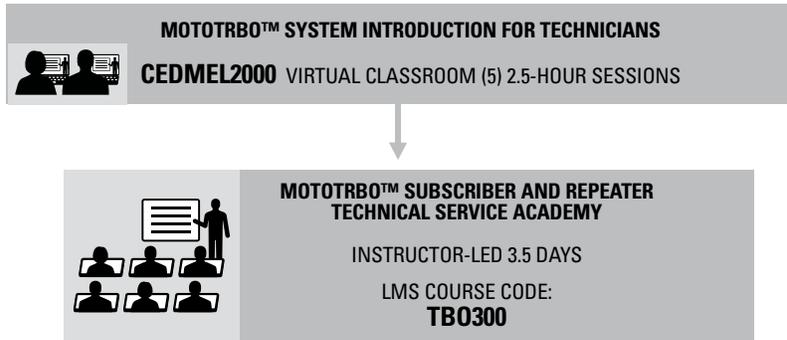
MOTOTRBO™ TECHNICAL TRAINING CURRICULUM BASED ON YOUR CURRENT IP AND MOTOTRBO™ EXPERIENCE



CURRICULUM COMPLETE

PARTICIPANT SHOULD BE ABLE TO DESCRIBE THE KEY CHARACTERISTICS OF THE SYSTEM, DESCRIBE THE KEY CONFIGURATION ITEMS IN BOTH SUBSCRIBERS AND REPEATERS, PROGRAM EFFECTIVE REPEATER AND SUBSCRIBER CODEPLUG TEMPLATES FOR THE SYSTEM, AND DESCRIBE THE APPLICABLE IP NETWORKING REQUIREMENTS WHEN DESIGNING A SYSTEM.

MOTOTRBO™ TECHNICAL TRAINING CURRICULUM FOR SUBSCRIBER / REPEATER MAINTENANCE TECHNICIAN



CURRICULUM COMPLETE

PARTICIPANT WILL LEARN THE COMMON MOTOTRBO™ FEATURES AND CAPABILITIES TO DESIGN AND DEPLOY MOTOTRBO™ SYSTEMS. PARTICIPANT SHOULD BE ABLE TO COMPLETE PERFORMANCE CHECKS, RADIO ALIGNMENTS, DISASSEMBLY/REASSEMBLY, MAINTENANCE, AND TROUBLESHOOTING OF VARIOUS MOTOTRBO™ RADIO TYPES.

RADIO SOLUTIONS MOTOTRBO™

For information on prerequisites and to register for courses visit the LMS at: LEARNING.MOTOROLASOLUTIONS.COM

For general information, contact North America Education Services help desk at: (800) 247-2346, option 4 or training.na@motorolasolutions.com

MOTOTRBO™ SYSTEM INTRODUCTION FOR TECHNICIANS

COURSE OVERVIEW

This is an introductory course to the MOTOTRBO™ system theory of operation, key components and topologies. MOTOTRBO™ Systems Introduction for Technicians gives the Professional-Level Empower Certification seekers all the basic information they need to know about common MOTOTRBO™ features and capabilities, along with system design and deploy principles. Upon successfully completing this course, individuals should be ready to take the more advanced Design and Deploy courses for IP Site Connect, Capacity Plus (Multi-Site and Single Site), Capacity Max and/or Connect Plus.

AUDIENCE

Anyone who will sell, design, configure, deploy, or maintain MOTOTRBO™ Digital Radio Systems. This would include, but is not limited to: Design Engineers, Communication System Technicians, Technical Support Personnel and Service Technicians.

COURSE OBJECTIVES

After completing this course, the student will be able to:

- Describe the different components available to build your MOTOTRBO™ system.
- Explain the MOTOTRBO™ Modes and Systems.
- Describe the various Data Application's capabilities and everyday uses within the MOTOTRBO™ systems.
- Describe MOTOTRBO™s Digital and Analog features.
- Explain system and channel capacity planning.
- Explain MOTOTRBO™ IP network design considerations.
- Describe organizational requirement and resources needed to design the fleetmap.
- Describe the use and purpose of various tools such as: Radio Management, Tuner, RDAC, Air Tracer, Site Survey and 3rd Party Application Tools.
- Navigate the main screens of the Customer Programming Software (CPS) needed to configure the radios and repeaters.

REQUISITE KNOWLEDGE

Participants should have a basic understanding of radio communication fundamentals.

Knowledge of basic two-way FM and digital communications theory.

- RDS0003 – Basic Networking
- RDS0002 – Basic RF
- RDS0004 – Basic Radio
- AAE1402 – Professional and Commercial Radios (PCR) Portfolio Overview



VIRTUAL CLASSROOM
LENGTH: (5) 3-HOUR SESSIONS
LMS COURSE CODE: CEDMEL2000

MOTOTRBO™ SYSTEMS APPLIED NETWORKING

COURSE OVERVIEW

The MOTOTRBO™ Systems Applied Networking provides technicians with the necessary information required for understanding the typical networking requirements for implementing a variety of MOTOTRBO™ solutions. The course includes familiarization/review of basic networking concepts and MOTOTRBO™-specific networking requirements. This course will focus on specific configurations for IP Site Connect, Linked Capacity Plus, and Connect Plus trunking systems.

AUDIENCE

Technical System Managers and Technicians

COURSE OBJECTIVES

After completing this course, the student will be able to:

- Recall Basic Networking Concepts
- Identify recommended network components for MOTOTRBO™ systems
- Define LAN/WAN topologies for MOTOTRBO™ systems
- Perform backup, restore and recovery of recommended network components
- Identify network security concepts for MOTOTRBO™ systems

REQUISITE KNOWLEDGE

Completion of the following course(s) or equivalent experience:

- Networking Essentials in Motorola Solutions Communication Systems (NST762)



INSTRUCTOR-LED
LENGTH: 3.5 DAYS
LMS COURSE CODE: PCT2007

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MOTOTRBO™ RADIO MANAGEMENT WORKSHOP

COURSE OVERVIEW

The MOTOTRBO™ Radio Management 2.0 Workshop course provides technicians with the necessary information and practice to use the MOTOTRBO™ Radio Management 2.0 programming tool effectively.

AUDIENCE

System Managers and Technicians

COURSE OBJECTIVES

After completing this course, the student will be able to:

- Deploy and use RM 2.0 in a variety of real-world scenarios.
- Create and maintain configurations for basic MOTOTRBO™ Configurations (Connect Plus and Capacity Max excluded).
- Utilize Wi-Fi programming within RM 2.0.
- Use the RM Import and Export feature for database population.
- Convert existing radio templates and codeplugs to RM 2.0 Configurations.
- License and activate Radio and Application features.
- Use advanced features such as Data Mining.
- Use RM 2.0 to ease mass-deployments of subscribers.

REQUISITE KNOWLEDGE

Completion of the following course(s) or equivalent experience:

- PCT1032 MOTOTRBO™ Radio Management 2.0 Configuration Mode completion
- Networking Essentials or Network + Certification
- A high-level working knowledge of IP networking is very important



INSTRUCTOR-LED
LENGTH: 2 DAYS
LMS COURSE CODE:
PCT2022

MOTOTRBO™ SUBSCRIBER AND REPEATER TECHNICAL SERVICE ACADEMY

COURSE OVERVIEW

Participants will learn the capabilities, features and functions of the MOTOTRBO™ family of radios and repeaters as well as how to correctly complete performance checks, radio alignments, disassembly/reassembly, maintenance, and troubleshooting. This Academy will also focus on the detailed theory of operation. In addition to lecture, large amounts of hands on, scenario based lab work will be used to reinforce knowledge transfer. This Academy will cover in detail different models within the MOTOTRBO™ family of radios and repeaters.

AUDIENCE

Radio Technicians

COURSE OBJECTIVES

After completing this course, the student will be able to:

- Distinguish between the features and specifications of the MOTOTRBO™ portable and mobile radios and repeaters
- Verify the correct operations of the MOTOTRBO™ radios and repeaters by completing Performance Checks and Alignment procedures
- Maintain and troubleshoot MOTOTRBO™ radios and repeaters
- Disassemble and reassemble the radios using the documented procedures

REQUISITE KNOWLEDGE

Completion of the following course(s) or equivalent experience:

- CEDMEL2000 - Introduction to MOTOTRBO™ Systems for Technicians



INSTRUCTOR-LED
LENGTH: 3.5 DAYS
LMS COURSE CODE:
TB0300

MOTOTRBO™ CAPACITY MAX DESIGN AND DEPLOY

COURSE OVERVIEW

MOTOTRBO™ Capacity Max Design and Deploy begins by covering the design process for a Capacity Max Radio system. Under the Instructor's guidance, participants will have the opportunity to practice designing and deploying a small scale, 2 Site/3 Channel, Capacity Max system in a safe classroom environment. This course will also cover how to configure Capacity Max using Radio Management 2.0 Configuration Mode.

In order to get the most of the hands-on activities, Participants MUST bring their own laptop to class with the latest RM 2.0 Configuration Mode software loaded. Please download this software from MOL (Motorola Solutions Online).

AUDIENCE

System Managers and Technicians

COURSE OBJECTIVES

After completing this course, the student will be able to:

- Design a simple a 1-System 2 Site/3 Channel Capacity Max system
- Calculate Capacity Max capacity and bandwidth using a Case Scenario and System Design tools.
- Using Radio Management Configuration Mode, configure your radios and infrastructure.
- Deploy a 1-System 2 Site/3 Channel Capacity Max system.
- Using System Advisor, learn the fundamentals of troubleshooting and maintaining a Capacity Max system
- Execute Radio Management database backup and restore
- Describe how to optimize a Capacity Max system

REQUISITE KNOWLEDGE

Completion of the following course(s) or equivalent experience:

- CEDMEL2000 - MOTOTRBO™ System Introduction for Technicians.
- PCT1047 – MOTOTRBO™ Capacity Max Technical Overview (OLT)
- PCT1046 – MOTOTRBO™ Capacity Max Theory of Operations (OLT)
- PCT1032 – Radio Management 2.0 Configuration Mode (OLT)
- Understanding IP Network Addressing
- Knowledge of RF Propagation modelling tools



INSTRUCTOR-LED
LENGTH: 4.5 DAYS
LMS COURSE CODE:
PCT2010

RADIO SOLUTIONS MOTOTRBO™

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MOTOTRBO™ DESIGN AND DEPLOY FOR CAPACITY PLUS

COURSE OVERVIEW

MOTOTRBO™ Capacity Plus Design and Deploy training covers the key components and architectures of MOTOTRBO™ Capacity Plus Radio systems. Participants will be able to describe the MOTOTRBO™ Capacity Plus system, its capabilities, system components, and data applications. Participants will also be able to describe various MOTOTRBO™ Capacity Plus system topologies. They will learn how to design and deploy a MOTOTRBO™ Capacity Plus radio system. This course will also cover how to configure a MOTOTRBO™ Capacity Plus system using MOTOTRBO™ Customer Programming Software (CPS).

AUDIENCE

System Managers and Technicians

COURSE OBJECTIVES

After completing this course, the student will be able to:

- Describe the MOTOTRBO™ Capacity Plus system, its capabilities, system components, and data application.
- Describe the MOTOTRBO™ Capacity Plus theory of operation.
- Describe the available MOTOTRBO™ Capacity Plus topologies.
- Learn the steps needed to configure a Capacity Plus system using MOTOTRBO™ CPS to program the subscribers and repeaters.

REQUISITE KNOWLEDGE

Completion of the following course(s) or equivalent experience:

- RDS0003 – Basic Networking
- RDS0002 – Basic RF
- RDS0004 - Basic Radio
- AAE1402 – Professional and Commercial Radios (PCR) Portfolio Overview
- CEDMEL2000 – MOTOTRBO™ System Introduction for Technicians



INSTRUCTOR-LED
LENGTH: 0.5 DAYS
LMS COURSE CODE:
CEDMEL2600N

MOTOTRBO™ DESIGN AND DEPLOY FOR LINKED CAPACITY PLUS

COURSE OVERVIEW

MOTOTRBO™ Linked Capacity Plus Design and Deploy training introduces the key components and architectures of MOTOTRBO™ Linked Capacity Plus Radio systems. Participants will be able to describe the MOTOTRBO™ Linked Capacity Plus system, its capabilities, system components, and data applications. Participants will also be able to describe the MOTOTRBO™ Linked Capacity Plus system topology. They will learn what's involved with Designing and Deploying a MOTOTRBO™ Linked Capacity Plus radio system. This course will also cover how to configure a MOTOTRBO™ Linked Capacity Plus system using MOTOTRBO™ Customer Programming Software (CPS).

AUDIENCE

System Managers and Technicians

COURSE OBJECTIVES

After completing this course, the student will be able to:

- Describe the MOTOTRBO™ Linked Capacity Plus system, its capabilities, system components, and data application.
- Describe the MOTOTRBO™ Linked Capacity Plus theory of operation.
- Describe the available MOTOTRBO™ Linked Capacity Plus topologies.
- Learn the steps needed to configure a Linked Capacity Plus system using MOTOTRBO™ CPS to program the subscribers and repeaters.

REQUISITE KNOWLEDGE

Completion of the following course(s) or equivalent experience:

- RDS0003 – Basic Networking
- RDS0002 – Basic RF
- RDS0004 - Basic Radio
- AAE1402 – Professional and Commercial Radios (PCR) Portfolio Overview
- CEDMEL2000 – MOTOTRBO™ System Introduction for Technicians



INSTRUCTOR-LED
LENGTH: 0.5 DAYS
LMS COURSE CODE:
AEL2601N

MOTOTRBO™ DESIGN AND DEPLOY FOR IP SITE CONNECT

COURSE OVERVIEW

MOTOTRBO™ IP Site Connect Design and Deploy training introduces the key components and architectures of the MOTOTRBO™ IP Site Connect radio systems. Participants will be able to describe the MOTOTRBO™ IP Site Connect system and its capabilities, system components, and data applications capabilities. Participants will also be able to describe various MOTOTRBO™ IP Site Connect system topologies. Participants will learn how to design and deploy a MOTOTRBO™ IP Site Connect radio system. This course will also cover how to configure a MOTOTRBO™ IP Site Connect System using MOTOTRBO™ Customer Programming Software. This course was designed for individuals who already have a good understanding of MOTOTRBO™ systems, but who want to now focus on IP Site Connect.

AUDIENCE

System Managers and Technicians

COURSE OBJECTIVES

After completing this course, the student will be able to:

- Describe the MOTOTRBO™ Capacity Plus system, its capabilities, system components, and data application.
- Describe the MOTOTRBO™ Capacity Plus theory of operation.
- Describe the available MOTOTRBO™ Capacity Plus topologies.
- Learn the steps needed to configure a Capacity Plus system using MOTOTRBO™ CPS to program the subscribers and repeaters.

REQUISITE KNOWLEDGE

Completion of the following course(s) or equivalent experience:

- RDS0003 – Basic Networking
- RDS0002 – Basic RF
- RDS0004 - Basic Radio
- AAE1402 – Professional and Commercial Radios (PCR) Portfolio Overview
- CEDMEL2000 – MOTOTRBO™ System Introduction for Technicians



INSTRUCTOR-LED
LENGTH: 0.5 DAYS
LMS COURSE CODE:
AEL2600N



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MOTOTRBO™ CONNECT PLUS DESIGN AND DEPLOY

COURSE OVERVIEW

MOTOTRBO™ Connect Plus Design and Deploy introduces the key components and architectures of a MOTOTRBO™ Connect Plus Digital Radio system. The goal of the training is to teach participants how to correctly design and deploy a Connect Plus system in the field.

AUDIENCE

System Managers and Technicians

COURSE OBJECTIVES

After completing this course, the student will be able to:

- Describe the MOTOTRBO™ Connect Plus system.
- Describe in detail MOTOTRBO™ Connect Plus theory of operation.
- Identify the available MOTOTRBO™ Connect Plus topologies.
- Configure a MOTOTRBO™ Connect Plus system using MOTOTRBO™ CPS to program both MOTOTRBO™ radios and MOTOTRBO™ repeaters.
- Configure a MOTOTRBO™ option board using MOTOTRBO™ Connect Plus Option Board CPS.
- Use the MOTOTRBO™ Connect Plus Network Management Application to configure, monitor, and make adjustments to MOTOTRBO™ Connect Plus sites and subscriber units.

REQUISITE KNOWLEDGE

Completion of the following course(s) or equivalent experience:

- CEDMEL2000: MOTOTRBO™ System Introduction for Technicians

One or more of the following:

- AEL2600: MOTOTRBO™ IP Site Connect Design and Deploy
- CEDMEL2600: MOTOTRBO™ Capacity Plus Design and Deploy
- AEL2601: MOTOTRBO™ Linked Capacity Plus Design and Deploy

MOTOTRBO™ SYSTEM ACADEMY

COURSE OVERVIEW

This course allows the participant to acquire in-depth hands-on experience planning, configuring and deploying the following MOTOTRBO™ Systems and Solutions: Digital Conventional, IP Site Connect, Capacity Plus and Linked Capacity Plus.

NOTE: MOTOTRBO™ Connect Plus Systems are covered in a separate class, please reference course Design and Deploy for MOTOTRBO™ Connect Plus (AEL3601) to learn how to plan, configure and deploy MOTOTRBO™ Connect Plus systems

AUDIENCE

System Administrators, System Technicians, Field Technicians

COURSE OBJECTIVES

After completing this course, the student will be able to:

- Create and implement functional programming templates for example radio sites and systems that include:
 - Digital Conventional simplex and repeater-based systems.
 - IP Site Connect multisite conventional systems.
 - Capacity Plus single-site trunked systems.
 - Linked Capacity Plus multisite trunked systems.

Students will also receive instruction and/or hands-on experience with:

- Receiver voting topologies.
- Integrating MOTOTRBO™ Anywhere
- Integrating Avtec Scout consoles

REQUISITE KNOWLEDGE

Completion of the following course(s) or equivalent experience:

- MOTOTRBO™ System Introduction for Technicians (CEDMEL2000)
- MOTOTRBO™ Design and Deploy for IP Site Connect (AEL2600)
- MOTOTRBO™ Design and Deploy for Capacity Plus (CEDMEL2600)
- MOTOTRBO™ Design and Deploy for Linked Capacity Plus (AEL2601)



VIRTUAL CLASSROOM

LENGTH: 5 DAYS (3.5
HRS/DAY)

LMS COURSE CODE:
AEL3601



INSTRUCTOR-LED

LENGTH: 3.5 DAYS

LMS COURSE CODE:
PCT3002



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SCHEDULE AND PRICE SHEET](#)

MOTOTRBO™ SYSTEM ACADEMY FOR CONNECT PLUS

COURSE OVERVIEW

MOTOTRBO™ Connect Plus System Academy allows the participant to acquire in-depth experience planning, configuring and deploying MOTOTRBO™ Connect Plus Trunking systems in a hands-on laboratory environment. This course reinforces and provides tangible context for individuals who have completed the virtual instructor-led MOTOTRBO™ Design and Deploy course and who wish to master the key elements of the MOTOTRBO™ Connect Plus Digital Radio system.

AUDIENCE

System Administrators, System Technicians, Field Technicians, Support Personnel

COURSE OBJECTIVES

After completing this course, the student will be able to:

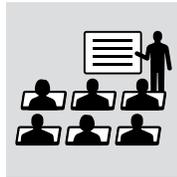
- Apply Connect Plus system theory and technical capabilities and features to real-world scenarios.
- Create and implement functional programming templates for Connect Plus subscribers and repeaters.
- Configure Connect Plus XRC site controllers for single and multi-site systems.
- Configure Connect Plus XRT gateways for key applications such as MOTOTRBO™ Anywhere.
- Configure site controller redundancy.
- Determine bandwidth requirements for inter-site links using the Connect Plus System Planner.
- Configure Auto-Fallback operation in subscribers and the site infrastructure.
- Configure Emergency Calling and Emergency Alert operation.

- Configure option board codeplugs for over the air delivery.
- Perform over the air programming (OTAP) of key subscriber files such as the network frequency file, option board firmware and option board codeplugs.
- Describe and configure Network Address Translation (NAT) in site routers that are representative of typical customer equipment.
- Troubleshoot Connect Plus systems from the network, subscriber, and repeater perspectives.

REQUISITE KNOWLEDGE

Completion of the following course(s) or equivalent experience:

- MOTOTRBO™ System Introduction for Technicians (CEDMEL2000)
- MOTOTRBO™ Connect Plus Design and Deploy (AEL3601)



INSTRUCTOR-LED
LENGTH: 4.5 DAYS
LMS COURSE CODE:
PCT3003

MOTOTRBO™ CONNECT PLUS TO CAPACITY MAX MIGRATION TRAINING

COURSE OVERVIEW

This Virtual Instructor-Led training will guide you in migrating a Connect Plus to a Capacity Max radio system using the Capacity Max Bridge (CMB). Receive expert guidance on how to install, configure, and troubleshoot the CMB while also learning about the differences in system operations.

NOTE: : To gain the most benefit from this training, field experience or proficiency at deploying both Capacity Max and Connect Plus systems is strongly recommended.

AUDIENCE

Dealers, Channel Partners, Technicians, MSI Employees

COURSE OBJECTIVES

After completing this course, the student will be able to:

- Describe the features and capabilities of the Capacity Max Bridge (CMB).
- Use Radio Management to configure the CMB for your system.
- List the types of calls the CMB can bridge and the differences between the two MOTOTRBO™ systems.
- Monitor the CMB for optimal performance.

REQUISITE KNOWLEDGE

Completion of the following course(s) or equivalent experience:

- AEL3601 - MOTOTRBO™ Connect Plus Design and Deploy
- PCT2010 - MOTOTRBO™ Capacity Max Design and Deploy



VIRTUAL CLASSROOM
LENGTH: 0.5 DAYS
LMS COURSE CODE:
PCT3012

 [CLICK HERE TO VIEW THE SCHEDULE AND PRICE SHEET](#)



PUBLIC SAFETY LTE DELIVERS A HIGH DEGREE OF THE 5 C's



COVERAGE WITHOUT COMPROMISE

Public Safety LTE networks handle peak usage and prioritize system traffic to the end of coverage. Extend network coverage during disaster recovery situations and optimize coverage at the edge with LTE deployable trailers. Because first responders can instantly access video, photos, maps and more, they're better prepared to arrive at a dangerous crime scene or search patient medical records from a moving ambulance.



CAPACITY FOR IT ALL

Capacity isn't only critical for emergencies, it's essential for day-to-day operations. When thousands of people converge at sports venues, concerts, festivals and rallies, mobile capacity must be sufficient and robust to keep everyone safe.



CAPABILITIES TO IMPROVE SITUATIONAL AWARENESS

When public safety personnel have a unified picture of what's unfolding, they are better equipped to respond. High-speed data, location information, photos and streaming video can significantly improve collaboration and outcomes.



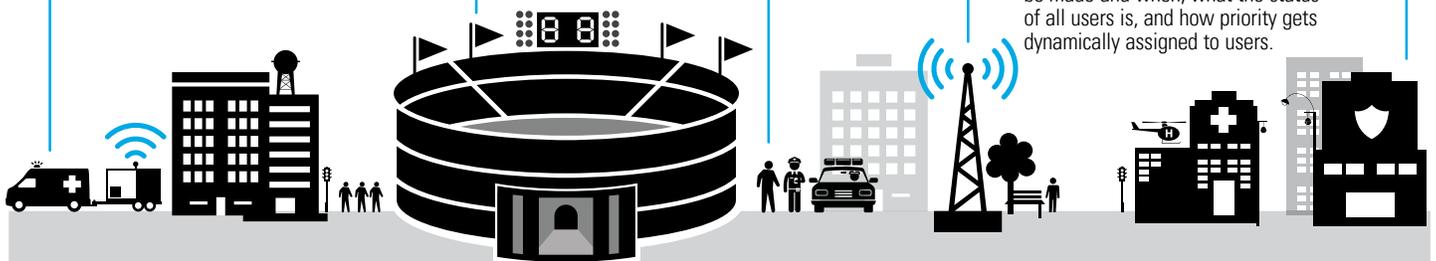
COST SAVING

ON A LARGE SCALE
An optimized Public Safety LTE network that saves money via economies of scale on devices and infrastructure partnership where needed.



CONTROL OF YOUR COMMUNICATIONS

An optimized Public Safety LTE network gives you greater control over your system, software and devices. You decide who accesses the system, what changes need to be made and when, what the status of all users is, and how priority gets dynamically assigned to users.





PUBLIC SAFETY LTE COURSES

PUBLIC SAFETY LTE ARCHITECTURE AND SIGNALING (LTE2005)	58
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**THE LEARNING
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PUBLIC SAFETY LTE COURSES

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PUBLIC SAFETY LTE ARCHITECTURE AND SIGNALING

COURSE OVERVIEW

This lab-based class provides students a practical understanding of 3GPP LTE/EPC signaling as used in a public safety LTE network.

Students use an Aricent EPC core system, Ericsson eNodeB, and Motorola Solutions subscriber units to manage LTE/EPC network elements and interfaces, determine subscriber and network element status, capture and analyze LTE signaling, and analyze end-to-end service signaling and quality of service.

AUDIENCE

Customers

COURSE OBJECTIVES

After completing this course, the student will be able to:

- Describe LTE network elements and function
- Describe LTE/EPC interfaces
- Analyze LTE/EPC signaling flows
- Evaluate network element status based on NE interface and signaling state
- Trace UE state based on signaling
- Validate and troubleshoot end-to-end service signaling
- Describe LTE Quality of Service (QoS) operation
- Describe LTE to ASTRO® 25 inter-working options

REQUISITE KNOWLEDGE

Completion of the following course(s) or equivalent experience:

- Public Safety LTE System Overview (AAE1603)
- Networking Essentials in Motorola Solutions Communications Equipment (NST762)



INSTRUCTOR-LED
LENGTH: 4.5 DAYS
LMS COURSE CODE:
LTE2005

PUBLIC SAFETY LTE SYSTEM ADMINISTRATION

COURSE OVERVIEW

The MOTOTRBO™ Systems Applied Networking provides technicians with the necessary information required for understanding the typical networking requirements for implementing a variety of MOTOTRBO™ solutions. The course includes familiarization/review of basic networking concepts and MOTOTRBO™-specific networking requirements. This course will focus on specific configurations for IP Site Connect, Linked Capacity Plus, and Connect Plus trunking systems.

AUDIENCE

Technical System Managers and technicians

COURSE OBJECTIVES

After completing this course, the student will be able to:

- Recall Basic Networking Concepts
- Identify recommended network components for MOTOTRBO™ systems
- Define LAN/WAN topologies for MOTOTRBO™ systems
- Perform backup, restore and recovery of recommended network components
- Identify network security concepts for MOTOTRBO™ systems

REQUISITE KNOWLEDGE

Completion of the following course(s) or equivalent experience:

- Networking Essentials in Motorola Solutions Communication Systems (NST762)



INSTRUCTOR-LED
LENGTH: 4.5 DAYS
LMS COURSE CODE:
LTE2006

PUBLIC SAFETY LTE APPLIED NETWORKING

COURSE OVERVIEW

The Public Safety LTE Applied Networking course covers the operation and maintenance of Motorola Solutions supplied network transport equipment used in a PS LTE network. Participants will learn the operation and replacement tasks required to maintain Layer 2 switches, Layer 3 switches, the NTP server, DNS server, firewalls, and other devices which provide backhaul transport and connectivity services in the network.

This lab-based course offers students practice with critical maintenance procedures on standalone equipment without impacting network operation.

AUDIENCE

Customer System Managers, Customer Network Transport Technical Staff

COURSE OBJECTIVES

After completing this course, the student will be able to:

- Check and manage status of LTE network transport devices
- Upgrade and downgrade device firmware or operating system
- Backup and restore device configuration
- Replace device hardware
- Validate and troubleshoot device operation

REQUISITE KNOWLEDGE

Completion of the following course(s) or equivalent experience:

- Public Safety LTE System Overview (AAE1603)
- Networking Essentials in Motorola Solutions Communications Equipment (NST762)



INSTRUCTOR-LED
LENGTH: 4.5 DAYS
LMS COURSE CODE:
LTE2007

PUBLIC SAFETY LTE COURSES

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PUBLIC SAFETY LTE SYSTEM OVERVIEW

COURSE OVERVIEW

The Public Safety LTE System Overview self-paced course presents a high-level description of the Public Safety LTE system and an introduction into the network elements that comprise the system.

AUDIENCE

System Managers, System Technicians

COURSE OBJECTIVES

After completing this course, the student will be able to:

- Describe LTE (Long-Term Evolution) technologies
- Describe the networks and their connections in a Public Safety LTE system
- Describe the functionality of the elements in aM Public Safety LTE system
- Describe how Prioritization works
- Describe bearers and data paths
- Describe the User Equipment (UE)

REQUISITE KNOWLEDGE

- None



ONLINE, SELF-PACED
LENGTH: 1 HOUR
LMS COURSE CODE:
AAE1603



SOFTWARE & APPLICATIONS

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SOFTWARE & APPLICATIONS

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WAVE CERTIFIED INTEGRATION ENGINEER

COURSE OVERVIEW

The WAVE Certified Integration Engineer course provides instruction in designing, integrating, and troubleshooting WAVE systems. It also provides the groundwork for a basic understanding of how WAVE delivers a Radio-over-IP solution. The training scope covers WAVE integration to MOTOTRBO™, ASTRO, and DIMETRA systems.

AUDIENCE

Sales/Systems Engineers who will design and implement WAVE solutions, presale/post sale engineers, Motorola Solutions STs and FTs, partners, and customers.

COURSE OBJECTIVES

After completing this course, the student will be able to:

- Understand and identify WAVE components.
- Install and configure the WAVE Management Server, Media Server, Proxy Server, Desktop Communicator, Advanced Desktop Communicator, Web and Mobile Communicators.
- Identify radio systems compatible with WAVE and list integration steps.
- Maintain and support a WAVE domain.

REQUISITE KNOWLEDGE

General knowledge of:

- IP Networking
- IP Telephony
- Server-class Operating Systems
- Mobile Device Applications
- LMR Radio Systems
- Motobridge
- MOTOTRBO™
- VMware vSphere – server virtualization platform
- Windows Active Directory
- IP Security



INSTRUCTOR-LED
LENGTH: 4.5 DAYS
LMS COURSE CODE:
AST3001

WAVE 7000 ADMINISTRATION AND MAINTENANCE WORKSHOP

COURSE OVERVIEW

The course covers the following:

- WAVE 7000 system overview and a list of features
- WAVE 7000 server administration, maintenance and troubleshooting content
- PSX PTT application overview, available call types

The intent of the course is to present the WAVE 7000 system in the context of the entire solution including IMW and LTE elements.

However, a detailed discussion of IMW and PS LTE components and applications is outside of the scope of this course.

AUDIENCE

System Administrators, Field Engineers, Support Engineers

COURSE OBJECTIVES

After completing this course, the student will be able to:

- Provide information regarding the WAVE 7000 system, its function and capabilities.
- Perform the call types offered within the WAVE 7000 solution.
- Recognize WAVE 7000 administration tools and their functions.
- Define and describe the features of WAVE 7000 system.
- Execute back up and restore operations for WAVE 7000 system.
- Understand and explain process of geo-redundancy, as well as its administration, maintenance, provisioning and synchronization.
- Define and describe Secure Signaling and Service Authentication of WAVE 7000.
- Fix the presented issues of WAVE 7000 System.

REQUISITE KNOWLEDGE

- None



INSTRUCTOR-LED
LENGTH: 3 DAYS
LMS COURSE CODE:
LTE2043

INTELLIGENT MIDDLEWARE 5.2 OPERATION AND ADMINISTRATION

COURSE OVERVIEW

The purpose of this course is to provide the steps to operate and maintain a customer's IMW 5.2 system within their Motorola Solutions system (ASTRO, Dimetra, LTE).

AUDIENCE

Partners/Resellers and customers who would be responsible for the operation and maintenance of a customer's IMW system within their Motorola Solutions systems (ASTRO, Dimetra, LTE).

COURSE OBJECTIVES

After completing this course, the student will be able to:

- Describe IMW features.
- Perform installation of IMW.
- Configure an IMW system.
- Identify the IMW tools to administer the system.
- Perform routine administration.
- Perform troubleshooting.
- Understand system-specific considerations.

REQUISITE KNOWLEDGE

- None



INSTRUCTOR-LED
LENGTH: 2 DAYS
LMS COURSE CODE:
RDS2025

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SOFTWARE & APPLICATIONS

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COMMANDCENTRAL VAULT END USER

COURSE OVERVIEW

The CommandCentral Vault End User course starts out by providing a high level overview of CommandCentral Vault. It then demonstrates all of the tasks and end user may be required to do. It goes through grouping and filtering of videos, it walks through the tasks of adding annotations, creating video clips, adding appropriate tags, and how to handle audio and picture files.

AUDIENCE

End users

COURSE OBJECTIVES

After completing this course, the student will be able to:

- Describe the CommandCentral Vault GUI and the Vault functions
- Navigate through, Group and Filter Videos
- Describe the Video overview screen
- Create clips, add annotations, and add appropriate tags to videos
- Describe how to handle Audio and picture files

REQUISITE KNOWLEDGE

- None



ONLINE, SELF-PACED
LENGTH: 1 HOUR
LMS COURSE CODE:
PSA1044

COMMANDCENTRAL VAULT REDACTION

COURSE OVERVIEW

This training provides instruction on how to perform the redaction of videos in CommandCentral Vault.

AUDIENCE

Record Specialists, Administrators, FOIA Officers or anyone who is required to redact videos before they are distributed.

COURSE OBJECTIVES

After completing this course, the student will be able to:

- Prepare Videos for redaction
- Understand the key relationship between concepts of how redaction works such key frames, threshold setting, lighting, object movement, and so forth...
- -Redact and save a video

REQUISITE KNOWLEDGE

- None



ONLINE, SELF-PACED
LENGTH: 0.5 HOURS
LMS COURSE CODE:
PSA1062

COMMANDCENTRAL ANALYTICS END USER

COURSE OVERVIEW

The CommandCentral Analytics End User course provides an overview of CommandCentral Analytics. It consists of eight modules: Overview, Basic Operations, Dashboard, Roll Call and Maps, Trendcaster, Reporting, New Tabs, and Email Reports.

AUDIENCE

End users

COURSE OBJECTIVES

After completing this course, the student will be able to:

- Describe what CommandCentral Analytics is.
- Perform Basic Operations.
- Set and read Trendcaster.
- Manage tabs.
- Manage the application.

REQUISITE KNOWLEDGE

- None



ONLINE, SELF-PACED
LENGTH: 1 HOUR
LMS COURSE CODE:
RDS2023



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SOFTWARE & APPLICATIONS

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COMMANDCENTRAL PREDICTIVE END USER

COURSE OVERVIEW

The CommandCentral Predictive End User course provides an overview of CommandCentral Predictive. It consists of four modules: Overview, Basic Operations, Map View and TAP View, and Gaining Access (for Users with administration privileges). The course presents an overview of the application features and key users. It includes a presentation of the User Menu together with instructions on how to perform basic operations and use the main tabs of the application. For users with system administration privileges, it provides guidance on how to gain access to CommandCentral Predictive, how to create and manage user accounts.

AUDIENCE

End users

COURSE OBJECTIVES

After completing this course, the student will be able to:

- Understand and identify the key features of CommandCentral Predictive.
- Perform basic operations.
- Use the Map View and TAP View tabs.
- Gain access to the application.

REQUISITE KNOWLEDGE

- None



ONLINE, SELF-PACED
LENGTH: 0.5 HOURS
LMS COURSE CODE:
RDS2024

COMMANDCENTRAL AGENCY SYSTEM ADMINISTRATION

COURSE OVERVIEW

The CommandCentral Agency System Administration course provides an overview of the System Administration functions that apply to all of the CommandCentral Applications in the CommandCentral suite of Applications. This course covers the creation and modification of user information and the creation and modification of groups with permissions that users are assigned to. The group permissions determine what an end user is able to see, modify or do in the CommandCentral suite of applications.

AUDIENCE

System Administrators or anyone who is responsible for setting up users, and groups along with their access permissions in the CommandCentral suite of applications

COURSE OBJECTIVES

After completing this course, the student will be able to:

- Add users to the CommandCentral application
- Modify user information
- Remove users from the CommandCentral applications
- Add groups to the CommandCentral application
- Add permissions to the groups
- Define which layers in inform that a group may access
- Assign User to specific Groups for their access level

REQUISITE KNOWLEDGE

- None



ONLINE, SELF-PACED
LENGTH: 0.5 HOURS
LMS COURSE CODE:
PSA1045

COMMANDCENTRAL VAULT SYSTEM ADMINISTRATION

COURSE OVERVIEW

The CommandCentral Vault System Administration course provides an overview of CommandCentral Vault's System Administrator tasks. It covers: Device management tasks, including deleting devices, and adding new devices to vault. Adding new devices is referred to as the "Out of Box Experience". It then explains how to assign devices to officers, and finally goes through the steps to set up tags. Tags are used to identify or classify videos in to categories that are important to an agency. How these tags can be used for searching, grouping or if they can be available on the Si device are determined by setting the system administrator makes. This course also explains how to set up the default global retention durations, how to set the Recovery period before a video is deleted, and how to set unique retention times for special video types.

AUDIENCE

Command Central Vault System Administrators

COURSE OBJECTIVES

After completing this course, the student will be able to:

- Add, delete and assign Si Devices
- Set video retention and recovery durations
- Create and Manage Tags
- Fix the presented issues of WAVE 7000 System.

REQUISITE KNOWLEDGE

- None



ONLINE, SELF-PACED
LENGTH: 0.5 HOURS
LMS COURSE CODE:
PSA1043



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SOFTWARE & APPLICATIONS

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COMMANDCENTRAL AWARE FIELD WORKSHOP

COURSE OVERVIEW

The CommandCentral Aware Field Workshop course consists of several modules to address customer training needs for the Aware solution. This training provides information on the general Aware interface including video, messaging, mapping, and radio consoles as well as modules that address the optional applications found in the Aware solution. This course is divided into two sections: one to address the needs of customer system administrators and the second to train operators of the Aware position. The administrator content covers the information necessary to manage user, camera, reports and other tasks that are necessary to administer the Aware solution. The operator content covers the controls and functionality of the various applications that make up the Aware solution to allow users to make the most effective use of their Aware positions.

AUDIENCE

Aware position operators, System Administrators, System Administrators/Managers

COURSE OBJECTIVES

After completing this course, the participant will be able to:

- Understand the functionality of applications that comprise CommandCentral Aware.
- Operate CommandCentral Aware applications.
- Use the administrative tools to manage the applications that comprise
- CommandCentral Aware.

REQUISITE KNOWLEDGE

None



INSTRUCTOR-LED
LENGTH: 1-2 DAYS
LMS COURSE CODE:
RDS2027

COMMANDCENTRAL INFORM END USER

COURSE OVERVIEW

This course provides an overview of the CommandCentral Inform User Interface. It then goes into detail on how to display and modify how Inform displays each application the user is using so only relevant data is presented.

AUDIENCE

Officers, detectives, commanders or anyone who needs to use the CommandCentral Inform application

COURSE OBJECTIVES

After completing this course, the student will be able to:

- Navigate the CommandCentral Inform User Interface
- Configure your Instance of CommandCentral Inform to display data that is relevant to your job.

REQUISITE KNOWLEDGE

None



ONLINE, SELF-PACED
LENGTH: 1 HOUR
LMS COURSE CODE:
PSA1057

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ADDITIONAL COURSES

MOSCAD NFM PROGRAMMING, MAINTENANCE AND OPERATOR (FXD010)

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RADIO SOLUTIONS **ADDITIONAL COURSES**

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MOSCAD NFM/SDM MAINTENANCE AND PROGRAMMING

COURSE OVERVIEW

The course focuses on a detailed discussion of the different types of Network Fault Management systems, SDM3000 RTU hardware, hands-on activities with programming the RTU's, Attach Site Builder Applications for Tag Generation, Generating Tags and Files, navigating with the web browser features and the Graphic Master Computer.

AUDIENCE

System Managers, Service Technicians, Motorola Solutions Service Center, End Users

COURSE OBJECTIVES

After completing this course, the student will be able to:

- Install NFM SDM3000 builder software on students' laptops.
- Configure alarm points using SDM3000 builder.
- Generate Tags and Files to import alarm tags.
- Navigating and acknowledging alarms at the Graphic Master Computer.
- Utilize the web browser features to view and configure the system.
- Create Custom Tabs.
- Create Custom Maps.

REQUISITE KNOWLEDGE

Completion of the following course(s) or equivalent experience:

- A basic understanding of Windows navigation
- Laptop computer with Windows XP
- Windows program files must be on the "C" directory



INSTRUCTOR-LED
LENGTH: 3 DAYS
LMS COURSE CODE:
FXD010



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