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 organisation one-stop shop, end-to-end training support: from needs analysis and consultancy to course development, customisation, delivery, and logistics.

Let us work with your team to ensure that your organisation configures, operates and maintains your products and systems to effectively and efficiently meet your specific needs.
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
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 Enrol in a Course section for further instructions.

CREATE A MOTOROLA SOLUTIONS LOGIN ID:

- Visit:  [https://learning.motorolasolutions.com](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

QUESTIONS ABOUT YOUR ACCOUNT OR A COURSE?

Your help desk information can be located in the top, right hand corner of the catalogue pages. You can also click here to view the help desk contact information in your region.
TRAINING OPTIONS, POLICIES AND REQUIREMENTS

INSTRUCTOR-LED TRAINING
Resident training consists of regularly scheduled classes conducted at one of the Motorola Solutions Technical Training Centres. The centres 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 Paths from each product area of the catalogue, or simply based upon your own personal need. Just look for courses with the Online Self-paced or Virtual Classroom icon.

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.

LAPTOP REQUIREMENTS
Some of our classes may require students to bring their laptops to the classroom so that they may utilise an electronic copy of the class material. Please review your enrolment 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.
PRICING AND HELPFUL INFORMATION

FOR QUESTIONS AND ASSISTANCE
Call the Education Services help desk
Monday – Friday,
9 a.m. – 6 p.m. Kuala Lumpur/Singapore Time
or email us at:
training.apac@motorolasolutions.com

HOW TO MAKE PAYMENTS WHEN ENROLLING IN A COURSE
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.

FOR QUESTIONS AND ASSISTANCE

HOW TO MAKE PAYMENTS WHEN REGISTERING
For your convenience we accept the following methods of payment:
- Credit Card
- Purchase Order
- Company Check

CONTACT MOTOROLA SOLUTIONS ASIA PACIFIC

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For general information contact the Asia Pacific Education Services Help Desk at:
training.apac@motorolasolutions.com

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

COURSES FOR END USERS:

**CONSOLES:**
- MCC 7000 Series Dispatch Console Administrator
- MCC 7000 Series Dispatch Console Operator
- MCD 5000 Operator

**MOBILES AND PORTABLES:**
- APX™ Series
- MOTOTRBO™ Series
- XTL™/XTS Series
- MTP/MTM Series

**ADDITIONAL TRAINING:**
- Si500 Body-Worn Camera
- Sr600 In-Vehicle Camera
- CommandCentral Vault
- WAVE

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 organisation. 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 organisation. 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.

OPERATOR TRAINING

With this option, the users within your organisation 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 organisation’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

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.
COURSES

USING THE TRAINING PATHS

The test icon found in the Paths 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.
# Foundational Courses

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**The Learning Management System (LMS)**

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

RF BASICS / RADIO SYSTEM BASICS

- **BASIC RF**
  - RDS0002 ONLINE SELF-PACED

- **BASIC RADIO**
  - RDS0004 ONLINE SELF-PACED

- **COMMUNICATION SYSTEMS CONCEPTS**
  - INSTRUCTOR-LED 5 DAYS
  - LMS COURSE CODE: NST021

CURRICULUM COMPLETE

PARTICIPANT HAS RF KNOWLEDGE REQUIRED FOR ADVANCING TO MORE COMPLEX TECHNICAL TRAINING COURSES.
IP/NODEWORKING FUNDAMENTALS

- BASIC NETWORKING
  - RDS0003 ONLINE SELF-PACED

- NETWORKING ESSENTIALS IN MOTOROLA SOLUTIONS COMMUNICATIONS SYSTEM
  - INSTRUCTOR-LED 5 DAYS
  - LMS COURSE CODE: NST762

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

**DIMETRA SYSTEM**
- DIMETRA SYSTEM APPLIED NETWORKING
  - INSTRUCTOR-LED 5 DAYS
  - LMS COURSE CODE: DMT1108

**MOTOTRBO™ SYSTEM**
- MOTOTRBO™ SYSTEMS APPLIED NETWORKING
  - INSTRUCTOR-LED 4 DAYS
  - LMS COURSE CODE: PCT2007

**LTE SYSTEM**
- PUBLIC SAFETY LTE APPLIED NETWORKING
  - INSTRUCTOR-LED 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 18 FOR MORE DETAILS ON DIMETRA
CLICK HERE TO GO TO PAGE 55 FOR MORE DETAILS ON MOTOTRBO™
CLICK HERE TO GO TO PAGE 77 FOR MORE DETAILS ON LTE
**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

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

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**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 organisations

**REQUISITE KNOWLEDGE**
None

**ONLINE, SELF-PACED**
LENGTH: 1 HOUR
LMS COURSE CODE: RDS0003
### RF Fundamentals

**COURSE OVERVIEW**
This course delivers a basic understanding of RF.

**AUDIENCE**
Technical staff that requires to acquire the fundamentals of RF.

**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 transmission lines.
- Describe the construction and operation of antennas.
- Describe RF propagation.
- Describe digital communication techniques

**REQUISITE KNOWLEDGE**
None

**INSTRUCTOR-LED**
LENGTH: 5 DAYS
LMS COURSE CODE: TGTC08

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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 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**
None

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

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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: 5 DAYS
LMS COURSE CODE: NST021

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: 5 DAYS
LMS COURSE CODE: NST762
TETRA OVERVIEW

COURSE OVERVIEW
This course will provide an introduction to TETRA as a precursor to proprietary TETRA and Dimetra solutions.

AUDIENCE
Personnel requiring a generic introduction to TETRA.

COURSE OBJECTIVES
After completing this course, the student will be able to:
- Describe the history and function of the TETRA Standard and ETSI Role in the European Standard
- Describe the purpose and function of the various TETRA interfaces
- Describe the Benefits of the TETRA services provided
- List the benefits provided by the TETRA system
- Describe the TETRA specifications for, system parameters, protocol specifications and the TETRA spectrum
- Describe the various security safeguards in place within the TETRA standard for Radio communication systems
- Describe the functions and purpose of TETRA

REQUISITE KNOWLEDGE
None

INSTRUCTOR-LED
LENGTH: 3 DAYS
LMS COURSE CODE: TGTC06

SYSTEM ENGINEERING OVERVIEW

COURSE OVERVIEW
This course delivers a basic understanding of System Engineering.

AUDIENCE
Technical staff that requires to acquire a System Engineering Overview.

COURSE OBJECTIVES
After completing this course, the student will be able to:
- Describe electrical principles including AC and DC.
- Describe radio principles.
- Describe Impedance in transmission lines.
- Describe the purposes and operation of an antenna system.
- Describe RF propagation.
- Describe Tetra Air Interface principles.
- Describe RF Site Techniques and Planning.
- Describe Dimetra Call Processing and Networking.
- Describe Dimetra Fleetmapping concept.
- Describe system optimization, the role of NM applications and RF tools used in the optimization process.

REQUISITE KNOWLEDGE
Knowledge of basic electronic and electrical, radio frequency and computer networking is an advantage.

INSTRUCTOR-LED
LENGTH: 5 DAYS
LMS COURSE CODE: DMT1086

DIMETRA IP FLEETMAPPING WORKSHOP

COURSE OVERVIEW
This course provides an overview of the processes needed to design and develop a fleetmap for a Dimetra R8.2 system. It is highly practical in nature and will guide delegates through the steps and processes necessary to design a basic Fleetmap. This course will not cover every programmable infrastructure or TETRA radio feature, but will provide the knowledge required for delegates to expand on the subjects covered in this course to develop more complex system Fleetmaps.

AUDIENCE
All staff who are involved in system planning and Fleetmapping of a Dimetra IP R8.2 system.

COURSE OBJECTIVES
After completing this course, the student will be able to:
- Perform the basic planning requirements and complete a simple Fleetmap information template
- Write a simple Fleetmap based on sample operational requirement information

REQUISITE KNOWLEDGE
Completion of the following course(s) or equivalent experience:
- Dimetra IP System Overview
- Dimetra IP System Configuration & Administration Workshop

INSTRUCTOR-LED
LENGTH: 3 DAYS
LMS COURSE CODE: TGTC04

CLICK HERE TO VIEW THE SCHEDULE
DIMETRA APPLIED NETWORKING

**COURSE OVERVIEW**
This course provides engineers and technicians with the necessary networking information required for the network components applied in the DIMETRA systems. The course includes overview of the basic networking concepts, network configuration overview of the transport network components and information assurance applied in the DIMETRA systems.

**AUDIENCE**
Technical System Managers and Network Technicians

**COURSE OBJECTIVES**
After completing this course, the student will be able to:
- Describe basic IP network hardware and protocols.
- Analyze basic IP network connectivity and addressing.
- Describe DIMETRA Network Transport Subsystem.
- Operate DIMETRA Transport Network Device Management application.
- Describe DIMETRA Master Site VLAN/VRRP Operation.
- Describe Site link, console site link and Inter-zone link connectivity.
- Describe DIMETRA applied networking in a call processing.
- Describe DIMETRA Information Assurance.
- Describe the Customer Network Integration interfaces
- Describe DIMETRA Data Subsystem

**REQUISITE KNOWLEDGE**
None

INSTRUCTOR-LED
LENGTH: 5 DAYS
LMS COURSE CODE: DMT1108

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™ systems. 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
- Communications Equipment (NST762)

INSTRUCTOR-LED
LENGTH: 4 DAYS
LMS COURSE CODE: PCT2007

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: 5 DAYS
LMS COURSE CODE: LTE2007
# DIMETRA SYSTEMS COURSES

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To register for a course, go to learning.motorolasolutions.com
# DIMETRA SYSTEMS COURSES (CTD)

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DIMETRA IP MSO SYSTEM ENGINEER

DIMETRA IP SYSTEM OVERVIEW
INSTRUCTOR-LED 3 DAYS
TSYS01R90

DIMETRA IP CONFIGURATION AND ADMINISTRATION WORKSHOP
INSTRUCTOR-LED 4 DAYS
TSYS04R90

OPTIONAL TRAINING
PARTICIPANT HAS DIMETRA IP SYSTEM OVERVIEW KNOWLEDGE REQUIRED FOR ADVANCING TO THE FOLLOWING COURSES.

SECURE COMMUNICATIONS
DIMETRA IP SECURE COMMUNICATIONS COURSE
INSTRUCTOR-LED 3 DAYS
TSYS16R90

NETWORK SECURITY
DIMETRA IP NETWORK SECURITY
INSTRUCTOR-LED 1 DAY
TSYS17R90

ENCRIPTION, AUTHENTICATION & PROVISIONING
DIMETRA IP AIR INTERFACE ENCRYPTION, AUTHENTICATION & PROVISIONING
INSTRUCTOR-LED 3 DAYS
TSYS12R90
DIMETRA IP FIELD ENGINEER

DIMETRA IP SYSTEM OVERVIEW
TSYS01R90  INSTRUCTOR-LED  3 DAYS

MTS 1 INSTALLATION, CONFIGURATION, TROUBLESHOOTING AND MAINTENANCE WORKSHOP
INSTRUCTOR-LED  4 DAYS  TBTS04

DIMETRA IP AIR INTERFACE ENCRYPTION, AUTHENTICATION & PROVISIONING
INSTRUCTOR-LED  3 DAYS  TSYS12R90

MTS 2/MTS 4 INSTALLATION, CONFIGURATION, TROUBLESHOOTING AND MAINTENANCE WORKSHOP
INSTRUCTOR-LED  4 DAYS  TBTS01

OPTIONAL TRAINING
PARTICIPANT HAS DIMETRA IP SYSTEM OVERVIEW KNOWLEDGE REQUIRED FOR ADVANCING TO THE FOLLOWING COURSES.

INTRODUCTION TO R56
NST9252  ONLINE, SELF-PACED  1 HOUR

TRACES WORKSHOP
TMSC04  INSTRUCTOR-LED  1 DAY
# DIMETRA IP System Administrator

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## Optional Training

Participant has DIMETRA IP System Overview knowledge required for advancing to the following courses.

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DIMETRA IP DISPATCH ADMINISTRATOR

DIMETRA IP SYSTEM OVERVIEW
TSYS01R90
INSTRUCTOR-LED
3 DAYS

DIMETRA D9.0 MCC7500
TROUBLESHOOTING AND MAINTENANCE
TSYS31R90
INSTRUCTOR-LED
3 DAYS

DIMETRA D9.0 MCC7500
OPERATOR
TSYS32R90
INSTRUCTOR-LED
1 DAY

DIMETRA D9.0 MCC7500
ADMINISTRATOR
TSYS33R90
INSTRUCTOR-LED
1 DAY

OPTIONAL TRAINING

PARTICIPANT HAS DIMETRA IP SYSTEM OVERVIEW KNOWLEDGE REQUIRED FOR ADVANCING TO THE FOLLOWING COURSES.

DIMETRA IP SECURE
COMMUNICATIONS
TSYS16R90
INSTRUCTOR-LED
3 DAYS

DISPATCH
COMMUNICATIONS
SERVER WORKSHOP
DMT1112
INSTRUCTOR-LED
3 DAYS

DIMETRA IP AIR
INTERFACE ENCRYPTION,
AUTHENTICATION &
PROVISIONING
TSYS12R90
INSTRUCTOR-LED
3 DAYS
DIMETRA IP DISPATCH OPERATOR

DIMETRA IP SYSTEM OVERVIEW
TSYS01R90
INSTRUCTOR-LED
3 DAYS

DIMETRA D9.0 MCC 7500 OPERATOR WORKSHOP
TSYS32R90
INSTRUCTOR-LED
1 DAY
RADIO SOLUTIONS DIMETRA SYSTEMS

For general information contact the Asia Pacific Education Services Help Desk at:
training.apac@motorolasolutions.com

Motorola Solutions - Product and System Technical Training Course Catalogue | Asia Pacific | 2018

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

RADIO PROGRAM AND FLEETMAPPING

DIMETRA IP SYSTEM OVERVIEW
TSYS01R90
INSTRUCTOR-LED
3 DAYS

DIMETRA IP FLEETMAPPING WORKSHOP
TGTC04
INSTRUCTOR-LED
3 DAYS

TETRA TERMINAL PROGRAMMING
TTER01PLUS
INSTRUCTOR-LED
2 DAYS

INTEGRATED TERMINAL MANAGEMENT (REMOTE PROGRAMMING)
DMT1050
INSTRUCTOR-LED
1 DAY

OPTIONAL TRAINING

PARTICIPANT HAS DIMETRA IP SYSTEM OVERVIEW KNOWLEDGE REQUIRED FOR ADVANCING TO THE FOLLOWING COURSES.

DIMETRA IP AIR INTERFACE ENCRYPTION, AUTHENTICATION & PROVISIONING
TSYS12R90
INSTRUCTOR-LED
3 DAYS

DIMETRA IP SECURE COMMUNICATIONS
TSYS16R90
INSTRUCTOR-LED
3 DAYS

DIMETRA IP CONFIGURATION & ADMINISTRATION WORKSHOP
TSYS0AR90
INSTRUCTOR-LED
4 DAYS
DIMETRA IP D9.0 SYSTEM OVERVIEW

COURSE OVERVIEW
This course provides an overview of the features and functions of a DIMETRA IP D9.0 system. The course is divided into eight modules and includes descriptions of the various call types and system hardware functionality. An application overview describes the purpose of the software used to manage and administer the system. Each module includes an assessment designed to test learning.

AUDIENCE
All staff who require an overview of the DIMETRA IP system functionality and features.

COURSE OBJECTIVES
After completing this course, the student will be able to:
• Describe Basic Radio concepts.
• Describe DIMETRA IP benefits.
• Describe DIMETRA IP D9.0 features and their benefits.
• Describe DIMETRA IP D9.0 Single Zone system components and their functionality.
• Describe the purpose and function of DIMETRA IP D9.0 Network Management applications.
• Describe DIMETRA IP D9.0 Multi-Zone system components and their functionality.
• Describe how different types of calls are processed through a DIMETRA IP D9.0 system.

REQUISITE KNOWLEDGE
None

DIMETRA IP D9.0 CONFIGURATION & ADMINISTRATION WORKSHOP

COURSE OVERVIEW
During this workshop delegates will use configuration and administration applications to manage a DIMETRA IP D9.0 system as they would on a daily basis. The delegates will perform configuration set up procedures for the more popular features and functions as well as common administration tasks, based on real business scenarios.

AUDIENCE
System managers responsible for configuration and administration of a DIMETRA IP D9.0 system

COURSE OBJECTIVES
After completing this course, the student will be able to:
• Describe the purpose of Configuration Management and Server Administration within your DIMETRA IP D9.0 System
• Define tools used to perform Configuration Management
• Perform system user and infrastructure configuration procedures
• Perform basic System Security Management procedures
• Define Applications used to perform Network Management Server and Database Administration tasks
• Explain the importance of daily operational tasks
• Perform daily operational tasks

REQUISITE KNOWLEDGE
• DIMETRA IP D9.0 System Overview course (TSYS01R90).

DIMETRA IP D9.0 FAULT MANAGEMENT WORKSHOP

COURSE OVERVIEW
The workshop will allow delegates to use applications to identify faults on systems components using a live DIMETRA IP D9.0 system and within the context of business scenarios.

AUDIENCE
System operations staff and field engineers who perform fault management tasks on a DIMETRA IP D9.0 system.

COURSE OBJECTIVES
After completing this course, the student will be able to:
• Define the role of Fault Management within Network Management
• Define the role of each of the applications used within Fault Management
• Utilize the Unified Event Manger-UEM application to assist Fault Management within the DIMETRA IP system
• Use the TNCT to assist Fault Management
• Use the Zone Configuration Manager application to perform diagnostic functions within the DIMETRA IP system
• Use the Zone Watch application to assist Fault Management within the DIMETRA IP system
• Identify file backup procedures.

REQUISITE KNOWLEDGE
• DIMETRA IP D9.0 System Overview course (TSYS01R90).
DIMETRA IP D9.0 PERFORMANCE MANAGEMENT WORKSHOP

COURSE OVERVIEW
During this workshop delegates will use applications on a live DIMETRA IP D9.0 system using business scenarios. Using these applications delegates will learn how to interpret system and user performance based on call traffic and device statistics.

AUDIENCE
System operators and managers who monitor and collect system statistics on a DIMETRA IP D9.0 system.

COURSE OBJECTIVES
After completing this course, the student will be able to:
• Describe the factors that affect system performance.
• Describe the Performance Management Analysis process.
• List the Performance Management applications used in a DIMETRA system.
• Describe the purpose of system reports, system usage applications and device statistics in Performance Management activities.
• Access and navigate DIMETRA Performance Management applications to monitor system activity and generate system reports.

REQUISITE KNOWLEDGE
• DIMETRA IP D9.0 System Overview course (TSYS01R90).

DIMETRA IP D9.0 TROUBLESHOOTING AND MAINTENANCE WORKSHOP

COURSE OVERVIEW
During this workshop delegates will troubleshoot and maintain a live DIMETRA IP system using business scenarios, troubleshooting procedures and diagnostic applications. Delegates will also perform complex FRU/FRE procedures to resolve hardware faults.

AUDIENCE
System and Field Engineers who troubleshoot and maintain a DIMETRA IP D9.0 system.

COURSE OBJECTIVES
After completing this course, the student will be able to:
• Describe troubleshooting model process, system support tools and technical support services provided by Motorola Solutions.
• Describe the DIMETRA IP system architecture.
• Perform troubleshooting procedures using system troubleshooting tools.
• Perform recommended routine maintenance procedures for a DIMETRA IP system.
• Perform replacement procedures and reconfigure faulty Field Replaceable Units (FRUs) and Field Replaceable Equipment/Entities (FREs) within a DIMETRA IP system.
• Perform verification procedures on FRU/FRE replacement.

REQUISITE KNOWLEDGE
• DIMETRA IP D9.0 System Overview course (TSYS01R90).
• DIMETRA IP D9.0 Fault Management Workshop (TSYS06R90).

DIMETRA IP D9.0 AIR INTERFACE ENCRYPTION, AUTHENTICATION AND PROVISIONING

COURSE OVERVIEW
During this workshop, students will perform key management tasks on a live DIMETRA IP D9.0 system. Students will perform authentication and provisioning procedures for the daily administration of user authentication and provisioning based on real business scenarios.

AUDIENCE
System Operators and Managers responsible for the provisioning and management of key authentication in a DIMETRA IP D9.0 System.

COURSE OBJECTIVES
After completing this course, the student will be able to:
• Describe how Air Interface Encryption and Authentication work within the DIMETRA IP System.
• Describe the hardware components used in the Encryption and Authentication Process.
• Describe distribution, storage, key updates and key management of Air Interface Encryption and Authentication keys.
• Perform Encryption Key management procedures using the Enhanced AuC, PrC, and KVL system components.

REQUISITE KNOWLEDGE
• DIMETRA IP D9.0 System Overview course (TSYS01R90).

INSTRUCTOR-LED
LENGTH: 3 DAYS
LMS COURSE CODE: TSYS12R90

CLICK HERE TO VIEW THE SCHEDULE
DIMETRA IP D9.0 SECURE COMMUNICATION WORKSHOP

COURSE OVERVIEW
During the workshop delegates will perform key management, administrative, and maintenance tasks on a live DIMETRA IP D9.0 system. The workshop is divided into six modules and real business scenarios will allow delegates to perform key management, key transference, maintenance and troubleshooting procedures on the Key Management Facility (KMF) server and client.

AUDIENCE
System Operators, Managers and Field Technicians responsible for the management and maintenance of secure end-to-end communications in a DIMETRA IP D9.0 system.

COURSE OBJECTIVES
After completing this course, the student will be able to:
• Describe the theory of DIMETRA Secure Communications Operation.
• Carry out KMF Administration.
• Utilize the E2E KVL.
• Perform KMF OTAK/OTEK Management Activities and Procedures.
• Setup an MCC7500S Secure Console.
• Administer the KMF Server.

REQUISITE KNOWLEDGE
• DIMETRA IP D9.0 System Overview course (TSYS01R90).

DIMETRA IP D9.0 NETWORK SECURITY

COURSE OVERVIEW
The workshop is designed to give an overview of the elements of the DIMETRA IP network security solution. The generic threat to network security will be discussed. The course is divided into six modules during which delegates will perform basic procedures using network security software elements.

AUDIENCE
System Operators, Managers, and Field Technicians responsible for the management and maintenance of Network Security in a DIMETRA IP D9.0 system.

COURSE OBJECTIVES
After completing this course, the student will be able to:
• Describe the Generic Threats to Network Security
• Describe the DIMETRA AntiVirus protection
• Describe the DIMETRA Authentication Management
• Describe and manage DIMETRA IP firewall protection

REQUISITE KNOWLEDGE
Completion of the following course(s) or equivalent experience:
• DIMETRA IP D9.0 System Overview (TSYS01R90)
DIMETRA X CORE D9.0

COURSE OVERVIEW
This course provides an overview of the features and functions of a DIMETRA X Core D9.0 system. The course is divided into eight modules and includes descriptions of the various call types and system hardware functionality. An application overview describes the purpose of the software used to manage and administer the system. Each module includes an assessment designed to test learning.

AUDIENCE
All staff who require an overview of the DIMETRA X Core system functionality and features.

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

- Describe Basic Radio concepts.
- Describe DIMETRA X Core benefits.
- Describe DIMETRA X Core D9.0 features and their benefits.
- Describe DIMETRA X Core D9.0 Single Zone system components and their functionality.
- Describe the purpose and function of DIMETRA X Core D9.0 Network Management applications.
- Describe DIMETRA X Core D9.0 Multi-Zone system components and their functionality.
- Describe DIMETRA X Core D9.0 Inter-System Interface functionality.
- Describe how different types of calls are processed through a DIMETRA X Core D9.0 system.

REQUISITE KNOWLEDGE
None

INSTRUCTOR-LED
LENGTH: 3 DAYS
LMS COURSE CODE: DMT1088

DIMETRA X CORE D9.0 CONFIGURATION AND ADMINISTRATION

COURSE OVERVIEW
During this workshop delegates will use configuration and administration applications to manage a DIMETRA X Core D9.0 system as they would on a daily basis. The delegates will perform configuration set up procedures for the more popular features and functions as well as common administration tasks, based on real business scenarios.

AUDIENCE
System managers responsible for configuration and administration of a DIMETRA X Core D9.0 system

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

- Define the role of Configuration Management and Server Administration within your DIMETRA X Core D9.0 System.
- Describe fleetmapping and home zone map function.
- Perform configuration procedures using UCM.
- Perform configuration procedures using ZCM.
- Perform configuration procedures using RCM.
- Perform Network Management Server Administration tasks.
- Explain the importance of daily operational tasks.
- Perform server database administration tasks.

REQUISITE KNOWLEDGE
- DIMETRA X Core D9.0 System Overview course (DMT1088)

INSTRUCTOR-LED
LENGTH: 4 DAYS
LMS COURSE CODE: DMT1089

DIMETRA X CORE D9.0 FAULT MANAGEMENT

COURSE OVERVIEW
The workshop will allow delegates to use applications to identify faults on systems components using a live DIMETRA X Core D9.0 system and within the context of business scenarios.

AUDIENCE
System operations staff and field engineers who perform fault management tasks on a DIMETRA IP D9.0 system.

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

- Define the role of Fault Management within Network Management
- Define the role of each of the applications used within Fault Management
- Utilize the Unified Event Manager (UEM) application to assist Fault Management within the DIMETRA X Core system
- Use the Transport Network Device Manager (TNDM) to assist Fault Management
- Use the Zone Configuration Manager application to perform diagnostic functions within the DIMETRA X Core system
- Use the Zone Watch application to assist Fault Management within the DIMETRA X Core system
- Identify file backup procedures.

REQUISITE KNOWLEDGE
- DIMETRA X Core D9.0 System Overview course (DMT1088)

INSTRUCTOR-LED
LENGTH: 3 DAYS
LMS COURSE CODE: DMT1090
DIMETRA X CORE D9.0 PERFORMANCE MANAGEMENT

COURSE OVERVIEW
During this workshop delegates will use applications on a live DIMETRA X Core D9.0 system using business scenarios. Using these applications delegates will learn how to interpret system and user performance based on call traffic and device statistics.

AUDIENCE
System operators and managers who monitor and collect system statistics on a DIMETRA X Core D9.0 system.

COURSE OBJECTIVES
After completing this course, the student will be able to:
- Describe the factors that affect system performance.
- Describe the Performance Management Analysis process.
- List the Performance Management applications used in a DIMETRA system.
- Describe the purpose of system reports, system usage applications and device statistics in Performance Management activities.
- Access and navigate DIMETRA Performance Management applications to monitor system activity and generate system reports.

REQUISITE KNOWLEDGE
- DIMETRA X Core D9.0 System Overview course (DMT1088)

DIMETRA X CORE D9.0 TROUBLESHOOTING AND MAINTENANCE

COURSE OVERVIEW
During this workshop delegates will troubleshoot and maintain a live DIMETRA X Core system using business scenarios, troubleshooting procedures and diagnostic applications. Delegates will also perform complex FRU/FRE procedures to resolve hardware faults.

AUDIENCE
System and Field Engineers who troubleshoot and maintain a DIMETRA X Core D9.0 system.

COURSE OBJECTIVES
After completing this course, the student will be able to:
- Describe troubleshooting model process, system support tools and technical support services provided by Motorola Solutions.
- Describe the DIMETRA X Core system architecture.
- Perform troubleshooting procedures using system troubleshooting tools.
- Perform recommended routine maintenance procedures for a DIMETRA X Core system.
- Perform replacement procedures and reconfigure faulty Field Replaceable Units (FRUs) and Field Replaceable Equipment/Entities (FREs) within a DIMETRA X Core system.
- Perform verification procedures on FRU/FRE replacement.

REQUISITE KNOWLEDGE
- DIMETRA X Core System Overview course (DMT1088)
- DIMETRA X Core Fault Management Workshop (DMT1090)
DIMETRA IP COMPACT D8.2

DESIGN A DIMETRA IP COMPACT SYSTEM

COURSE OVERVIEW
This course provides best practices in the design of DIMETRA IP Compact System. It covers all areas from the initial gathering of customer requirements, selecting the most appropriate hardware and features, through to final technical review and customer acceptance testing. The course is highly practical and covers the use of system design tools, such as the Pricebook Configuration tool, Network Configuration Tool Express and Terminal Pricebook Configuration Tool to produce a final design and cost breakdown of a customer system.

AUDIENCE
Technical System Managers responsible for setting-up, configuring and administering a DIMETRA IP Compact System.

COURSE OBJECTIVES
After completing this course, the student will be able to:
- Gather customer system requirements using the 5C question model
- Generate preliminary design using Motorola system design tools
- Select DIPC hardware and features to meet customer needs
- Create a detailed design document for customer approval using Motorola system design tools
- Describe requirements for RF and control site selection
- Develop final system documentation based on customer updates
- Describe installation planning requirements

REQUISITE KNOWLEDGE
- AEE1300 Basic RF Fundamentals
- AEE1301 Basic Networking Fundamentals
- AAE1403 DIMETRA IP Subscriber Portfolio Overview
- AAE1404 DIMETRA IP System Portfolio Overview
- DMT1018.00E Tetra Accessories Overview

SETTING UP AND MANAGING YOUR DIMETRA IP COMPACT SYSTEM

COURSE OVERVIEW
The workshop will provide an overview on how to set-up and run a DIMETRA IP Compact/Scalable IP system. The course will provide a system overview of the components and applications that make up the system as well as hands-on practicals that will allow delegates to perform configuration set-up procedures for common features and functions as well as common administration tasks.

AUDIENCE
System Managers/Staff responsible for setting-up, configuring and administering a DIMETRA IP Compact/Scalable IP System, MTS and MCC7500 equipment.

COURSE OBJECTIVES
After completing this course, the student will be able to:
- Setup a DIMETRA IP Compact/Scalable IP System.
- Configure a DIMETRA IP Compact/Scalable IP System for use using NM applications and procedures.
- Carry out MTS configuration and verification procedures using Motorola BTS Service Software application.
- Setup and configure a MCC 7500 dispatch subsystem for use within the DIMETRA IP Compact/Scalable IP system.
- Carry out system backup and restoration procedures using the DIMETRA Enhanced Software Update application and manual techniques.

REQUISITE KNOWLEDGE
- Network Management Overview (DCOMP01R82)

INSTRUCTOR-LED
LENGTH: 5 DAYS
LMS COURSE CODE: DCOMP04R82
TROUBLESHOOTING AND MAINTENANCE OF YOUR DIMETRA IP COMPACT SYSTEM

COURSE OVERVIEW
The workshop will allow delegates an introduction into troubleshooting and maintaining a live DIMETRA IP Compact system. Delegates will complete a series of business scenario task sheets, utilising a troubleshooting methodology, diagnostics applications and completing FRU/FRE procedures to resolve issue.

AUDIENCE
Technical System Managers and Network Technicians

COURSE OBJECTIVES
After completing this course, the student will be able to:
• Describe troubleshooting model process, system support tools and technical support services provided by Motorola Solutions
• Describe the DIMETRA system architecture
• Perform troubleshooting procedures using system troubleshooting tools
• Perform recommended routine maintenance procedures for a DIMETRA IP System
• Perform replacement procedures and reconfigure faulty Field Replaceable Units (FRUs) and Field Replaceable Equipment/Entities (FREs) within a DIMETRA IP System.
• Perform verification procedures on FRU/FRE replacement.

REQUISITE KNOWLEDGE
• RF background knowledge
• Network Management Overview (DCOMP01R82)
• Setting up and Managing your DIMETRA IP Compact (DCOMP04R82)

TETRA TERMINAL OPERATOR, PROGRAMMING AND MAINTENANCE

COURSE OVERVIEW
This practical course will provide assistance to TETRA radio users, diagnose radio problems both locally and remotely. Program the radio for end user operations and provide first line maintenance for suspected faulty radios.

AUDIENCE
Technicians and personnel, who will be involved in programming and maintaining to level 1.

COURSE OBJECTIVES
After completing this course, the student will be able to:
• Locate and use all MTP6650 and MTM5400 controls.
• Execute trunked and direct mode calls using the MTP6650 and MTM5400 radios.
• Carry out radio troubleshooting using built-in diagnostics.
• Describe the function of Motorola CPS Plus software.
• Create a user codeplug and program the codeplug into an MTP6650 and MTM5400 radio.
• Carry out software troubleshooting using CPS Plus.

REQUISITE KNOWLEDGE
None
**DIMETRA IP MICRO**

### DESIGNING A DIMETRA IP MICRO SYSTEM

**COURSE OVERVIEW**
This course provides best practices in the design of DIMETRA IP Micro systems. It covers all areas from the initial gathering of customer requirements, selecting the most appropriate hardware and features, through to final technical review and customer acceptance testing. The course is highly practical and covers the use of system design tools, such as the Micro Pricebook Configuration tool and Terminal Pricebook Configuration Tool to produce a final design and cost breakdown of a customer system.

**AUDIENCE**
Technical System Managers

**COURSE OBJECTIVES**
- Gather customer system requirements using the 5C question model
- Generate preliminary design using Motorola system design tools
- Select DIPM hardware and features to meet customer needs
- Create a detailed design document for customer approval using Motorola system design tools
- Describe requirements for RF and control site selection
- Develop final system documentation based on customer updates
- Describe installation planning requirements

**REQUISITE KNOWLEDGE**
- AAE1303 Radio 101 Fundamentals
- AEE1300 Basic RF Fundamentals
- AEE1301 Basic Networking Fundamentals
- AAE1403 DIMETRA IP Subscriber Portfolio Overview
- AAE1404 DIMETRA IP System Portfolio Overview

### DEPLOYING AND MANAGING A DIMETRA IP MICRO SYSTEM

**COURSE OVERVIEW**
The workshop will provide an overview on how to set-up and run a DIMETRA IP Micro system. The course will provide a system overview of the components and applications that make up the system as well as hands-on practicals that will allow delegates to perform typical configuration set-up procedures as well as common administration tasks.

**AUDIENCE**
Personnel responsible for setting-up, configuring and administrating a DIMETRA IP Micro system.

**COURSE OBJECTIVES**
- Describe the procedure for a DIMETRA IP Micro System installation.
- Demonstrate the DIMETRA IP Micro System operation procedures.
- Demonstrate the DIMETRA IP Micro System administration procedures.
- Demonstrate the DIMETRA IP Micro System maintenance procedures.
- Describe Network Planning in overview.

**REQUISITE KNOWLEDGE**
- IP background, RF Fundamentals, Design a DIPM System one

**INSTRUCTOR-LED**
LENGTH: 2 DAYS
LMS COURSE CODE: DMT3002

**INSTRUCTOR-LED**
LENGTH: 3 DAYS
LMS COURSE CODE: AEL2303

CLICK HERE TO VIEW THE SCHEDULE
## ADDITIONAL DIMETRA SYSTEMS COURSES

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<td><strong>COURSE OVERVIEW</strong></td>
<td>After a brief review of Professional Mobile Radio (PMR) and Terrestrial Trunked Radio (TETRA) technologies, this course will focus on introducing Motorola Solutions’ DIMETRA IP Portfolio.</td>
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<td>Personnel requiring a generic introduction to DIMETRA IP</td>
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<td><strong>COURSE OBJECTIVES</strong></td>
<td>After completing this course, the student will be able to:</td>
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<td>• Describe Professional Mobile Radio (PMR) properties and applications.</td>
<td>• Identify the role and purpose of Network Management (NM) within a Dimetra IP System.</td>
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<td>• Describe the TETRA standard, system structure, modes of operation and TETRA services.</td>
<td>• Describe the TETRA infrastructure, radios, accessories portfolio and their features.</td>
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<td>• Identify Motorola’s DIMETRA Portfolio, DIMETRA IP system options and services.</td>
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| ONLINE, SELF-PACED | 2 HOURS | LMS COURSE CODE: AAE1404 |
| ONLINE, SELF-PACED | 1 HOUR | LMS COURSE CODE: DMT0020 |
| ONLINE, SELF-PACED | 1.5 HOURS | LMS COURSE CODE: DCOMP01R82 |
DIMETRA APPLIED NETWORKING

COURSE OVERVIEW
This course provides engineers and technicians with the necessary networking information required for the network components applied in the DIMETRA systems. The course includes overview of the basic networking concepts, network configuration overview of the transport network components and information assurance applied in the DIMETRA systems.

AUDIENCE
Technical System Managers and Network Technicians

COURSE OBJECTIVES
After completing this course, the student will be able to:
- Describe basic IP network hardware and protocols.
- Analyze basic IP network connectivity and addressing.
- Describe DIMETRA Network Transport Subsystem.
- Operate DIMETRA Transport Network Device Management application.
- Describe DIMETRA Master Site VLAN/VRRP Operation.
- Describe Site link, console site link and Inter-zone link connectivity.
- Describe Site link, console site link and Inter-zone link connectivity.
- Describe DIMETRA applied networking in a call processing.
- Describe DIMETRA Information Assurance.
- Describe the Customer Network Integration interfaces.
- Describe DIMETRA Data Subsystem.

REQUISITE KNOWLEDGE
None

DISPATCH COMMUNICATIONS SERVER WORKSHOP

COURSE OVERVIEW
This workshop provides an overview of the DIMETRA Dispatch Communication Server as well as hands on activities in terms of configuration, administration, troubleshooting and maintenance aspects of the DCS server and DCS clients.

AUDIENCE
Field and system engineers who support DCS solution.

COURSE OBJECTIVES
After completing this course, the student will be able to:
- Describe DCS functionality, topology, components and client connectivity.
- Describe DCS solution system limits, throughput and performance.
- Describe how DCS solution is incorporated in DIMETRA call processing.
- Perform configuration of DCS solution components.
- Administer and maintain the DCS solution.
- Perform diagnostic and troubleshooting activities for the DCS solution.
- Perform restoration procedures for DCS solution components in the event of failure.

REQUISITE KNOWLEDGE
- DIMETRA IP D8.2 System Overview (TSYS01R82)

MOTOMAPPING OPERATION AND ADMINISTRATION

COURSE OVERVIEW
The purpose of this course is to provide operational knowledge of the Intelligent Middleware MotoMapping solution. It captures essential navigational and procedural activities that are used for administering, managing, and utilizing MotoMapping.

AUDIENCE
Personnel responsible for administrative and operational management of Intelligent Middleware applications.

COURSE OBJECTIVES
After completing this course, the student will be able to:
- The goal of this course is to present a spectrum of actions that can be performed in MotoMapping, including preparatory tasks.

REQUISITE KNOWLEDGE
None
COURSE OVERVIEW
The purpose of this course is to provide the steps to operate and maintain a customer’s UNS within their Motorola system (DIMETRA IP). The course should provide system so students can have hands-on practice going through the operation, maintenance, and troubleshooting steps.

AUDIENCE
Partners/Resellers and customers who would be responsible for the operation and maintenance of a customer’s UNS within their Motorola system (DIMETRA IP).

COURSE OBJECTIVES
After completing this course, the student will be able to:
- Describe the Features of UNS
- Configure a UNS system
- Identify the UNS tools to administer the system
- Perform routine administration
- Perform troubleshooting

REQUISITE KNOWLEDGE
None

INSTRUCTOR-LED
LENGTH: 2 DAYS
LMS COURSE CODE: DMT2008
DISPATCH CONSOLE PORTFOLIO

OPERATIONAL COMMAND AND CONTROL FROM MULTIPLE POINTS, AT MULTIPLE LEVELS
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* 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
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, Gateway Units (GUs), 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
MCD 5000 Technicians

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

REQUISITE KNOWLEDGE
Completion of the following course(s) or equivalent experience:
• Communication Systems Concepts

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

**INSTRUCTOR-LED**
LENGTH: 5 DAYS
LMS COURSE CODE: AST1002

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**MCC7500 OPERATOR AND ADMINISTRATION**

**COURSE OVERVIEW**
This course provides students with an introduction to the dispatch console, its basic operation and tailored job aids which will be available for assistance in operation. Through facilitation and hands-on activities, the user learns how to perform common tasks associated with the console operation.

**AUDIENCE**
Dispatch Console Operators, System Administrators for Dispatch Console Operators

**COURSE OBJECTIVES**
After completing this course, the student will be able to:
- Identify the hardware components that make up the dispatcher position
- Describe the purpose of the Elite Dispatch application
- Identify elements that make up the menu and toolbar structure within the Elite Dispatch software
- Perform dispatcher operations:
  - Communicate with radios: transmit and receive calls within group and individual communications categories
  - Perform advanced signaling features
  - Perform basic procedures within screen configurations
  - Perform basic procedures within resource groups

**REQUISITE KNOWLEDGE**
None

**INSTRUCTOR-LED**
LENGTH: 1 DAY
LMS COURSE CODE: DCOMP11R8

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Click here to view the schedule
### COURSE OVERVIEW
This course provides students with an introduction to the dispatch console, its basic operation and tailored job aids which will be available for assistance in operation. Through facilitation and hands-on activities, the user learns how to perform common tasks associated with the console operation.

### AUDIENCE
Dispatch Console Operators

### COURSE OBJECTIVES
After completing this course, the student will be able to:
- Identify the hardware components that make up the dispatcher position
- Describe the purpose of the Elite Dispatch application
- Identify elements that make up the menu and toolbar structure within the Elite Dispatch software
- Perform dispatcher operations:
  - Communicate with radios: transmit and receive calls within group and individual communications categories
  - Perform advanced signaling features
  - Perform basic procedures within screen configurations
  - Perform basic procedures within resource groups

### REQUISITE KNOWLEDGE
None

### INSTRUCTOR-LED
LENGTH: 1 DAY
LMS COURSE CODE: TSYS32R90

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### COURSE OVERVIEW
This course provides students with an introduction to the Elite Admin application. It enables system administrators to use the software to set up configurations for the Elite Dispatch desktops that organize resources to meet specific user needs. Through facilitation and hands-on activities, the user learns how the configurations created in the Elite Admin can be saved and then distributed among the Elite Dispatch desktops.

###AUDIENCE
System Administrators for Dispatch Console Operators

### COURSE OBJECTIVES
After completing this course, the student will be able to:
- Identify the hardware components that make up the dispatcher position
- Describe the Purpose of the Elite Admin application
- Identify elements that make up the menu and toolbar structure within the Elite Admin software
- Perform Elite Admin Configurations

### REQUISITE KNOWLEDGE
Completion of the following course(s) or equivalent experience:
- DIMETRA MCC 7500 Operator Course (TSYS32R90)

### INSTRUCTOR-LED
LENGTH: 1 DAY
LMS COURSE CODE: TSYS33R90

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### COURSE OVERVIEW
During this workshop students will perform installation, configuration and troubleshooting procedures relating to the MCC 7500C dispatch console on a live DIMETRA D9.0 system.

### AUDIENCE
Control Room Managers, System Engineers and Network Administrators responsible for the installation, configuration and maintenance of control rooms containing dispatch consoles.

### COURSE OBJECTIVES
After completing this course, the student will be able to:
- Install and configure the hardware and software components of the MCC 7500C Dispatch Console subsystem.
- Troubleshoot installation and configuration problems for the MCC 7500C Dispatch Console.

### REQUISITE KNOWLEDGE
Completion of the following course(s) or equivalent experience:
- DIMETRA MCC 7500 Operator Course (TSYS32R90)
- DIMETRA D9.0 MCC7500 Administrator (TSYS33R90)

### INSTRUCTOR-LED
LENGTH: 3 DAYS
LMS COURSE CODE: TSYS31R90

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THE LEARNING MANAGEMENT SYSTEM (LMS)
To register for a course, go to learning.motorolasolutions.com
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

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)

MTS 2/MTS 4 INSTALLATION, CONFIGURATION, TROUBLESHOOTING & MAINTENANCE WORKSHOP

COURSE OVERVIEW
This course includes the theoretical and practical aspects of configuring, maintaining and troubleshooting the MTS 1 base station in a DIMETRA IP system. The course includes the practical use of service software and the man-machine. Practical sessions include the testing and configuration of the MTS 2/MTS 4.

AUDIENCE
Field Engineers responsible for installing and configuring and maintaining MTS 2/MTS 4 equipment.

COURSE OBJECTIVES
After completing this course, the student will be able to:
• Describe the function of the MTS 2/MTS 4 within a DIMETRA System.
• Identify and describe the function of MTS 2/MTS 4 components.
• Describe MTS 2/MTS 4 installation procedures.
• Execute MMI commands using local and telnet access.
• Perform MTS 2/MTS 4 verification test procedures.
• Download configuration and application files using the BTS Service Software and Software Download Manager application.
• Perform MTS 2/MTS 4 Ki loading procedures.
• Perform MTS 2/MTS 4 troubleshooting using BTS Service Software.

REQUISITE KNOWLEDGE
Completion of the following course(s) or equivalent experience:
• RF and Field or Bench service background

INSTRUCTOR-LED LENGTH: 4 DAYS
LMS COURSE CODE: TBTS01
MTS 1 INSTALLATION, CONFIGURATION, TROUBLESHOOTING AND MAINTENANCE

COURSE OVERVIEW
This course includes the theoretical and practical aspects of configuring, maintaining and troubleshooting the MTS 1 base station in a DIMETRA IP system. The course includes the practical use of service software and the man-machine. Practical sessions include the testing and configuration of the MTS 1.

AUDIENCE
Field Engineers responsible for installing and configuring and maintaining MTS 1 equipment.

COURSE OBJECTIVES
After completing this course, the student will be able to:
• Describe the function of the MTS 1 within a DIMETRA System.
• Identify and describe the function of MTS 1 components.
• Describe MTS 1 installation procedures.
• Execute MMI commands using local and telnet access.
• Perform MTS 1 verification test procedures.
• Download configuration and application files using the BTS Service Software and Software Download Manager application.
• Perform MTS 1 Ki loading procedures.
• Perform MTS 1 troubleshooting using BTS Service Software.

REQUISITE KNOWLEDGE
Completion of the following course(s) or equivalent experience:
• RF and Field or Bench service background

INSTRUCTOR-LED
LENGTH: 4 DAYS
LMS COURSE CODE: TBTS04

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To register for a course, go to learning.motorolasolutions.com
XTS/XTL SUBSCRIBER FAMILY

DO YOU HAVE CPS PROGRAMMING EXPERIENCE?

YES

NO

CPS PROGRAMMING AND TEMPLATE BUILDING
ADT001T

CPS PROGRAMMING AND TEMPLATE BUILDING
ADT001V INSTRUCTOR-LED 2 DAYS

XTS/XTL TECHNICAL SUBSCRIBER ACADEMY
INSTRUCTOR-LED 5 DAYS
LMS COURSE CODE: ADST005

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, SUBMERGIBILITY TEST, MOBILE RADIO INSTALLATION, AND TROUBLESHOOT TO THE BOARD LEVEL.
APX SUBSCRIBER FAMILY

APX CPS PROGRAMMING AND TEMPLATE BUILDING
APX7001V INSTRUCTOR-LED 2 DAYS

APX TECHNICAL SUBSCRIBER ACADEMY
INSTRUCTOR-LED 5 DAYS
LMS COURSE CODE: APX010

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, SUBMERGIBILITY TEST, MOBILE RADIO INSTALLATION, AND TROUBLESHOOT TO THE BOARD LEVEL.
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

INSTRUCTOR-LED
LENGTH: 2 DAYS
LMS COURSE CODE: ADT001V

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, Programming over P25, Advanced System Key Management, Vacuum and Submersibility Testing, Mobile Radio Installation and many other special setup or configuration modes. 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 & 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:
• Experience with the basic features and options of two-way radios basic concepts of trunking

INSTRUCTOR-LED
LENGTH: 5 DAYS
LMS COURSE CODE: ADST005

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

INSTRUCTOR-LED
LENGTH: 2 DAYS
LMS COURSE CODE: APX7001V

CLICK HERE TO VIEW THE SCHEDULE
RADIO SOLUTIONS SUBSCRIBERS

For general information contact the Asia Pacific Education Services Help Desk at:
training.apac@motorolasolutions.com

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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 (ARD004)
• Theory of Radio Operations (RCS003E)

Required:

• APX CPS Programming and Template Building (APX7001V)

INSTRUCTOR-LED
LENGTH: 5 DAYS
LMS COURSE CODE: APX010

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 optimise Radio Management Performance

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

• APX™ CPS Programming and Template (APX7001V Building)

INSTRUCTOR-LED
LENGTH: 3 DAYS
LMS COURSE CODE: RDS2017

CLICK HERE TO VIEW THE SCHEDULE
TETRA SUBSCRIBER END-USER OPERATOR COURSES

AVAILABLE FOR ST7000, MTP3000 SERIES, MTP6000 SERIES, MTM5000 SERIES, AND MTP8000EX.

Click here to go to the LMS to get additional information and to register for the following subscriber courses. The course description to the right applies to all courses listed below.

ST7000 END-USER OPERATOR (DMT1083)
MTP3000 END-USER OPERATOR (DMT1054)
MTP6000 END-USER OPERATOR (DMT1068)
MTM5000 END-USER OPERATOR (DMT1070)
MTP8000EX END-USER OPERATOR (DMT1069)

OTHER SUBSCRIBER COURSES

Click here to go to the LMS to get additional information and to register for the following subscriber courses.

GENERAL COURSES

TETRA TERMINAL PROGRAMMING (CPS PLUS) (TTER01PLUS)
TRACES WORKSHOP (TMSC04)
INTEGRATED TERMINAL MANAGEMENT (REMOTE PROGRAMMING) (DMT1050)
TETRA ACCESSORIES OVERVIEW (DMT1018)
TETRA RADIO OVERVIEW (AAE1403)
TETRA SUBSCRIBER SERVICE TRAINING

Click here to go to the LMS to get additional information and to register for the following subscriber service training. The course description to the bottom applies to all courses listed below.

MTM5X00 / MTM800FUG / MTM800FUG ET LEVEL 2 SERVICE TRAINING (DMT0018)

ST7000 LEVEL 2 SERVICE TRAINING (DMT1025)

MTP8000EX SERIES LEVEL 2 SERVICE TRAINING (DMT1023)

MTP3000 SERIES LEVEL 2 SERVICE TRAINING (DMT0001)

MTP6000 SERIES L2 SERVICE TRAINING (DMT0010)

ADVISOR TPG2200 LEVEL 2 SERVICE TRAINING (DMT0030)

COURSE OVERVIEW
These courses are intended to train Motorola Solutions authorised service personnel on how to carry out Level Two service on the respective devices. The training includes a comprehensive practical exercise designed to allow delegates to practice and confirm their understanding of all features and functions covered in these courses.

AUDIENCE
Radio Technicians

COURSE OBJECTIVES
The goal of the Service Training course is to teach the participants to:
• Understand the product specifications.
• Program the device using the CPS.
• Initiate performance tests.
• Tune the radio.
• Disassemble and reassemble the radio.

REQUISITE KNOWLEDGE
• Radio Communication Fundamentals
• Knowledge of basic two-way FM and Digital Communications

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

Click here to go to the LMS to get additional information and to register for the following subscriber service training. The course description to the bottom applies to all courses listed below.

MTM5X00 / MTM800FUG / MTM800FUG ET LEVEL 2 SERVICE TRAINING (DMT0018)

ST7000 LEVEL 2 SERVICE TRAINING (DMT1025)

MTP8000EX SERIES LEVEL 2 SERVICE TRAINING (DMT1023)

MTP3000 SERIES LEVEL 2 SERVICE TRAINING (DMT0001)

MTP6000 SERIES L2 SERVICE TRAINING (DMT0010)

ADVISOR TPG2200 LEVEL 2 SERVICE TRAINING (DMT0030)

COURSE OVERVIEW
These courses are intended to train Motorola Solutions authorised service personnel on how to carry out Level Two service on the respective devices. The training includes a comprehensive practical exercise designed to allow delegates to practice and confirm their understanding of all features and functions covered in these courses.

AUDIENCE
Radio Technicians

COURSE OBJECTIVES
The goal of the Service Training course is to teach the participants to:
• Understand the product specifications.
• Program the device using the CPS.
• Initiate performance tests.
• Tune the radio.
• Disassemble and reassemble the radio.

REQUISITE KNOWLEDGE
• Radio Communication Fundamentals
• Knowledge of basic two-way FM and Digital Communications

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

Click here to go to the LMS to get additional information and to register for the following subscriber service training. The course description to the bottom applies to all courses listed below.

MTM5X00 / MTM800FUG / MTM800FUG ET LEVEL 2 SERVICE TRAINING (DMT0018)

ST7000 LEVEL 2 SERVICE TRAINING (DMT1025)

MTP8000EX SERIES LEVEL 2 SERVICE TRAINING (DMT1023)

MTP3000 SERIES LEVEL 2 SERVICE TRAINING (DMT0001)

MTP6000 SERIES L2 SERVICE TRAINING (DMT0010)

ADVISOR TPG2200 LEVEL 2 SERVICE TRAINING (DMT0030)

COURSE OVERVIEW
These courses are intended to train Motorola Solutions authorised service personnel on how to carry out Level Two service on the respective devices. The training includes a comprehensive practical exercise designed to allow delegates to practice and confirm their understanding of all features and functions covered in these courses.

AUDIENCE
Radio Technicians

COURSE OBJECTIVES
The goal of the Service Training course is to teach the participants to:
• Understand the product specifications.
• Program the device using the CPS.
• Initiate performance tests.
• Tune the radio.
• Disassemble and reassemble the radio.

REQUISITE KNOWLEDGE
• Radio Communication Fundamentals
• Knowledge of basic two-way FM and Digital Communications
Si 500 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

Si 500 END USER TRAINING

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

PUBLIC SAFETY LTE LEX L10i MISSION CRITICAL HANDHELD OVERVIEW

COURSE OVERVIEW
The Public Safety LTE LEX L10i Mission Critical Handheld Overview instructor-led course presents an overview of the LEX L10i Mission Critical Handheld, including hands on practice of managing and validating devices using available methods. Maintaining and troubleshooting the LEX L10i is also covered.

AUDIENCE
Field Technicians

COURSE OBJECTIVES
After completing this course, the student will be able to:
• Describe LEX L10i features.
• Perform user operation procedures on the LEX L10i.
• Perform management procedures on the LEX L10i.
• Perform validation procedures on the LEX L10i.
• Perform maintenance procedures on the LEX L10i.
• Perform troubleshooting procedures on the LEX L10i.

REQUISITE KNOWLEDGE
None
PUBLIC SAFETY LTE VEHICULAR SUBSCRIBER MODEM WORKSHOP

COURSE OVERVIEW
The Public Safety LTE Vehicular Subscriber Modem User programme is an instructor-led training course describing the LTE Vehicle Subscriber Modem including a hands-on practice of the modern operation. The course is designed to provide an overview of the LTE Vehicle Subscriber Modem, how it is installed and some of the technical issues that may arise after installation.

AUDIENCE
First Responders, End Users, Technicians

COURSE OBJECTIVES
After completing this course, the student will be able to:
• Recognize and describe the Vehicle Subscriber Modem (VSM).
• Describe the components used with the VSM.
• Understand the installation requirements.
• Understand where the VSM fits within the Public Safety LTE system.
• Recognize the VSM Status Utility and understand its function.
• Troubleshoot general connection problems.
• Understand the meaning of the different LED indicators.

REQUISITE KNOWLEDGE
Completion of the following course(s) or equivalent experience:
• Public Safety LTE System Overview (AAE1603)
MOTOTRBO™ SYSTEMS PORTFOLIO
## MOTOTRBO™ COURSES

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To register for a course, go to learning.motorolasolutions.com
MOTOTRBO™ TECHNICAL TRAINING CURRICULUM
BASED ON YOUR CURRENT IP AND MOTOTRBO™ EXPERIENCE

DO YOU UNDERSTAND IP?

NO

YES

DO YOU HAVE MOTOTRBO™ EXPERIENCE?

NO

YES

MOTOTRBO™ SYSTEMS APPLIED NETWORKING
INSTRUCTOR-LED 4 DAYS
LMS COURSE CODE:
PCT2007

BASIC NETWORKING
RDS0003 ONLINE SELF-PACED

MOTOTRBO™ SYSTEM INTRODUCTION FOR TECHNICIANS
CEDMEL2000 INSTRUCTOR-LED 2 DAYS

CHOOSE YOUR SPECIALISED SYSTEM TRAINING

MOTOTRBO™ CAPACITY MAX DESIGN AND DEPLOY
INSTRUCTOR-LED 5 DAYS
PCT2010

MOTOTRBO™ DESIGN AND DEPLOY IP SITE CONNECT
INSTRUCTOR-LED 2 DAYS
AEL2600

MOTOTRBO™ DESIGN AND DEPLOY FOR CAPACITY PLUS
INSTRUCTOR-LED 2 DAYS
CEDEMEL2600

MOTOTRBO™ DESIGN AND DEPLOY FOR LINKED CAPACITY PLUS
INSTRUCTOR-LED 2 DAYS
AEL2601

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

MOTOTRBO™ SYSTEM INTRODUCTION FOR TECHNICIANS
CEDMEL2000  INSTRUCTOR-LED 2 DAYS

MOTOTRBO™ SUBSCRIBER AND REPEATER TECHNICAL SERVICE ACADEMY
INSTRUCTOR-LED 4 DAYS
LMS COURSE CODE: TB0300

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.
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 organisational 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

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)
MOTOTRBO™ RADIO MANAGEMENT WORKSHOP

COURSE OVERVIEW
PThe 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).
- Utilise 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:
- PCT1047 – MOTOTRBO™ Capacity Max Technical Overview (OLT)
- PCT1046 – MOTOTRBO™ Capacity Max Theory of Operations (OLT)
- PCT1045 – MOTOTRBO™ Capacity Max Technical Overview (OLT)
- PCT1032 – Radio Management 2.0 Configuration Mode (OLT)
- PCT1031 – MOTOTRBO™ System Introduction for Technicians
- CEDMEL2000 - Introduction to MOTOTRBO™ Systems for Technicians
- CEDMEL2000 - MOTOTRBO™ System Introduction for Technicians

REQUISITE KNOWLEDGE
Completion of the following course(s) or equivalent experience:
- Knowledge of RF Propagation modelling tools
- Understanding IP Network Addressing
- Knowledge of RF Propagation modelling tools

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

INSTRUCTOR-LED
LENGTH: 4 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 optimise 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: 5 DAYS
LMS COURSE CODE: PCT2010

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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: 2 DAYS
LMS COURSE CODE: CEDMEL2600AEL

CLICK HERE TO VIEW THE SCHEDULE

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: 2 DAYS
LMS COURSE CODE: AEL2601AEL

CLICK HERE TO VIEW THE SCHEDULE

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: 2 DAYS
LMS COURSE CODE: AEL2600AEL

CLICK HERE TO VIEW THE SCHEDULE
**COURSE OVERVIEW**

MOTOTRBO™ Design and Deploy training covers the key components and architectures of MOTOTRBO Capacity Plus, Linked Capacity Plus and IP Site Connect Radio systems. You will be able to describe the different MOTOTRBO systems, their capabilities, system components and data applications. You will also learn how to select the best MOTOTRBO system to meet your customer’s needs. The goal of this program is to give you an opportunity to practice designing a MOTOTRBO system including fleetmapping, bandwidth calculations and topology drawing. You will configure the subscribers and repeaters using MOTOTRBO Customer Programming Software (CPS). A basic introduction to Radio Management and Over-the-Air Programming will be covered as well.

**AUDIENCE**

System Managers and Technicians

**COURSE OBJECTIVES**

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

- Describe the MOTOTRBO Capacity Plus, Linked Capacity Plus and IP Site Connect systems, their capabilities, system components, and data application.
- Describe the MOTOTRBO theory of operation.
- Identify the available MOTOTRBO modes and topologies.
- Configure a Capacity Plus, Linked Capacity Plus or IP Site Connect system using MOTOTRBO CPS to program the subscribers and repeaters.
- Design a Capacity Plus, Linked Capacity Plus and IP Site Connect system, given a sample case study.
- Explain the pre-deployment and deployment steps for MOTOTRBO.
- Identify the advantages that Radio Management provides.
- Navigate MOTOTRBO Radio Management screens.
- Explain how to manage multiple MOTOTRBO radios simultaneously.

**REQUISITE KNOWLEDGE**

Prior to attending this training, student should have obtained:

- MOTOTRBO Systems Technical Associate Certificate

**REQUIRED**

- Student must bring his own laptop to class every day. There are in-class hands-on exercises on the Customer Programming Software (CPS) and the electronic version of the MOTOTRBO System Planner.
- Student must have own Learning Management System (LMS) account.
COURSE OVERVIEW
This training is for those individuals who wish to take their knowledge to the next level of understanding as it pertains to the MNIS Voice and Data Gateways of a MOTOTRBO™ Capacity Max system. The system design implications and foundational deployment of 3rd party Applications (AVTEC Scout, SmartPTT and TRBOnet) will be addressed, as well as how to enable Over-the-Air Programming and IMPRESS™ Battery Management in a Capacity Max system.
As a cost-saving alternative to traditional classroom, this course is delivered as a Virtual Instructor Led Training (VILT) divided into 5 sessions; each session is 2.5 hours in length. Special software is not required. You only need a standard web browser and telephone or VoIP capability to participate.
Your instructor will contact you prior to the beginning of the session to introduce himself, provide you with the class materials and instructions.

AUDIENCE
System Managers and Technicians

COURSE OBJECTIVES
After completing this course, the student will be able to:
- Explain the implications and deploy the following in basic Capacity Max system:
  - VRC Gateway
  - Data Gateway
  - SmartPTT
  - TRBOnet
  - AVTEC Scout
  - Over-the-Air Programming
  - IMPRESTM Battery Management

REQUISITE KNOWLEDGE
Completion of the following course(s) or equivalent experience:
- CEDMEL2000 - Introduction to MOTOTRBO Systems for Technicians or equivalent experience
- PCT1047 - MOTOTRBO Capacity Max Technical Overview (Online Training) or PCT1050 - MOTOTRBO Capacity Max Technical Overview (Instructor-Led Training)
- PCT1046 - MOTOTRBO Capacity Max Theory of Operation (Online Training) or PCT1051 - MOTOTRBO Capacity Max Theory of Operation (Instructor-Led Training)
- PCT1031 - MOTOTRBO Capacity Max System Advisor
- PCT1032 - Radio Management 2.0 Configuration Mode (Online Training)
- Understanding IP Network Addressing
- Knowledge of RF Propagation Modelling Tools

VIRTUAL CLASSROOM
LENGTH: 2 DAYS
LMS COURSE CODE: PCT3006

SMARTPTT PLUS ESSENTIALS AND DEPLOYMENT

COURSE OVERVIEW
During this course delegates will cover all aspects of the SmartPTT Plus system. The course starts by providing detailed information on the system's benefits, architecture and features, including the requirements for deploying a SmartPTT system. The course then goes on to cover the installation and configuration of the Dispatch, Radioserver and associated system components and features.

AUDIENCE
Technical personnel involved in the design, deployment and installation or configuration of a SmartPTT Plus system.

COURSE OBJECTIVES
After completing this course, the student will be able to:
- Describe the function of SmartPTT PLUS
- Describe SmartPTT PLUS solution architecture
- List the system requirements for deploying a SmartPTT PLUS solution
- Describe the process of system design for IP Site Connect, Capacity Plus, Linked Capacity Plus
- Describe the system design processes for Connect Plus
- Define the set-up, installation and configuration process for the SmartPTT PLUS Radio Server
- Define the set-up, installation and configuration process for the SmartPTT PLUS Dispatcher console functions
- Configure MOTOTRBO radios and repeaters for SmartPTT PLUS
- Configure MOTOTRBO Network Interface Service and MOTOTRBO DDMS Administrative Client

REQUISITE KNOWLEDGE
None

INSTRUCTOR-LED
LENGTH: 3 DAYS
LMS COURSE CODE: PCT2005

CLICK HERE TO VIEW THE SCHEDULE
ASTRO® 25 SYSTEMS PORTFOLIO
## ASTRO® 25 IV&D System Courses

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

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**The Learning Management System (LMS)**

To register for a course, go to learning.motorolasolutions.com
ASTRO® 25 IV&D RADIO SYSTEM ADMINISTRATOR

M CORE

L CORE

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

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.

ASTRO® 25 IV&D RADIO SYSTEM ADMINISTRATOR WORKSHOP
INSTRUCTOR-LED 5 DAYS
LMS COURSE CODE: ACS717102

RECOMMENDED CURRICULUM IS COMPLETE

OPTIONAL TRAINING PATH AVAILABLE. CLICK ON THIS LINK TO GO TO PAGE 69 FOR ADDITIONAL DETAILS.
For general information contact the Asia Pacific Education Services Help Desk at:
training.apac@motorolasolutions.com

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**ASTRO® 25 IV&D M/L Core Technician**

**M Core**

**L Core**

**ASTRO® 25 IV&D System Overview**

AST1038 ONLINE SELF-PACED

**ASTRO® 25 IV&D M Core Workshop**

INSTRUCTOR-LED 5 DAYS

LMS COURSE CODE: ACS717103

**ASTRO® 25 IV&D K Core Technician**

**M Core**

**L Core**

**ASTRO® 25 IV&D System Overview**

AST1038 ONLINE SELF-PACED

**ASTRO® 25 IV&D Conventional K Core with Configuration Manager**

INSTRUCTOR-LED 3 DAYS

LMS COURSE CODE: ACS717410

**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.
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 PATH AVAILABLE.
CLICK ON THIS LINK TO GO TO PAGE 69 FOR ADDITIONAL DETAILS.
**ASTRO® 25 IV&D CONVENTIONAL RF SITE TECHNICIAN**

**M CORE**

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

**K CORE**

**RECOMMENDED CURRICULUM IS COMPLETE**
PARTICIPANT SHOULD BE ABLE TO MAINTAIN AN ASTRO® 25 REPEATER SITE INCLUDING THE GTR8000 BASE STATIONS, GCP8000 SITE CONTROLLER, SITE COMPARATOR AND OTHER SITE EQUIPMENT.

**LANGUAGES OFFERED:**
- **English**

**LMS COURSE CODE:**
ACS717440

**OPTIONAL TRAINING PATH AVAILABLE.**
CLICK ON THIS LINK TO GO TO PAGE 69 FOR ADDITIONAL DETAILS.
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.**

**SYSTEMS FLEETMAPPING**

- ASTRO® 25 IV&D SYSTEMS FLEETMAPPING INSTRUCTOR-LED
  - RDS1017

**RADIO AUTHENTICATION**

- ASTRO® 25 IV&D RADIO AUTHENTICATION INSTRUCTOR-LED
  - AST2038
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

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 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
• Utilise 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: 5 DAYS
LMS COURSE CODE: ACS717103
**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)

**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 optimising the system resources.
- 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
**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 used 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
- Provide 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.

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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, organise, 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)

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**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 (NW7003)

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

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

DEPLOY FOR ASTRO® 25 IV&D TRUNKING WITH L CORE

COURSE OVERVIEW
This course provides an overview and implementation plan for deployment of an L1/L2 ASTRO 25 IV&D 7.15 system, contains information and procedures for bringing Motorola Manufacturing Representatives (MRs) up to speed on how to assemble and install the L1/L2 system for customers, and acts as a resource on how to reference other training materials for troubleshooting and additional L1/L2 system tasks.

AUDIENCE
Motorola Manufacturing Representatives (MRs) involved in the installation of L1/L2 systems.

COURSE OBJECTIVES
After completing this course, the student will be able to:
• Correctly and efficiently install and locally configure an L Core system that has been staged by CCSi.
• Perform initial Power On of equipment to verify proper operation.
• Commission the L Core System once it has been installed.
• Test the L Core System per Acceptance Test Plans (ATP).
• Back up the Infrastructure and System Databases of the L Core System.

REQUISITE KNOWLEDGE
Completion of the following courses or equivalent knowledge:
• Trunking or knowledge based on system deploying
• Networking: Networking Essentials in Communication Equipment (NST762) or online classes
• R56: Site Installation Practices Workshop (R56) NST925

CLICK HERE TO VIEW THE SCHEDULE
DEPLOY FOR ASTRO® 25 IV&D TRUNKING WITH K CORE

COURSE OVERVIEW
This course provides an overview and implementation plan for deployment of an K1/K2 ASTRO 25 IV&D 7.16 system, contains information and procedures for bringing Motorola Manufacturing Representatives (MRs) up to speed on how to install the K1/K2 system for customers, and acts as a resource on how to reference other training materials for troubleshooting and additional K1/K2 system tasks.

AUDIENCE
Motorola Manufacturing Representatives (MRs) involved in the installation of K1/K2 systems.

COURSE OBJECTIVES
After completing this course, the student will be able to:
• Correctly and efficiently install and locally configure a K Core system that has been staged by CCSi.
• Perform initial Power On of equipment to verify proper operation.
• Commission the K Core System once it has been installed.
• Test the K Core System per Acceptance Test Plans (ATP).
• Back up the Infrastructure and System Databases of the K Core System.

REQUISITE KNOWLEDGE
Completion of the following courses or equivalent knowledge:
• Conventional RF System knowledge based on system deploying
• Networking: Networking Essentials in Communication Equipment (NST762) or online classes
• R56: Site Installation Practices Workshop (R56) NST925
• ASTRO 25 IV&D with K Core System Overview (ACS714400)

INSTRUCTOR-LED
LENGTH: 3 DAYS
LMS COURSE CODE: ACS716470

CLICK HERE TO VIEW THE SCHEDULE
HELPING PEOPLE BE THEIR BEST IN THE MOMENTS THAT Matter
PUBLIC SAFETY LTE DELIVERS
A HIGH DEGREE OF THE 5 C’s

**COVERAGE WITHOUT COMPROMISE**
Public Safety LTE networks handle peak usage and prioritise system traffic to the end of coverage. Extend network coverage during disaster recovery situations and optimise 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.

**CONTROL OF YOUR COMMUNICATIONS**
An optimised 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.

**COST SAVING ON A LARGE SCALE**
An optimised Public Safety LTE network that saves money via economies of scale on devices and infrastructure partnership where needed.
**PUBLIC SAFETY LTE COURSES**

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To register for a course, go to [learning.motorolasolutions.com](http://learning.motorolasolutions.com)
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)

PUBLIC SAFETY LTE SYSTEM ADMINISTRATION

COURSE OVERVIEW
PS LTE System Administration training covers the key functionality and tasks required to administer and manage a Public Safety LTE system. Participants will understand the functionality of the management applications, requirements for subscriber provisioning, requirements for proper quality of service, fault management and other network administration needs. Participants will perform tasks demonstrating proficiency in using the applications resident on the OSP platform.

AUDIENCE
Customer System Manager, Customer Technical Staff, MSI employee

COURSE OBJECTIVES
After completing this course, the student will be able to:
• Understand the function of the Operations Support Platform (OSP) and how it is used to manage the PS LTE system.
• Access the Unified Provisioning Manager (UPM) and provision end users and UICCs on the PS LTE system.
• View and manage faults using the Unified Event Manager (UEM).
• Access the Log Management application to view and manage syslog messages.
• Monitor the performance of the system using PM reports.
• View eNodeB fault and performance status within a graphical map using the Network Monitor application.
• Manage and control access to the OSP platform and the suite of management applications residing on the OSP.
• Access the OSP virtual machines and perform administrative actions.

REQUISITE KNOWLEDGE
Completion of the following course(s) or equivalent experience:
• Basic Networking (RDS0003)
• PS LTE System Overview (AAE1603)

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)
COURSE OVERVIEW
The Public Safety LTE LEX L10i Mission Critical Handheld Overview instructor-led course presents an overview of the LEX L10i Mission Critical Handheld, including hands-on practice of managing and validating devices using available methods. Maintaining and troubleshooting the LEX L10i is also covered.

AUDIENCE
Field Technicians

COURSE OBJECTIVES
After completing this course, the student will be able to:
• Describe LEX L10i features.
• Perform user operation procedures on the LEX L10i.
• Perform management procedures on the LEX L10i.
• Perform maintenance procedures on the LEX L10i.
• Perform troubleshooting procedures on the LEX L10i.

REQUISITE KNOWLEDGE
• None

INSTRUCTOR-LED
LENGTH: 1 DAY
LMS COURSE CODE: LTE1024

COURSE OVERVIEW
The Public Safety LTE Vehicular Subscriber Modem Workshop is an instructor-led training course describing the LTE Vehicle Subscriber Modem including a hands-on practice of the modem operation. The course is designed to provide an overview of the LTE Vehicle Subscriber Modem, how it is installed and some of the technical issues that may arise after installation.

AUDIENCE
First Responders, End Users, Technicians

COURSE OBJECTIVES
After completing this course, the student will be able to:
• Recognize and describe the Vehicle Subscriber Modem (VSM).
• Describe the components used with the VSM.
• Understand the installation requirements.
• Understand where the VSM fits within the Public Safety LTE system.
• Recognize the VSM Status Utility and understand its function.
• Troubleshoot general connection problems.
• Understand the meaning of the different LED indicators.

REQUISITE KNOWLEDGE
Completion of the following courses or equivalent experience:
• Public Safety LTE System Overview (AAE1603)

INSTRUCTOR-LED
LENGTH: 1 DAY
LMS COURSE CODE: LTE1023

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
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 a 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

WAVE CERTIFIED INTEGRATION ENGINEER (AST3001)

WAVE 7000 ADMINISTRATION AND MAINTENANCE WORKSHOP (LTE2043)

UNS OPERATIONS AND ADMINISTRATION R4.0 (DMT2008)

INTELLIGENT MIDDLEWARE 5.2 OPERATION AND ADMINISTRATION (RDS2025)

THE LEARNING MANAGEMENT SYSTEM (LMS)

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

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

UNS OPERATIONS AND ADMINISTRATION R4.0

COURSE OVERVIEW
The purpose of this course is to provide the steps to operate and maintain a customer’s UNS within their Motorola system (DIMETRA IP). The course should provide system so students can have hands-on practice going through the operation, maintenance, and troubleshooting steps.

AUDIENCE
Partners/Resellers and customers who would be responsible for the operation and maintenance of a customer’s UNS within their Motorola system (DIMETRA IP)

COURSE OBJECTIVES
After completing this course, the student will be able to:
• PDescribe the Features of UNS
• Configure a UNS system
• Identify the UNS tools to administer the system
• Perform routine administration
• Perform troubleshooting

REQUISITE KNOWLEDGE
None
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

FOR MORE INFORMATION, CONTACT YOUR MOTOROLA SOLUTIONS REPRESENTATIVE

CLICK HERE TO VIEW THE SCHEDULE
• **Easy to print:** Stand-alone file that is not part of this larger catalogue.
• **Easier to use:** Each course is hyperlinked to its sign-up page in the Learning Management System (LMS).
• **Updated frequently:** Download the latest version for the most current schedule.

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 +44 (0) 203 0277 499.

Click on the above link to access the schedule and pricing file or visit:
## CONTACT US

### THE LEARNING MANAGEMENT SYSTEM (LMS)

Visit our learning website: [motorolasolutions.com](mailto:motorolasolutions.com)

## CONTACT MOTOROLA SOLUTIONS ASIA PACIFIC

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<td>1-800-931855</td>
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