



# Product and system technical training course catalog

Global Education. Latin American Caribbean Region edition  
January 2025



**MOTOROLA** SOLUTIONS





# WELCOME

Day in, and day out, governments and businesses around the world rely on effortless and reliable communication. Our customers call it their lifeline. To help businesses operate without interruption and to safeguard communities, workplaces, and ultimately, each one of us, we are determined to help keep the lifeline unbreakable.

With Motorola Solutions, Inc. Global Education, we help your two biggest lifeline investments - your personnel and your technology infrastructure - work together efficiently to maximize the value of your communication technologies.

Whether your organization is new to our latest innovations or has years of experience with us, our Education Services team helps expand your personnel's skills and knowledge for the full application of your technology investment.

Starting with professionally developed, real-world application and content, we always design your training with the learner in mind. Our experienced instructors average 20+ years in the communications industry and specialize in Motorola Solutions technologies and services. Immersive, hands-on experiences, expert lab environments, or online learning ensure we meet your learners with the right kind of learning at the right times.

Whether training is delivered virtually, at your location or in our facilities, we can help ensure that your personnel know how to amplify your investment, maximize operational efficiency, and ensure an unbreakable lifeline.

We look forward to working with you.



**MOTOROLA**  
SOLUTIONS



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# EDUCATION SERVICES

Global Education teams up with you in the successful implementation, maintenance, and use of your communication system. We blend our passion for learning and innovation to deliver comprehensive training strategies, targeted to ensure technicians, administrators, supervisors, and operators find in us a trusted and effective learning partner.

Our range of services is designed to ensure you find the right learning support your organization's unique characteristics demand. From Education Packages, offering a selection of essential training activities, to the most personalized service: a Training Need Analysis service followed by a tailored training plan, specifically designed to meet the results you want to achieve.

Our services not only respond to businesses and organizations' needs, but also to limitations uncertain times may bring. Our learning technology allows us to provide remote instructor-led training, so your personnel can attend our sessions from anywhere in the region.

Browse this Catalog to learn more about each of these services and their benefits, and also discover a selection of our extensive training portfolio. If you have any questions, contact your Motorola Solutions representative.





## GENERAL INFORMATION

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

For general information contact the Latin America Education Services Help Desk at:  
training.lacr@motorolasolutions.com

# QUALITY ASSURANCE: THE TPMA FRAMEWORK

## MOTOROLA SOLUTIONS GLOBAL EDUCATION COMMITS TO EXCELLENCE IN INSTRUCTOR- LED TRAINING

For 45+ years, our instructors continue to be laser-focused on your two lifeline investments - your personnel and your technology infrastructure. Our mission is to work together efficiently to maximize the value of your communication technologies.

Motorola Solutions is aware of the impact training experiences have on your team and your organization. When it comes to supporting the success of your employees and your technology infrastructure, we seek to continually deliver exceptional training to you.

For over 10 years, we have built and implemented the Training Performance Monitoring & Assessment (TPMA) framework in our organization. Our internal instructors are held to the highest level of training standards outlined within the Learning & Performance Institute (LPI). The TPMA certificate is widely-recognized and accepted as the premiere institute for learning, assessing and benchmarking trainer progress.

Anywhere in the world, those who hold a TPMA certificate demonstrate that they have reached or exceeded the highest standards demanded within the industry.

## WHY DO TPMA CERTIFICATIONS MATTER?

Adopting TPMA standards is essential to meet industry trends and leading industry best practices to meet user needs, enhance instructor development and ultimately leads to a happy customer experience.

LPI ensures the quality of the instructors' training delivery is maintained and meets the highest quality standards, provides expert feedback on their performance and promotes the development of their facilitator skills.

Visit us at [learning.motorolasolutions.com](http://learning.motorolasolutions.com) to register for our training courses.

## ACHIEVING OPTIMAL PERFORMANCE MATTERS TO US

- We focus on the needs of the learner, not the trainer
- The personalized approach and structured consistency of standardized requirements help win business

"The instructor did an outstanding job. Truly a professional and extremely knowledgeable. Never rushed and always listened. Provided feedback to all questions and allowed students to participate at their own level of expertise and speed."

"Excellent coach. Direct, precise, detailed. Explain everything in the right way. Honestly, the best coach I have ever had. They do not skip anything, explain everything in detail. My knowledge after this training is much better. During the entire training, he was fully committed to us."

"The Instructor was extremely helpful during the training. He has an excellent way of teaching and was very attentive to the students when asked questions. I liked that he went over each and every field of CPS. Excellent Instructor! I would recommend to anyone!"

"The instructor showed outstanding skills to combine theory, practice, actual cases and hands-on training. Great training."

"Exceptional course, no words to explain the instructor's commitment and professionalism. Vast experience, humbleness, patience and amazing teaching skills. A different and positive class."

"The best teacher I have ever had in any previous training courses. Very challenging and interactive teaching helping me to understand the system from the bottom to top with a lot of additional slides from the teacher with extremely good and clear explanations in the system networking for deeper understanding."

"One of the best instructors I had. Speaks clearly, responsive to the students; actions and very good at making the students stay alert and attentive."

"Amazing training, very glad to join it. Amazing trainer, very vibrant, very knowledgeable trainer. Looking forward to more training with him. Good trainer from a good company."



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# EDUCATION PACKAGES

Motorola Solutions Education Packages have been built by our technical education experts, to provide you a simpler way to select the right learning activities from our extensive training portfolio. These packages are all designed considering four vital aspects:

- Your Motorola Solutions Infrastructure & Devices
- The Level of Support provided by Motorola Solutions
- The tasks undertaken by your team, and
- The roles of the professionals in charge of those tasks

Behind these packages there are Education Services professionals whose aim is to fully prepare your team to achieve desired organizational efficiency and outcomes by ensuring that they have the knowledge, skill and competency needed to effectively interact with your Motorola Solutions technology investment.

If you wish to customize your Motorola Solutions training strategy, ask our Professional Education Services team to analyze your specific technical and end user training needs and gaps. Please work with your Motorola Solutions account representative to request this professional service.

Let Motorola Solutions Education Services help you ensure that your organization provides effortless and reliable communications, and keep your lifeline stronger than ever!

### ASTRO® INFRASTRUCTURE EDUCATION PACKAGES



#### COMPLEMENT EDUCATION PACKAGE

Prepare your team to operate your ASTRO® Solution, achieving optimal organizational efficiency.

##### TOPICS

System Overview, Upgrade Differences, MyView Portal, Device End-User Best Practices, Dispatch End-User Best Practices

#### SUPPLEMENT EDUCATION PACKAGE

Prepare your team to operate and administer your ASTRO® Solution, achieving optimal organizational efficiency.

##### TOPICS

System Overview, Administration, Secure Communications, Upgrade Differences, MyView Portal, Device End-User Best Practices, Dispatch End-User Best Practices

#### SUPPORT EDUCATION PACKAGE

Prepare your team to operate, administer, and maintain your ASTRO® Solution, achieving optimal organizational efficiency.

##### TOPICS

System Overview, Core, RF-Subsystems, Transport, Administration, Dispatch, Secure Communications, Security Patch Management, Device End-User Best Practices, Dispatch End-User Best Practices

### ASTRO® DEVICES EDUCATION PACKAGES



#### COMPLEMENT EDUCATION PACKAGE

Prepare your team to operate your APX™ devices.

##### TOPICS

Device Overview, My View Portal, Device End-User Best Practices

#### SUPPLEMENT EDUCATION PACKAGE

Prepare your team to operate and administer your APX™ devices.

##### TOPICS

Device Overview, Programming and Radio Management, Device End-User Best Practices

#### SUPPORT EDUCATION PACKAGE

Prepare your team to operate, administer, and maintain your APX™ devices.

##### TOPICS

Device Overview, Programming and Radio Management, Radio Maintenance, Device End-User Best Practices

Talk with your Motorola Solutions contact for a quote, or email us at [training.lacr@motorolasolutions.com](mailto:training.lacr@motorolasolutions.com) for more information on how to sign your team up for one of our Education Services Packages.



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training.lacr@motorolasolutions.com

# SAMPLE PACKAGES



## ASTRO® INFRASTRUCTURE SUPPLEMENT EDUCATION PACKAGE

This Education Package aligns with the Infrastructure ADVANCED Services Package

ASTRO® 25 SYSTEM OVERVIEW

MY VIEW PORTAL OVERVIEW

ASTRO® FEATURES & FUNCTIONALITY

ASTRO® 25 SYSTEM FLEETMAPPING

ASTRO® 25 IV&D RADIO SYSTEM ADMINISTRATOR

MCC 7000 SERIES MANAGEMENT

CONSOLE ADMINISTRATOR & DISPATCH  
END-USER TRAINING

RADIO END-USER  
TRAIN-THE-TRAINER WORKSHOP

WAVE™ ADMINISTRATION  
& END-USER TRAINING

RADIO AUTHENTICATION

EXECUTIVE OVERVIEW

ASTRO® 25 IV&D SECURE COMMUNICATIONS



## APX DEVICE SUPPORT EDUCATION PACKAGE

This Education Package aligns with the APX Device ESSENTIAL Services Package

APX QUICK START

APX RADIO MANAGEMENT OVERVIEW

APX CPS PROGRAMMING & TEMPLATE BUILDING

APX RADIO MANAGEMENT WORKSHOP

APX TECHNICAL SUBSCRIBER ACADEMY

RADIO END-USER  
TRAIN-THE-TRAINER WORKSHOP

### LEGEND:

- Foundation
- Administration
- Maintenance
- Device & Console Best Practices
- Optional

Talk with your Motorola Solutions contact for a quote, or email us at [training.lacr@motorolasolutions.com](mailto:training.lacr@motorolasolutions.com) for more information on how to sign your team up for one of our Education Services Packages.





# OPERATOR TRAINING

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

Users of your mobile and portable  
radios require training on their units to  
understand its basic operation,  
features and functions.

Dispatchers of your consoles require  
training to understand basic  
operation, features and functions;  
management personnel require  
training on the Motorola Solutions  
applications.



## TRAIN THE TRAINER

With this option, Motorola Solutions trains your qualified instructors so that they, in turn, can train each individual user in your organization. These classes are usually delivered on site using your equipment and our end-user training materials, that can be tailored if needed.

### AUDIENCE

This course is geared for customers who have an experienced, dedicated training staff in their organization.

### COURSE OVERVIEW

This course provides your training personnel knowledge and practice that will enable them to successfully train their students. It concentrates on specific product features and how it relates to the training process; students will become proficient in discussing common tasks associated with the operation of their radios and consoles, as identified in the training 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 organization are trained by a Motorola Solutions instructor. These classes are typically done on site using your equipment and our end-user training materials, that can be tailored if needed.

### CONSOLES TRAINING

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

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

### SUBSCRIBER TRAINING

These courses provide radio users with an introduction to their radios and a review of their radio's basic functionality. 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: End-user training materials are not sold as standalone products, they are part of our Train-the-Trainer or Operator training programmes.

### COURSES FOR CONSOLE PRODUCTS

- MCC 7000 Series Dispatch Consoles
- MCD 5000
- DCX9000

### COURSES FOR MOBILES & PORTABLES

- DIMETRA™ Series
- APX™ Series
- MOTOTRBO™ Series



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# TAILORED TRAINING: ANALYSIS AND CONSULTATION SERVICES

The variety of services we offer reflects our desire to make sure all our customers find the right training option for them. For those who demand fully personalized training support, and acknowledge the value consulting with experts brings, we are looking forward to partnering with you in the design, implementation, and evaluation

of your product and solutions technical training strategy.

Our training consultants and technology experts will complete a thorough analysis of your infrastructure and the results your organization pursues, the challenges your team faces, the performance they aim to achieve, and the new capabilities they need

to acquire.

The outcome of that analysis will be a tailored learning proposal, designed just for you and your particular circumstances and preferences. It will also be the route map for our instructors, and the point of reference for evaluations of learning, results, or expectations.

## TRAINING OPTIONS

In this catalog, you will find a selection of the more than 500 training resources that form our training portfolio, and a variety of learning methodologies.

Choosing the most suitable training delivery method depends on multiple factors, as organizational goals, learning objectives, or circumstances out of our control limiting our choices. Regardless of what those circumstances are, our purpose is to make sure you always find in our training offer a valid alternative to keep your personnel abreast.



### LIVE TRAINING

It consists of scheduled sessions delivered either remotely or in a conventional classroom, but always led by a technical instructor.

In Motorola Solutions remote live training, the benefits of instructor-led sessions are moved to a virtual environment; thanks to the distance learning technologies we use and our remote labs, learners and instructors interact and collaborate in real time. Live discussions, demonstrations, and online activities happen in these remote sessions.

The same instructors also deliver training in traditional training facilities, and during those face-to-face sessions, they specially focus on hands-on training, allowing learners to immerse themselves in the subject, and practice in a safe environment.

Whether you are interested in one of these methods or a combination of them, either if our off-the-shelf courses meet your needs or you need them customised to suit your requirements, contact us now to start working together on your training strategy.

[Open registration schedule](#)

Click [here](#) to find the upcoming training sessions, open to all our customers. Learn more about each class and book a seat using the link to the Learning eXperience Portal sign-up page provided.



### SELF-PACED TRAINING

It allows your team to gain foundational knowledge on a variety of topics using their computer and at their own schedule. There are two main types of self-paced training:

- **Online courses:** a single piece of training, with defined objectives and estimated duration.
- **Microlearning:** a collection of brief components grouped into related topics.

We also have a wide offer of training you can take at your own pace. Click [here](#) to see the list of training resources that will allow you to gain foundational knowledge on a variety of topics and get ready for your instructor-led training session.



# LEARNING EXPERIENCE PORTAL

AN INTERACTIVE PLATFORM... DESIGNED FOR YOU! THE LXP IS YOUR VALUABLE RESOURCE TO SEE THE LATEST COURSES, DESCRIPTIONS, REQUIREMENTS, DATES AND LOCATIONS.

Use the search box and 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 plus stay up-to-date with training news and announcements.



## GENERAL INFORMATION

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

For general information contact the Latin America Education Services Help Desk at:  
training.lacr@motorolasolutions.com

# HOW TO ACCESS THE LEARNING EXPERIENCE PORTAL

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

## SET UP A NEW USER ACCOUNT AND PASSWORD

- Visit: <https://learning.motorolasolutions.com>
- Click “Register”
- Fill Out all the required information on the form; preferably, use a company email address during the registration process. If you are a MSI Customer with an established 10-digit Motorola Customer Account Number, please enter your Company Name in the form.
- Click “Submit”
- You will receive a confirmation of your submission
- You will next receive further information to activate your account (Up to 5 business days)

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

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

## GENERAL INFORMATION

For information on prerequisites and to register for courses visit the LXP at: [LEARNING.MOTOROLASOLUTIONS.COM](http://LEARNING.MOTOROLASOLUTIONS.COM)

For general information contact the Latin America Education Services Help Desk at: [training.lacr@motorolasolutions.com](mailto:training.lacr@motorolasolutions.com)

# HELPFUL INFORMATION

## FOR QUESTIONS AND ASSISTANCE

The LXP Helpdesk is available for you Monday – Friday from 8:00 am - 6:00 pm (U.S. EST) on the phone numbers listed on the table below. Attention is available in Spanish, Portuguese and English. You may also email our LXP Helpdesk at: [training.lacr@motorolasolutions.com](mailto:training.lacr@motorolasolutions.com)

## HOW TO MAKE PAYMENTS WHEN ENROLLING IN A COURSE

For your convenience we accept the following methods of payment:

- Credit Card
- Purchase Order

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 purchase order specifications. All pricing listed is US dollars.

Note: Invoices are available only when using Purchase Orders.

### CONTACT MOTOROLA SOLUTIONS LATIN AMERICA

<b>ARGENTINA</b>	0800-333-3708	<b>MEXICO</b>	001-855-241-8253
<b>BRAZIL</b>	0800-892-4264	<b>PANAMA</b>	001-800-205-3867
<b>CHILE</b>	123-0020-2126	<b>PERU</b>	0800-55760
<b>COLOMBIA</b>	01-800-710-2285	<b>VENEZUELA</b>	0800-100-9332
<b>COSTA RICA</b>	0800-013-1450		

### HELPDESK PHONE NUMBERS

<b>SPANISH</b>	DID 3127255372
<b>PORTUGUESE</b>	DID 3127255373
<b>CARIBBEAN</b>	DID 3127255368

For assistance specific for partner accounts please contact us at: [partners.lacr@motorolasolutions.com](mailto:partners.lacr@motorolasolutions.com)

# POLICIES & REQUIREMENTS

## CANCELLATION AND RESCHEDULING BY THE STUDENT

Registrants may cancel or reschedule a class no less than 30 days prior to the class start date.

Cancellations received after the started deadline will not be eligible for a refund.

## CANCELLATION AND RESCHEDULING BY MOTOROLA SOLUTIONS

Motorola Solutions Training Services reserves the right to cancel any course due to low enrollment or other circumstances which would make the event non-viable up to 10 business days prior to the start of class.

If Motorola Solutions cancels a class, the registrants will be offered a full refund. Registrants will be notified at the time of change or cancellation with regards to the cancellation and refund process.

For more information about our Cancellation Policy, visit <https://learning.motorolasolutions.com/content/cancellation-policy>

## PROFESSIONALISM

Students are expected to maintain professional conduct and dress at all times. Class dress is casual, but smart.

## LAPTOP REQUIREMENTS

All our classes 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 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.

Find more information about Terms & Conditions, visit <https://learning.motorolasolutions.com/content/terms-and-conditions>





# MOTOROLA SOLUTIONS TECHNICAL TRAINING COURSES

This section contains a selection of courses included in our technical training portfolio, and roadmaps to guide your team on their learning journey.  
The following icons will help you identify the type of training, and its availability in other languages rather than English:



LIVE TRAINING  
VIRTUAL / FACE-TO-FACE  
TUTOR-LED TRAINING



SELF-PACED TRAINING  
ONLINE COURSES / MICROLEARNING

1

2

5 DAYS

ASTRO® 25 IV&D  
SYSTEM CORE  
WORKSHOP

3

AST4103

4

ESPAÑOL

PORTUGUÊS

- 1- COURSE TITLE
- 2- COURSE DURATION
- 3- COURSE CODE
- 4- TRANSLATIONS AVAILABLE

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training.lacr@motorolasolutions.com

# COURSE INDEX

Use this matrix to quickly identify the targeted role and system life cycle phase of each course.

Portfolio	Course Code & Type	Course Title	Foundations	Product/System Intro	Stage & Deploy	Operate	Maintain	Administrator	Technician	End User
Radio Foundations	RDS0002	Basic RF	•					•	•	
	RDS0003	Basic Networking	•					•	•	
	RDS0004	Basic Radio	•					•	•	•
	RDS2012	Advanced RF: Introduction	•					•	•	
	RDS2013	Advanced RF: Performance	•					•	•	
	RDS2014	Advanced RF: Troubleshooting	•					•	•	
	ACT100E	Bridging the Knowledge Gap - Technicians	•						•	
	ACT101E	Bridging the Knowledge Gap - System Administrator	•					•		
	NST021	Communication System Concepts	•					•	•	
	NST762	Networking Essentials in Motorola Communications Equipment	•					•	•	
	NST925	Site Installation Practices Workshop R56	•					•	•	
	RDS1037	Spectrum Frequencies Systems	•					•	•	
	AST4104	ASTRO® 25 Systems Applied Networking			•	•	•	•	•	
	AST1038	ASTRO® 25 IV&D System Overview		•				•	•	
ASTRO® System	AST1067	ASTRO® 25 IV&D System Architecture & Layout Overview	•			•	•		•	•
	AST4103	ASTRO® 25 IV&D System Core Workshop			•	•	•	•	•	
	AST4410	ASTRO® 25 IV&D Conventional Core with Configuration Manager Workshop			•	•	•	•	•	
	AST4102	ASTRO® 25 IV&D Radio System Administrator Workshop			•	•	•	•	•	
	AST0176	Data Services Administration			•	•	•	•	•	
	AST4208	ASTRO® 25 IV&D GTR 8000 Repeater Site Workshop			•	•	•	•	•	
	AST4217	ASTRO® 25 IV&D IP Base Digital Simulcast Workshop			•	•	•	•	•	
	AST4440	ASTRO® 25 IV&D Conventional RF Site Workshop			•	•	•	•	•	
	AST2038	ASTRO® 25 IV&D Radio Authentication			•	•	•	•	•	
	AST4207	ASTRO® 25 IV&D Secure Communications Workshop			•	•	•	•	•	
	RDS1017	ASTRO® 25 IV&D Systems Fleetmapping			•	•	•	•	•	
	AST2005	ASTRO® 25 ISSI 8000 / CSSI 8000 Enterprise Networking Workshop	•					•	•	
	DMT0057	Introduction to Trunked Radio Concepts	•					•	•	
	DMT1114	DIMETRA™ Express Security Features: Install, Config and Maintenance			•	•	•	•	•	
DIMETRA™ Systems	DMT9400	DIMETRA™ X Core D9.4 System Overview		•	•	•	•	•	•	
	DMT9401	DIMETRA™ X Core D9.4 Configuration and Administration			•	•	•	•	•	
	DMT9402	DIMETRA™ X Core D9.4 Fault Management			•	•	•	•	•	
	DMT9403	DIMETRA™ X Core D9.4 Performance Management			•	•	•	•	•	
	DMT9404	DIMETRA™ X Core D9.4 Troubleshooting and Maintenance			•	•	•	•	•	
	DMT9405	DIMETRA™ X Core D9.4 Air- Interface Encryption, Authentication and Provisioning			•	•	•	•	•	
	DMT9406	DIMETRA™ X Core D9.4 Networking Security			•	•	•	•	•	
	DMT9407	DIMETRA™ X Core D9.4 Dispatch Communications Server			•	•	•	•	•	
	DMT9408	DIMETRA™ X Core D9.4 MSO Recovery and Retoration				•	•	•	•	
	DMT0084	DIMETRA™ X Core Secure Communications Workshop			•	•	•	•	•	
	DMT0036	DIMETRA™ Express Installation, Configuration and Maintenance Workshop			•	•	•	•	•	

Live training  
Self-paced training



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Portfolio	Course Code & Type	Course Title	Foundations	Product/System Intro	Stage & Deploy	Operate	Maintain	Administrator	Technician	End User
Console Courses	DMT9409	DIMETRA™ X Core D9.4 MCC 7500C Workshop			•	•	•	•	•	
	CON012	MCC 7000 Series Dispatch Consoles Workshop			•	•	•	•	•	
	DMT0072	DCX9000 for DIMETRA Express Workshop		•	•	•	•	•	•	
Base Stations	TBTS01	MTS 2/MTS 4 Install, Config, Troubleshooting & Maintenance Workshop			•	•	•	•	•	
	TBTS04	MTS 1 Install, Config, Troubleshooting and Maintenance Workshop			•	•	•	•	•	
	AST2006	Standalone GTR 8000 Conventional Base Radio			•	•	•	•	•	
Subscribers	TTER27E	MXM7000 Overview				•	•	•	•	•
	PCT1032	MOTOTRBO Radio Management 2.0 Configuration Mode			•	•		•	•	
	PCT0173NL	R7 Series Overview	•			•		•	•	•
	AST2003	APX Radio Management Overview		•	•				•	
	PCT0115	MOTOTRBO CPS 2.0 Programming				•	•	•	•	
	DMT1054	MTP3000 Series End User Operator				•	•	•	•	•
	DMT1068	MTP6000 Series End User Operator				•	•	•	•	•
	DMT1070	MTM5000 Series End User Operator				•	•	•	•	•
	TTER01PLUS	TETRA Terminal Programming Course (CPS Plus)				•	•	•	•	
	DMT1107	TETRA Subscriber Operator, Programming and Maintenance				•	•	•	•	•
	TBO300	MOTOTRBO Subscriber & Repeater Technical Service Academy				•	•	•	•	
	PCT2022	MOTOTRBO Radio Management 2.0 Workshop			•	•		•	•	
	AST1074	ASTRO® 25 IV&D Introduction to Radio System Management Applications			•	•	•	•	•	
	RDS2017	APX™ Radio Management Workshop			•	•	•	•	•	
	APX7001	APX™ CPS Programming and Template Building		•	•	•		•	•	
	APX010	APX™ Technical Subscriber Academy		•	•		•	•	•	•
MOTOTRBO™	PCT1046	MOTOTRBO™ Capacity Max Theory of Operation			•	•	•	•	•	
	PCT1047	MOTOTRBO™ Capacity Max Technical Overview		•	•	•		•	•	
	PCT1066	MOTOTRBO™ IP Site Connect and Capacity Plus Technical Overview			•			•	•	
	PCT0147	Capacity Max System Server Upgrade			•	•	•	•	•	
	CEDMEL2000	MOTOTRBO™ System Introduction for Technicians	•		•			•	•	
	PCT2023	MOTOTRBO™ IP Site Connect and Capacity Plus Theory of Operations & Design			•			•	•	
	PCT3014	MOTOTRBO™ IP Site Connect and Capacity Plus Systems Workshop			•	•	•	•	•	
	PCT2010	MOTOTRBO™ Capacity Max Design and Deploy			•	•	•	•	•	
MOTOTRBO™ Ion	PCT0129	MOTOTRBO Ion Overview		•		•		•	•	•
	PCT0131	MOTOTRBO Ion MyView and RadioCentral Overview			•	•		•	•	
	PCT0161	MOTOTRBO Ion Features and Services				•	•	•	•	•
	PCT0132	RadioCentral MOTOTRBO Ion Workshop			•	•	•	•	•	

■ Live training  
■ Self-paced training

## GENERAL INFORMATION

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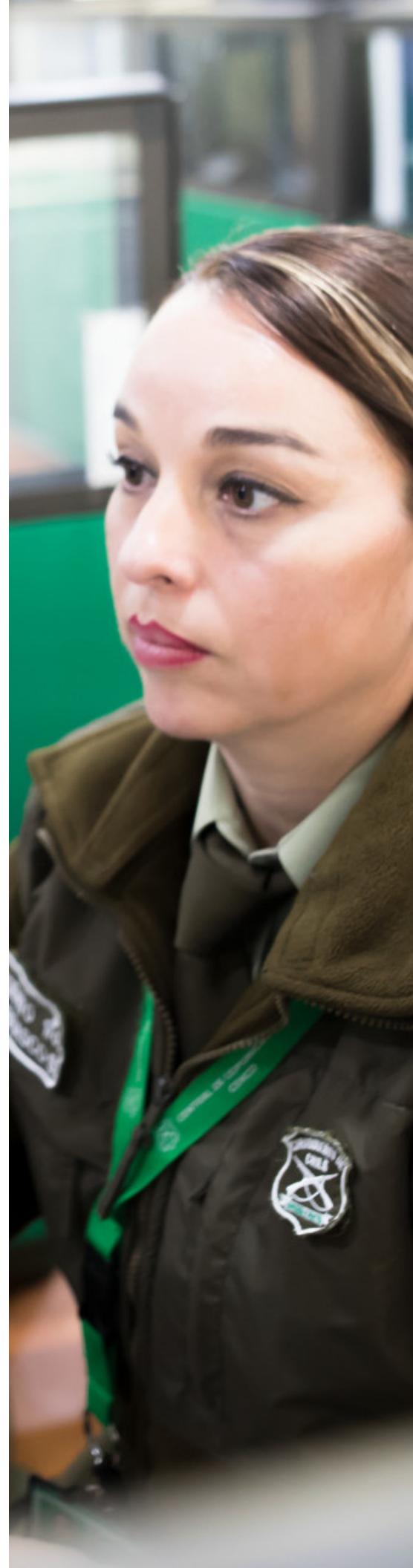
Portfolio	Course Code & Type	Course Title	Foundations	Product/System Intro	Stage & Deploy	Operate	Maintain	Administrator	Technician	End User
Private Broadband	PTT0001L	WAVE PTX Overview				•	•		•	
	PTT0004L	WAVE PTX Admin Portal: End-User Training				•	•			•
	PTT0006L	WAVE PTX R11.2 Mobile Application: En-User Training				•	•			•
	PSA0250	Critical Connect + WAVE PTX for Public Safety				•	•	•	•	•
	AST1035	WAVE™ System Administration			•			•	•	
Vesta - NG911	VST0002	VESTA Analytics Lite				•				•
	VST0003	VESTA SMS Admin				•				•
	VST0004	VESTA SMS Agent				•				•
	VST0005	VESTA Map Local Agent				•				•
	VST0006	VESTA Heads Up Display (HUD)				•				•
	VST0007	VESTA Map Local Installation, Maintenance and Upgrades				•				•
	VST0008	Data Hub for VESTA Map Local				•	•		•	•
	VST0009	VESTA - Activity View				•				•
	VST0010	VESTA Enhanced IP Phone Admin Training				•				•
	VST0103	VESTA 9-1-1 Troubleshooting				•	•	•	•	
	VST0105	VESTA 911 Installation and Maintenance/Admin (Virtual Training)				•	•	•		•
	VST0106	VESTA SMS/Text to 911 Installation and Maintenance (Virtual Training)				•	•			
	VST0107	911 Maintenance and Administration (Smart Hands)				•	•		•	•
	VST0501	CallWorks AdminStation				•	•		•	•
CallWorks	VST0502	CallWorks DecisionStation				•	•		•	•
	VST0503	CallWorks CallStation			•	•				•
	VST0001	CallWorks CallStation Integration w/RapidSOS			•	•				•
	VST0201	Emergency CallWorks Operations & Maintenance			•	•				•
Cybersecurity	CYB0161	Cyber Incident Response - Data Collection and Analysis		•		•		•	•	•
	CYB0162	Cyber Incident Response - Vulnerability Assessment		•		•		•	•	•
	CYB0163	Cyber Incident Response - The Incident Response Process		•		•		•	•	•
	CYB0164	Cyber Incident Response - Incident Response, Methods, Tools & Techniques		•		•		•	•	•
	CYB0165	Cyber Incident Response - Threats and Attacks		•		•		•	•	•
	CYB0166	Introduction to Cybersecurity		•		•		•	•	•
Mobile Video	PSA0036	VideoManager System Administrator			•	•	•		•	•

Live training

Self-paced training

# FOUNDATIONAL COURSES

<b>BASIC RF (RDS0002)</b>	21
<b>BASIC RADIO (RDS0004)</b>	21
<b>BASIC NETWORKING (RDS0003)</b>	21
<b>ADVANCED RF: INTRODUCTION (RDS2012)</b>	22
<b>ADVANCED RF: PERFORMANCE (RDS2013)</b>	22
<b>ADVANCED RF: TROUBLESHOOTING (RDS2014)</b>	22
<b>SPECTRUM FREQUENCIES SYSTEMS (RDS1037)</b>	23
<b>COMMUNICATION SYSTEMS CONCEPTS (NST021)</b>	23
<b>NETWORKING ESSENTIALS IN MOTOROLA SOLUTIONS COMMUNICATIONS EQUIPMENT (NST762)</b>	23
<b>SITE INSTALLATION PRACTICES WORKSHOP R56 (NST925)</b>	24
<b>BRIDGING THE KNOWLEDGE GAP FOR ASTRO® 25 – TECHNICIAN (ACT100E)</b>	24
<b>BRIDGING THE KNOWLEDGE GAP FOR ASTRO® 25 – SYSTEM ADMINISTRATOR (ACT101E)</b>	24
<b>ASTRO® 25 SYSTEMS APPLIED NETWORKING (AST4104)</b>	25





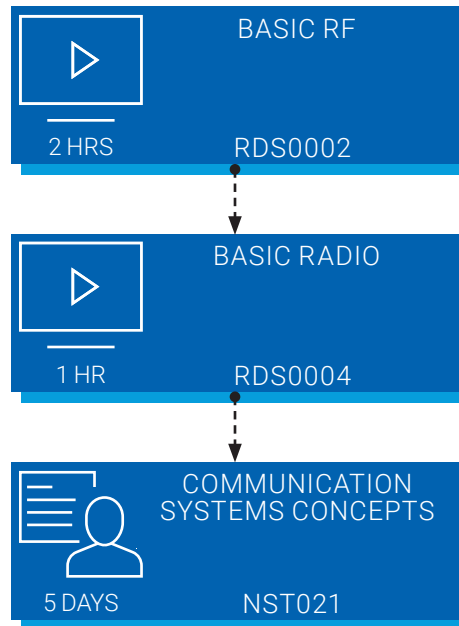
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## RF FUNDAMENTALS

### RF BASICS / RADIO SYSTEM BASICS



### CURRICULUM COMPLETE

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

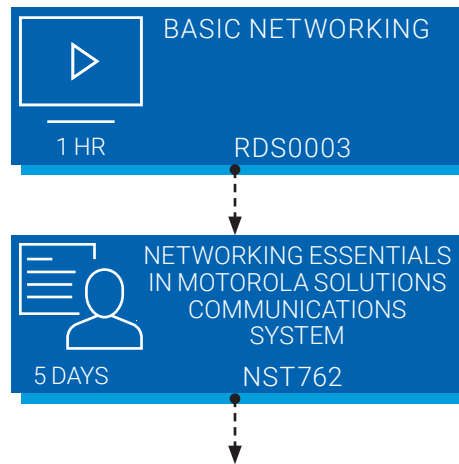


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## IP/NETWORKING FUNDAMENTALS



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



### ASTRO® 25 SYSTEM




[CLICK HERE TO GO TO  
PAGE 26 FOR MORE  
DETAILS ON ASTRO®  
25](#)

[CLICK HERE TO GO TO  
PAGE 56 FOR MORE  
DETAILS ON  
MOTOTRBO™](#)

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**BASIC RF**

2 HRS

RDS0002

 ESPAÑOL  PORTUGUÊS

### 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.

### TARGET AUDIENCE

Technical staff who need to understand communication systems concepts.

### 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

### PREREQUISITES

None



**BASIC RADIO**

1 HR

RDS0004

 ESPAÑOL  PORTUGUÊS

### 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.

### TARGET AUDIENCE

Individuals who need a foundational overview of 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:

- RDS0002 - Basic RF

### PREREQUISITES

None



**BASIC NETWORKING**

1 HR

RDS0003

 ESPAÑOL  PORTUGUÊS

### COURSE OVERVIEW

This course provides a detailed overview of the fundamentals of computer networking. Topics include the TCP/IP five layer model, interconnecting devices, transmission media, user-facing applications and network security.

### TARGET 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.
- Compare the OSI and TCP/IP reference models.
- Identify standards organizations.
- Define the physical and logical topologies in system networking.
- Define the various transmission media.
- Define commonly used network protocols.
- Describe the levels of network security and types of network protection.

### REQUISITE KNOWLEDGE

None

### PREREQUISITES

None



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ADVANCED RF:  
INTRODUCTION

1 HR RDS2012

 ESPAÑOL  PORTUGUÊS

### COURSE OVERVIEW

This course provides an introduction to advanced concepts of radio frequency. Topics include circuit elements, modulation, frequency spectrum, the decibel scale, and filters. This is part one of a three-part training course on RF for Radio Professionals.

After completing this course, please proceed to the RDS2013 Advanced RF: Performance training course.

### TARGET 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

By the end of the course, the student will be able to:

- Describe the basic circuit elements and phenomena.
- Define and compare different types of digital modulation.
- List common frequency spectrum bands and describe their common uses.
- Describe the filtering process and types of RF filters.
- Describe the process of building a link budget

### REQUISITE KNOWLEDGE

Completion of the following course or equivalent experience:

- RDS0002 - Basic RF

### PREREQUISITES

None



ADVANCED RF:  
PERFORMANCE

1 HR RDS2013

 ESPAÑOL  PORTUGUÊS

### COURSE OVERVIEW

This course provides an overview of RF performance elements. Topics include transmission lines, antennas, hardware filters, performance parameters, and testing equipment. This is part two of a three-part training course on RF for Radio Professionals.

After completing this course, please proceed to the RDS2014 Advanced RF: Troubleshooting training course

### TARGET 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

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

- Describe the transmission line theory.
- Provide the guidelines for cable selection, routing and installation.
- Provide an overview of different antenna types and their uses.
- List advanced RF hardware filters and provide their functions.
- Discuss RF performance issues.
- List and describe transmitter performance parameters.
- List and describe receiver performance parameters.
- List and describe common test equipment

### REQUISITE KNOWLEDGE

Completion of the following course or equivalent experience:

- RDS0002 - Basic RF
- RDS2012 - Advanced RF: Introduction

### PREREQUISITES

None



ADVANCED RF:  
TROUBLESHOOTING

0.5 HRS RDS2014

 ESPAÑOL  PORTUGUÊS

### COURSE OVERVIEW

This course provides an overview of troubleshooting an RF system. During this course, you will learn how to locate and address issues in transmitting and receiving in an RF system. This is part three of a three-part training course on RF for Radio Professionals.

### TARGET 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 a simple transmit and receive system.
- Locate transmit and receive problems in an RF system.
- Describe the RF troubleshooting process.
- List the equipment used during a troubleshooting process

### REQUISITE KNOWLEDGE

Completion of the following courses or equivalent experience:

- RDS0002 - Basic RF
- RDS2012 - Advanced RF: Introduction
- RDS2013 - Advanced RF: Performance

### PREREQUISITES

None

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**SPECTRUM  
FREQUENCIES  
SYSTEMS**

5 DAYS RDS1037

 ESPAÑOL  PORTUGUÊS

### COURSE OVERVIEW

This course shows the students the functioning and adjustment of Combiners, Duplexers and Antennas. In addition to amplifiers operating theories and Top Multi couplers, reception systems sensitivity, Spectrum Analyzer. It will also be shown how to build up the major types of RF connectors.

### TARGET AUDIENCE

Maintenance Technicians/Engineers

### COURSE OBJECTIVES

On completion of this course delegates will be able to:


- Set combiners and duplexers
- Know what type of antenna to use for the system
- Adjust the receiving system in relation to noise and signal to manufacture the connectors properly

### REQUISITE KNOWLEDGE

Knowledge on basic electronic concepts

### PREREQUISITES

None



**COMMUNICATION  
SYSTEMS CONCEPTS**

5 DAYS NST021

 ESPAÑOL

### COURSE OVERVIEW

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

- RF System Operation and a basic walkthrough of building a communication system
- Trunking Operation
- Types of modulation used in RF System operation
- Radio frequency path
- Decibels and their uses on the job
- RF Propagation/RF Interference
- Basic Troubleshooting practices

### TARGET AUDIENCE

Individuals who are interested in the operational concepts of driving modern communication systems.

### COURSE OBJECTIVES

Upon 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

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

### PREREQUISITES

None



**NETWORKING ESSENTIALS  
IN MOTOROLA SOLUTIONS  
COMMUNICATIONS  
EQUIPMENT**

5 DAYS NST762

 ESPAÑOL  PORTUGUÊS

### 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.

### TARGET 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

- An understanding of basic Motorola Communications Systems
- Basic familiarization with computer operating systems
- Completion of Basic Networking course (RDS0003) or equivalent experience

### PREREQUISITES

None



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**SITE INSTALLATION  
PRACTICES  
WORKSHOP R56**

4 DAYS      NST925

 ESPAÑOL  PORTUGUÊS

### COURSE OVERVIEW

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

### TARGET AUDIENCE

Technicians who need an introduction to the R56 processes.

### COURSE OBJECTIVES

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

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

### REQUISITE KNOWLEDGE

Graduate of a basic electronics course

### PREREQUISITES

None



**BRIDGING THE  
KNOWLEDGE GAP  
FOR ASTRO® 25 –  
TECHNICIAN**

4 HRS      ACT100E

 PORTUGUÊS

### COURSE OVERVIEW

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

### TARGET AUDIENCE

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

### COURSE OBJECTIVES

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


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

### REQUISITE KNOWLEDGE

None

### PREREQUISITES

None



**BRIDGING THE  
KNOWLEDGE GAP FOR  
ASTRO® 25 – SYSTEM  
ADMINISTRATOR**

4 HRS      ACT101E

 PORTUGUÊS

### COURSE OVERVIEW

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

### TARGET AUDIENCE

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

### COURSE OBJECTIVES

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

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

### REQUISITE KNOWLEDGE

None

### PREREQUISITES

None

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### COURSE OVERVIEW

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

### TARGET AUDIENCE

Technical System Managers and Technicians

### COURSE OBJECTIVES

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

- Describe ASTRO® 25 topologies.
- Describe ASTRO® 25 traffic flows.
- Describe TCP/IP addressing in an ASTRO® 25 network.
- Configure switches and verify switch operation.
- Configure routers and verify router operation.
- Compare Motorola GGM 8000 routers and Juniper routers.
- Perform common maintenance tasks for switches and routers.
- Describe IP Multicast addresses and talkgroup operation.
- Describe network management functions and applications.
- Describe Information Assurance in ASTRO® 25.
- Describe extended topologies such as the Data Subsystem and ISSI.

### REQUISITE KNOWLEDGE

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

- NST762 - Networking Essentials in Motorola Communications Systems

### PREREQUISITES

None



# ASTRO® 25 IV&D SYSTEM COURSES

<b>ASTRO® 25 IV&amp;D SYSTEM OVERVIEW (AST1038)</b>	31
<b>ASTRO 25 IV&amp;D SYSTEM ARCHITECTURE AND LAYOUT OVERVIEW (AST1067)</b>	31
<b>ASTRO® 25 IV&amp;D WITH M CORE WORKSHOP (AST4103)</b>	31
<b>ASTRO® 25 IV&amp;D CONVENTIONAL CORE WITH CONFIGURATION MANAGER WORKSHOP (AST4410)</b>	32
<b>ASTRO® 25 IV&amp;D RADIO SYSTEM ADMINISTRATOR WORKSHOP (AST4102)</b>	32
<b>DATA SERVICES ADMINISTRATION (AST0176)</b>	32
<b>ASTRO® 25 IV&amp;D GTR 8000 REPEATER SITE WORKSHOP (AST4208)</b>	33
<b>ASTRO® 25 IV&amp;D IP BASED DIGITAL SIMULCAST WORKSHOP (AST4217)</b>	33
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<b>ASTRO® 25 SYSTEMS FLEETMAPPING (RDS1017)</b>	34
<b>ASTRO® 25 ISSI 8000 / CSSI 8000 FEATURE OVERVIEW (AST2005)</b>	35

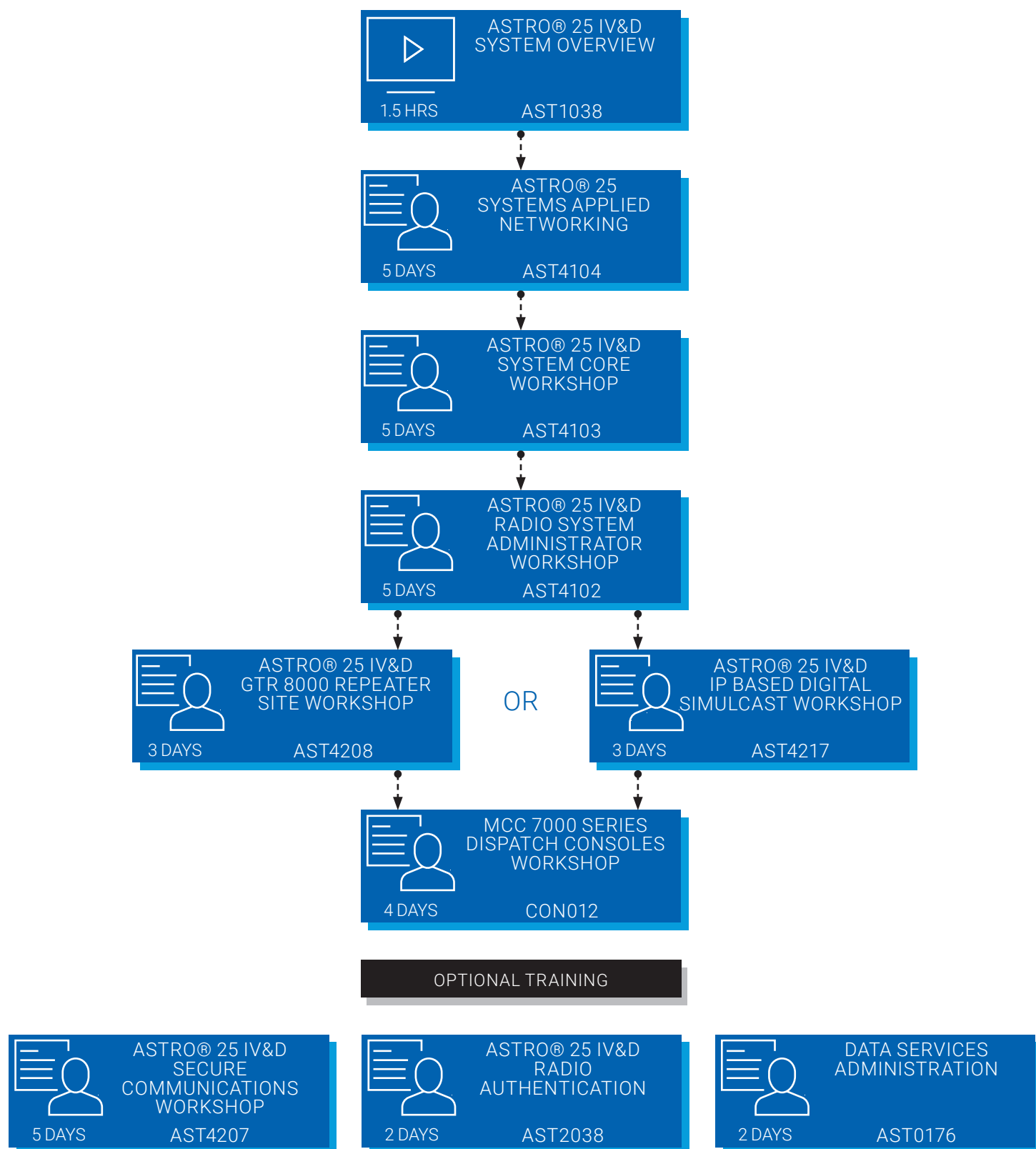


## RADIO SOLUTIONS ASTRO® 25 IV&D SYSTEMS

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### ASTRO® 25 SYSTEM ENGINEER

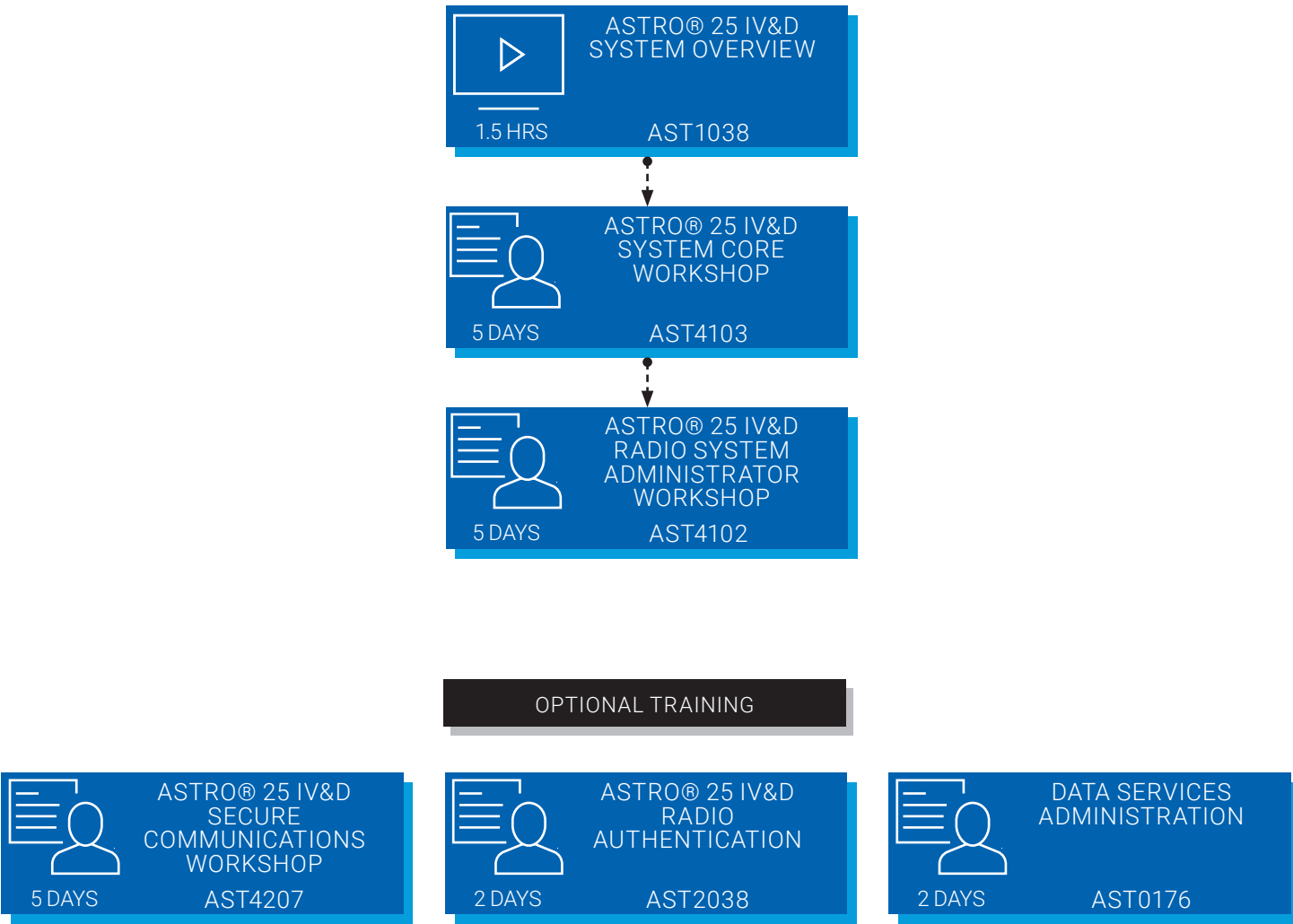


RADIO SOLUTIONS ASTRO® 25 IV&D SYSTEMS

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ASTRO® 25 SYSTEM ADMINISTRATOR






## RADIO SOLUTIONS ASTRO® 25 IV&D SYSTEMS

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### ASTRO® 25 DISPATCH TECHNICIAN




**ASTRO® 25 IV&D  
SYSTEM OVERVIEW**

**1.5 HRS**

**AST1038**





**MCC 7000 SERIES  
DISPATCH CONSOLES  
WORKSHOP**

**4 DAYS**

**CON012**

#### OPTIONAL TRAINING



**ASTRO® 25 IV&D  
SECURE  
COMMUNICATIONS  
WORKSHOP**

**5 DAYS**

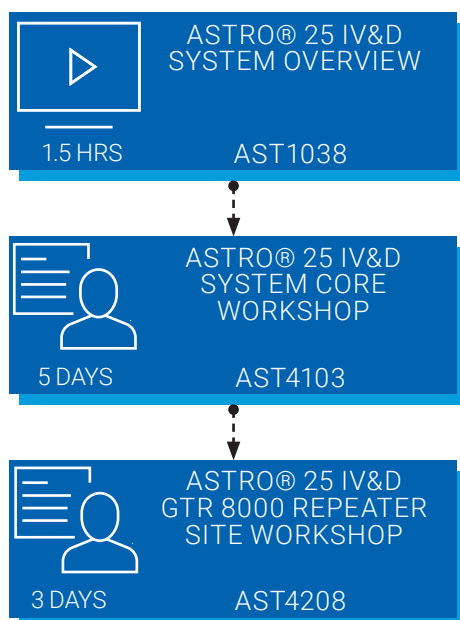
**AST4207**

## RADIO SOLUTIONS ASTRO® 25 IV&D SYSTEMS

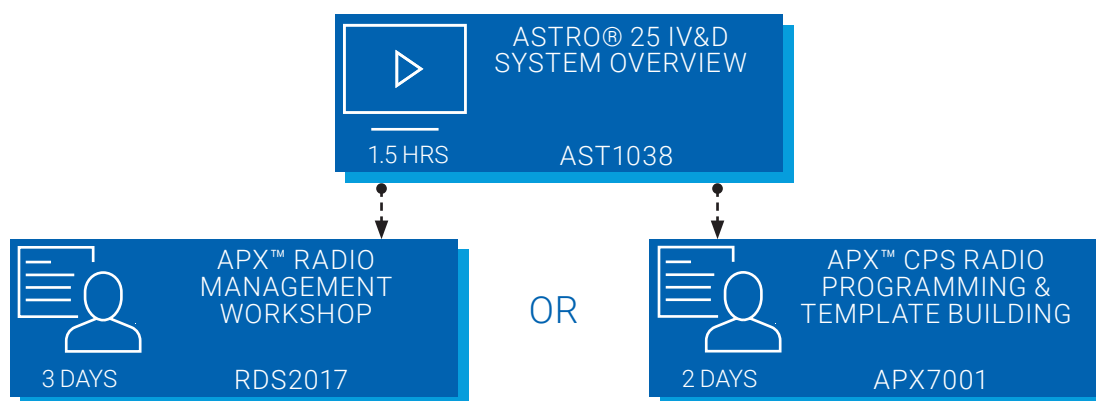
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### ASTRO® 25 SITE TECHNICIAN



### ASTRO® 25 SUBSCRIBER TECHNICIAN



#### OPTIONAL TRAINING



## RADIO SOLUTIONS ASTRO® 25 IV&D SYSTEMS

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ASTRO® 25 IV&D  
SYSTEM OVERVIEW

1.5 HRS      AST1038

 ESPAÑOL  PORTUGUÊS

### COURSE OVERVIEW

The ASTRO®25 IV&D System Overview course will provide participants with knowledge and understanding of the ASTRO 25 system. The system architecture, components, and features will be explained. This course does not cover K Core material. For more information on K Core, please refer to AST3038

### TARGET AUDIENCE

This course is intended for Professionals who need to get an understanding of the architecture, components, and features of the ASTRO®25 IV&D System.

### COURSE OBJECTIVES

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

- Describe the general architecture of an ASTRO 25 Radio System.
- List key features available in the ASTRO 25 Zone Core.
- Define components of the ASTRO 25 system.
- Summarize site components in the ASTRO 25 system.
- Explain the features, capabilities and components of dispatch consoles in the ASTRO 25 system.
- Recognize Mobility and Call Processing in the ASTRO 25.
- Identify applications and features for managing the ASTRO 25 system.

### REQUISITE KNOWLEDGE

None

### PREREQUISITES

None



ASTRO 25 IV&D SYSTEM  
ARCHITECTURE &  
LAYOUT OVERVIEW

1 DAY      AST1067

 ESPAÑOL  PORTUGUÊS

### COURSE OVERVIEW

The course provides a general description of the architecture, functions and components of an ASTRO trunking system.

### TARGET AUDIENCE

System administrators, technical system administrators, system technicians, field service technicians.

### COURSE OBJECTIVES

At the end of this course, the student will be able to:

- Describe the general architecture of an ASTRO 25 Radio System.
- List key features available in the ASTRO 25 Zone Core.
- Define components of the ASTRO 25 system.
- Summarize site components in the ASTRO 25 system.
- Explain the features, capabilities and components of dispatch consoles in the ASTRO 25 system.
- Recognize Mobility and Call Processing in the ASTRO 25.
- Identify applications and features for managing the ASTRO 25 system.

### REQUISITE KNOWLEDGE

None

### PREREQUISITES

None



ASTRO® 25 IV&D  
SYSTEM CORE  
WORKSHOP

5 DAYS      AST4103

 ESPAÑOL  PORTUGUÊS

### COURSE OVERVIEW

The ASTRO® 25 IV&D with ASTRO® 25 System Core course teaches advanced 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.

### TARGET AUDIENCE

ASTRO® 25 System Core Master Site Technicians

### COURSE OBJECTIVES

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

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

### REQUISITE KNOWLEDGE

Completion of the following courses or equivalent experience:

- ACT100E or ACT101E - Bridging the Knowledge Gap
- NST762 - Networking Essentials in Communication Equipment
- AST4104 - ASTRO® 25 Systems Applied Networking
- AST1038 - ASTRO® 25 IV&D System Overview

### PREREQUISITES

None



## RADIO SOLUTIONS ASTRO® 25 IV&D SYSTEMS

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

For general information contact the Latin America Education Services Help Desk at:  
training.lacr@motorolasolutions.com



**ASTRO® 25 IV&D  
CONVENTIONAL CORE  
WITH CONFIGURATION  
MANAGER WORKSHOP**

**3 DAYS****AST4410**



**ASTRO® 25 IV&D  
RADIO SYSTEM  
ADMINISTRATOR  
WORKSHOP**

**5 DAYS****AST4102**



**DATA SERVICES  
ADMINISTRATION**

**2 DAYS****AST0176**

 ESPAÑOL  PORTUGUÊS

### COURSE OVERVIEW

This course teaches advanced troubleshooting skills and best practices for the ASTRO® 25 IV&D Conventional Core with Configuration Manager. It also focuses on administrator functions and how to use the ASTRO® 25 IV&D Configuration Manager applications.

### TARGET AUDIENCE

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

### COURSE OBJECTIVES

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

- Understand the key physical and functional characteristics of the ASTRO® 25 Conventional Core with Configuration Manager system.
- Perform tasks necessary to install the ASTRO® 25 Conventional Core with Configuration Manager system components.
- Perform configuration steps for the ASTRO® 25 Conventional Core with Configuration Manager system components.
- Understand the available maintenance tools and indicators in the ASTRO® 25 Conventional Core with Configuration Manager system.

### REQUISITE KNOWLEDGE

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

- ACT101E - Bridging the Knowledge Gap – System Administrators
- NST762 - Networking Essentials in Motorola Communications Equipment
- AST4104 - ASTRO® 25 System Applied Networking
- AST1038 - ASTRO® 25 IV&D System Overview

### PREREQUISITES

- AST3038 - ASTRO® 25 IV&D System Overview - K Core

### COURSE OVERVIEW

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

### TARGET AUDIENCE

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

### COURSE OBJECTIVES

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

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

### REQUISITE KNOWLEDGE

Completion of the following courses or equivalent experience:

- AST1038 - ASTRO® 25 IV&D System Overview
- ACT101E - Bridging the Knowledge Gap – System Administrators
- NST762 - Networking Essentials in Communication Equipment
- AST4104 - ASTRO® 25 Applied Networking

### PREREQUISITES

None

### COURSE OVERVIEW

This course familiarizes participants in how the Data subsystem performs in ASTRO. We will also provide the steps to operate and maintain a customer's IMW system within their Motorola Solutions system (ASTRO).

### TARGET AUDIENCE

System Administrators, Console Technicians

### COURSE OBJECTIVES

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

- Explain how the Data subsystem performs in ASTRO®.
- Explain the difference between the Radio Network Interface (RNI) and the Customer Enterprise Network (CEN).
- Describe how Firewall functions in Data Communications.
- Explain IMW's role in the ASTRO Data subsystem.
- Configure the IMW server and manage IMW services.
- Describe how Over-the-Air-Programming (OTAP) is processed by the RNI and CEN.
- Describe how Over-the-Air-Rekeying (OTAR) is process in RNI and CEN.

### REQUISITE KNOWLEDGE

Professionals responsible for the operation and maintenance of a customer's IMW system within their Motorola Solutions systems (ASTRO).


### PREREQUISITES

None

## RADIO SOLUTIONS ASTRO® 25 IV&D SYSTEMS

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**ASTRO® 25 IV&D  
GTR 8000 REPEATER  
SITE WORKSHOP**

3 DAYS      AST4208

 ESPAÑOL  PORTUGUÊS

### 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.

### TARGET 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 courses or equivalent experience:

- AST1038 - ASTRO® 25 IV&D System Overview
- ACT100E - Bridging the Knowledge Gap - Technicians
- NST762 - Networking Essentials in Communication Equipment
- AST4104 - ASTRO®25 Applied Networking

### PREREQUISITES

None



**ASTRO® 25 IV&D  
IP BASED DIGITAL  
SIMULCAST  
WORKSHOP**

3 DAYS      AST4217

### COURSE OVERVIEW

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

### TARGET AUDIENCE

Simulcast Site Technicians

### COURSE OBJECTIVES

After completing the course the participant will be able to:

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

### REQUISITE KNOWLEDGE

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

- ACT100E - Bridging the Knowledge Gap – Technicians
- NST762 - Networking Essentials in Motorola Communications Equipment
- AST1038 - ASTRO® 25 IV&D System Overview
- AST4104 - ASTRO® 25 Systems Applied Networking

### PREREQUISITES

Completion of the following courses or equivalent experience:

- AST1038 - ASTRO® 25 IV&D System Overview



**ASTRO® 25 IV&D  
CONVENTIONAL RF  
SITE WORKSHOP**

3 DAYS      AST4440

### 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.

### TARGET AUDIENCE

Site Technicians

### COURSE OBJECTIVES

After completing the course the participant 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 course(s) or equivalent experience:

- ACT101E - Bridging the Knowledge Gap – System Administrators
- NST762 - Networking Essentials in Motorola Communications Equipment
- AST4104 - ASTRO® 25 System Applied Networking
- AST1038 - ASTRO® 25 IV&D System Overview

### PREREQUISITES

None

## RADIO SOLUTIONS ASTRO® 25 IV&D SYSTEMS

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**ASTRO® 25 RADIO  
AUTHENTICATION**

2 DAYS      AST2038



**ASTRO® 25 IV&D  
SECURE  
COMMUNICATIONS  
WORKSHOP**

5 DAYS      AST4207



**ASTRO® 25 SYSTEMS  
FLEETMAPPING**

2 DAYS      RDS1017

### COURSE OVERVIEW

This course describes the Radio Authentication feature and defines the HW/SW components in the Radio Authentication system. In addition, it describes the Radio Authentication process and discusses the various Keys usage in Radio Authentication. Students will understand how to provision and distribute relevant Keys using the AuC Client GUI to access the AuC Server.

### TARGET AUDIENCE

Customer Administrators or Technicians.

### COURSE OBJECTIVES

At the end of this course, you should be able to:

- Describe Radio Authentication features and HW/SW components
- Describe the Radio Authentication process
- Discuss the Keys used in Radio Authentication
- Provision and Distribute relevant Keys
- Describe the AuC Client GUI
- Enable Radio Authentication in the System
- Configure the KVL 5000 for Radio Authentication
- Manage Subscribers from the AuC Client
- Discuss Radio Authentication functionality in a DSR system.

### REQUISITE KNOWLEDGE

Radio System Administration or equivalent knowledge of the Provisioning Manager, ZoneWatch, Historical Reports, ATIA Log Viewer, Unified Event Manager (UEM) and Unified Network Configurator (UNC).

### PREREQUISITES

None

 ESPAÑOL  PORTUGUÊS

### COURSE OVERVIEW

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

### TARGET AUDIENCE

System Technicians, System Administrators, Technical System Managers

### COURSE OBJECTIVES

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

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

### REQUISITE KNOWLEDGE

Completion of the following courses or equivalent experience:

- ACT100E - Bridging the Knowledge Gap - Technicians
- NST762 - Networking Essentials in Communication Equipment

### PREREQUISITES

None

### 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.

### TARGET AUDIENCE

This course is intended for technical support staff who are involved in planning and mapping of an ASTRO® 25 IV&D radio system

### COURSE OBJECTIVES

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

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

### REQUISITE KNOWLEDGE

None

### PREREQUISITES

None

## RADIO SOLUTIONS ASTRO® 25 IV&D SYSTEMS

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

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training.lacr@motorolasolutions.com



### COURSE OVERVIEW

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

### TARGET AUDIENCE

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

### COURSE OBJECTIVES

At the end of this course, you should be able to:

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

### REQUISITE KNOWLEDGE

Completion of the following courses or equivalent experience:

- ACT100E - Bridging the Knowledge Gap - Technicians
- AST1038 - ASTRO 25 IV&D System Overview

### PREREQUISITES

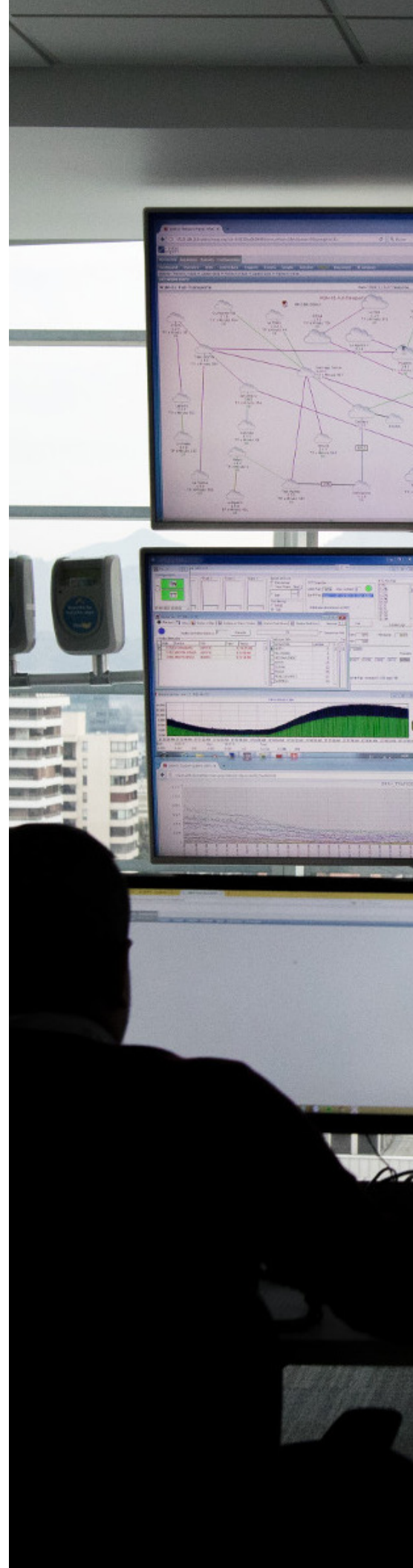
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# DIMETRA™ SYSTEMS COURSES

DIMETRA™ SYSTEM TRAINING IS ALSO  
AVAILABLE IN PREVIOUS RELEASES,  
PLEASE CONTACT MOTOROLA  
SOLUTIONS FOR MORE INFORMATION.

<b>INTRODUCTION TO TRUNKED RADIO CONCEPTS (DMT0057)</b>	40
<b>DIMETRA X CORE D9.4 SYSTEM OVERVIEW (DMT9400)</b>	40
<b>DIMETRA™ X CORE D9.4 CONFIGURATION AND ADMINISTRATION (DMT9401)</b>	40
<b>DIMETRA™ X CORE D9.4 FAULT MANAGEMENT (DMT9402)</b>	41
<b>DIMETRA™ X CORE D9.4 PERFORMANCE MANAGEMENT (DMT9403)</b>	41
<b>DIMETRA™ X CORE D9.4 TROUBLESHOOTING AND MAINTENANCE (DMT9404)</b>	41
<b>DIMETRA™ X CORE D9.4 AIR INTERFACE ENCRYPTION, AUTHENTICATION, AND PROVISIONING (DMT9405)</b>	42
<b>DIMETRA X CORE D9.4 NETWORK SECURITY (DMT9406)</b>	42
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<b>DIMETRA™ X CORE SECURE COMMUNICATIONS WORKSHOP (DMT0084)</b>	43
<b>DIMETRA™ EXPRESS SECURITY FEATURES: INSTALLATION, CONFIGURATION, AND MAINTENANCE (DMT1114)</b>	43
<b>DIMETRA™ EXPRESS INSTALLATION, CONFIGURATION AND MAINTENANCE WORKSHOP (DMT0036)</b>	43

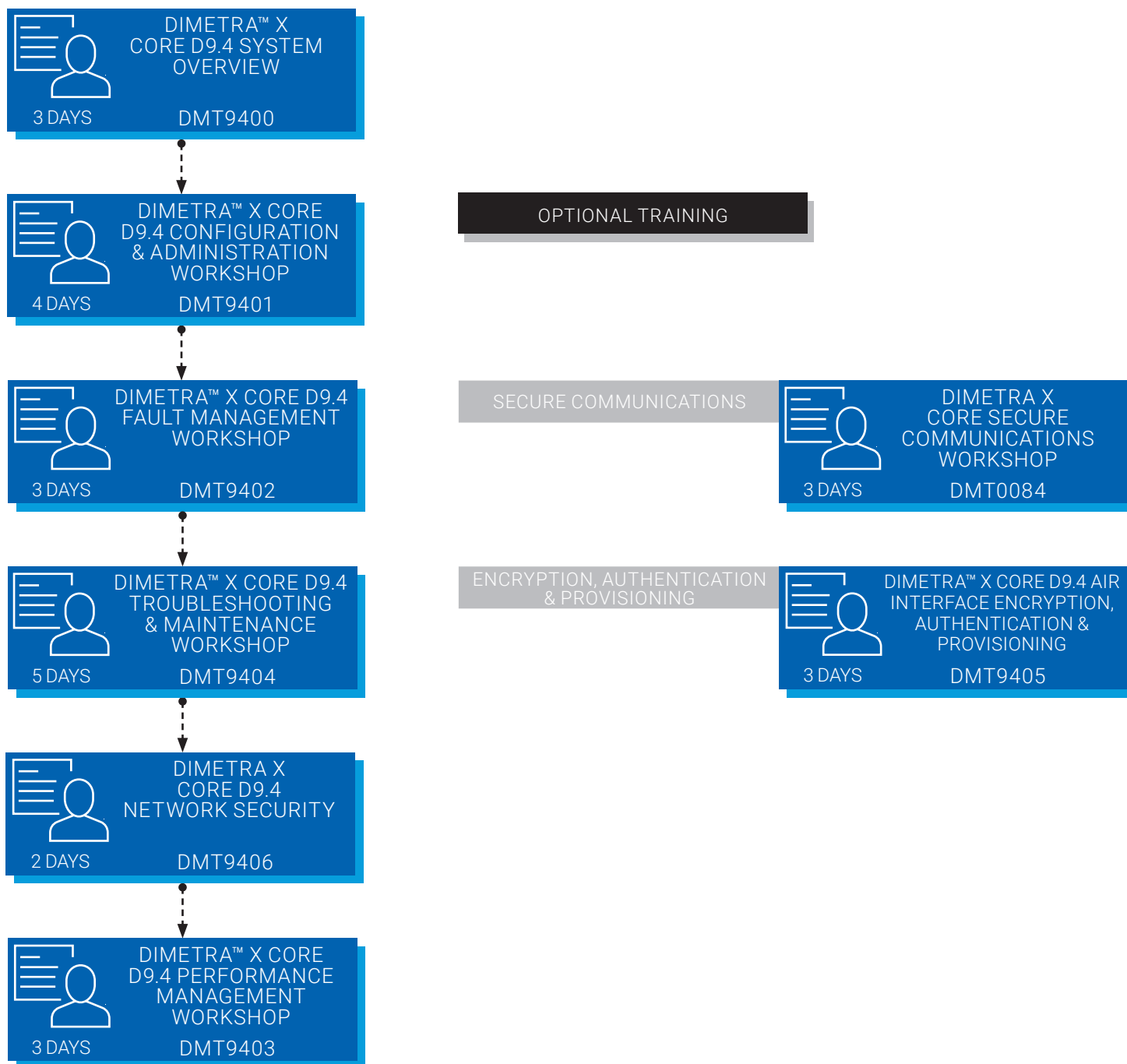


## RADIO SOLUTIONS DIMETRA SYSTEMS

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### DIMETRA™ MSO SYSTEM ENGINEER

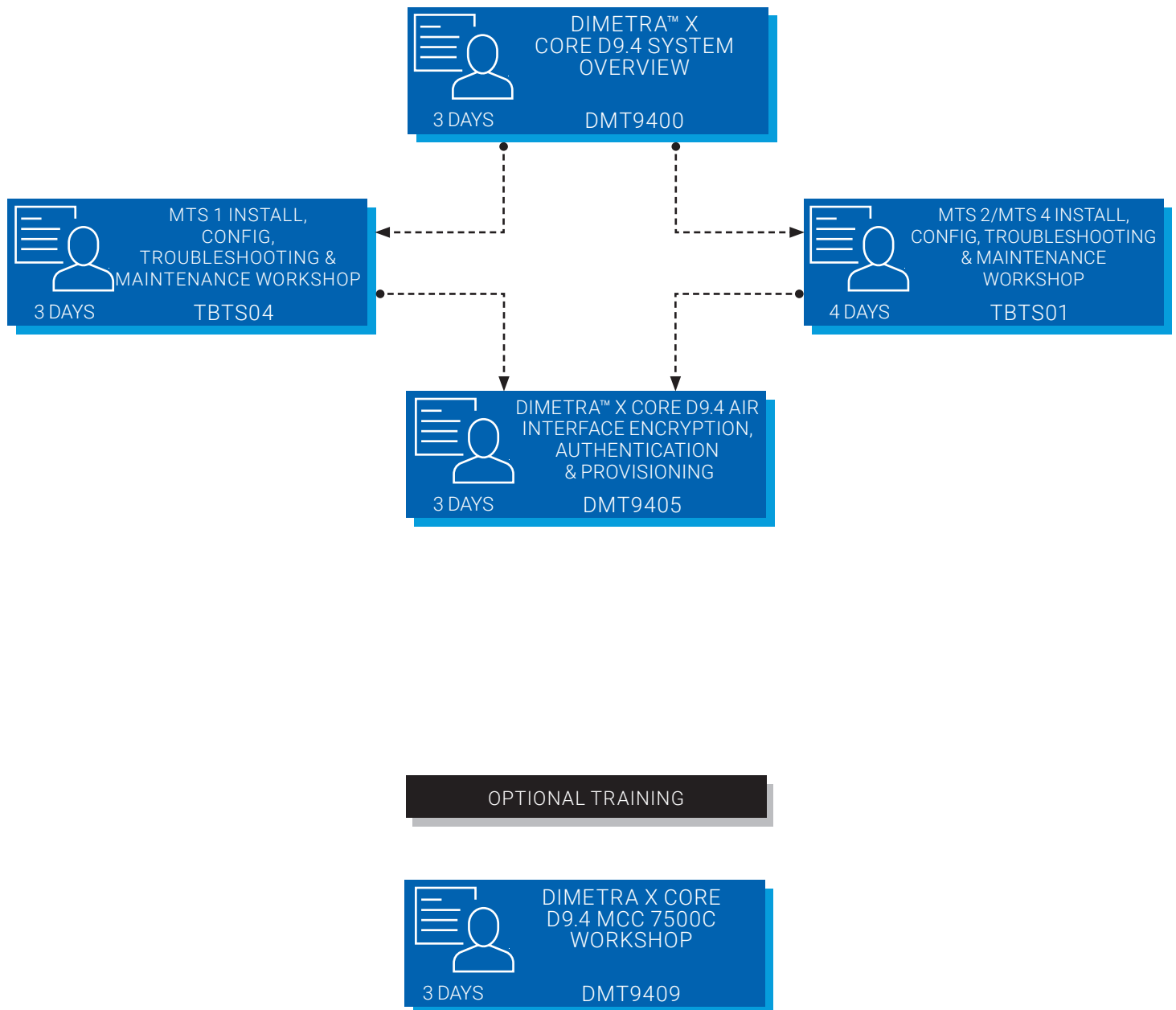


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### DIMETRA™ FIELD ENGINEER

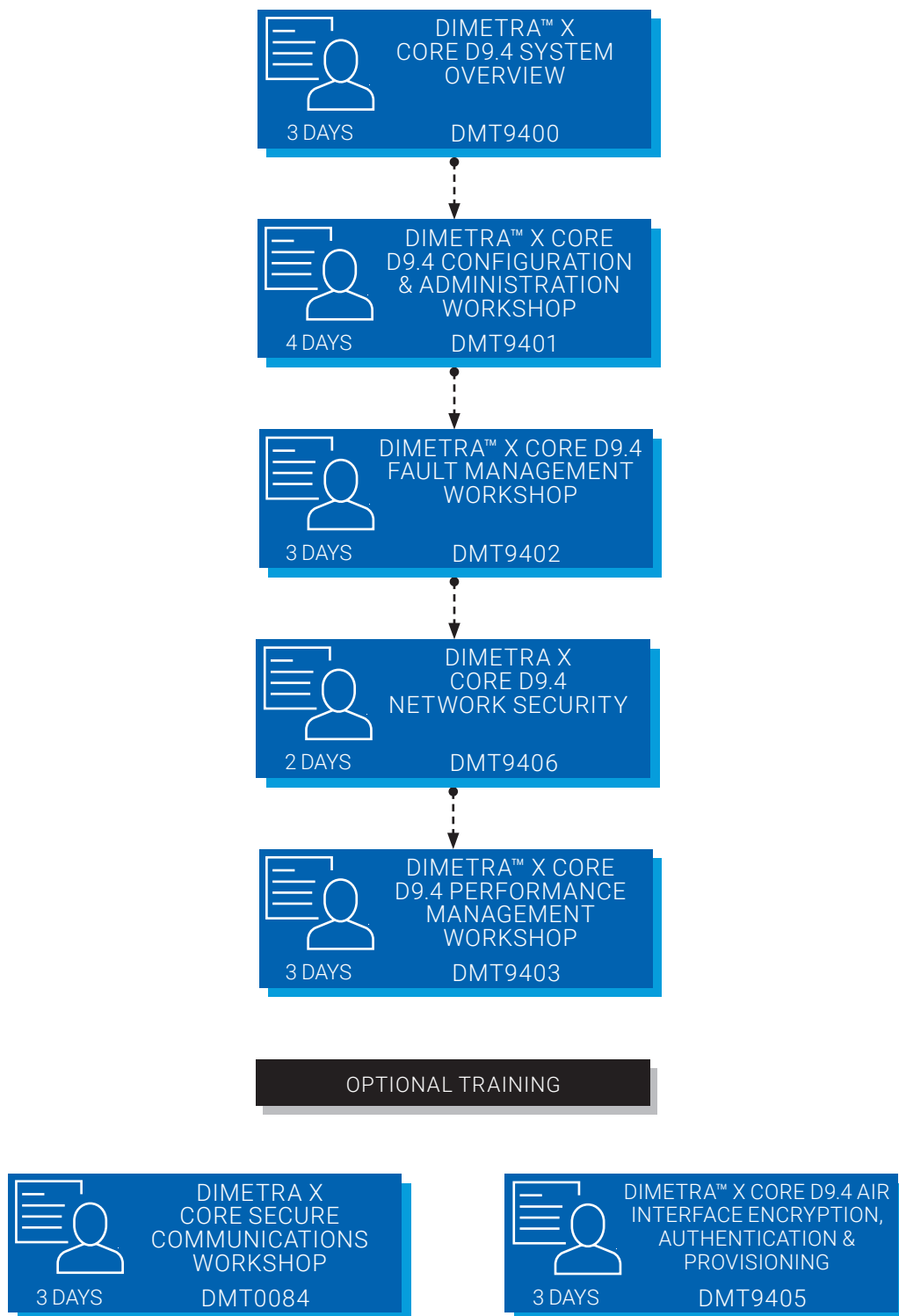


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### DIMETRA™ SYSTEM ADMINISTRATOR





## RADIO SOLUTIONS DIMETRA SYSTEMS

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### INTRODUCTION TO TRUNKED RADIO CONCEPTS

0.5HRS DMT0057

#### COURSE OVERVIEW

This course provides an overview of basic radio concepts and the main technical characteristics of a TETRA Radio system. The course describes the principles of trunked and conventional radio systems.

#### TARGET AUDIENCE

All staff who require an overview of basic radio concepts and the main technical characteristics of a TETRA Radio system.

#### COURSE OBJECTIVES

By the end of the course, the student will be able to:

- Describe the operation of a Basic Conventional Radio system.
- Describe the advantages of a Trunked Radio system over a Conventional Radio system.
- Describe the main technical characteristics of a TETRA Radio system.

#### REQUISITE KNOWLEDGE

None

#### PREREQUISITES

None



### DIMETRA™ X CORE D9.4 SYSTEM OVERVIEW

3 DAYS DMT9400

#### COURSE OVERVIEW

This course provides an overview of the features and functions of a DIMETRA™ X Core D9.4 system. The course includes descriptions of the various call types and system hardware functionality. The applications overview describes the purpose of the software used to manage and administer the system.

#### TARGET AUDIENCE

Individuals who need an overview of the DIMETRA X Core system functionality and features.

#### COURSE OBJECTIVES

By the end of the course, the student will be able to:

- Describe DIMETRA X Core features and their benefits.
- Describe DIMETRA X Core single zone system components and their functionality.
- Describe the purpose and function of the DIMETRA X Core Network Management applications.
- Describe DIMETRA X Core multi-zone system components and their functionality.
- Describe how different types of calls are processed through a DIMETRA X Core system.
- Describe Inter-System Interface architecture and functionality.

#### REQUISITE KNOWLEDGE

None

#### PREREQUISITES

DMT0057 - Introduction to Trunked Radio Concepts



### DIMETRA™ X CORE D9.4 CONFIGURATION AND ADMINISTRATION

4 DAYS DMT9401

#### COURSE OVERVIEW

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

#### TARGET AUDIENCE

System managers responsible for the configuration and administration of a DIMETRA X Core system.

#### COURSE OBJECTIVES

By the end of the course, the student will be able to:

- Describe the purpose of configuration management and server administration within your DIMETRA X Core system.
- Describe fleetmapping and home zone map functions.
- Perform configuration procedures using User Configuration Manager (UCM).
- Perform configuration procedures using Zone Configuration Manager (ZCM).
- Perform configuration procedures using Radio Control Manager (RCM).
- Perform server database administration tasks.

#### REQUISITE KNOWLEDGE

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

- DMT9400 DIMETRA X Core D9.4 System Overview

#### PREREQUISITES

None

## RADIO SOLUTIONS DIMETRA SYSTEMS

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**DIMETRA™ X  
CORE D9.4 FAULT  
MANAGEMENT**

**3 DAYS**

**DMT9402**

### COURSE OVERVIEW

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

### TARGET AUDIENCE

System operations staff and field engineers who perform fault management tasks on a DIMETRA X Core system.

### COURSE OBJECTIVES

By the end of the 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.
- Use the following applications to facilitate Fault Management:
  - Unified Event Manager (UEM)
  - Transport Network Device Manager (TNDM)
  - Zone Configuration Manager (ZCM)
  - System Health Application Suite (SHAS)
- Perform backup and restore tasks using the Enhanced Software Update (ESU)

### REQUISITE KNOWLEDGE

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

- DMT9400 DIMETRA X Core D9.4 System Overview

### PREREQUISITES

None



**DIMETRA™ X CORE  
D9.4 PERFORMANCE  
MANAGEMENT**

**3 DAYS**

**DMT9403**

### COURSE OVERVIEW

During this workshop, delegates will use applications on a live DIMETRA™ X Core system based on real business scenarios. Delegates will learn how to interpret system and user performance based on call traffic and device statistics.

### TARGET AUDIENCE

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

### COURSE OBJECTIVES

By the end of the 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 X Core 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

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

- DMT9400 - DIMETRA X Core D9.4 System Overview

### PREREQUISITES

None



**DIMETRA™ X CORE D9.4  
TROUBLESHOOTING &  
MAINTENANCE**

**5 DAYS**

**DMT9404**

### 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.

### TARGET AUDIENCE

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

### COURSE OBJECTIVES

By the end of the course, the student will be able to:

- Describe the troubleshooting process and fault management approach to maintain the DIMETRA X Core system.
- Describe the architecture and hardware components of the following subsystems:
  - Common Server Platform
  - Call Processing Subsystem
  - Network Management Subsystem
  - Telephone Interconnect Subsystem
  - Data Subsystem
  - Network Transport Subsystem
- Perform maintenance and troubleshooting procedures on the DIMETRA X Core system.
- Perform backup and restoration procedures on the related application server.
- Replace and reconfigure faulty Field Replaceable Units (FRUs) and Field Replaceable Equipment/Entities (FREs) within a DIMETRA X Core system.

### REQUISITE KNOWLEDGE

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

- DMT9400 DIMETRA X Core D9.4 System Overview

### PREREQUISITES

- DMT9401 - DIMETRA X Core D9.4 Configuration and Administration
- DMT9402 - DIMETRA X Core D9.4 Fault Management

## RADIO SOLUTIONS DIMETRA SYSTEMS

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**DIMETRA™ X CORE D9.4 AIR  
INTERFACE ENCRYPTION,  
AUTHENTICATION, &  
PROVISIONING**

**3 DAYS**  
**DMT9405**

### COURSE OVERVIEW

During this workshop, students will perform key management tasks on a live DIMETRA™ X Core system. Students will perform authentication and provisioning procedures for the daily administration of user authentication and provisioning based on real business scenarios.

### TARGET AUDIENCE

System operators and managers responsible for the provisioning and management of key authentication in a DIMETRA X Core system.

### COURSE OBJECTIVES

By the end of this course, the student will be able to:

- Describe how Air Interface Encryption and Authentication work within the DIMETRA X Core system.
- Describe the TETRA security classes and DIMETRA X Core encryption keys.
- Describe Authentication and Encryption keys distribution, storage, updates, and management.
- Describe operational principles of the Group Cipher Key (GCK) feature.
- Perform Encryption Key management procedures using the Enhanced Authentication Centre (EAuC) system components.
- Perform key provisioning of the TETRA radios for Authentication and Encryption operations.
- Perform EAuC administration and management tasks.

### REQUISITE KNOWLEDGE

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

- DMT9400 DIMETRA X Core D9.4 System Overview

### PREREQUISITES

None



**DIMETRA X CORE D9.4  
NETWORK SECURITY**

**2 DAYS**  
**DMT9406**

### COURSE OVERVIEW

During this workshop, delegates will perform complete hardware, software, and database restorations of the DIMETRA™ X Core MSO system. The tasks will be carried out in a lab environment through hands-on activities according to the procedures and guidelines from system documentation.

### TARGET AUDIENCE

Individuals who troubleshoot and maintain a DIMETRA X Core system.

### COURSE OBJECTIVES

By the end of the course, the student will be able to:

- Performing complete system backup.
- Performing location failure simulation.
- Performing location switchover to maintain full operation environment.
- Reinstalling failed system hardware/software components.
- Restoring system database and reconfigure the system back to original operating conditions.
- Performing post-restoration check and test.

### REQUISITE KNOWLEDGE

None

### PREREQUISITES

Completion of the following courses or equivalent experience may be required, depending on the system:

- DMT9400 - DIMETRA X Core D9.4 System Overview
- DMT9401 - DIMETRA X Core D9.4 Configuration and Administration
- DMT9402 - DIMETRA X Core D9.4 Fault Management
- DMT9404 - DIMETRA X Core D9.4 Troubleshooting and Maintenance
- DMT9405 - DIMETRA X Core D9.4 Air Interface Encryption, Authentication, and Provisioning
- DMT9406 - DIMETRA X Core D9.4 Network



**DIMETRA X CORE D9.4  
MSO RECOVERY &  
RESTORATION  
WORKSHOP**

**5 DAYS**  
**DMT9408**

### COURSE OVERVIEW

During this workshop, delegates will perform complete hardware, software, and database restorations of the DIMETRA™ X Core MSO system. The tasks will be carried out in a lab environment through hands-on activities according to the procedures and guidelines from system documentation.

### TARGET AUDIENCE

Individuals who troubleshoot and maintain a DIMETRA X Core system.

### COURSE OBJECTIVES

By the end of the course, the student will be able to:

- Performing complete system backup.
- Performing location failure simulation.
- Performing location switchover to maintain full operation environment.
- Reinstalling failed system hardware/software components.
- Restoring system database and reconfigure the system back to original operating conditions.
- Performing post-restoration check and test.

### REQUISITE KNOWLEDGE

None

### PREREQUISITES

Completion of the following courses or equivalent experience may be required, depending on the system:

- DMT9400 - DIMETRA X Core D9.4 System Overview
- DMT9401 - DIMETRA X Core D9.4 Configuration and Administration
- DMT9402 - DIMETRA X Core D9.4 Fault Management
- DMT9404 - DIMETRA X Core D9.4 Troubleshooting and Maintenance
- DMT9405 - DIMETRA X Core D9.4 Air Interface Encryption, Authentication, and Provisioning
- DMT9406 - DIMETRA X Core D9.4 Network

## RADIO SOLUTIONS DIMETRA SYSTEMS

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

For general information contact the Latin America Education Services Help Desk at:  
training.lacr@motorolasolutions.com



**DIMETRA X  
CORE SECURE  
COMMUNICATIONS  
WORKSHOP**  
3 DAYS  
DMT0084



**DIMETRA™ EXPRESS  
SECURITY FEATURES:  
INSTALL, CONFIG &  
MAINTENANCE**  
0.5HRS  
DMT1114



**DIMETRA™ EXPRESS  
INSTALLATION, CONF,  
& MAINTENANCE  
WORKSHOP**  
2 DAYS  
DMT0036

### COURSE OVERVIEW

During the workshop, delegates will perform key management, administrative, and maintenance tasks on a live DIMETRA™ X Core system. Using real business scenarios, this workshop will allow delegates to perform key management, key transference, maintenance, and troubleshooting procedures on the Key Management Facility (KMF) server and client.

### TARGET AUDIENCE

System operators, managers, and field technicians responsible for the management and maintenance of secure end-to-end communications in a DIMETRA X Core system.

### COURSE OBJECTIVES

By the end of the 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.
- Administer the KMF server.
- Set up an MCC 7500S secure console.

### REQUISITE KNOWLEDGE

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

- DMT9400 - DIMETRA X Core D9.4 System Overview

### PREREQUISITES

None

### COURSE OVERVIEW

Students will learn how to perform authentication, provisioning and air interface encryption procedures within a DIMETRA™ Express System. You will learn how to install, configure and maintain the DIMETRA Express security features.

### TARGET AUDIENCE

System Operators and Managers responsible for the provisioning and management of key authentication in a DIMETRA Express System.

### COURSE OBJECTIVES

By the end of the course, the student will be able to:

- Describe how Air Interface Encryption and Authentication work within the DIMETRA Express 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.

### REQUISITE KNOWLEDGE

Knowledge of the DIMETRA Express configuration and administration graphical user interface.

### PREREQUISITES

None

### COURSE OVERVIEW

This course will give the opportunity to install and configure a DIMETRA™ Express system from start to finish. Learners will be able to carry out all of the necessary configuration activities required when commissioning a DIMETRA Express radio network.

### TARGET AUDIENCE

Individuals who need to set up or manage a DIMETRA Express system.

### COURSE OBJECTIVES

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

- Describe DIMETRA Express main features and functionality.
- Install DIMETRA Express system.
- Setup a DIMETRA Express system.
- Setup and configure additional sites to the DIMETRA Express system.
- Configure a DIMETRA Express system using DIMETRA Express Network Manager application and procedures.
- Describe/Perform TETRA radio authentication process/provisioning in the DIMETRA Express system.
- Perform authentication application administration and management tasks.

### REQUISITE KNOWLEDGE

A basic understanding of Radio Frequency (RF) technology and Internet Protocol (IP) fundamentals.

### PREREQUISITES

None



# CONSOLE COURSES

CONSOLE TRAINING IS ALSO  
AVAILABLE IN PREVIOUS RELEASES,  
PLEASE CONTACT MOTOROLA  
SOLUTIONS FOR MORE INFORMATION.

<b>DIMETRA X CORE D9.4 MCC 7500C WORKSHOP (DMT9409)</b>	45
<b>MCC 7000 SERIES DISPATCH CONSOLES WORKSHOP (CON012)</b>	45
<b>DCX9000 FOR DIMETRA EXPRESS WORKSHOP (DMT0072)</b>	45

MCC 7000 SERIES DISPATCH  
CONSOLES WORKSHOP (CON012)  
FOCUSES ON THE CONSOLES  
APPLICATION IN AN M- OR L-CORE  
SYSTEM.



## RADIO SOLUTIONS CONSOLES

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

For general information contact the Latin America Education Services Help Desk at:  
training.lacr@motorolasolutions.com



**DIMETRA X CORE  
D9.4 MCC 7500C  
WORKSHOP**

**3 DAYS**  
**DMT9409**



**MCC 7000 SERIES  
DISPATCH CONSOLES  
WORKSHOP**

**3.5 DAYS**  
**CON012**



**DCX9000 FOR  
DIMETRA EXPRESS  
WORKSHOP**

**2 DAYS**  
**DMT0072**

 ESPAÑOL  PORTUGUÊS

### COURSE OVERVIEW

This course gives students an in-depth explanation of the MCC7500C Dispatch Console solution. During this workshop, students will perform hands-on activities associated to the MCC 7500C Dispatch Console on a live DIMETRA™ X Core system.

### TARGET AUDIENCE

Control Room Managers, System Engineers, and Network Administrators responsible for the deployment, maintenance, and operations of the MCC 7500C Dispatch Consoles in a DIMETRA X Core system.

### COURSE OBJECTIVES

By the end of this course, the student will be able to:

- Describe the MCC 7500C Dispatch Console subsystem.
- Install the hardware and software components of the MCC 7500C Dispatch Console.
- Configure the MCC 7500C Dispatch Console using UCM and ZCM.
- Perform administrative tasks using the MCC 7500 Elite Admin software.
- Operate the MCC 7500 Elite Dispatch application to manage and communicate with radio resources.
- Troubleshoot installation and configuration problems from the MCC 7500C Dispatch Console.

### REQUISITE KNOWLEDGE

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

- DMT9400 DIMETRA X Core D9.4 System Overview

### PREREQUISITES

None

### COURSE OVERVIEW

This course familiarizes participants in installation, configuration, management and repair of MCC 7500(e) Dispatch Consoles AUX I/O servers, Conventional Channel Gateways, and other optional features.

### TARGET AUDIENCE

System Administrators, Console Technicians.

### COURSE OBJECTIVES

By the end of the course, the student will be able to:

- Understand key physical and functional characteristics of MCC 7500(e) Dispatch Consoles.
- Understand physical installation requirements of MCC 7500(e) Dispatch Consoles.
- Perform tasks necessary to install MCC 7500(e) Dispatch Consoles components.
- Perform configuration steps for MCC 7500(e) Dispatch Consoles components.
- Understand available maintenance tools and indicators in MCC 7500(e) Dispatch Consoles.
- Troubleshoot MCC 7500(e) Dispatch Consoles components to the Motorola Solutions recommended service level.
- Perform tasks necessary to provision users for MCC 7500(e) Dispatch Consoles.
- Configure the MCC 7500(e) Dispatch Consoles interface.
- Perform required administrative activities for MCC 7500(e) Dispatch Consoles.
- Perform tasks necessary to install and configure MCC 7500(e) console AuxIO servers (SDM 3000 and MC-EDGE).

### REQUISITE KNOWLEDGE

- ACT100E or ACT101E - Bridging the Knowledge Gap
- NST762 - Networking Essentials in Motorola Communications Equipment
- AST4104 - ASTRO® 25 Systems Applied Networking

### PREREQUISITES

- AST1038 - ASTRO® 25 IV&D System Overview

### COURSE OVERVIEW

In this workshop, you will learn about the features and functions of the DCX9000 Dispatch Console and Voice Logger. You will perform installation, configuration, and other end-user procedures to familiarize yourself with DCX9000.

### TARGET AUDIENCE

Individuals who need to learn how to install, configure, and operate the DCX9000 system.

### COURSE OBJECTIVES

By the end of the course, the student will be able to:

- Describe the DCX9000 system and its features and functions.
- Install and integrate DCX9000 with your DIMETRA™ system.
- Configure the DCX9000 and DIMETRA systems for the implementation of DCX9000.
- Use DCX9000 to communicate and manage your radio fleet.

### REQUISITE KNOWLEDGE

Basic knowledge of the installation and configuration of the DIMETRA Express system

### PREREQUISITES

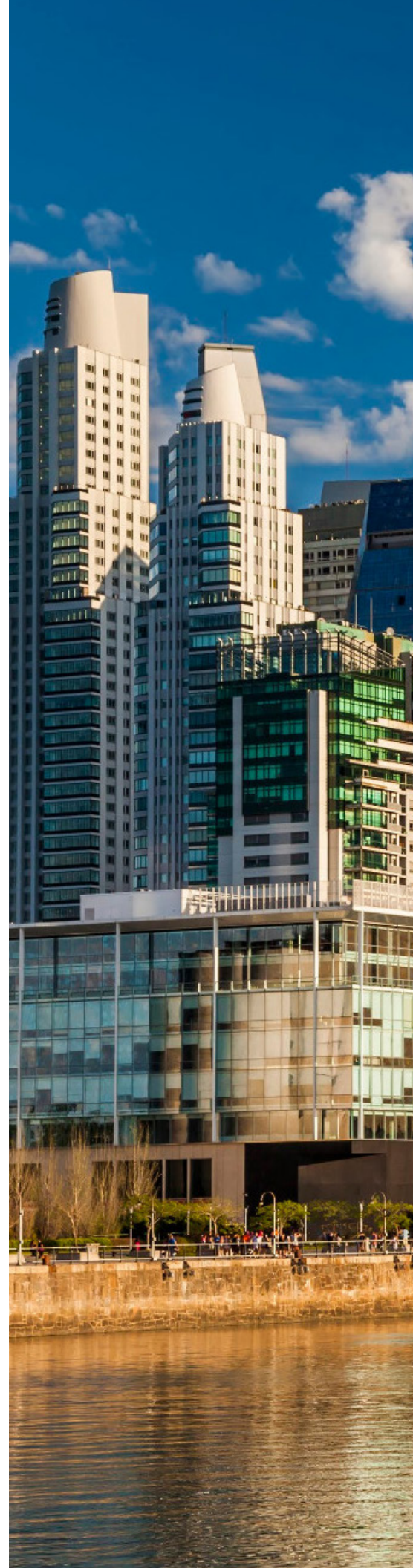
None

# BASE STATIONS COURSES

**MTS 2/MTS 4 INSTALLATION, CONFIGURATION, TROUBLESHOOTING  
& MAINTENANCE WORKSHOP (TBTS01)** 47

**MTS 1 INSTALLATION, CONFIGURATION, TROUBLESHOOTING AND  
MAINTENANCE (TBTS04)** 47

**STANDALONE GTR8000 CONVENTIONAL BASE RADIO (AST2006)** 47



## RADIO SOLUTIONS BASE STATIONS

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

For general information contact the Latin America Education Services Help Desk at:  
training.lacr@motorolasolutions.com



MTS 2/MTS 4  
INSTALL, CONFIG,  
TROUBLESHOOTING &  
MAINTENANCE WORKSHOP

4 DAYS      TBTS01



MTS 1 INSTALL, CONFIG,  
TROUBLESHOOTING  
& MAINTENANCE

3 DAYS      TBTS04



STANDALONE GTR8000  
CONVENTIONAL  
BASE RADIO

2 DAYS      AST2006

### COURSE OVERVIEW

This course includes the theoretical and practical aspects of configuring, maintaining and troubleshooting the MTS base station in a DIMETRA™ system. The course includes the practical use of service software and the human-machine interface. Practical sessions include the removal and replacement of Field Replaceable Units (FRU).

### TARGET AUDIENCE

Field Engineers responsible for installing, configuring, and maintaining the base station equipment.

### COURSE OBJECTIVES

By the end of the course, the student will be able to:

- Describe the function of the MTS within a DIMETRA system.
- Identify and describe functions of MTS components.
- Perform MTS installation procedures.
- Perform MTS status verification commands.
- Perform configuration and maintenance tasks using Motorola TETRA BTS Service Software.
- Verify minimum MTS configuration requirement for Wide Area Trunking mode.
- Download a configuration file to the MTS using the Software Download Manager applications.
- Carry out removal and replacement procedures for MTS FRUs.
- Perform Ki loading procedures to the MTS.
- Describe MTS expansion option.
- Troubleshoot MTS to FRU level.

### REQUISITE KNOWLEDGE

RF and Field or Bench service background, plus completion of one of the DIMETRA X Core System Overview courses or equivalent experience.

### PREREQUISITES

None

### COURSE OVERVIEW

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

### TARGET AUDIENCE

Field Engineers responsible for installing, 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

RF and Field or Bench service background is recommended

### PREREQUISITES

None

### 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.

### TARGET AUDIENCE

Maintenance Technicians

### COURSE OBJECTIVES

By the end of the 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

General RF knowledge and skills basic knowledge of two-way radio systems

### PREREQUISITES

None



# SUBSCRIBER COURSES

<b>TETRA SUBSCRIBER END-USER OPERATOR COURSES</b>	49
<b>TETRA TERMINAL PROGRAMMING COURSE (CPS PLUS)</b> (TTER01PLUS)	50
<b>TETRA SUBSCRIBER OPERATOR, PROGRAMMING AND MAINTENANCE</b> (DMT1107)	50
<b>APX RADIO MANAGEMENT OVERVIEW</b> (AST2003)	50
<b>MOTOTRBO CPS 2.0 PROGRAMMING</b> (PCT0115)	51
<b>APX™ TECHNICAL SUBSCRIBER ACADEMY</b> (APX010)	51
<b>ASTRO® 25 IV&amp;D INTRODUCTION TO RADIO SYSTEM MANAGEMENT APPLICATIONS</b> (AST1074)	51
<b>APX™ RADIO MANAGEMENT WORKSHOP</b> (RDS2017)	52
<b>APX™ CPS PROGRAMMING AND TEMPLATE BUILDING</b> (APX7001)	52
<b>MOTOTRBO RADIO MANAGEMENT 2.0 CONFIGURATION MODE</b> (PCT1032)	52
<b>MOTOTRBO™ SUBSCRIBER AND REPEATER TECHNICAL SERVICE ACADEMY</b> (TBO300)	53
<b>MOTOTRBO™ RADIO MANAGEMENT WORKSHOP</b> (PCT2022)	53
<b>MOTOTRBO™ ION OVERVIEW</b> (PCT0129)	53
<b>MOTOTRBO™ ION MYVIEW AND RADIOCENTRAL OVERVIEW</b> (PCT0131)	54
<b>MOTOTRBO ION FEATURES AND SERVICES</b> (PCT0161)	54
<b>RADIOCENTRAL MOTOTRBO™ ION WORKSHOP</b> (PCT0132)	54
<b>R7 SERIES OVERVIEW</b> (PCT0173NL)	55



## RADIO SOLUTIONS SUBSCRIBERS

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

For general information contact the Latin America Education Services Help Desk at:  
training.lacr@motorolasolutions.com


## TETRA SUBSCRIBER END-USER OPERATOR COURSES

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




MTP3000 SERIES  
END-USER OPERATOR

1 DAY DMT1054



MTP6000 SERIES  
END-USER OPERATOR

1 DAY DMT1068



MTM5000 SERIES  
END-USER OPERATOR

1 DAY DMT1070



MTM5400 SERIES  
END-USER OPERATOR

2 HRS TTER27E

### COURSE OVERVIEW

Our subscriber end-user operator courses will provide the background information and the knowledge required to allow delegates to be fully conversant with the features and functions of their chosen subscriber. It will provide users with an introduction to their subscriber, its operation and builds on theoretical instruction with practical exercises designed to allow delegates to practice and confirm their understanding of all features and functions covered in the course.

### TARGET AUDIENCE

Radio end-user operators

### COURSE OBJECTIVES

The goal of End-User Operator courses is to enable the user to identify the features and functions of their chosen subscriber, to make calls and perform basic radio troubleshooting.

After completing any of these courses, the student will be able to:

- Identify the location and function of all subscriber keys and controls.
- Describe radio preparation including assembly and battery charging.
- Make all available Trunked Mode and Direct Mode calls.
- List optional features available to the subscriber.
- Perform basic subscriber troubleshooting.

### REQUISITE KNOWLEDGE

None

### PREREQUISITES

None

## RADIO SOLUTIONS SUBSCRIBERS

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

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training.lacr@motorolasolutions.com



**TETRA TERMINAL  
PROGRAMMING  
COURSE (CPS PLUS)**

**2 DAYS**


**TTER01PLUS**



**TETRA SUBSCRIBER  
OPERATOR,  
PROGRAMMING &  
MAINTENANCE**

**8 HRS**

**DMT1107**



**APX RADIO MANAGEMENT  
OVERVIEW OPERATOR  
COURSE**

**1 HR**

**AST2003**

### COURSE OVERVIEW

This course will provide the background information and the knowledge required to program Motorola Solutions TETRA radios. The course is highly practical in nature and covers everything from software requirements and installation, through to programming and editing radio codeplugs, and troubleshooting.

### TARGET AUDIENCE

Technical staff required to program Motorola Solutions TETRA radios.

### COURSE OBJECTIVES

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

- Identify and locate all program features.
- Describe the function of all major CPS Plus features and tools.
- Installation of the CPS and adding RPK files.
- Carry out radio programming using CPS Plus.
- Carry out CPS Plus troubleshooting procedures.

### REQUISITE KNOWLEDGE

None

### PREREQUISITES

None

### COURSE OVERVIEW

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

### TARGET AUDIENCE

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

### COURSE OBJECTIVES

By the end of the 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.
- Carry out configuration for collaborative devices.

### REQUISITE KNOWLEDGE

None

### PREREQUISITES

None

### COURSE OVERVIEW

This course provides an overview of the features and functions of the APX series Radio Management software. Participants will learn what the Radio Management software is designed to do, and will also learn how to use it to program large and small groups of subscribers.

### TARGET AUDIENCE

Technicians and System Managers needing an understanding of the basics of the Radio Management application as well as database and fleet management.

### COURSE OBJECTIVES

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

- Identify the solution that Radio Management provides
- Differentiate between All-in-One PC needs and Distributed Use needs regarding Radio Management
- Locate the APX Radio Management
- Navigate the APX Radio Management screens
- Populate the database
- Schedule a Read job
- Manage multiple APX radios simultaneously
- Create, modify, and select programming templates
- Schedule a Write job
- Conduct a search
- Search, sort, and group radios
- Sort and manage information in the Table view
- Identify the function of the Job view.

### REQUISITE KNOWLEDGE

None


### PREREQUISITES

None

## RADIO SOLUTIONS SUBSCRIBERS

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

For general information contact the Latin America Education Services Help Desk at:  
training.lacr@motorolasolutions.com



**MOTOTRBO  
CPS 2.0  
PROGRAMMING**

1 HR

PCT0115

 ESPAÑOL  PORTUGUÊS

### COURSE OVERVIEW

This course provides an overview of the MOTOTRBO ION features and capabilities. We will help you understand how they work, when they are useful, and how they impact your day-to-day task.

### TARGET AUDIENCE

This course is intended to those who need to get an overview of MOTOTRBO ION radio.

### COURSE OBJECTIVES

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

- Identify the MOTOTRBO ION radio.
- Understand what the new features are for the MOTOTRBO ION radio.
- Identify controls and features of the MOTOTRBO ION radio.
- Perform common operations of the MOTOTRBO ION radio.

### REQUISITE KNOWLEDGE

None

### PREREQUISITES

None



**APX™ TECHNICAL  
SUBSCRIBER  
ACADEMY**

5 DAYS

APX010

 ESPAÑOL  PORTUGUÊS

### 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 Level 2 (block-level) theory of operation for the APX family of radios and provide a review of APX CPS and Radio Management programming. In addition to the lecture, large amounts of hands on with scenario-based lab work will be used to reinforce knowledge transfer.

### TARGET AUDIENCE

This course is intended for who would like to get familiar with the features, operation principles, troubleshooting steps and disassembly and reassembly of the APX family of radios.

### COURSE OBJECTIVES

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

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

### REQUISITE KNOWLEDGE

Completion of the following courses or equivalent experience:

- NST021 - Communication Systems Concepts
- APX7001 - APX CPS Programming and Template Building Overview

### PREREQUISITES

None



**ASTRO® 25 IV&D  
INTRODUCTION TO RADIO  
SYSTEM MANAGEMENT  
APPLICATIONS**

1 DAY

AST1074

 ESPAÑOL  PORTUGUÊS

### COURSE OVERVIEW

This course provides a high-level overview of the Motorola Radio System Management applications through recorded demonstrations of common system tasks.

### TARGET AUDIENCE

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

### COURSE OBJECTIVES

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

- Describe the purpose of Network Management applications used in an ASTRO system.
- Identify high-level capabilities of those Network Administrator applications.
- Familiarize with common operations allowed by those Network Administrator applications.

### REQUISITE KNOWLEDGE

Completion of the following courses or equivalent experience:

- ACT100E - Bridging the Knowledge Gap - Technicians
- AST1038 - ASTRO® 25 IV&D System Overview
- AST4103 - ASTRO® 25 IV&D System Core Workshop

### PREREQUISITES

None



## RADIO SOLUTIONS SUBSCRIBERS

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

For general information contact the Latin America Education Services Help Desk at:  
training.lacr@motorolasolutions.com



**APX™ RADIO  
MANAGEMENT  
WORKSHOP**

3 DAYS RDS2017

 PORTUGUÊS

### COURSE OVERVIEW

Participants will learn the capabilities, features, and functions of the APX Radio Management Suite.

The course contains labs that focus on installation, configuration, and operation using both wired and POP25 updates to APX Subscriber radios in both a LAN and WAN environment.

### TARGET AUDIENCE

Radio Technicians, System Managers, Radio Programmers

### COURSE OBJECTIVES

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

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

### REQUISITE KNOWLEDGE

Completion of the following courses or equivalent experience:

- APX7001 - APX CPS Programming and Template Building Overview

### PREREQUISITES

None



**APX™ CPS  
PROGRAMMING &  
TEMPLATE BUILDING**

2 DAYS APX7001

 ESPAÑOL  PORTUGUÊS

### COURSE OVERVIEW

The APX™ CPS Radio 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.

### TARGET AUDIENCE

You should attend this training course if you are a radio technician or system manager who needs to:

- Perform APX radios programming.
- Gain knowledge of the APX CPS navigation, tools, options and features.
- Have a better understanding of APX subscriber operating in Conventional, Single Site trunking, Simulcast, SmartZone or ASTRO 25 IV&D TDMA and ASTRO 25 IV&D x2.

### COURSE OBJECTIVES

By the end of the course, the student will be able to:


- Navigate through the user interface of the APX™ Customer Programming Software (CPS).
- Build the APX family of programming templates using the APX™ CPS programming software.
- Program the specific conventional and trunking parameters related to the various system types in which the radios will operate.
- Program the radios using typical APX™ CPS features and functions, such as cloning and drag and drop operations.
- Use additional APX™ CPS related functions such as codeplug comparison, radio flashing, Advance System Key Administrator, and codeplug merging.

### REQUISITE KNOWLEDGE

Knowledge of the basic features and options of two-way radios and the basic concepts of trunking.

### PREREQUISITES

None



**MOTOTRBO RADIO  
MANAGEMENT 2.0  
CONFIGURATION MODE**

1 HR PCT1032

 ESPAÑOL  PORTUGUÊS

### COURSE OVERVIEW

This self-paced course is a basic tutorial of Radio Management (RM) 2.0 Configuration Mode. A set of short videos present installation and deployment of RM components, explain the concepts of sets and configurations, and demonstrate the user how to navigate through RM Client views and functionalities. The course also covers migration from template to configuration mode, backup and restores procedures, as well as user and machine authorization. Completion of the final quiz is required to receive course credit.

### TARGET AUDIENCE

Professionals responsible for configuring, deploying, or maintaining MOTOTRBO radios and repeaters.

### COURSE OBJECTIVES

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

- Explain the purpose of that Radio Management Configuration (RM) Mode.
- Explain the concept of sets and configurations.
- Set-up Radio Management 2.0 for the first time.
- Name and navigate through major RM Client views.
- Perform basic RM Configuration Client operations: populate and manage radio database, edit sets and configurations, etc.
- Perform Server Utility operations.

### REQUISITE KNOWLEDGE

None


### PREREQUISITES

None

## RADIO SOLUTIONS SUBSCRIBERS

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

For general information contact the Latin America Education Services Help Desk at:  
training.lacr@motorolasolutions.com



**MOTOTRBO™  
SUBSCRIBER &  
REPEATER TECHNICAL  
SERVICE ACADEMY**

4 DAYS      TBO300

 ESPAÑOL  PORTUGUÊS

### COURSE OVERVIEW

During this course you will learn about 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, as well as plenty of hands on, scenario-based lab work to reinforce knowledge transfer.

### TARGET 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

### PREREQUISITES

None



**MOTOTRBO™ RADIO  
MANAGEMENT  
WORKSHOP**

2 DAYS      PCT2022

 ESPAÑOL  PORTUGUÊS

### COURSE OVERVIEW

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

### TARGET AUDIENCE

System Managers and Technicians

### COURSE OBJECTIVES

By the end of the course, the student will be able to:

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


### REQUISITE KNOWLEDGE

Networking Essentials or Network + Certification.

- A high-level working knowledge of IP networking is important.

### PREREQUISITES

PCT1032 - MOTOTRBO™ Radio Management 2.0 Configuration Mode



**MOTOTRBO™ ION  
OVERVIEW**

1 HR      PCT0129

 ESPAÑOL  PORTUGUÊS

### COURSE OVERVIEW

This course provides an overview of the MOTOTRBO ION features and capabilities. We will help you understand how they work, when they are useful, and how they impact your day-to-day task.

### TARGET AUDIENCE

This course is intended to those who need to get an overview of MOTOTRBO ION radio.

### COURSE OBJECTIVES

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

- Identify the MOTOTRBO ION radio.
- Understand what the new features are for the MOTOTRBO ION radio.
- Identify controls and features of the MOTOTRBO ION radio.
- Perform common operations of the MOTOTRBO ION radio.

### REQUISITE KNOWLEDGE

None


### PREREQUISITES

None

## RADIO SOLUTIONS SUBSCRIBERS

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MOTOTRBO™  
ION MYVIEW &  
RADIOCENTRAL  
OVERVIEW

1 HR PCT0131

 ESPAÑOL  PORTUGUÊS

### COURSE OVERVIEW

This course provides an introduction to using the MyView Portal and the RadioCentral Client to manage the basic setup and configuration of the features for your MOTOTRBO ION devices.

### TARGET AUDIENCE

This course is intended for individuals who need to configure, maintain, and monitor the MOTOTRBO ION radio.

### COURSE OBJECTIVES

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

- Navigate through the MyView Portal to find the editing and administrative tools.
- Navigate through the RadioCentral Client to find the editing and device programming tools as well as standard views.
- Once enrolled, the learner will be able to download a sample MOTOTRBO ION configuration from the Resources tab.

### REQUISITE KNOWLEDGE

None

### PREREQUISITES

None



MOTOTRBO ION  
FEATURES AND  
SERVICES

2 HRS PCT0161

 ESPAÑOL  PORTUGUÊS

### COURSE OVERVIEW

This course provides an overview of the MOTOTRBO ION features and services. You will learn about the use cases of each feature as well as how to operate them. You will also learn how to configure, update, and maintain your radio so that it stays in optimum condition.

Note: This course is previously known as PCT0141 MOTOTRBO ION Features and Services.

### TARGET AUDIENCE

This course is intended for those who want to know more about the MOTOTRBO ION radio's features and services.

### COURSE OBJECTIVES

By the end of the course, the student will be able to:

- Describe the features and services covered in this course.
- Operate these features on the radio.
- Prepare the radio for field use.
- Maintain the radio in good condition based on the recommended radio care.
- Perform basic radio troubleshooting.

### REQUISITE KNOWLEDGE

None

### PREREQUISITES

None



RADIOCENTRAL  
MOTOTRBO™ ION  
WORKSHOP

8 HRS PCT0132

### COURSE OVERVIEW

In this workshop, you will learn about the MyViewPortal and RadioCentral application to set up and program the MOTOTRBO ION radios.

### TARGET AUDIENCE

This course is intended for system managers and technical staff responsible for managing MOTOTRBO ION radios.

### COURSE OBJECTIVES

Upon completion of this course, you will be able to:

- Navigate through the MyView Portal to find the editing and administrative tools.
- Navigate through the RadioCentral Client to find the editing tools and standard views.
- Successfully complete the lab tasks covered in the course to be able to navigate and perform basic operations in MyView Portal and RadioCentral.
- Describe basic troubleshooting steps for a MOTOTRBO ION device.

### REQUISITE KNOWLEDGE

- Completed PCT0131 MOTOTRBO™ ION MyView and RadioCentral™ Overview course
- MOTOTRBO system knowledge
- Familiarity with MOTOTRBO radio programming using CPS or Radio Management software.


### PREREQUISITES

None

## RADIO SOLUTIONS SUBSCRIBERS

For information on prerequisites and to register for courses visit the LXP at: [LEARNING.MOTOROLASOLUTIONS.COM](http://LEARNING.MOTOROLASOLUTIONS.COM)

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### R7 SERIES OVERVIEW

1 HR

PCT0173NL

 ESPAÑOL  PORTUGUÊS

### COURSE OVERVIEW

This course provides an overview of the R7 series of its features and capabilities. We will help you understand how they work, when they are useful, and how they impact your day-to-day task.

### TARGET AUDIENCE

This course is intended to those who need to get an overview of the R7 series of radios.

### COURSE OBJECTIVES

After completing this course, you will be able to:

- Identify the R7 Series Radio
- Understand what the features and capabilities are for the R7 radio
- Identify controls and features of the R7 radio
- Perform common operations of the R7 radio

### REQUISITE KNOWLEDGE

None.

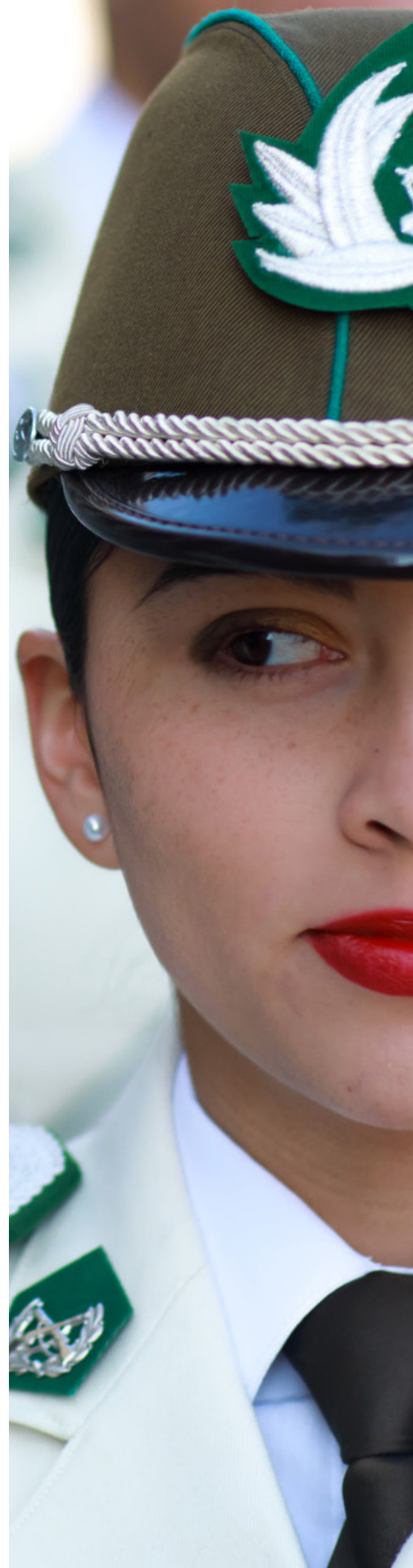
### PREREQUISITES

None

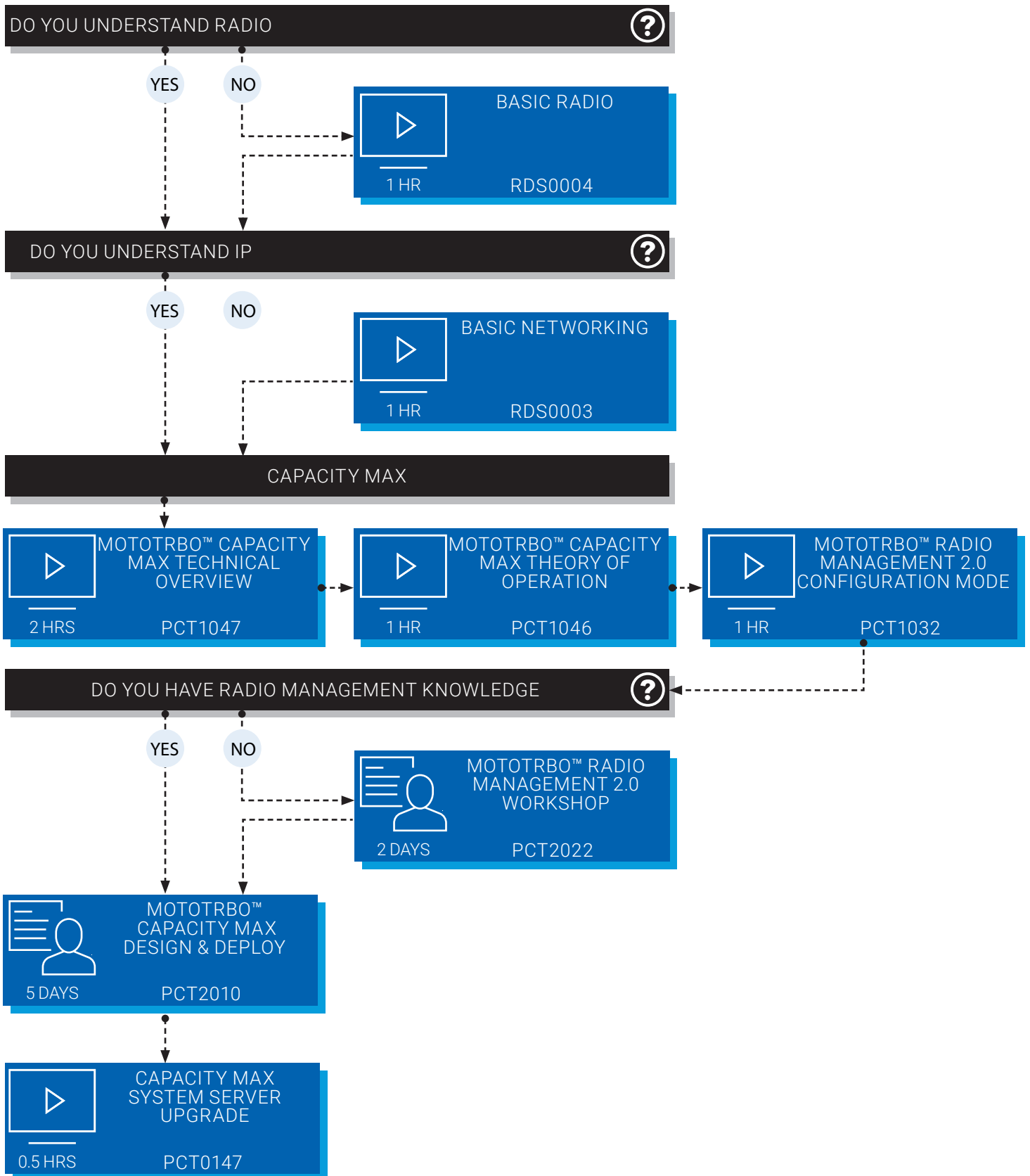


# MOTOTRBO™ COURSES

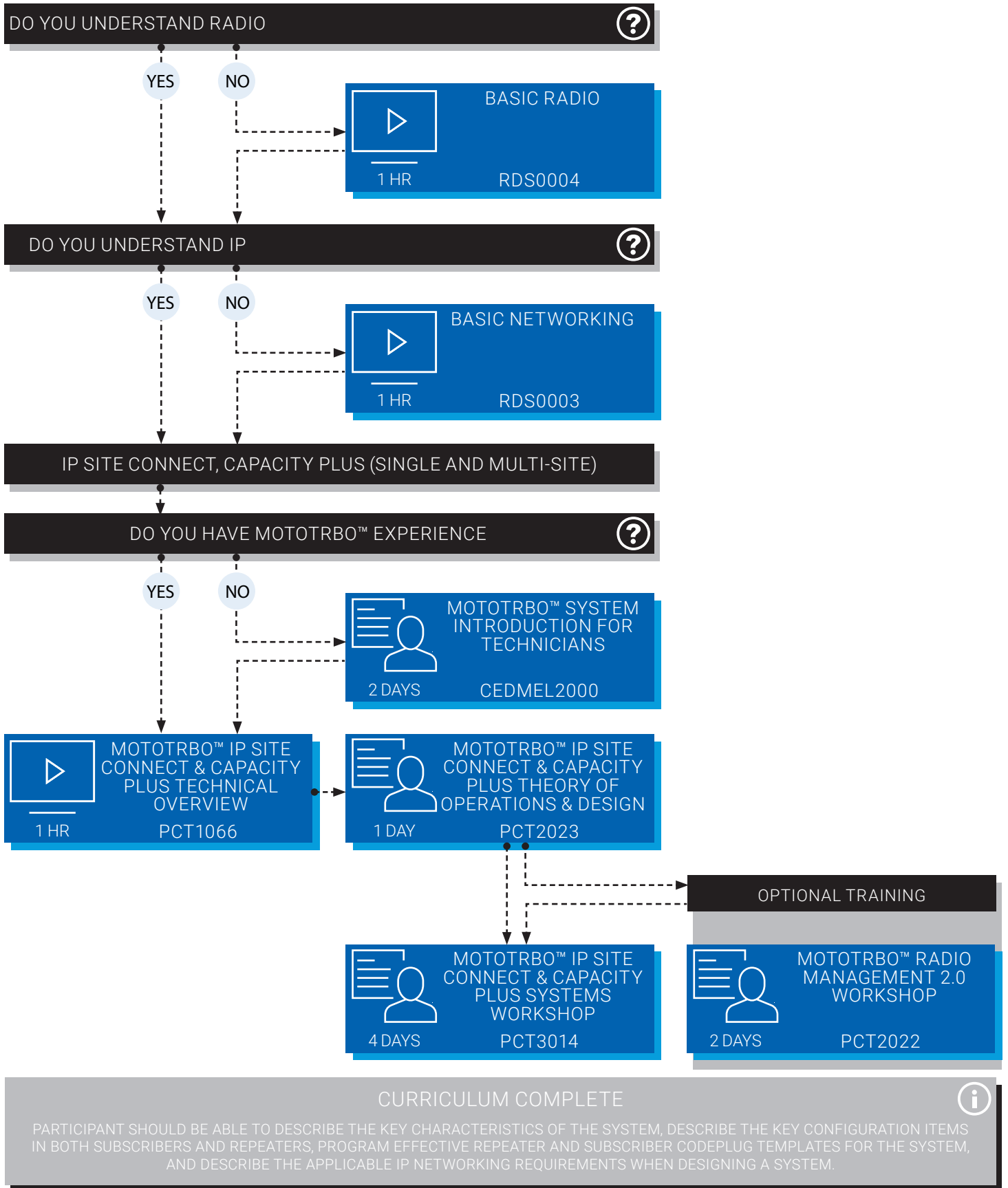
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## MOTOTRBO™ TECHNICAL CAPACITY MAX TRAINING CURRICULUM



## MOTOTRBO™ TECHNICAL IP SITE CONNECT, CAPACITY PLUS TRAINING CURRICULUM

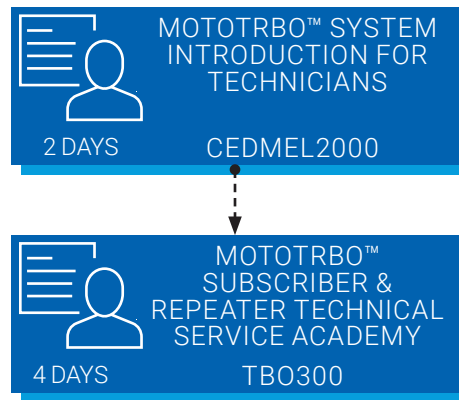


## RADIO SOLUTIONS MOTOTRBO™

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training.lacr@motorolasolutions.com

# MOTOTRBO™ TECHNICAL TRAINING CURRICULUM FOR SUBSCRIBER/REPEATER MAINTENANCE TECHNICIAN



## CURRICULUM COMPLETE




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

## RADIO SOLUTIONS MOTOTRBO™

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MOTOTRBO™  
CAPACITY MAX  
THEORY OF  
OPERATION

1 HR PCT1046

 ESPAÑOL  PORTUGUÊS

### COURSE OVERVIEW

This foundational self-study course is designed to help you understand the theory of how a Capacity Max system functions. It describes the life cycle of a call, which includes: call initiation, call queuing, call grant or rejection, call transmission(s), and call termination. This knowledge is important for system troubleshooting and maintenance purposes.

### TARGET AUDIENCE

Professionals responsible for selling, designing, configuring, deploying, or maintaining MOTOTRBO™ radio systems.

### COURSE OBJECTIVES

Upon completion of this course, you will be able to describe and explain the functions of:

- Control Channel
- Roaming
- Radio Registration
- Call Request
- Call Setup
- Busy Queue
- Channel Allocation
- Call Termination

### REQUISITE KNOWLEDGE

Basic Radio knowledge

### PREREQUISITES

PCT1047 - MOTOTRBO™ Capacity Max Technical Overview



MOTOTRBO™  
CAPACITY MAX  
TECHNICAL  
OVERVIEW

2 HRS PCT1047

 ESPAÑOL  PORTUGUÊS

### COURSE OVERVIEW

This self-study course is designed to help you learn the fundamentals of Capacity Max. Whether you have a sales or technical background, this training will give you the information that you need to gain a basic understanding of Capacity Max. Begin by exploring the DMR standard and Capacity Max's positioning within the MOTOTRBO™ portfolio of systems. Learn about the different hardware and software components that make up a Capacity Max system and gain an understanding of its logical and physical topology. Features, redundancy, design tools and warranty will also be addressed.

### TARGET AUDIENCE

Professionals responsible for selling, designing, configuring, deploying, or maintaining MOTOTRBO™ radio systems.

### COURSE OBJECTIVES

By the end of the course, the student will be able to:


- Explain Digital Mobile Radio (DMR)
- Describe a basic Capacity Max system and where it fits in the MOTOTRBO™ Portfolio
- Describe the Capacity Max's system physical and logical topologies
- List the minimum hardware and software requirements for a Capacity Max system
- Distinguish the three different types of Capacity Max Operating Modes
- Identify the different features and license types available for a Capacity Max system

### REQUISITE KNOWLEDGE

Basic Radio knowledge

### PREREQUISITES

None



MOTOTRBO™ IP SITE  
CONNECT & CAPACITY  
PLUS TECHNICAL  
OVERVIEW

1 HR PCT1066

 ESPAÑOL  PORTUGUÊS

### COURSE OVERVIEW

This course is designed to help you understand the basics of a MOTOTRBO™ IP Site Connect and a MOTOTRBO™ Capacity Plus system. We'll begin by exploring their capabilities, features and positioning within the MOTOTRBO™ system solutions. You will also learn about the different system components and their general topology. The course will also review available MOTOTRBO™ services packages.

### TARGET AUDIENCE

Professionals responsible for selling, designing, configuring, deploying, or maintaining MOTOTRBO™ radio systems.

### COURSE OBJECTIVES

By the end of the course, the student will be able to:

- Describe a MOTOTRBO™ IP Site Connect and Capacity Plus system.
- Explain the capabilities of the MOTOTRBO™ IP Site Connect and Capacity Plus system.
- Identify the MOTOTRBO™ IP Site Connect and Capacity Plus system components.
- Identify a MOTOTRBO™ IP Site Connect and Capacity Plus topology.
- Explain the difference in service plans between these systems.

### REQUISITE KNOWLEDGE

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

- Basic Radio knowledge
- CEDMEL2000 - MOTOTRBO™ Systems Introduction for Technicians

### PREREQUISITES

None



## RADIO SOLUTIONS MOTOTRBO™

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**MOTOTRBO™ SYSTEM  
INTRODUCTION FOR  
TECHNICIANS**

2 DAYS CEDMEL2000

 ESPAÑOL  PORTUGUÊS

### COURSE OVERVIEW

This is an introductory course to the MOTOTRBO system theory of operation, key components and topologies. During this course you will learn about common MOTOTRBO features, capabilities, and system design and deploy principles. After completing this course, you will be ready to take the more advanced Design & Deploy courses for IP Site Connect and Capacity Plus systems.

### TARGET AUDIENCE

Professionals responsible for selling, designing, configuring, deploying, or maintaining MOTOTRBO Digital Radio Systems.

### COURSE OBJECTIVES

Upon completion of this course, you will be able to:

- Correctly categorize the different components available to build your MOTOTRBO system.
- Accurately explain the functional technology that MOTOTRBO systems employ
- Propose the MOTOTRBO topology that best fits the user requirements.
- Correctly describe MOTOTRBO's digital and analog features.
- Analyze the various data applications' capabilities and everyday uses within the MOTOTRBO systems.
- Refer to system and channel capacity considerations during system planning.
- Refer to MOTOTRBO IP network design considerations during system planning.
- Design a fleetmap in accordance with organizational requirements and resources.


### REQUISITE KNOWLEDGE

Completion of the following optional courses or equivalent knowledge:

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

### PREREQUISITES

None



**MOTOTRBO™ IP SITE  
CONNECT & CAPACITY  
PLUS THEORY OF  
OPERATIONS & DESIGN**

1 DAY PCT2023

 ESPAÑOL

### COURSE OVERVIEW

During this course, you will learn about how IPSC and Capacity Plus systems function, as well as system design and deployment topologies, fleetmapping, and the MOTOTRBO System Design Tool. You will also learn about different types of data and site roaming options in both systems, as well as programming configurations in CPS 2.0.

### TARGET AUDIENCE

Professionals responsible for designing and deploying MOTOTRBO radio systems.

### COURSE OBJECTIVES

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

- Explain the call processing methods.
- Define repeater arbitration, Enhanced Channel Access (ECA) and All Start.
- List the considerations that must be taken into account when designing a MOTOTRBO IP Site Connect, Capacity Plus Single-Site or Capacity Plus Multi-Site system.
- Use the MOTOTRBO System Design Tool to size the system.
- Explain the purpose of Fleetmapping, how to conduct a fleetmap and its importance in system design.
- Illustrate possible system deployment topologies based on options selected.
- Configure the systems with the use of MOTOTRBO Customer Programming Software 2.0 (CPS 2.0).

### REQUISITE KNOWLEDGE

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

- RDS0004 - Basic Radio knowledge
- CEDMEL2000 - MOTOTRBO™ Systems Introduction for Technicians

### PREREQUISITES

- PCT1066 - MOTOTRBO™ IP Site Connect and Capacity Plus Technical Overview



**MOTOTRBO™ IP SITE  
CONNECT & CAPACITY  
PLUS SYSTEMS  
WORKSHOP**

4 DAYS PCT3014

 ESPAÑOL  PORTUGUÊS

### COURSE OVERVIEW

During this course you will acquire in-depth hands-on experience in planning, configuring, and deploying the following MOTOTRBO systems: Digital Conventional, IP Site Connect, Capacity Plus Single and Multi-Site. You will have the opportunity to practice designing and deploying each system type, while taking into account the fleetmapping considerations for each system.

### TARGET AUDIENCE

Professionals responsible for deploying MOTOTRBO radio systems.

### COURSE OBJECTIVES

Upon completion of this course, the participant will be able to:

- Describe the MOTOTRBO IP Site Connect and Capacity Plus (Single and Multi-Site) systems, their capabilities, system components, and data application.
- Describe the MOTOTRBO IP Site Connect and Capacity Plus (Single and Multi-Site) theory of operation.
- Describe the available MOTOTRBO IP Site Connect and Capacity Plus (Single and Multi-Site) topologies.
- Take the steps needed to configure IP Site Connect and Capacity Plus (Single and Multi-Site) systems using MOTOTRBO CPS to program the subscribers and repeaters.

### REQUISITE KNOWLEDGE

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

- RDS0004 - Basic Radio
- CEDMEL2000 - MOTOTRBO™ System Introduction for Technicians


### PREREQUISITES

- PCT1066 - MOTOTRBO™ IP Site Connect and Capacity Plus Technical Overview
- PCT2023 - MOTOTRBO™ IP Site Connect and Capacity Plus Theory of Operations and Design

## RADIO SOLUTIONS MOTOTRBO™

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**MOTOTRBO™  
CAPACITY MAX  
DESIGN & DEPLOY**

5 DAYS      PCT2010

 ESPAÑOL    PORTUGUÊS

### COURSE OVERVIEW

During this course, you will learn about the design process for a Capacity Max Radio system. You will also practice designing and deploying a small scale Capacity Max system, and configuring 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 installed.

### TARGET AUDIENCE

This training is intended for professionals responsible for designing, configuring, or deploying MOTOTRBO radio systems.

### COURSE OBJECTIVES

Upon completion of this course, you will be able to:

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

### REQUISITE KNOWLEDGE

- Understanding IP Network Addressing.
- Knowledge of RF Propagation modeling tools

### PREREQUISITES

- PCT1047 - MOTOTRBO™ Capacity Max Technical Overview
- PCT1046 - MOTOTRBO™ Capacity Max Theory of Operation
- PCT1032 - MOTOTRBO™ Radio Management 2.0 Configuration Mode



**CAPACITY MAX  
SYSTEM SERVER  
UPGRADE**

0.5 HRS      PCT0147

### COURSE OVERVIEW

Capacity Max System Server Upgrade will conduct a CMSS upgrade by preparing the ESU Launchpad software, set up virtual machines, and server components. This course will also cover a complete run of the CMSS upgrade process successfully from start to finish.

### TARGET AUDIENCE

This training is intended for professionals responsible for configuring the Capacity Max System Server upgrades. This would include but is not limited to: communication system technicians, technical system managers, technical support personnel, and service technicians.

### COURSE OBJECTIVES

Upon completion of this course, you will be able to:

- Conduct a Capacity Max System Server Upgrade by preparing the ESU Launchpad software.
- Execute using the ESU Launchpad software in the virtual machine, server, and components.
- Complete a run of the Capacity Max System Server Upgrade process successfully from start to finish.

### REQUISITE KNOWLEDGE

- Knowledge IP Network Addressing.
- Knowledge of virtual machines

### PREREQUISITES

None

# PRIVATE BROADBAND

<b>WAVE™ PTX OVERVIEW (PTT0001L)</b>	64
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<b>WAVE™ PTX ADMIN PORTAL: END-USER TRAINING (PTT0004L)</b>	64
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## RADIO SOLUTIONS PRIVATE BROADBAND

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**WAVE™ PTX  
OVERVIEW**

**0.75 HRS**

**PTT0001L**

 ESPAÑOL  PORTUGUÊS

### COURSE OVERVIEW

In this course, you will get acquainted with the WAVE PTX solution, learn how it connects teams across devices, networks, and locations, and see how its components enable organizations to stay connected.

### TARGET AUDIENCE

This course is intended to those who would like to learn about the WAVE PTX solution, its benefits, and components.

### COURSE OBJECTIVES

By the end of the course, the student will be able to:

- Explain the benefits of Push-to-Talk communication.
- Match various roles within an organization to the right WAVE PTX solution.
- Recall WAVE PTX features and optional packages.
- Illustrate the WAVE PTX Architecture and LMR Interoperability.
- Recognize the components of WAVE PTX and know their features.
- Access additional training materials.
- Get the support you need for your solution.

### REQUISITE KNOWLEDGE

None

### PREREQUISITES

None



**WAVE™ PTX  
ADMIN PORTAL:  
END-USER TRAINING**

**1 HR**

**PTT0004L**

### COURSE OVERVIEW

This course provides an overview of the WAVE PTX Admin Portal for commercial markets, its key features, and roles within the portal. It includes clickable software simulations showing basic operations that can be performed at the Distributor, Partner- and Customer-level.

### TARGET AUDIENCE

Distributors who use the Admin Portal to add and manage Partners in the commercial market; Partners who use the Admin Portal to add and manage customers in the commercial market; commercial customers who use the Admin Portal to manage subscriptions and add or manage users and devices.

### COURSE OBJECTIVES

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


- Navigate the WAVE PTX Admin Portal.
- Add and manage partners from the distributor level.
- Add and manage customers from the partner level.
- Add and manage partner employees from the partner level.
- Manage subscriptions and licenses.
- Add and manage customer employees.
- Register and manage TLK and Evolve devices.
- Create and manage mobile, tablet, and dispatch users.
- Create and manage standard, dispatch, and broadband talkgroups.

### REQUISITE KNOWLEDGE

None

### PREREQUISITES

None



**WAVE PTX R11.2  
MOBILE APPLICATION:  
END-USER TRAINING**

**2.5 HRS**

**PTT0006L**

### COURSE OVERVIEW

During this course, you will perform key tasks in the WAVE PTX Mobile Application in order to communicate with contacts and talkgroups.

### TARGET AUDIENCE

WAVE PTX users who want to get hands-on practice with the features and operation principles of the WAVE PTX Mobile Application.

### COURSE OBJECTIVES

After completing this course, you will be able to:

- Navigate and use the WAVE PTX Mobile Application in Standard and PTT Radio modes.
- Initiate and receive PTT calls to and from contacts and talkgroups.
- Initiate and receive video streaming sessions to and from contacts and talkgroups.
- Use multimedia messaging to exchange text messages and files.
- Take advantage of emergency features.
- Perform user check and monitoring.

### REQUISITE KNOWLEDGE

None


### PREREQUISITES

None

## RADIO SOLUTIONS PRIVATE BROADBAND

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**CRITICALCONNECT  
+ WAVE PTX FOR  
PUBLIC SAFETY**

2 DAYS      PSA0250



**WAVE™ SYSTEM  
ADMINISTRATION**

2 DAYS      AST1035

 ESPAÑOL

### COURSE OVERVIEW

Critical Connect is the new interoperability in the cloud solution and it replaces the use of on-premise ISSI. It is also the bridge between radio and broadband PTT solutions based on the Unified Communications platform.

The course describes the components and dependencies of Critical Connect, and how to quote and order the solution. During this training, you will become acquainted with the main functions and features of the Critical Connect solution and learn to navigate and operate the Critical Connect Patch Portal. You will perform the actions required to create and manage existing patches within the portal.

### TARGET AUDIENCE

Administrators and technicians using the Patch Portal to set up and manage inter-agency patches.

### COURSE OBJECTIVES

By the end of the course, the student will be able to:

- Describe the features of Critical Connect.
- Describe Critical Connect capabilities.
- Describe technical requirements.
- Identify the architecture – cloud components.
- Navigate the Patch Portal Interface with confidence.
- Search and filter talkgroups by type.
- Create and remove patches through various actions.
- Enable and manage existing patches.

### REQUISITE KNOWLEDGE

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

- AST1038 / AST1067 - ASTRO® 25 IV&D System Overview

### PREREQUISITES

None

### COURSE OVERVIEW

This course provides an overview of the WAVE™ solution, its features, hardware requirements, and software and is targeted to the Administrator role and or support roles.

### TARGET AUDIENCE

You should attend this training course if you are an Administrator or support personnel of a WAVE™ solution.

### COURSE OBJECTIVES

After completing this course, you will be able to:

- Examine the WAVE system topology and license settings.
- Add and manage Channels and Channel Groups.
- Add and manage User and Profile records.
- Install and use the WAVE communicators.
- Manage Media and Proxy Servers.
- Set up channel recording sessions.
- View Audit Log records.
- Backup and restore a local WAVE SQL Database.
- Describe WAVE server redundancy.
- Discuss WAVE integration techniques.

### REQUISITE KNOWLEDGE

None

### PREREQUISITES

None



# COMMANDCENTRAL

## YOUR ALL-IN-ONE SOLUTION

Command Central is an all-in-one solution, highly customized, and so is the training we provide. Our CommandCentral Training Team will take a system-level view of your CommandCentral deployment and tailor a training solution that will create value for your agency. The instruction to be provided and the related training modality will be dependent on each CommandCentral module and the modules deployed on your system; the plan could include online self-paced training, virtual instructor-led and/or onsite training sessions.

While the live training sessions are fully tailored, our Learning eXperience Portal hosts an extended offer of self-paced training. This table shows a selection of the courses you will find in our learning management system; all you need is an LXP account (see instructions on page 13):



Course code	Course title	Duration
PSA0302	CC Aware	2 DAYS



Course code	Course title	Duration (hours)
PSA0053	CommandCentral Aware Rules Engine	0.75
PSA0054	CommandCentral Aware Camera Directory	0.5
PSA0055	CommandCentral Aware: Location Tracking and Historical Map	0.75
PSA0069	CommandCentral Aware: Cloud Advanced Map View	0.5
PSA0258	CommandCentral Aware Provisioning Aware in Admin 2.0	0.5
PSA0267	CommandCentral Aware for Mobile Video	0.75
PSA0274	CommandCentral Unit Management Administration	0.75
PSA0276	CommandCentral Aware for Mobile Video Administration	0.75
PSA0321	CommandCentral Aware Zone of Interest	0.5
PSA0322	CommandCentral Aware Patrol Checkpoint	0.5
PSA4058	CommandCentral Aware Cloud Basic Operations	0.25
PSA4059	CommandCentral Aware Cloud Video View Basics	0.75
PSA4060	CommandCentral Aware Cloud Radio Console View	0.5
PSA4119	CommandCentral Aware Map Toolbars	0.5
PSA4120	CommandCentral Aware Cloud Understanding the Event Monitor	0.75
PSA4121	CommandCentral Aware Advanced Video View	0.75

# VESTA® SOLUTIONS COURSES

## EMERGENCY CALL HANDLING: VESTA® SOLUTIONS

At Motorola Solutions, we know that one of the key components to keep people connected when it matters most is to provide the best training possible. This empowers our customers to use their VESTA® solutions to their fullest potential, maximizing their abilities to maintain operations, protect property and save lives.

Led by knowledgeable, dedicated product training specialists, our courses offer learners the possibility to get a firm understanding of their VESTA® solution.

Find below some of the online and live courses currently available. For more information, visit the LXP or contact us at:

- VESTA.trainingadmin@motorolasolutions.com – Training, Courseware
- VESTA.quotes@motorolasolutions.com – Sales, Quotes

 <b>VESTA® ANALYTICS LITE</b> 0.5 HRS      VST0002	 <b>VESTA® SMS ADMIN</b> 0.5 HRS      VST0003	 <b>VESTA® SMS AGENT</b> 0.5 HRS      VST0004
 <b>VESTA® MAP LOCAL AGENT</b> 0.5 HRS      VST0005	 <b>VESTA® HEADS UP DISPLAY (HUD)</b> 0.5 HRS      VST0006	 <b>VESTA® MAP LOCAL INSTALLATION, MAINTENANCE &amp; UPGRADES</b> 0.5 HRS      VST0007
 <b>DATA HUB FOR VESTA® MAP LOCAL</b> 0.5 HRS      VST0008	 <b>VESTA® - ACTIVITY VIEW</b> 0.5 HRS      VST0009	 <b>VESTA® ENHANCED IP PHONE ADMIN TRAINING</b> 0.5 HRS      VST0010
 <b>VESTA® 9-1-1 TROUBLESHOOTING</b> 4 DAYS      VST0103	 <b>VESTA® 911 INSTALLATION &amp; MAINTENANCE/ADMIN (VIRTUAL TRAINING)</b> 8 DAYS      VST0105	 <b>VESTA® SMS/TEXT TO 911 INSTALLATION &amp; MAINTENANCE (VIRTUAL TRAINING)</b> 3 DAYS      VST0106
 <b>911 MAINTENANCE &amp; ADMINISTRATION (SMART HANDS)</b> 4 DAYS      VST0107		



# CALLWORKS COURSES

In these changing times PSAPs face new challenges, beyond responding to a mobile society and adopting Next Generation technology. Amid and despite these challenges, CallWorks CallStation continues to ensure call takers gain the functionality they need to save seconds and save lives.

For more information, visit our website at [motorolasolutions.com](http://motorolasolutions.com)



CALLWORKS  
ADMINISTRATION

VST0501



CALLWORKS  
DECISIONSTATION

VST0502



CALLWORKS  
CALLSTATION

VST0503



EMERGENCY  
CALLWORKS  
OPERATIONS &  
MAINTENANCE

4 DAYS

VST0201



CALLWORKS  
CALLSTATION  
INTEGRATION W/  
RAPIDSOS

0.25 HRS

VST0001






# CYBERSECURITY COURSES

<b>CYBER INCIDENT RESPONSE - DATA COLLECTION AND THE INCIDENT RESPONSE PROCESS (CYB0161)</b>	70
<b>CYBER INCIDENT RESPONSE - VULNERABILITY ASSESSMENT (CYB0162)</b>	70
<b>CYBER INCIDENT RESPONSE - THE INCIDENT RESPONSE PROCESS (CYB0163)</b>	70
<b>CYBER INCIDENT RESPONSE - INCIDENT RESPONSE, METHODS, TOOLS AND TECHNIQUES (CYB0164)</b>	71
<b>CYBER INCIDENT RESPONSE - THREATS AND ATTACKS (CYB0165)</b>	71
<b>INTRODUCTION TO CYBERSECURITY (CYB0166)</b>	71

## CYBERSECURITY

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

For general information contact the Latin America Education Services Help Desk at:  
training.lacr@motorolasolutions.com



CYBER INCIDENT  
RESPONSE- DATA  
COLLECTION &  
ANALYSIS

1 HR

CYB0161

### COURSE OVERVIEW

Cyber Incident Response is a self-directed, self-paced Computer Based Training (CBT) program that equips students with the skills needed to fight back against modern cyber threats. This course will cover data collection and analysis for network, host, and cloud-based data sources used within different organizations. Topics discussed throughout this course will focus on both quantitative and qualitative data analysis procedures, as they relate to traditional and typically customized computing solutions. Tools for data analysis within specific operating systems and reporting will also be discussed, as well as what your next steps should be in reporting out your findings to the appropriate teams within your organization.

### TARGET AUDIENCE

The Cyber Incident Response- Data Collection and Analysis training is designed for individuals with between 3 and 5 years of experience working in a computing environment as part of a CERT/CSIRT/SOC who desire or are required to protect critical information systems before, during, and after an incident which may be a cybersecurity attack.


### COURSE OBJECTIVES

By the end of the course, the student will be able to:

- Define security challenges facing cloud computing.
- Compare the advantages and disadvantages of cloud computing.
- Identify the difference between a threat and a vulnerability.
- Identify the differences between big data, data science, and data analytics as they relate to the field of cybersecurity.
- Analyze the need for data analytics as an essential requirement for both consumer and national level security.

### REQUISITE KNOWLEDGE

None



CYBER INCIDENT  
RESPONSE -  
VULNERABILITY  
ASSESSMENT

1 HR

CYB0162

### COURSE OVERVIEW

Cyber Incident Response- Vulnerability Assessment is a self-directed, self-paced Computer Based Training (CBT) program that equips students with the skills needed to fight back against modern cyber threats. This course takes a comprehensive look at the vulnerability assessment and scanning process. The lessons included here will begin in the planning stages and discuss how you can take scanning plans into action using tools and applications used throughout the cybersecurity industry. Finally, this course will also discuss the actions required once scanning is complete, including post-remediation actions and what steps are required during an audit of your organizational network.

### TARGET AUDIENCE

The Cyber Incident Response training is designed for individuals with between 3 and 5 years of experience working in a computing environment as part of a CERT/CSIRT/SOC who desire or are required to protect critical information systems before, during, and after an incident which may be a cybersecurity attack.

### COURSE OBJECTIVES

By the end of the course, the student will be able to:

- Assess information security risk in computing and networking environments
- Collect cyber threat intelligence
- Analyze the cybersecurity threat landscape
- Respond to and investigate cybersecurity threats
- Analyze data collected from security event logs
- Assess and defend against post-attack techniques.

### REQUISITE KNOWLEDGE

None



CYBER INCIDENT  
RESPONSE - THE  
INCIDENT RESPONSE  
PROCESS

1 HR

CYB0163

### COURSE OVERVIEW

Cyber Incident Response- The Incident Response Process is a self-directed, self-paced Computer Based Training (CBT) program that equips students with the skills needed to fight back against modern cyber threats. This course provides a complete look at the Incident Response (IR) process and associates related tasks and procedures in IR with a major cybersecurity framework. By first developing a broad understanding of what risk management is, security officials can then create the connections needed to establish security controls relevant to the needs of their specific organizations. At the conclusion of this course, we will also discuss relevant trends and tips for Incident Response (IR) containment, based on the latest research and best case practices from individuals within the cybersecurity industry.

### TARGET AUDIENCE

The Cyber Incident Response training is designed for individuals with between 3 and 5 years of experience working in a computing environment as part of a CERT/CSIRT/SOC who desire or are required to protect critical information systems before, during, and after an incident which may be a cybersecurity attack.

### COURSE OBJECTIVES

Upon completion of this course, you will be able to

- Assess information security risk in computing and networking environments
- Collect cyber threat intelligence
- Analyze the cybersecurity threat landscape
- Respond to and investigate cybersecurity threats
- Analyze data collected from security event logs
- Assess and defend against post-attack techniques.

### REQUISITE KNOWLEDGE


None



## CYBERSECURITY

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

For general information contact the Latin America Education Services Help Desk at:  
training.lacr@motorolasolutions.com



CYBER INCIDENT  
RESPONSE- INCIDENT  
RESPONSE, METHODS,  
TOOLS & TECHNIQUES

1 HR CYB0164

### COURSE OVERVIEW

Cyber Incident Response- Incident Response, Methods, Tools, and Techniques is a self-directed, self-paced Computer Based Training (CBT) program that equips students with the skills needed to fight back against modern cyber threats. During this course, these topics will cover a comprehensive overview of the basics of incident response, what steps can be taken to mitigate damage after an attack, and what you can do to help prepare your organization's cybersecurity infrastructure to be more prepared in the future.

### TARGET AUDIENCE

The Cyber Incident Response training is designed for individuals with between 3 and 5 years of experience working in a computing environment as part of a CERT/CSIRT/SOC who desire or are required to protect critical information systems before, during, and after an incident which may be a cybersecurity attack.

### COURSE OBJECTIVES

By the end of the course, the student will be able to:

- Assess information security risk in computing and networking environments
- Collect cyber threat intelligence
- Analyze the cybersecurity threat landscape
- Respond to and investigate cybersecurity threats
- Analyze data collected from security event logs
- Assess and defend against post-attack techniques.

### REQUISITE KNOWLEDGE

None



CYBER INCIDENT  
RESPONSE-  
THREATS & ATTACKS

1 HR CYB0165

### COURSE OVERVIEW

Cyber Incident Response- Threats and Attacks is a self-directed, self-paced Computer Based Training (CBT) program that equips students with the skills needed to fight back against modern cyber threats. The course provides both a historical and current look at threat trends affecting both small and large organizations. Includes a review of data-specific trends based on recently published attacks, as well as the impact of those incidents. By developing an understanding of what vulnerabilities are commonly searched for by attackers, organizations can prepare defense and mitigation plans in advance of an attack and by doing so protect proprietary data and other valuable organizational information.

### TARGET AUDIENCE

The Cyber Incident Response training is designed for individuals with between 3 and 5 years of experience working in a computing environment as part of a CERT/CSIRT/SOC who desire or are required to protect critical information systems before, during, and after an incident which may be a cybersecurity attack.

### COURSE OBJECTIVES

By the end of the course, the student will be able to:

- Assess information security risk in computing and networking environments
- Collect cyber threat intelligence
- Analyze the cybersecurity threat landscape
- Respond to and investigate cybersecurity threats
- Analyze data collected from security event logs
- Assess and defend against post-attack techniques

### REQUISITE KNOWLEDGE

None



INTRODUCTION  
TO CYBERSECURITY

2 DAYS CYB0166

### COURSE OVERVIEW

This course provides participants with a high-level overview of various aspects of Cybersecurity in the context of a modern and Internet-connected environment. Students will gain a foundational perspective on the challenges of designing a cybersecurity program, implementing secure systems, and other factors needed for a comprehensive cybersecurity solution. Upon completion of this course, each participant will be able to define cybersecurity terminology, compliance requirements, review sample attacks, and gain an understanding of the impact of current threat trends on cybersecurity implementation.

### TARGET AUDIENCE

Students who utilize internet-connected devices.

### COURSE OBJECTIVES

By the end of the course, the student will be able to:

- Provide a general definition of the concept of cybersecurity.
- Identify basic cybersecurity terminology.
- Identify the primary cybersecurity threats from cyber war, cyber terrorism, and cybercrime
- Describe specific cybersecurity challenges to the Federal government and the Department of Defense.
- Identify the key challenges to implementing security on the Internet.
- Develop connections between cybersecurity attack methods and motives for attackers.
- Analyze the role of legislation in cybersecurity and determine how countries respond nationally to various cyber attacks.

### REQUISITE KNOWLEDGE

None



# MOBILE VIDEO



VIDEOMANAGER  
SYSTEM  
ADMINISTRATOR

1 DAY

PSA0036

## COURSE OVERVIEW

During this course, you will learn how to fulfill the System Administrator role in VideoManager. This includes configuring, controlling, and maintaining the VideoManager system infrastructure.

## TARGET AUDIENCE

This course is intended for VideoManager users that are responsible for the overall system management and maintenance.

## COURSE OBJECTIVES

After completing this training course, you will be able to:

- Assess the health of your system
- Successfully update camera firmware
- Successfully update DockController firmware
- Run reports
- Perform general tasks such as disabling a user, replacing an RFID tag, expand storage, and manage network usage levels
- Create a new site.

## REQUISITE KNOWLEDGE

None

## PREREQUISITES

None





# CONTACT US

VISIT OUR GLOBAL  
EDUCATION WEBSITE:

[MOTOROLASOLUTIONS.COM/  
LEARNING](https://motorolasolutions.com/learning)

Our website is your portal to find help to meet your organizational training needs. Keep up to date with the latest version of this catalog, our training schedule, or simply use the Contact Us function for additional questions or assistance.



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**Learning &  
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