



# PRODUCT AND SYSTEM TECHNICAL TRAINING COURSE CATALOGUE

**MOTOROLA SOLUTIONS - WORLDWIDE EDUCATION**







# 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. Education Services, 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**



# TABLE OF CONTENTS



## EDUCATION SERVICES

INTRODUCTION..... 4

EDUCATION PACKAGES..... 5

TAILORED TRAINING:  
ANALYSIS AND CONSULTATION  
SERVICES ..... 7

QUALITY ASSURANCE:  
THE TPMA FRAMEWORK ..... 8

OPERATOR TRAINING ..... 9



## LEARNING EXPERIENCE PORTAL

LXP INTRODUCTION.....11

ACCESSING THE LXP ..... 12

**HELPFUL INFORMATION**

PAYMENTS ..... 13

HELP DESK CONTACTS..... 13

POLICIES AND REQUIREMENTS ..... 13



## TRAINING PORTFOLIO

**TWO-WAY COMMUNICATIONS**

FOUNDATIONAL COURSES ..... 16

DIMETRA™ SYSTEMS..... 24

SUBSCRIBERS ..... 40

MOTOTRBO™..... 47

ASTRO® P25  
INFRASTRUCTURE..... 54

**PRIVATE BROADBAND**..... 62



## 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 Asia Pacific Education Services Help Desk at:  
[training.apac@motorolasolutions.com](mailto:training.apac@motorolasolutions.com)

# INTRODUCTION TO MOTOROLA SOLUTIONS EDUCATION SERVICES

WorldWide 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 personalised 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 catalogue 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.





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**training.apac@motorolasolutions.com**

# 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 organisational 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 customise your Motorola Solutions training strategy, ask our Professional Education Services team to analyse your specific technical and 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 organisation provides effortless and reliable communications, and keep your lifeline stronger than ever!

### **DIMETRA™ INFRASTRUCTURE EDUCATION PACKAGES**



#### **COMPLEMENT EDUCATION PACKAGE**

Prepare your team to operate your DIMETRA™ Solution, achieving optimal organisational efficiency.

##### **TOPICS**

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

#### **SUPPLEMENT EDUCATION PACKAGE**

Prepare your team to operate and administer your DIMETRA™ Solution, achieving optimal organisational efficiency.

##### **TOPICS**

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

#### **SUPPORT EDUCATION PACKAGE**

Prepare your team to operate, administer, and maintain your DIMETRA™ Solution, achieving optimal organisational efficiency.

##### **TOPICS**

System Overview, Network Management, Consoles, Base Stations, Fleetmapping, Dispatch End-User Best Practices, Device End-User Best Practices

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

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# SAMPLE PACKAGE



## DIMETRA™ INFRASTRUCTURE SUPPLEMENT EDUCATION PACKAGE

This Education Package aligns with the Infrastructure ADVANCED Services Package

DIMETRA™ SYSTEM OVERVIEW

MYVIEW PORTAL OVERVIEW

DIMETRA™ SYSTEM FLEETMAPPING

DIMETRA™ CONFIGURATION & ADMINISTRATION

DIMETRA™ FAULT MANAGEMENT

LIFECYCLE MANAGEMENT

CONSOLE ADMINISTRATOR  
& DISPATCH END-USER TRAINING

RADIO END-USER TRAIN THE TRAINER

WAVE™ ADMINISTRATION & END USER

DIMETRA™ SECURE COMMUNICATIONS

DIMETRA™ PERFORMANCE MANAGEMENT

EXECUTIVE OVERVIEW

### LEGEND:

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

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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 personalised 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 catalogue, 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.

### 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, mobile-enabled components grouped into related topics.



## UNDERSTANDING THE ICONS



### LIVE TRAINING

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



### SELF-PACED TRAINING

**ONLINE COURSES / MICROLEARNING**



### EXAM

Where to start? Our training paths will let you know the starting point and milestones of your development, so you can make sure you acquire the right knowledge to make the most of each step of your learning process.

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# QUALITY ASSURANCE: THE TPMA FRAMEWORK

## MOTOROLA SOLUTIONS WORLDWIDE 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](https://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 personalised 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."

"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."

"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 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."





# 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 organisation. 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 organisation.

### 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 organisation 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 organisation's particular system.

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

### SUBSCRIBER TRAINING

These courses provide radio users with an introduction to their radios 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

## COURSES FOR CONSOLE PRODUCTS

- MCC 7000 Series Dispatch Console Administrator Training
- MCC 7000 Series Dispatch Console Operator Training
- MCD 5000 Operator Training
- DCX9000 Workshop

## COURSES FOR MOBILES & PORTABLES

- DIMETRA™ Series
- APX™ Series
- MOTOTRBO™ Series
- Customer Programming Software

**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.**





# 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.



[learning.motorolasolutions.com](https://learning.motorolasolutions.com)

## GENERAL INFORMATION

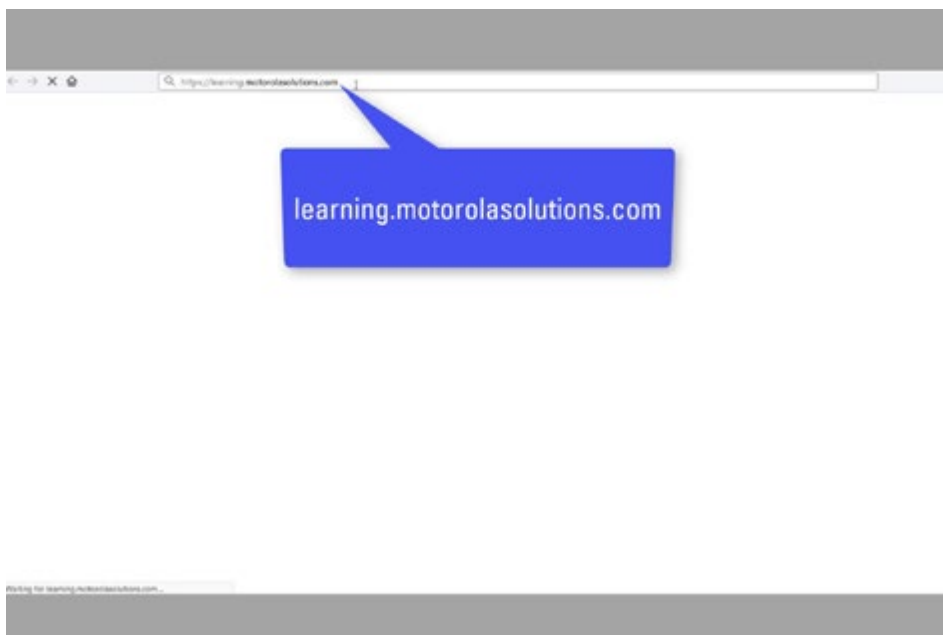
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## HOW TO ACCESS THE LEARNING EXPERIENCE PORTAL

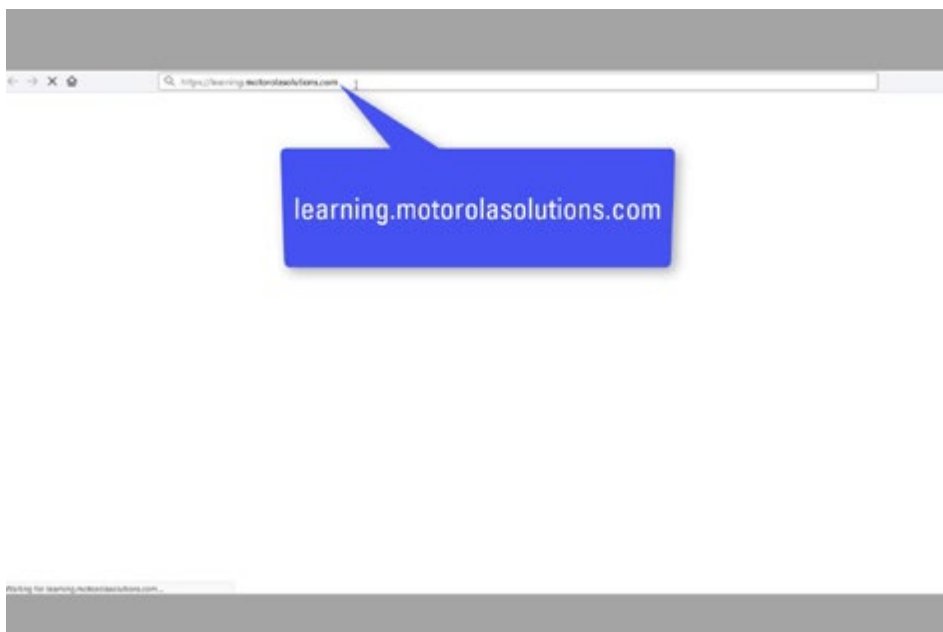
If you are a Motorola Solutions Customer who already has a Motorola Solutions Login ID, you can go to the “Enrol in a course” section for further instructions.

### 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 ENROL 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

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

# HELPFUL INFORMATION

## HOW TO MAKE PAYMENTS WHEN ENROLLING IN A COURSE

### HOW TO MAKE PAYMENTS WHEN REGISTERING

For your convenience we accept the following methods of payment:

- Credit Card
- Purchase Order

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

Contact the help desk above for assistance with payments and P.O. specifications.  
All pricing listed is US dollars.

**Note:** Invoices are available only when using Purchase Orders.

## FOR QUESTIONS AND ASSISTANCE

### Call the Education Help Desk

Monday – Friday,  
9:00 a.m. – 6:00 p.m. Kuala Lumpur/Singapore Time  
**or email us at:**  
**Training.APAC@motorolasolutions.com**

## CONTACT MOTOROLA SOLUTIONS ASIA PACIFIC

<b>AUSTRALIA</b>	1-800-931855	<b>MALAYSIA</b>	1-800-8-18590
<b>CHINA (MAINLAND)</b>	4001-202101	<b>NEW ZEALAND</b>	0800-445227
<b>HONG KONG SAR</b>	800-903-237	<b>PHILIPPINES</b>	1-800-1-114-2853
<b>INDIA</b>	000-800-9190337	<b>SINGAPORE</b>	800-1206952
<b>INDONESIA</b>	007-803-011-4936	<b>SOUTH KOREA</b>	00798-14-800-9674
<b>JAPAN</b>	0066-33-813730	<b>TAIWAN</b>	00801-13-6901
		<b>THAILAND</b>	1800-011691

## POLICIES AND 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 stated 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>



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Portfolio	Course code & Type	Course title							
			Foundations	Product/System introduction	Stage & Deploy	Operate	Maintain	Administrator	Technician
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	•					•	•
	● SRV1010	Server and Virtualization Foundation	•					•	•
	● AST4104	ASTRO® 25 Systems Applied Networking		•	•	•	•	•	•
	● DMT1108	DIMETRA™ Systems Applied Networking			•	•	•	•	•
	● TGTC08	RF Fundamentals	•					•	•
DIMETRA™ Systems	● DMT0057	Introduction to Trunked Radio Concepts	•					•	•
	● DMT9200	DIMETRA™ X Core D9.2 System Overview		•				•	•
	● DMT9201	DIMETRA™ X Core D9.2 Configuration and Administration Workshop		•		•	•	•	•
	● DMT9202	DIMETRA™ X Core D9.2 Fault Management Workshop			•	•	•	•	•
	● DMT9203	DIMETRA™ X Core D9.2 Performance Management Workshop			•	•	•	•	•
	● DMT9204	DIMETRA™ X Core D9.2 Troubleshooting and Maintenance Workshop			•	•	•	•	•
	● DMT9205	DIMETRA™ X Core D9.2 Air Interface Encryption, Authentication, and Provisioning			•	•	•	•	•
	● DMT2094	DIMETRA™ X Core Secure Communications Workshop			•	•	•	•	•
	● DMT9216	DIMETRA™ X Core Edge Installation, Configuration, and Administration Workshop		•	•	•	•	•	•
Console courses	● DMT0036	DIMETRA™ Express Installation, Configuration and Maintenance Workshop		•	•	•	•	•	•
	● DMT9211	DIMETRA™ X Core D9.2 MCC 7500 Admin Workshop			•	•	•	•	•
	● DMT9212	DIMETRA™ X Core D9.2 MCC 7500 Operator Workshop			•	•	•	•	•
	● DMT9213	DIMETRA™ X Core D9.2 MCC 7500 Install, Config, Troubleshooting, & Maintenance			•	•	•	•	•
	● DMT0072	DCX9000 for DIMETRA Express Workshop		•	•	•	•	•	•
	● RDS1022	MCD 5000 Technical Operational Workshop		•	•	•	•	•	•
	● AST2011	MCC 7000 Series Consoles for K-Core		•	•	•	•	•	•
	● AST2037	MCC 7000 Series Dispatch Consoles Overview			•	•	•	•	•
	● CON012	MCC 7000 Series Dispatch Consoles Workshop		•	•	•	•	•	•
Base stations	● TBTS01	MTS 2/MTS 4 Installation, Configuration, Troubleshooting & Maintenance Workshop		•	•	•	•	•	•
	● TBTS04	MTS 1 Installation, Configuration, Troubleshooting and Maintenance Workshop			•	•	•	•	•
Subscribers	● PCT1032	MOTOTRBO Radio Management 2.0 Configuration Mode		•	•	•	•	•	•
	● AST2003	APX Radio Management Overview		•				•	
	● PCT0115	MOTOTRBO CPS 2.0 Programming		•	•	•	•	•	•
	● DMT0033	ST7500 End User Operator			•	•	•	•	•
	● DMT1054	MTP3000 Series End User Operator			•	•	•	•	•
	● DMT1068	MTP6000 Series End User Operator			•	•	•	•	•
	● DMT1069	MTP8000Ex Series End User Operator			•	•	•	•	•
	● DMT1070	MTM5000 Series End User Operator			•	•	•	•	•
	● DMT1083	ST7000 End User Operator			•	•	•	•	•
	● DMT6003	MPX600 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		•	•		•	•	
	● RDS2017	APX™ Radio Management Workshop		•	•	•	•	•	•

● Live training  
● Self-paced training

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Portfolio	Course code & Type	Course title							
			Foundations	Product/System introduction	Stage & Deploy	Operate	Maintain	Administrator	Technician
MOTOTRBO™ Ion	● PCT0129	MOTOTRBO Ion Overview		•		•		•	•
	● PCT0131	MOTOTRBO Ion MyView and RadioCentral Overview	•	•		•	•		
	● PCT0161	MOTOTRBO Ion Features and Services				•	•	•	•
	● PCT0132	RadioCentral MOTOTRBO Ion Workshop			•	•	•	•	•
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 and Design			•			•	•
	● PCT3014	MOTOTRBO IP Site Connect and Capacity Plus Systems Workshop			•	•	•	•	•
	● PCT2010	MOTOTRBO™ Capacity Max Design and Deploy		•	•	•	•	•	•
	● PCT2005	SmartPTT Plus			•	•	•	•	•
	● PCT2006	TRBOnet Plus Essentials and Deployment			•	•	•	•	•
ASTRO® Systems	● AST1038	ASTRO® 25 IV&D System Overview		•				•	•
	● AST4102	ASTRO® 25 IV&D Radio System Administrator Workshop			•	•	•	•	•
	● AST4103	ASTRO® 25 IV&D System Core Workshop			•	•	•	•	•
	● AST4207	ASTRO® 25 IV&D Secure Communications Workshop			•	•	•	•	•
	● AST4208	ASTRO® 25 IV&D GTR 8000 Repeater Site Workshop			•	•	•	•	•
	● AST4410	ASTRO® 25 IV&D Conventional Core with Configuration Manager Workshop			•	•	•	•	•
	● AST4440	ASTRO® 25 IV&D Conventional RF Site Workshop			•	•	•	•	•
	● AST2038	ASTRO® 25 Radio Authentication			•	•	•	•	•
WAVE PTX	● PTT0001A	WAVE PTX Overview				•	•	•	•
	● PTT0004A	WAVE PTX Admin Portal: End-User Training				•	•		•
	● PTT0006A	WAVE PTX R11.2 Mobile Application: End-User Training (APAC)				•	•	•	•
	● PTT0054	Central Admin Tool (CAT) R10.0 & R11.2: End-User Training				•	•	•	
	● PSA0077	WAVE PTX User Provisioning Portal			•	•	•	•	•
	● PSA0078	WAVE PTX Enterprise Contacts and Group Management Portal			•	•	•	•	•
	● PSA0079	WAVE PTX Handset Standard Mode			•	•	•	•	•
	● PSA0080	WAVE PTX Handset PTT Radio Mode			•	•	•	•	•
	● PSA0081	WAVE PTX Dispatch Console and features			•	•	•	•	•
	● PTT0071	WAVE PTX System Overview & Architecture			•	•	•	•	•
	● PTT0072	WAVE Gateway Overview & Architecture			•	•	•	•	•
	● PTT0073	WAVE System Alarms Dashboard			•	•	•	•	•
	● PTT0074	WAVE System Field Utilities Tool			•	•	•	•	•
	● PTT0075	Critical Connect (Gateway) Portal for Interoperability with WAVE System			•	•	•	•	•

● Live training  
 ● Self-paced training

# FOUNDATIONAL COURSES

<b>RF FUNDAMENTALS</b> (TGTC08)	<b>19</b>
<b>BASIC RF</b> (RDS0002)	<b>19</b>
<b>BASIC RADIO</b> (RDS0004)	<b>19</b>
<b>ADVANCED RF: INTRODUCTION</b> (RDS2012)	<b>20</b>
<b>ADVANCED RF: PERFORMANCE</b> (RDS2013)	<b>20</b>
<b>ADVANCED RF: TROUBLESHOOTING</b> (RDS2014)	<b>20</b>
<b>COMMUNICATION SYSTEMS CONCEPTS</b> (NST021)	<b>21</b>
<b>BASIC NETWORKING</b> (RDS0003)	<b>21</b>
<b>NETWORKING ESSENTIALS IN MOTOROLA SOLUTIONS COMMUNICATIONS EQUIPMENT</b> (NST762)	<b>21</b>
<b>DIMETRA™ APPLIED NETWORKING</b> (DMT1108)	<b>22</b>
<b>ASTRO® 25 SYSTEM APPLIED NETWORKING</b> (AST4104)	<b>22</b>
<b>SERVER &amp; VIRTUALIZATION FOUNDATION</b> (SRV1010)	<b>22</b>
<b>BRIDGING THE KNOWLEDGE GAP FOR ASTRO® 25 – TECHNICIAN</b> (ACT100E)	<b>23</b>
<b>BRIDGING THE KNOWLEDGE GAP FOR ASTRO® 25 – SYSTEM ADMINISTRATOR</b> (ACT101E)	<b>23</b>





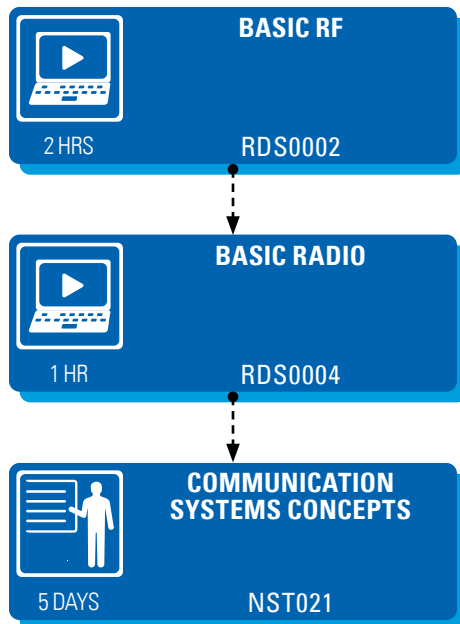
## RADIO SOLUTIONS FOUNDATIONAL

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## RF FUNDAMENTALS

### RF BASICS / RADIO SYSTEM BASICS

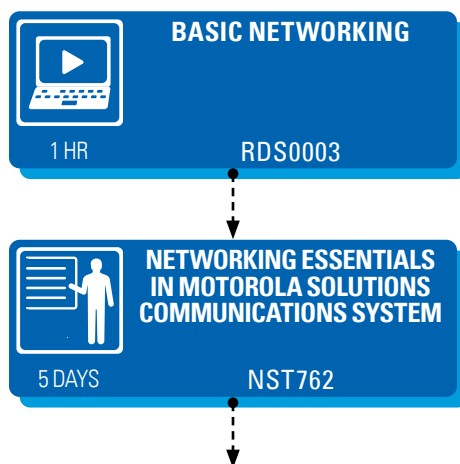


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## IP/NETWORKING FUNDAMENTALS



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



### DIMETRA™ SYSTEM



**DIMETRA™ APPLIED NETWORKING**

5 DAYS DMT1108

### ASTRO® 25 SYSTEM



**ASTRO® 25 SYSTEMS APPLIED NETWORKING**

5 DAYS AST4104

### CURRICULUM COMPLETE

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



[CLICK HERE TO GO TO  
PAGE 24 FOR MORE  
DETAILS ON DIMETRA™](#)

[CLICK HERE TO GO TO  
PAGE 54 FOR MORE  
DETAILS ON ASTRO® 25](#)

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**RF FUNDAMENTALS**

5 DAYS

TGTC08

### COURSE OVERVIEW

This course delivers a basic understanding of RF.

### TARGET AUDIENCE

Technical staff that requires to acquire the fundamentals of RF.

### COURSE OBJECTIVES

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

- Describe electrical principles including Direct and Alternating current.
- Describe the basic structure of radio transmitters and receivers.
- Describe transmission lines.
- Describe the construction and operation of antennas.
- Describe RF propagation.
- Describe digital communication techniques

### REQUISITE KNOWLEDGE

None

### PREREQUISITES

None



**BASIC RF**

2 HRS

RDS0002

### 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

### 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 analogue 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



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**ADVANCED RF:  
INTRODUCTION**  
1 HR  
RDS2012

### 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(s) or equivalent experience:

- RDS0002 - Basic RF

### PREREQUISITES

None

**ADVANCED RF:  
PERFORMANCE**  
1 HR  
RDS2013

### 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

### 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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**COMMUNICATION  
SYSTEMS CONCEPTS**

5 DAYS

NST021

### COURSE OVERVIEW

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

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

### TARGET AUDIENCE

Individuals who are interested in the operational concepts 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



**BASIC NETWORKING**

1 HR

RDS0003

### 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



**NETWORKING ESSENTIALS  
IN MOTOROLA SOLUTIONS  
COMMUNICATIONS  
EQUIPMENT**

5 DAYS

NST762

### 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

Completion of the following courses or equivalent experience is highly recommended:

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

### PREREQUISITES

None

## RADIO SOLUTIONS FOUNDATIONAL

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**DIMETRA™ APPLIED NETWORKING**  
5 DAYS  
DMT1108

### COURSE OVERVIEW

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

### TARGET AUDIENCE

Technical System Managers and Network Technicians

### COURSE OBJECTIVES

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

- Define basic IP network hardware and protocols
- Analyse basic IP network connectivity and addressing
- Define DIMETRA™ Core VLAN/VRRP Operation
- Define DIMETRA™ Network Transport Subsystem
- Review DIMETRA™ Network Management applications
- Define DIMETRA™ Information Assurance
- Define DIMETRA™ Data Subsystem

### REQUISITE KNOWLEDGE

None

### PREREQUISITES

None

**ASTRO® 25 SYSTEMS APPLIED NETWORKING**  
5 DAYS  
AST4104

### 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 familiarisation 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

**SERVER & VISUALIZATION FOUNDATION**  
4 DAYS  
SRV1010

### COURSE OVERVIEW

This course will prepare students to install a server and understand the basics of supported virtualization application. The course covers BIOS configuration, installing supported virtualization applications, installing a client and server OS and verifying operations. The course includes hands on lab exercises.

### TARGET AUDIENCE

Technical Support Staff who need to understand virtual servers or install servers that utilize Virtual Machines (VM).

### COURSE OBJECTIVES

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

- Configure BIOS parameters for server hardware
- Demonstrate basic knowledge of supported virtualization application, including capacity
- Install supported virtualization application on a server platform
- Configure supported virtualization application parameters of supported server hardware
- Install a Client OS and Server OS in a virtual environment
- Verify Server/Client operations in a virtual environment

### REQUISITE KNOWLEDGE

- Comp-TIA Server+ Certification or equivalent

### PREREQUISITES

None



## RADIO SOLUTIONS FOUNDATIONAL

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

4 HRS      ACT100E

### COURSE OVERVIEW

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

### TARGET AUDIENCE

This is targeted for System Administrators 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

### COURSE OVERVIEW

This five-module course is designed to bring Administrators from different technical backgrounds and experience levels to a common starting point for the ASTRO 25 curriculum. This course provides 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

This is targeted for System Administrators 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

By the end of the 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 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.
- Explain the Trunked Radio System Concepts.

### REQUISITE KNOWLEDGE

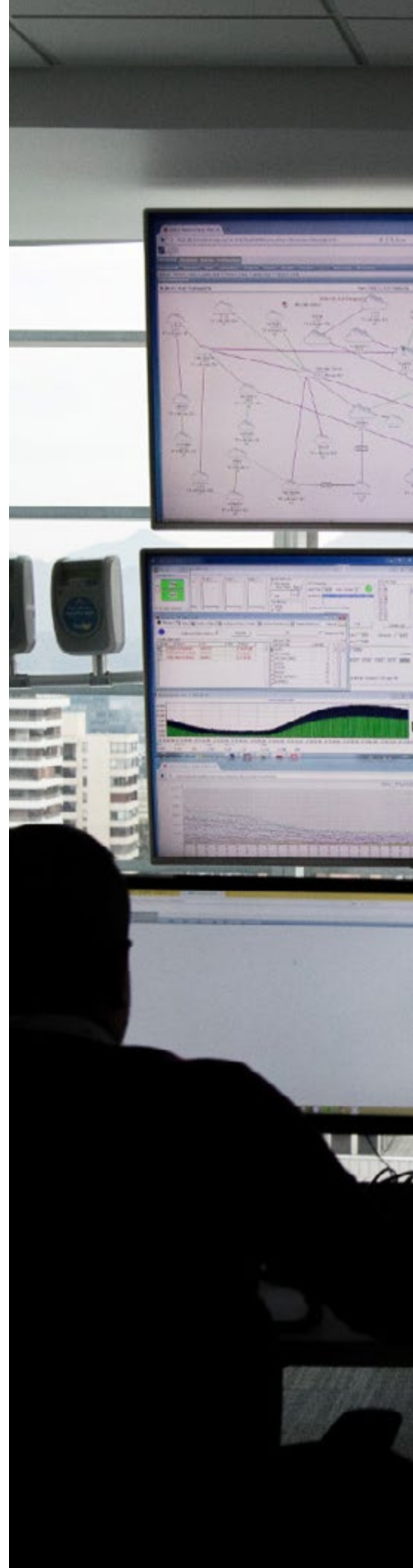
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### PREREQUISITES

None

# DIMETRA™ SYSTEMS COURSES

<b>DIMETRA™ X CORE D9.2 SYSTEM OVERVIEW (DMT9200)</b>	<b>30</b>
<b>INTRODUCTION TO TRUNKED RADIO CONCEPTS (DMT0057)</b>	<b>30</b>
<b>DIMETRA™ X CORE D9.2 CONFIGURATION AND ADMINISTRATION WORKSHOP (DMT9201)</b>	<b>30</b>
<b>DIMETRA™ X CORE D9.2 FAULT MANAGEMENT WORKSHOP (DMT9202)</b>	<b>31</b>
<b>DIMETRA™ X CORE D9.2 PERFORMANCE MANAGEMENT WORKSHOP (DMT9203)</b>	<b>31</b>
<b>DIMETRA™ X CORE D9.2 TROUBLESHOOTING AND MAINTENANCE WORKSHOP (DMT9204)</b>	<b>31</b>
<b>DIMETRA™ X CORE D9.2 AIR INTERFACE ENCRYPTION, AUTHENTICATION, AND PROVISIONING (DMT9205)</b>	<b>32</b>
<b>DIMETRA™ X CORE D9.2 SECURE COMMUNICATIONS WORKSHOP (DMT2094)</b>	<b>32</b>
<b>DIMETRA X CORE EDGE INSTALLATION, CONFIGURATION, AND ADMINISTRATION WORKSHOP (DMT9216 )</b>	<b>32</b>
<b>DIMETRA™ EXPRESS INSTALLATION, CONFIGURATION AND MAINTENANCE WORKSHOP (DMT0036)</b>	<b>33</b>

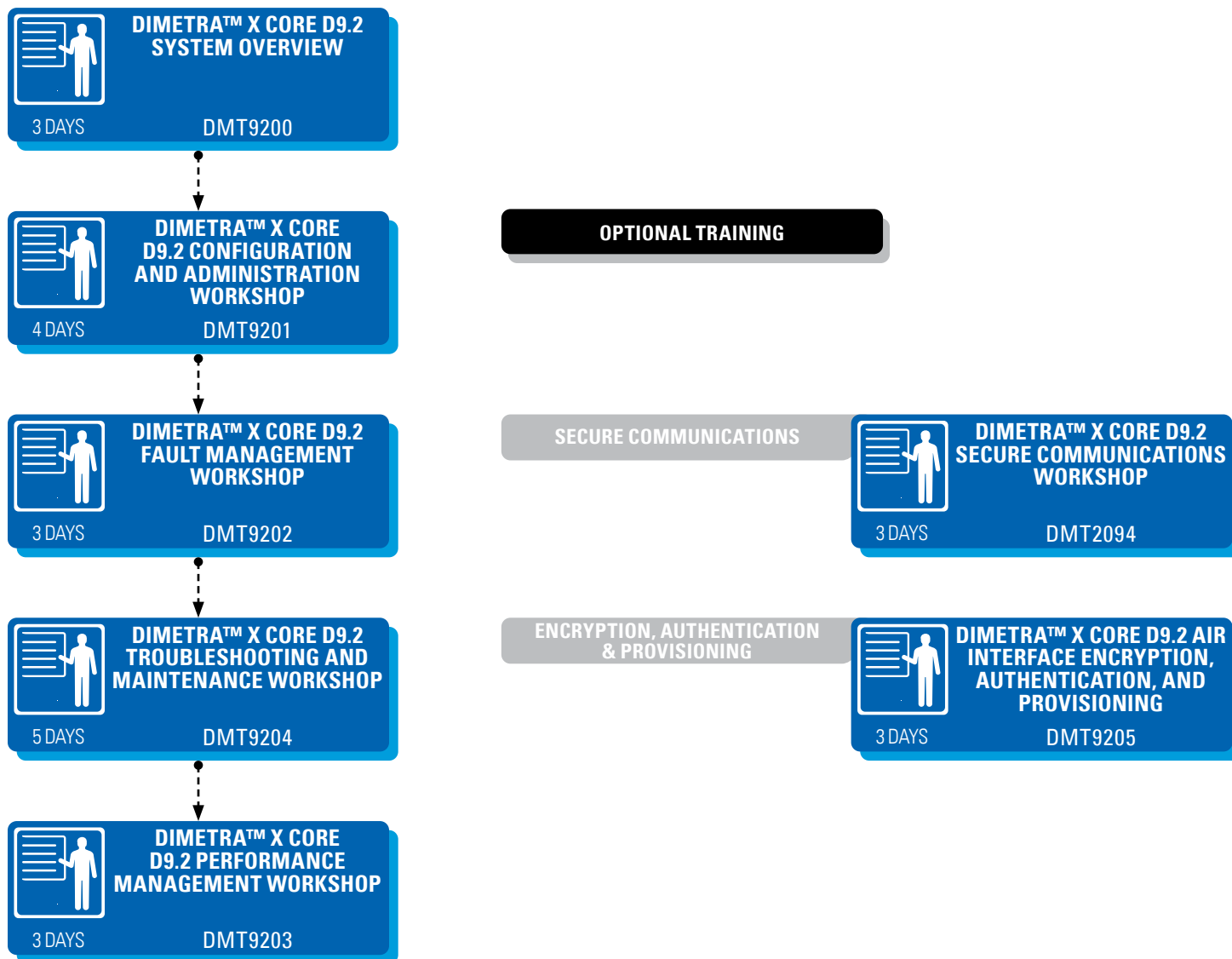


## RADIO SOLUTIONS DIMETRA SYSTEMS

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### DIMETRA™ MSO SYSTEM ENGINEER



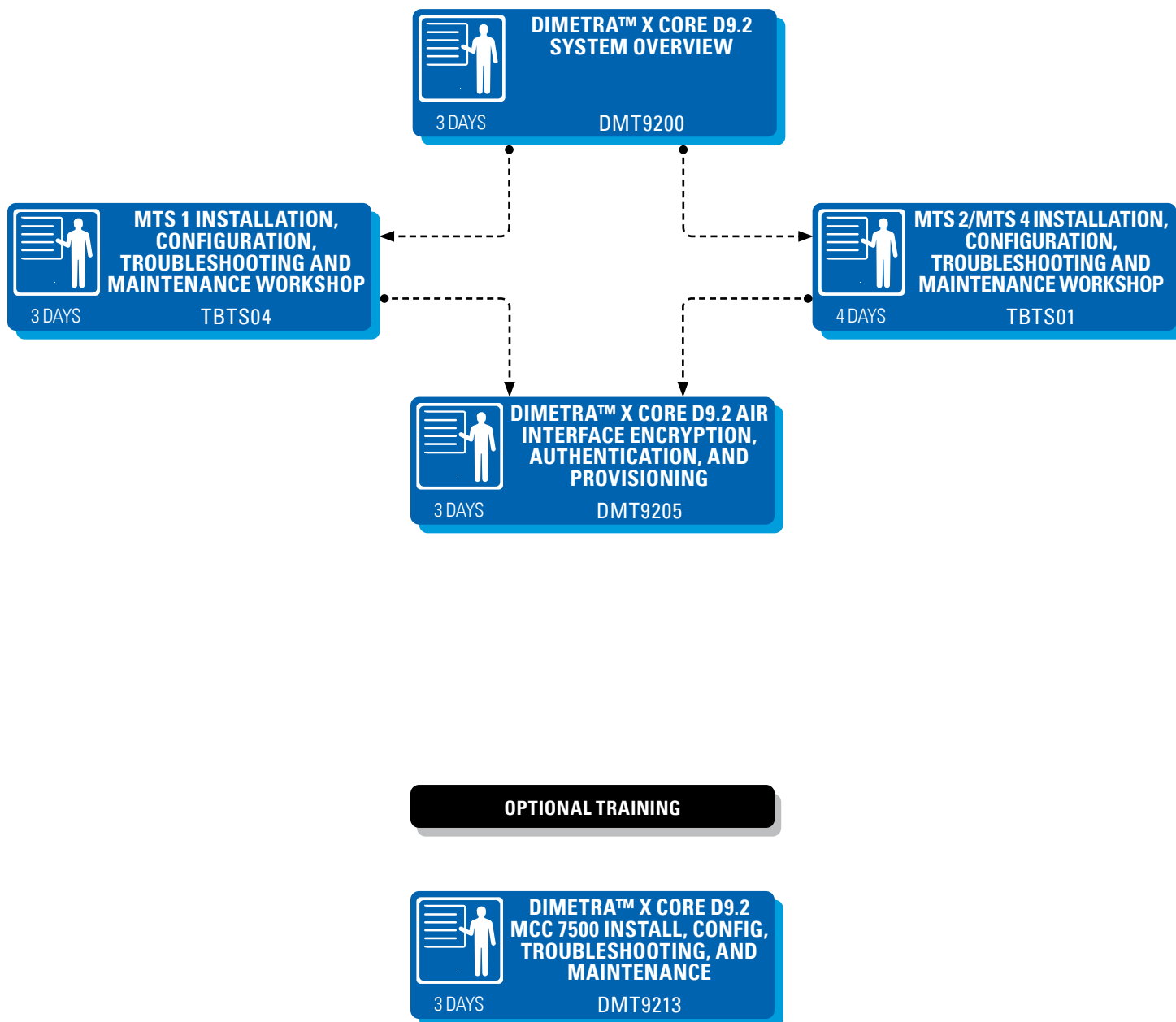


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### DIMETRA™ FIELD ENGINEER

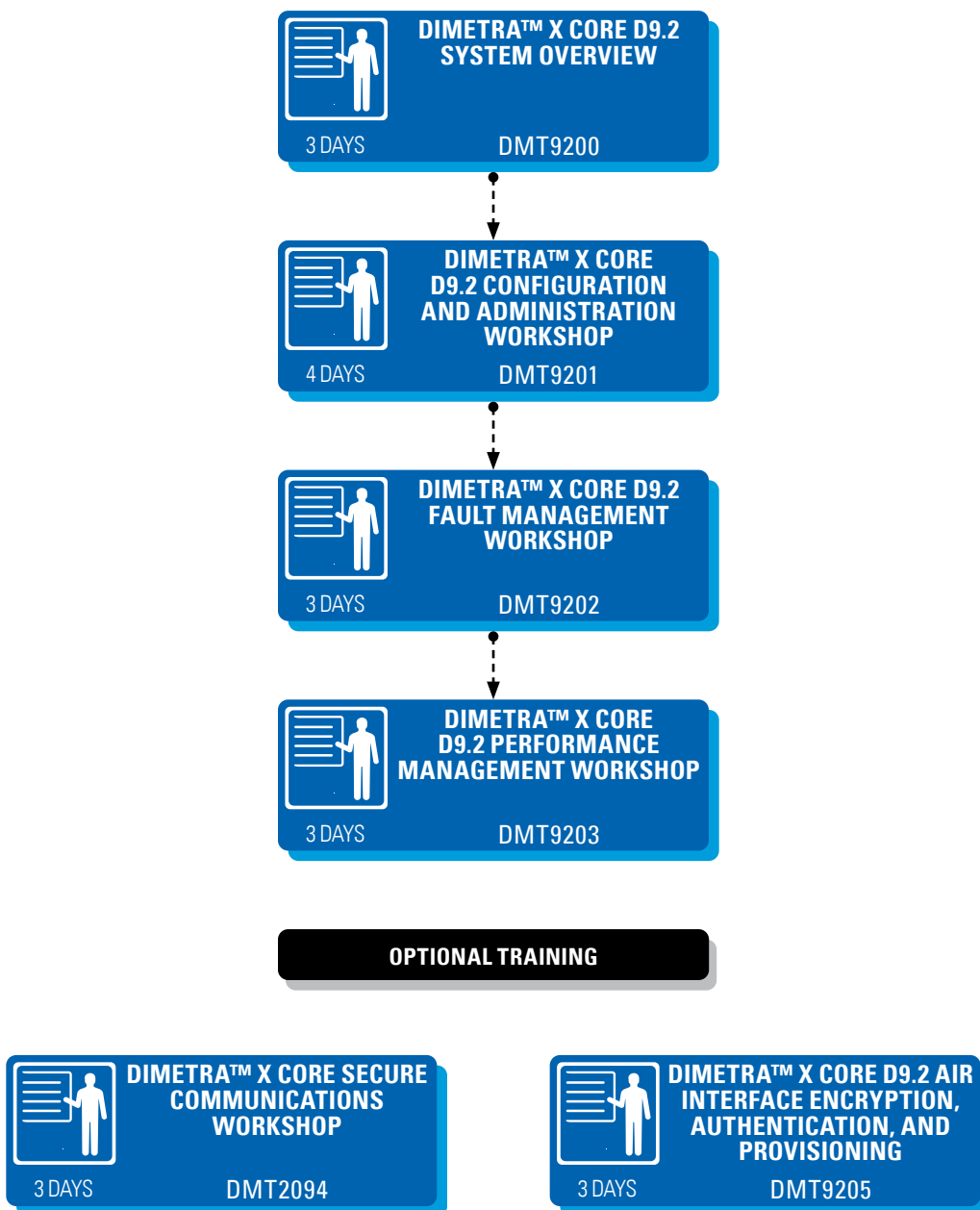


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### DIMETRA™ SYSTEM ADMINISTRATOR

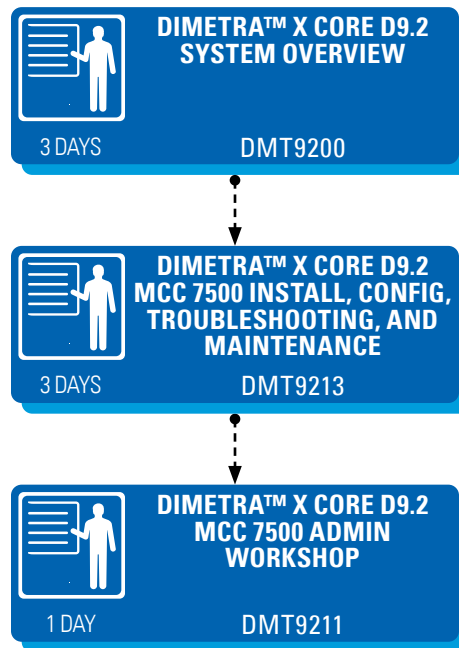


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### DIMETRA™ DISPATCH ADMINISTRATOR



#### OPTIONAL TRAINING



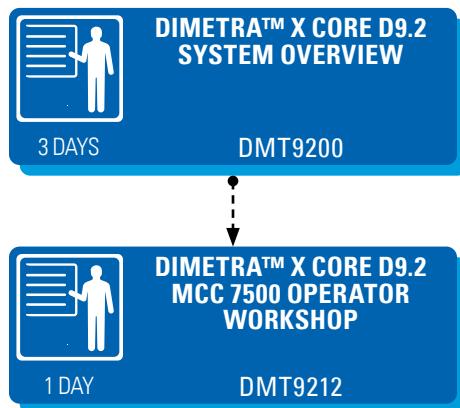


## RADIO SOLUTIONS **DIMETRA SYSTEMS**

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### **DIMETRA™ DISPATCH OPERATOR**



## RADIO SOLUTIONS DIMETRA SYSTEMS

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**DIMETRA™ X CORE D9.2  
SYSTEM OVERVIEW**

3 DAYS

DMT9200

### COURSE OVERVIEW

This course provides an overview of the features and functions of a DIMETRA™ X Core D9.2 system. The course includes descriptions of the various call types and system hardware functionality. Applications overview describes the purpose of the software used to manage and administer the system.

### TARGET AUDIENCE

All staff who require an overview of the DIMETRA™ X Core D9.2 system functionality and features.

### COURSE OBJECTIVES

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

- Describe DIMETRA X Core benefits.
- Describe DIMETRA X Core D9.2 features and their benefits.
- Describe DIMETRA X Core D9.2 Single Zone system components and their functionality.
- Describe the purpose and function of DIMETRA X Core D9.2 Network Management applications.
- Describe DIMETRA X Core D9.2 Multi-Zone system components and their functionality.
- Describe DIMETRA X Core D9.2 Inter-System Interface functionality.
- Describe how different types of calls are processed through a DIMETRA X Core D9.2 system.

### REQUISITE KNOWLEDGE

None

### PREREQUISITES

None



**INTRODUCTION TO  
TRUNKED RADIO CONCEPTS**

0.5 HRS

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  
D9.2 CONFIGURATION  
AND ADMINISTRATION  
WORKSHOP**

4 DAYS

DMT9201

### COURSE OVERVIEW

During this workshop, delegates will use configuration and administration applications to manage a DIMETRA™ X Core D9.2 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 configuration and administration of a DIMETRA X Core D9.2 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:

- DMT9200 DIMETRA™ X Core D9.2 System Overview

### PREREQUISITES

None

## RADIO SOLUTIONS DIMETRA SYSTEMS

For information on prerequisites and to register for courses visit the LXP at:  
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**DIMETRA™ X CORE D9.2  
FAULT MANAGEMENT  
WORKSHOP**

3 DAYS

DMT9202

### COURSE OVERVIEW

The workshop will allow delegates to use applications to identify faults on systems components using a live DIMETRA X Core D9.2 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 D9.2 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:

- DMT9200 DIMETRA™ X Core D9.2 System Overview

### PREREQUISITES

None

**DIMETRA™ X CORE  
D9.2 PERFORMANCE  
MANAGEMENT WORKSHOP**

3 DAYS

DMT9203

### COURSE OVERVIEW

During this workshop, delegates will use applications on a live DIMETRA™ X Core D9.2 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 D9.2 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:

- DMT9200 DIMETRA™ X Core D9.2 System Overview

### PREREQUISITES

None

**DIMETRA™ X CORE D9.2  
TROUBLESHOOTING AND  
MAINTENANCE WORKSHOP**

5 DAYS

DMT9204

### COURSE OVERVIEW

During this workshop, delegates will troubleshoot and maintain a live DIMETRA™ X Core D9.2 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 D9.2 system.

### COURSE OBJECTIVES

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

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

### REQUISITE KNOWLEDGE

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

- DMT9200 DIMETRA X Core D9.2 System Overview
- DMT9202 DIMETRA X Core D9.2 Fault Management Workshop

### PREREQUISITES

None

## RADIO SOLUTIONS DIMETRA SYSTEMS

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**DIMETRA™ X CORE D9.2 AIR  
INTERFACE ENCRYPTION,  
AUTHENTICATION, AND  
PROVISIONING**

3 DAYS

DMT9205



**DIMETRA™ X CORE  
D9.2 CORE SECURE  
COMMUNICATIONS  
WORKSHOP**

3 DAYS

DMT2094



**DIMETRA X CORE  
EDGE INSTALLATION,  
CONFIGURATION, AND  
ADMINISTRATION WORKSHOP**

2 DAYS

DMT9216

### COURSE OVERVIEW

During this workshop, students will perform key management tasks on a live DIMETRA™ X Core D9.2 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 D9.2 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 hardware components used in the Encryption and Authentication Process.
- Describe TETRA radio authentication in the DIMETRA X Core system.
- Describe the TETRA security classes.
- Describe the DIMETRA X Core encryption keys.
- Describe distribution, storage, key updates and key management of Air Interface Encryption and Authentication keys.
- Perform Encryption Key management procedures using the Enhanced AuC, PrC, and KVL system components.
- Describe operational principles of the GCK feature.
- Perform provisioning of the TETRA radios for Authentication and Encryption.
- Perform EAuC administration and management tasks.
- Conduct EAuC backup and restore.

### REQUISITE KNOWLEDGE

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

- DMT9200 DIMETRA X Core D9.2 System Overview

### PREREQUISITES

None

### 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:

- DMT9200 DIMETRA X Core D9.2 System Overview

### PREREQUISITES

None

### COURSE OVERVIEW

In this course, you will learn about the DIMETRA™ X Core Edge solution and how it operates within a DIMETRA X Core system. You will also carry out installation and configuration procedures based on real business scenarios.

### TARGET AUDIENCE

Technical support staff who needs to install and configure the DIMETRA X Core Edge solution.

### COURSE OBJECTIVES

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

- Describe the DIMETRA X Core Edge solution.
- List requirements, capacity, and limitations the DIMETRA X Core Edge solution.
- Install and configure DIMETRA X Core Edge to operate on your DIMETRA system.

### REQUISITE KNOWLEDGE

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

- DMT9200 DIMETRA X Core D9.2 System Overview.

### PREREQUISITES

None

## RADIO SOLUTIONS DIMETRA SYSTEMS

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### 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.
- Set up a DIMETRA Express system.
- Set up 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 administration and management tasks.

### REQUISITE KNOWLEDGE

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

### PREREQUISITES

None



# CONSOLE COURSES

<b>DIMETRA™ X CORE D9.2 MCC 7500 ADMIN WORKSHOP</b> (DMT9211)	<b>35</b>
<b>DIMETRA™ X CORE D9.2 MCC 7500 OPERATOR WORKSHOP</b> (DMT9212)	<b>35</b>
<b>DIMETRA™ X CORE D9.2 MCC 7500 INSTALL, CONFIG, TROUBLESHOOTING, AND MAINTENANCE</b> (DMT9213)	<b>35</b>
<b>DCX9000 FOR DIMETRA EXPRESS WORKSHOP</b> (DMT0072)	<b>36</b>
<b>MCD 5000 TECHNICAL WORKSHOP</b> (RDS1022)	<b>36</b>
<b>MCC 7000 SERIES CONSOLES FOR K-CORE</b> (AST2011)	<b>36</b>
<b>MCC 7000 SERIES DISPATCH CONSOLES OVERVIEW</b> (AST2037)	<b>37</b>
<b>MCC 7000 SERIES DISPATCH CONSOLES WORKSHOP</b> (CON012)	<b>37</b>

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



## RADIO SOLUTIONS CONSOLES

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**DIMETRA™ X CORE D9.2  
MCC 7500 ADMIN  
WORKSHOP**

1 DAY

DMT9211

### COURSE OVERVIEW

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

### TARGET AUDIENCE

System Administrators for Dispatch Console Operators.

### COURSE OBJECTIVES

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

- Identify the hardware components that make up the dispatcher position
- Describe the Purpose of the Elite Admin application
- Identify elements that make up the menu and toolbar structure within the Elite Admin software
- Perform Elite Admin Configurations

### REQUISITE KNOWLEDGE

Completion of the following course or equivalent experience:

- DMT9212 DIMETRA X Core D9.2 MCC 7500 Operator Workshop

### PREREQUISITES

None



**DIMETRA™ X CORE D9.2  
MCC 7500 OPERATOR  
WORKSHOP**

1 DAY

DMT9212

### COURSE OVERVIEW

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

### TARGET AUDIENCE

Dispatch Console Operators.

### COURSE OBJECTIVES

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

- Identify the hardware components that make up the dispatcher position
- Describe the Purpose of the Elite Dispatch application
- Identify elements that make up the menu and toolbar structure within the Elite Dispatch software
- Perform dispatcher operations:
  - Communicate with radios: transmit and receive calls within group and individual communications categories
  - Perform advanced signaling features i.e. Quicklists, Emergency call and alarms, Ambience Listening calls
  - Perform basic procedures within screen configurations i.e. expanding and compressing resources, adjusting volume
  - Perform basic procedures within resource groups i.e. multiselect or patch group, APB and patch transmit

### REQUISITE KNOWLEDGE

None

### PREREQUISITES

None



**DIMETRA™ X CORE D9.2  
MCC 7500 INSTALL, CONFIG,  
TROUBLESHOOTING, AND  
MAINTENANCE**

3 DAYS

DMT9213

### COURSE OVERVIEW

During this workshop, students will perform installation, configuration, and troubleshooting procedures relating to the MCC 7500C dispatch console on a live DIMETRA™ X Core D9.2 system.

### TARGET AUDIENCE

Control Room Managers, System Engineers, and Network Administrators responsible for the installation, configuration, and maintenance of control rooms containing MCC 7500C dispatch consoles in a DIMETRA X Core D9.2 system.

### COURSE OBJECTIVES

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

- Install and configure the hardware and software components of the MCC 7500C Dispatch Console subsystem.
- Troubleshoot installation and configuration problems for the MCC 7500C Dispatch Console.

### REQUISITE KNOWLEDGE

Completion of the following course or equivalent experience:

- DMT9200 DIMETRA X Core D9.2 System Overview

### PREREQUISITES

None

## RADIO SOLUTIONS CONSOLES

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**DCX9000 FOR  
DIMETRA EXPRESS  
WORKSHOP**

2 DAYS

DMT0072

### 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

At the end of this course, you should 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



**MCD 5000 TECHNICAL  
WORKSHOP**

3 DAYS

RDS1022

### COURSE OVERVIEW

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

### TARGET AUDIENCE

MCD 5000 Technicians

### COURSE OBJECTIVES

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

- Identify the MCD 5000 System components and functions.
- Install MCD 5000 Deskset.
- Install Radio Gateway Units.
- Configure MCD 5000 subcomponents.
- Troubleshoot the MCD 5000 System to Motorola Solutions recommended service levels.

### REQUISITE KNOWLEDGE

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

- NST021 Communication Systems Concepts

### PREREQUISITES

None



**MCC 7000 SERIES  
CONSOLES FOR K-CORE**

4 DAYS

AST2011

### COURSE OVERVIEW

This course provides a detailed discussion of console hardware and hands-on activities with the installation and configuration of the MCC 7000-Series console K-Core configurations. This course familiarizes technicians in:

- Troubleshooting and repair functions.
- Hardware and software applications for the MCC 7000 Series console.
- Configuration of the MCC 7000 Series console using the K Core Configuration Manager.
- Operating procedures of the MCC 7000 Series Console.

### TARGET AUDIENCE

System Operators, Administrators, and Technicians

### COURSE OBJECTIVES

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

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

### REQUISITE KNOWLEDGE

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

- NST762 Networking Essentials in Motorola Communication Systems
- ACT100E or ACT101E Bridging the Knowledge Gap
- AST1038 ASTRO® 25 IV&D System Overview
- AST4410 ASTRO® 25 IV&D Conventional Core with Configuration Manager Workshop

### PREREQUISITES

None

## RADIO SOLUTIONS CONSOLES

For information on prerequisites and to register for courses visit the LXP at:  
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**MCC 7000 SERIES DISPATCH CONSOLES OVERVIEW**

1 DAYAST2037

### COURSE OVERVIEW

This course provides an overview of the MCC 7000 series of Dispatch Consoles. It includes a description of the features, illustrations of subsystem architecture options, descriptions of subsystem components, and illustrations of signal flow and call processing.

### TARGET AUDIENCE

System Administrators, Console Technicians.

### COURSE OBJECTIVES

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

- Describe the features of MCC 7000 series of Dispatch Consoles.
- Explain the various system architectures for Dispatch Console subsystems.
- Describe system components in a Dispatch Console subsystem.
- Describe the steps in the signal flow of call processing from a Dispatch Console

### REQUISITE KNOWLEDGE

Completion of the following courses or equivalent experience:

- ACT100E or ACT101E Bridging the Knowledge Gap
- NST762 Networking Essentials in Motorola Communications Equipment

### PREREQUISITES

None

**MCC 7000 SERIES DISPATCH CONSOLES WORKSHOP**

5 DAYSCON012

### 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. The focus is on a detailed discussion of console hardware and hands-on activities with the installation and configuration of the MCC 7500(e) Dispatch Consoles.

### TARGET AUDIENCE

System Administrators, Console Technicians

### COURSE OBJECTIVES

After completing this 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.

### REQUISITE KNOWLEDGE

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

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

### PREREQUISITES

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

# BASE STATIONS COURSES

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

**39**

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

**39**





## RADIO SOLUTIONS BASE STATIONS

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**MTS 2/MTS 4 INSTALLATION,  
CONFIGURATION,  
TROUBLESHOOTING AND  
MAINTENANCE WORKSHOP**

4 DAYS TBTS01

**MTS 1 INSTALLATION,  
CONFIGURATION,  
TROUBLESHOOTING AND  
MAINTENANCE**

3 DAYS TBTS04

### 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 and configuring and maintaining MTS 1 equipment.

### COURSE OBJECTIVES

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

- Describe the function of the MTS 1 within a DIMETRA™ system.
- Identify and describe the function of MTS 1 components.
- Describe MTS 1 installation procedures.
- Execute HMI 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

# SUBSCRIBER COURSES

<b>TETRA SUBSCRIBER END-USER OPERATOR COURSES</b>	<b>41</b>
<b>TETRA TERMINAL PROGRAMMING COURSE (CPS PLUS) (TTER01PLUS)</b>	<b>42</b>
<b>TETRA SUBSCRIBER OPERATOR, PROGRAMMING AND MAINTENANCE (DMT1107)</b>	<b>42</b>
<b>MOTOTRBO™ RADIO MANAGEMENT 2.0 CONFIGURATION MODE (PCT1032)</b>	<b>42</b>
<b>MOTOTRBO CPS 2.0 PROGRAMMING (PCT0115)</b>	<b>43</b>
<b>MOTOTRBO™ RADIO MANAGEMENT 2.0 WORKSHOP (PCT2022)</b>	<b>43</b>
<b>MOTOTRBO™ SUBSCRIBER AND REPEATER TECHNICAL SERVICE ACADEMY (TBO300)</b>	<b>43</b>
<b>MOTOTRBO ION OVERVIEW (PCT0129)</b>	<b>44</b>
<b>MOTOTRBO ION MYVIEW AND RADIOCENTRAL OVERVIEW (PCT0131)</b>	<b>44</b>
<b>MOTOTRBO ION FEATURES AND SERVICES (PCT0161)</b>	<b>44</b>
<b>RADIOCENTRAL MOTOTRBO ION WORKSHOP (PCT0132)</b>	<b>45</b>
<b>APX™ RADIO MANAGEMENT OVERVIEW (AST2003)</b>	<b>45</b>
<b>APX™ RADIO MANAGEMENT WORKSHOP (RDS2017)</b>	<b>45</b>
<b>APX™ CPS RADIO PROGRAMMING AND TEMPLATE BUILDING (APX7001)</b>	<b>46</b>
<b>APX™ TECHNICAL SUBSCRIBER ACADEMY (APX010)</b>	<b>46</b>



## RADIO SOLUTIONS SUBSCRIBERS

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## 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



**MTM5000 SERIES  
END-USER OPERATOR**

1 DAY DMT1070



**MTP6000 SERIES  
END-USER OPERATOR**

1 DAY DMT1068



**ST7000 END-USER  
OPERATOR**

1 DAY DMT1083



**MTP8000EX SERIES  
END-USER OPERATOR**

1 DAY DMT1069



**ST7500 END-USER  
OPERATOR**

1 DAY DMT0033



**MXP600 SERIES  
END-USER OPERATOR**

1 DAY DMT6003

### 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**

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



**TETRA TERMINAL  
PROGRAMMING (CPS PLUS)**

2 DAYS

**TTER01PLUS**

### 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

By the end of 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



**TETRA SUBSCRIBER  
OPERATOR, PROGRAMMING  
AND MAINTENANCE**

1 DAY

**DMT1107**

### 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 this course, the student will be able to:

- Locate and use all MTP6650 and MTM5400 controls.
- Execute trunked and direct mode calls using the MTP6650 and MTM5400 radios.
- Carry out radio troubleshooting using built-in diagnostics.
- Describe the function of Motorola CPS Plus software.
- Create a user codeplug and program the codeplug into an MTP6650 and MTM5400 radio.
- Carry out software troubleshooting using CPS Plus.
- Carry out configuration for collaborative devices.

### REQUISITE KNOWLEDGE

None

### PREREQUISITES

None



**MOTOTRBO™ RADIO  
MANAGEMENT 2.0  
CONFIGURATION MODE**

1 HR

**PCT1032**

### 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.

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



### MOTOTRBO CPS 2.0 PROGRAMMING

1 HR

PCT0115

#### COURSE OVERVIEW

This course is an introduction to MOTOTRBO Customer Programming Software (CPS) 2.0. You will learn how to install and use CPS 2.0 to program your equipment.

#### TARGET AUDIENCE

Communication System Technicians, Technical Support Personnel, Service Technicians, Radio Programmers.

#### COURSE OBJECTIVES

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

- Explain the purpose of MOTOTRBO CPS 2.0.
- Successfully complete a read job.
- Update the settings for a codeplug.
- Successfully complete a write job.
- Demonstrate a general awareness for the common processes managed using MOTOTRBO CPS 2.0.

#### REQUISITE KNOWLEDGE

None

#### PREREQUISITES

None



### MOTOTRBO™ RADIO MANAGEMENT 2.0 WORKSHOP

2 DAYS

PCT2022

#### 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

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

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

#### REQUISITE KNOWLEDGE

- Networking Essentials or Network + Certification.
- A high-level working knowledge of IP networking.

#### PREREQUISITES

PCT1032 MOTOTRBO™ Radio Management 2.0 Configuration Mode



### MOTOTRBO™ SUBSCRIBER & REPEATER TECHNICAL SERVICE ACADEMY

4 DAYS

TBO300

#### COURSE OVERVIEW

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

#### 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

This training should only be attempted after you have had some experience or completed the following course:

- CEDMEL2000 MOTOTRBO™ System Introduction for Technicians

#### PREREQUISITES


None



## RADIO SOLUTIONS SUBSCRIBERS

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**MOTOTRBO ION  
OVERVIEW**  
1 HR  
PCT0129

### 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

**MOTOTRBO ION MYVIEW  
AND RADIOCENTRAL  
OVERVIEW**  
1 HR  
PCT0131

### 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

### 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

After completing this 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

## RADIO SOLUTIONS SUBSCRIBERS

For information on prerequisites and to register for courses visit the LXP at:  
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[training.apac@motorolasolutions.com](mailto:training.apac@motorolasolutions.com)

**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

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 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

**APX™ RADIO  
MANAGEMENT OVERVIEW**

1 HR

AST2003

### 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

**APX™ RADIO  
MANAGEMENT WORKSHOP**

3 DAYS

RDS2017

### COURSE OVERVIEW

Participants will learn the capabilities, features, and functions of the APX™ Radio Management Suite. In addition, the course will contain networking labs and Radio Management labs that will focus on installation, configuration, and operation using wired, Wi-Fi, 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 a deployed server environment.
- 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:

- APX7001APX™ CPS Programming and Template Building Overview

### PREREQUISITES

None

## RADIO SOLUTIONS SUBSCRIBERS

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**training.apac@motorolasolutions.com**

**APX™ TECHNICAL  
SUBSCRIBER ACADEMY**  
5 DAYS  
APX010

### 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, 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 those who would like to get familiar with the features, operation principles, and troubleshooting steps 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.
- Maintain and troubleshoot radios within the APX™ family of subscribers.

### REQUISITE KNOWLEDGE

Completion of the following courses or equivalent experience in radio communications:

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

### PREREQUISITES

None

**APX™ CPS RADIO  
PROGRAMMING AND  
TEMPLATE BUILDING**  
2 DAYS  
APX7001

### 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

After completing this 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

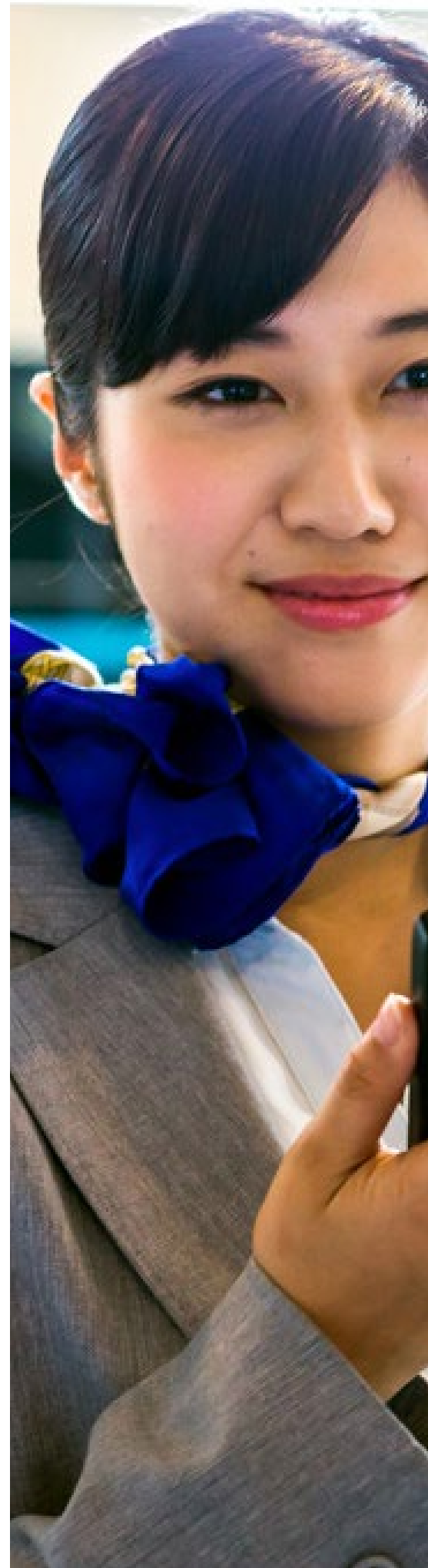
Knowledge of the basic features and options of two-way radios and the basic concepts of trunking.

### PREREQUISITES

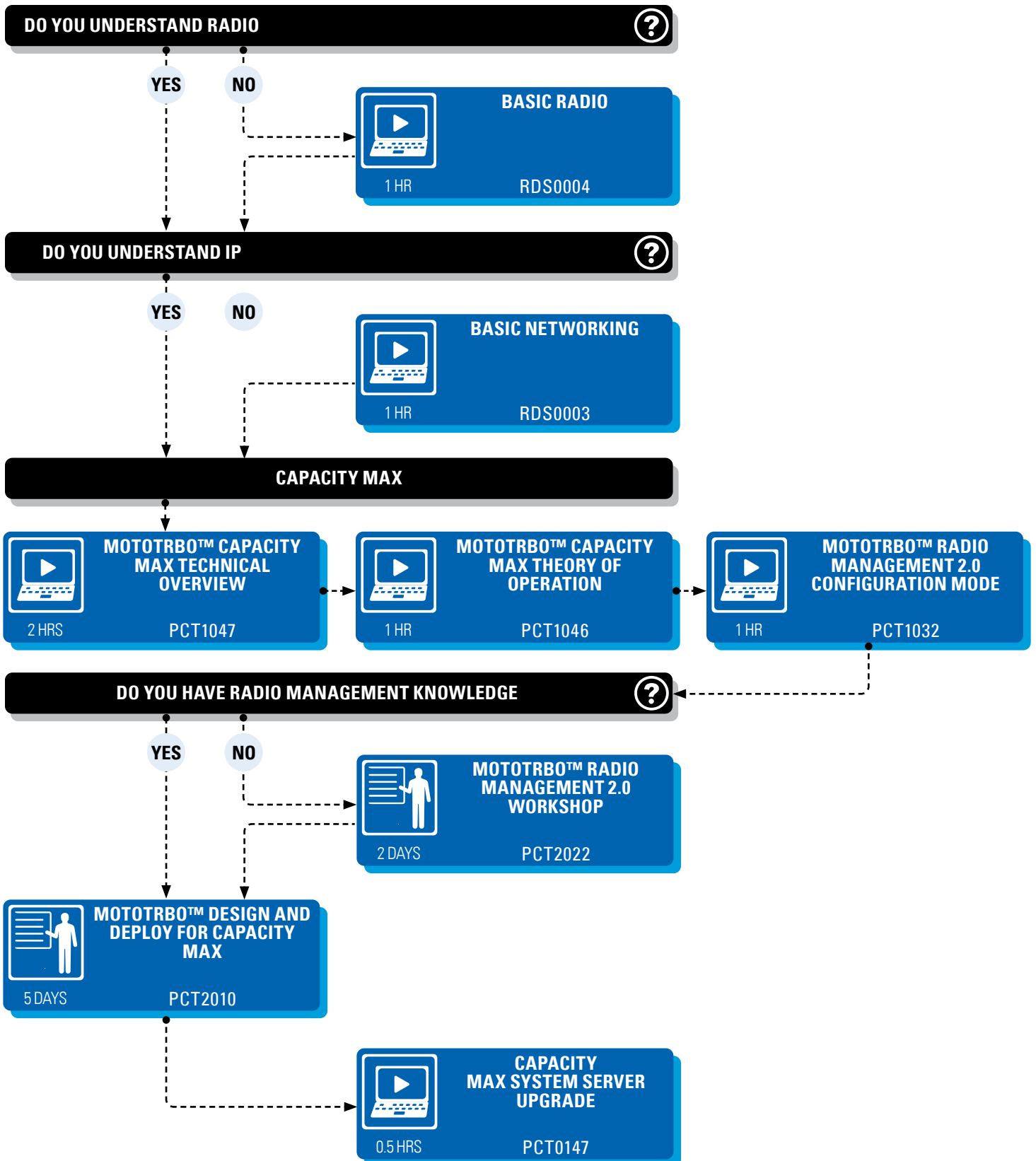
None

# MOTOTRBO™ COURSES

<b>MOTOTRBO™ SYSTEM INTRODUCTION FOR TECHNICIANS</b> (CEDMEL2000)	<b>50</b>
<b>MOTOTRBO™ CAPACITY MAX TECHNICAL OVERVIEW</b> (PCT1047)	<b>50</b>
<b>MOTOTRBO™ CAPACITY MAX THEORY OF OPERATION</b> (PCT1046)	<b>50</b>
<b>MOTOTRBO™ CAPACITY MAX DESIGN AND DEPLOY</b> (PCT2010)	<b>51</b>
<b>CAPACITY MAX SYSTEM SERVER UPGRADE</b> (PCT0147)	<b>51</b>
<b>MOTOTRBO™ IP SITE CONNECT AND CAPACITY PLUS TECHNICAL OVERVIEW</b> (PCT1066)	<b>51</b>
<b>MOTOTRBO™ IP SITE CONNECT AND CAPACITY PLUS THEORY OF OPERATIONS AND DESIGN</b> (PCT2023)	<b>52</b>
<b>MOTOTRBO™ IP SITE CONNECT AND CAPACITY PLUS SYSTEMS WORKSHOP</b> (PCT3014)	<b>52</b>
<b>TRBONET PLUS ESSENTIALS AND DEPLOYMENT</b> (PCT2006)	<b>52</b>
<b>TRBONET PLUS FOR CAPACITY MAX</b> (PCT3031)	<b>53</b>
<b>SMARTPTT PLUS ESSENTIALS AND DEPLOYMENT</b> (PCT2005)	<b>53</b>

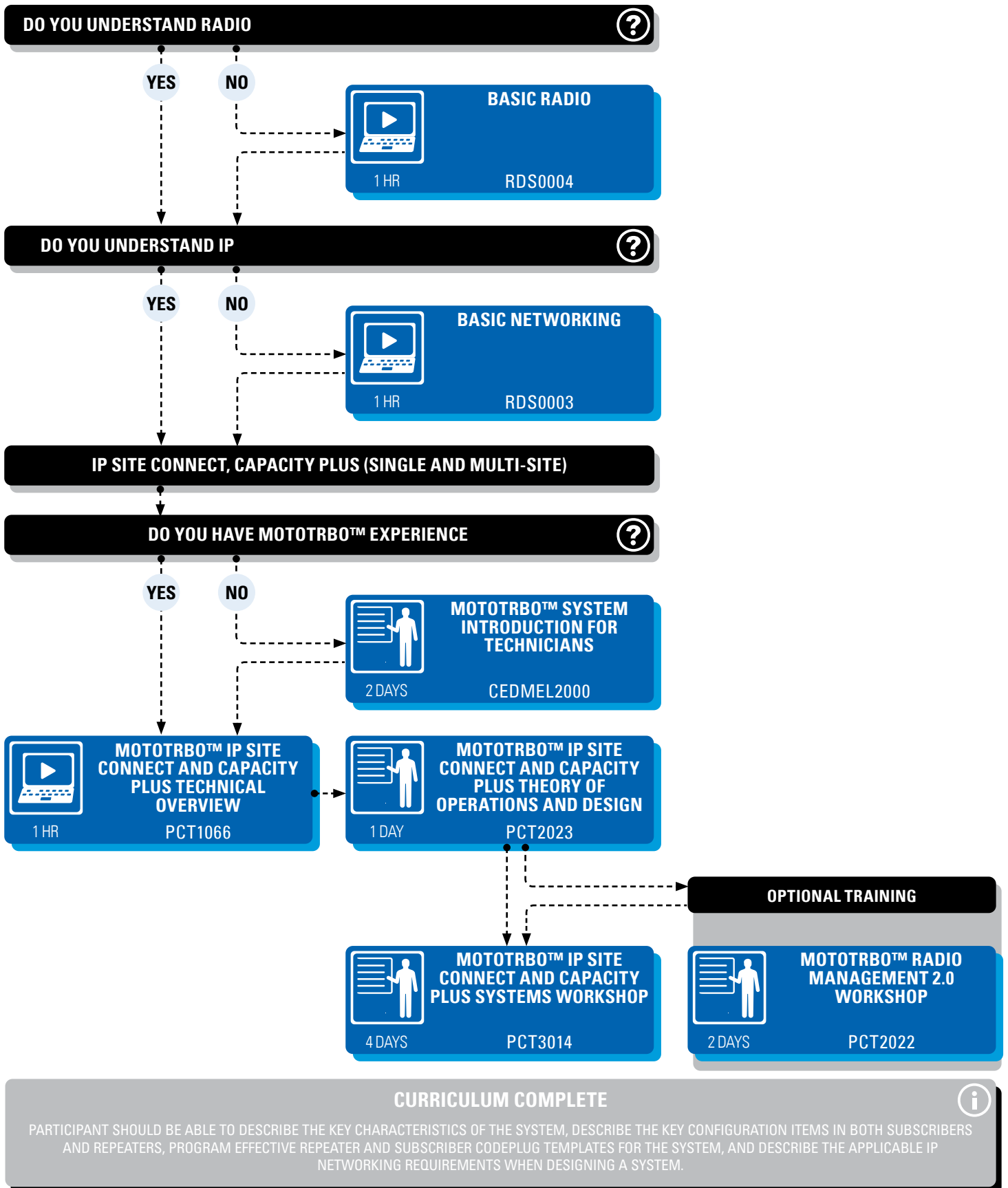


## MOTOTRBO™ TECHNICAL CAPACITY MAX TRAINING CURRICULUM





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





**MOTOTRBO™ SYSTEM  
INTRODUCTION FOR  
TECHNICIANS**

2 DAYS CEDMEL2000

## COURSE OVERVIEW

This is an introductory course to the MOTOTRBO™ system theory of operation, key components and topologies. MOTOTRBO™ System Introduction for Technicians provides all the basic information about common MOTOTRBO™ features and capabilities, along with system design and deploy principles.

## TARGET AUDIENCE

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

## COURSE OBJECTIVES

Upon completion of this course, the student 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.
- Select the right MOTOTRBO™ tool for your needs.
- Successfully purchase, register, and activate premium radio features.

## 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™ CAPACITY  
MAX TECHNICAL  
OVERVIEW**

2 HRS PCT1047

## 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

After completing this 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

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

- RDS0004 Basic Radio

## PREREQUISITES

None



**MOTOTRBO™ CAPACITY  
MAX THEORY OF  
OPERATION**

1 HR PCT1046

## 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, the student 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

## RADIO SOLUTIONS MOTOTRBO™

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

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[training.apac@motorolasolutions.com](mailto:training.apac@motorolasolutions.com)



**MOTOTRBO™ DESIGN AND  
DEPLOY FOR CAPACITY  
MAX**

5 DAYS

PCT2010

### COURSE OVERVIEW

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

### TARGET AUDIENCE

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

### COURSE OBJECTIVES

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

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

### REQUISITE KNOWLEDGE

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

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

### PREREQUISITES

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



**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, the student 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



**MOTOTRBO™ IP SITE  
CONNECT AND CAPACITY  
PLUS TECHNICAL  
OVERVIEW**

1 HR

PCT1066

### 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

After completing this 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:

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


### PREREQUISITES

None

## RADIO SOLUTIONS MOTOTRBO™

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

1 DAY


PCT2023



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

4 DAYS

PCT3014



**TRBONET PLUS  
ESSENTIALS AND  
DEPLOYMENT**

2 DAYS

PCT2006

### COURSE OVERVIEW

This course is designed to help you gain a solid foundation and understanding of the theory behind how an IPSC and Capacity Plus system functions. It describes the life cycle of a call, repeater arbitration and Motorola's proprietary Enhanced Channel Access (ECA) feature. In addition, you will learn about the different IPSC and Capacity Plus system design options, fleetmapping and the MOTOTRBO System Design Tool.

### 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.
- Describe the roaming process which helps to optimise User coverage.
- Describe Data capabilities.
- Understand the purpose and intent of voting repeaters and receivers.

### REQUISITE KNOWLEDGE

Completion of the following courses or equivalent experience:

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

### PREREQUISITES

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

### COURSE OVERVIEW

This course allows the participant to 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. Under the Instructor's guidance, participants will have the opportunity to practise designing and deploying the systems in a safe classroom environment. The course also provides information on the fleetmapping considerations together with exercises for each system type.

### TARGET AUDIENCE

Professionals responsible for deploying MOTOTRBO™ radio systems.

### COURSE OBJECTIVES

After completing this course, the student 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 courses 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

### COURSE OVERVIEW

The TRBOnet Plus Workshop is a highly interactive course, providing delegates with the information needed to install and configure a TRBOnet Plus system. Information covered includes MOTOTRBO™ control rooms, TRBOnet specifications, as well as installation and configuration procedures.

### TARGET AUDIENCE

System operations staff and field engineers involved in the installation and configuration of TRBOnet systems.

### COURSE OBJECTIVES

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


- Describe TRBOnet PLUS functionalities
- Describe TRBOnet PLUS solution architecture
- List the system requirements for deploying a TRBOnet PLUS solution
- Describe the system design for IP Site Connect, Capacity Plus, Linked Capacity Plus
- Describe the system design for Connect Plus
- Define the set-up, installation and configuration process of the TRBOnet PLUS Radio Server
- Define the set-up, installation and configuration process of TRBOnet PLUS Dispatcher console functionalities
- Configure MOTOTRBO™ radios and repeaters for TRBOnet PLUS
- Configure MOTOTRBO™ Network Interface Service and MOTOTRBO™ DDMS Administrative Client

### REQUISITE KNOWLEDGE

Completion of a DIMETRA™ System Overview course or equivalent experience is required.

### PREREQUISITES

None



**TRBONET PLUS FOR CAPACITY MAX**

2 DAYS

PCT3031

## COURSE OVERVIEW

During this course, you will cover all aspects of the TRBOnet Plus system. You will carry out configuration procedures for the system's main features and perform the main troubleshooting actions.

## TARGET AUDIENCE

System operations staff and field engineers involved in the installation and configuration of TRBOnet systems.

## COURSE OBJECTIVES

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

- Describe the function of SmartPTT PLUS
- Describe SmartPTT PLUS solution architecture
- List the system requirements for deploying a SmartPTT PLUS solution
- Describe the process of system design for IP Site Connect, Capacity Plus, Linked Capacity Plus
- Describe the system design processes for Connect Plus
- Define the set-up, installation and configuration process for the SmartPTT PLUS Radio Server
- Define the set-up, installation and configuration process for the SmartPTT PLUS Dispatcher console functions
- Configure MOTOTRBO™ radios and repeaters for SmartPTT PLUS
- Configure MOTOTRBO™ Network Interface Service and MOTOTRBO™ DDMS Administrative Client

## REQUISITE KNOWLEDGE

An understanding of IP Networking Addressing and VoIP protocols

Completion of the following courses or equivalent knowledge:

- PCT1047 MOTOTRBO Capacity Max Technical Overview
- PCT1032 Radio Management 2.0 Configuration Mode
- RDS0002 Basic RF

## PREREQUISITES

None



**SMARTPTT PLUS**

3 DAYS

PCT2005

## COURSE OVERVIEW

This course covers all aspects of the SmartPTT Plus system. It provides detailed information on the system's benefits, architecture and features, including the requirements for deploying a SmartPTT system. The course then goes on to cover the installation and configuration of the Dispatch, Radioserver and associated system components and features.

## TARGET AUDIENCE

Technicians and engineers who are involved in the design, deployment and installation or configuration of a SmartPTT Plus system.

## COURSE OBJECTIVES

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

- Describe the function of SmartPTT PLUS
- Describe SmartPTT PLUS solution architecture
- List the system requirements for deploying a SmartPTT PLUS solution
- Describe the process of system design for IP Site Connect, Capacity Plus, Linked Capacity Plus
- Describe the system design processes for Connect Plus
- Define the set-up, installation and configuration process for the SmartPTT PLUS Radio Server
- Define the set-up, installation and configuration process for the SmartPTT PLUS Dispatcher console functions
- Configure MOTOTRBO™ radios and repeaters for SmartPTT PLUS
- Configure MOTOTRBO™ Network Interface Service and MOTOTRBO™ DDMS Administrative Client

## REQUISITE KNOWLEDGE

• An understanding of IP Networking Addressing and VoIP protocols

• Completion of the following courses or equivalent knowledge:

- CEDMEL2000 MOTOTRBO™ System Introduction for Technicians
- PCT1047 MOTOTRBO™ Capacity Max technical Overview
- PCT1032 Radio Management 2.0 Configuration Mode

## PREREQUISITES

None

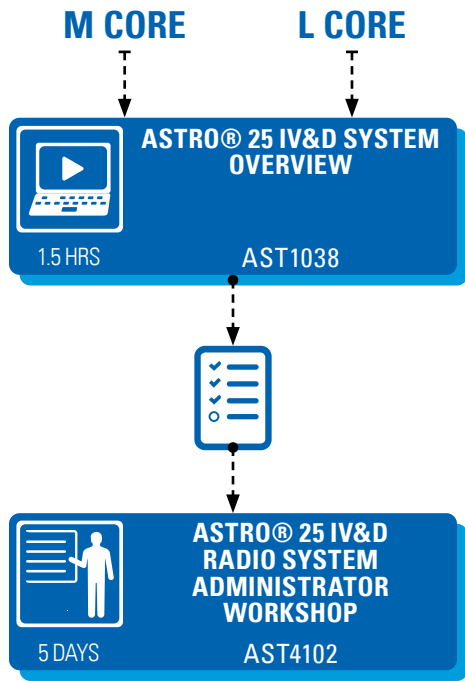


# ASTRO® 25 IV&D SYSTEM COURSES

<b>ASTRO® 25 IV&amp;D SYSTEM OVERVIEW (AST1038)</b>	<b>59</b>
<b>ASTRO® 25 IV&amp;D RADIO SYSTEM ADMINISTRATOR WORKSHOP (AST4102)</b>	<b>59</b>
<b>ASTRO® 25 IV&amp;D SYSTEM CORE WORKSHOP (AST4103)</b>	<b>59</b>
<b>ASTRO® 25 IV&amp;D SECURE COMMUNICATIONS WORKSHOP (AST4207)</b>	<b>60</b>
<b>ASTRO® 25 IV&amp;D GTR 8000 REPEATER SITE WORKSHOP (AST4208)</b>	<b>60</b>
<b>ASTRO® 25 IV&amp;D CONVENTIONAL CORE WITH CONFIGURATION MANAGER WORKSHOP (AST4410)</b>	<b>60</b>
<b>ASTRO® 25 IV&amp;D CONVENTIONAL RF SITE WORKSHOP (AST4440)</b>	<b>61</b>
<b>ASTRO® 25 SYSTEMS FLEETMAPPING (RDS1017)</b>	<b>61</b>
<b>ASTRO® 25 RADIO AUTHENTICATION (AST2038)</b>	<b>61</b>



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



**RECOMMENDED CURRICULUM IS COMPLETE**



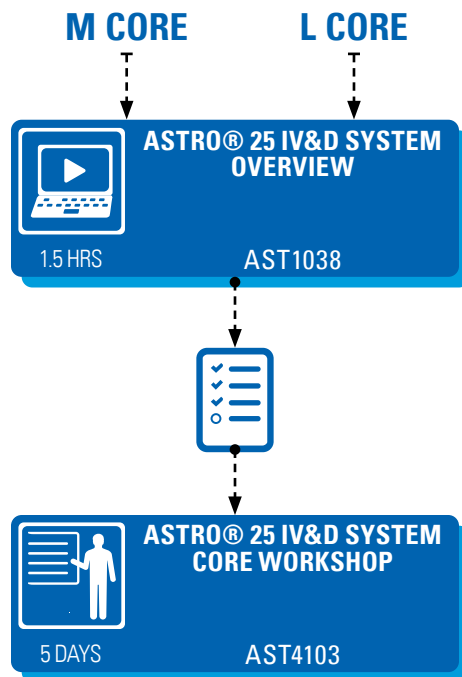
PARTICIPANT SHOULD BE ABLE TO CARRY OUT ADMINISTRATIVE TASKS IN THE ASTRO® 25 IV&D SYSTEM SUCH AS: PROVISIONING SUBSCRIBERS AND TALK GROUPS, GENERATING HISTORICAL REPORTS, CONTROLLING DEPLOYED SUBSCRIBERS AND MANAGING NETWORK ELEMENT CONFIGURATIONS. PARTICIPANT UNDERSTANDS FACTORS OF SYSTEM CONFIGURATION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

## 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 Asia Pacific Education Services Help Desk at:  
**training.apac@motorolasolutions.com**

### **ASTRO® 25 IV&D M/L CORE TECHNICIAN**

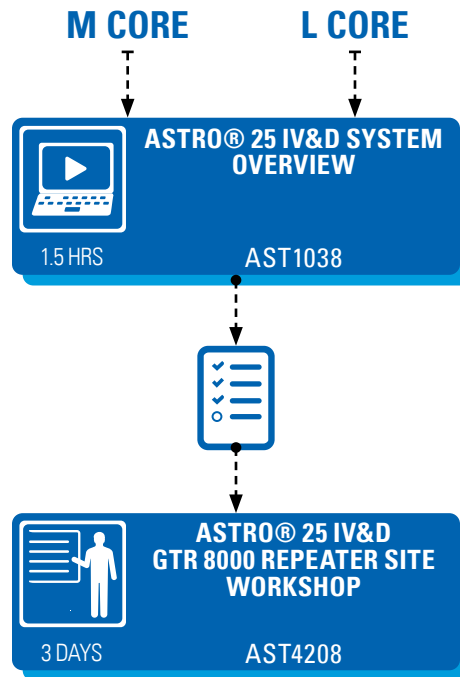


#### **RECOMMENDED CURRICULUM IS COMPLETE**



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

## ASTRO® 25 IV&D REPEATER SITE TECHNICIAN (GTR)

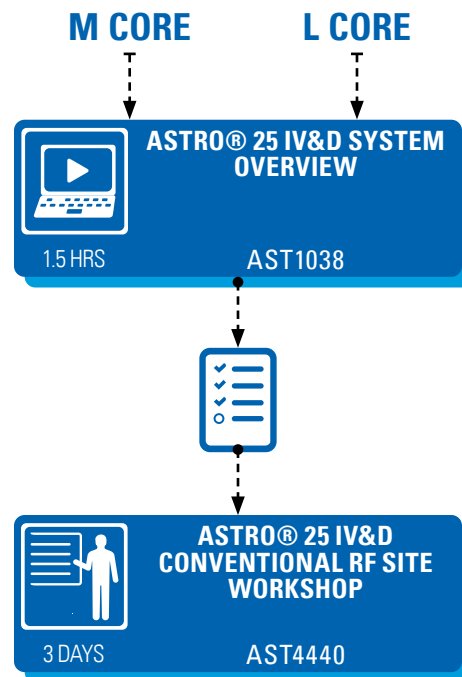


### RECOMMENDED CURRICULUM IS COMPLETE



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

## ASTRO® 25 IV&D CONVENTIONAL RF SITE TECHNICIAN



RECOMMENDED CURRICULUM IS COMPLETE





## RADIO SOLUTIONS ASTRO® 25 IV&D SYSTEMS

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**ASTRO® 25 IV&D  
SYSTEM OVERVIEW**

1.5 HRS

AST1038

### COURSE OVERVIEW

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

### TARGET AUDIENCE

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

### COURSE OBJECTIVES

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

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

### REQUISITE KNOWLEDGE

None

### PREREQUISITES

None



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

5 DAYS

AST4102

### 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 organisation 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:

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

### PREREQUISITES

None



**ASTRO® 25 IV&D SYSTEM  
CORE WORKSHOP**

5 DAYS

AST4103

### 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

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**ASTRO® 25 IV&D  
SECURE COMMUNICATIONS  
WORKSHOP**  
5 DAYS  
AST4207

### 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, organise, and implement Secure Communications in an ASTRO® 25 IV&D system.
- Install and configure a Key Management Facility (KMF) system and related components.
- Demonstrate centralised 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

**ASTRO® 25 IV&D  
GTR 8000 REPEATER SITE  
WORKSHOP**  
3 DAYS  
AST4208

### 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:

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

### PREREQUISITES

None

**ASTRO® 25 IV&D  
CONVENTIONAL CORE  
WITH CONFIGURATION  
MANAGER WORKSHOP**  
3 DAYS  
AST4410

### COURSE OVERVIEW

The ASTRO® 25 IV&D Conventional Core with Configuration Manager 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. A technical introduction to the MCC 7500 as used within the ASTRO® 25 IV&D Conventional Core with Configuration Manager, including some administrator functions, is also provided. Learning activities focus on gathering and analyzing system information to implement the appropriate actions that return a system to full operational status.

### TARGET AUDIENCE

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

### COURSE OBJECTIVES

After completing the 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 courses 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 IV&D  
CONVENTIONAL RF SITE  
WORKSHOP**

3 DAYS      AST4440



**ASTRO® 25 SYSTEMS  
FLEETMAPPING**

2 DAYS      RDS1017



**ASTRO® 25 IV&D  
RADIO AUTHENTICATION**

2 DAYS      AST2038

### 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

### 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 optimising the system resources.
- Describe the content to assist with fleetmapping decisions.
- Discuss frequency band plan organisation 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

### COURSE OVERVIEW

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

### TARGET AUDIENCE

Customer Administrators or Technicians.

### COURSE OBJECTIVES

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

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

### REQUISITE KNOWLEDGE

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

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

### PREREQUISITES

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

# PRIVATE BROADBAND


<b>WAVE PTX OVERVIEW</b> (PTT0001A)	<b>63</b>
<b>WAVE PTX ADMIN PORTAL: END-USER TRAINING</b> (PTT0004A)	<b>63</b>
<b>WAVE PTX R11.2 MOBILE APPLICATION: END-USER TRAINING</b> (PTT0006A)	<b>63</b>
<b>CENTRAL ADMIN TOOL (CAT) R10.0 &amp; R11.2: END-USER TRAINING</b> (PTT0054)	<b>64</b>
<b>WAVE PTX USER PROVISIONING PORTAL</b> (PSA0077)	<b>64</b>
<b>WAVE PTX ENTERPRISE CONTACTS AND GROUP MANAGEMENT PORTAL</b> (PSA0078)	<b>64</b>
<b>WAVE PTX HANDSET STANDARD MODE</b> (PSA0079)	<b>65</b>
<b>WAVE PTX HANDSET PTT RADIO MODE</b> (PSA0080)	<b>65</b>
<b>WAVE PTX DISPATCH CONSOLE AND FEATURES</b> (PSA0081)	<b>65</b>
<b>WAVE PTX SYSTEM OVERVIEW &amp; ARCHITECTURE</b> (PTT0071)	<b>66</b>
<b>WAVE GATEWAY OVERVIEW &amp; ARCHITECTURE</b> (PTT0072)	<b>66</b>
<b>WAVE SYSTEM ALARMS DASHBOARD</b> (PTT0073)	<b>66</b>
<b>WAVE SYSTEM FIELD UTILITIES TOOL</b> (PTT0074)	<b>66</b>
<b>CRITICAL CONNECT (GATEWAY) PORTAL FOR INTEROPERABILITY WITH WAVE SYSTEM</b> (PTT0075)	<b>67</b>



## PRIVATE BROADBAND

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[training.apac@motorolasolutions.com](mailto:training.apac@motorolasolutions.com)



**WAVE PTX OVERVIEW**

0.75 HRS

PTT0001A

### 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

After completing this 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, brochures, and data sheets.
- Get the support you need for your solution.

### REQUISITE KNOWLEDGE

None

### PREREQUISITES

None



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

1 HR

PTT0004A

### 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

PTT0006A

### 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, the student 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

## PRIVATE BROADBAND

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**training.apac@motorolasolutions.com**



**CENTRAL ADMIN TOOL  
(CAT) R10.0 & R11.2:  
END-USER TRAINING**

1 HR

PTT0054

### COURSE OVERVIEW

This course provides end-user training on the Central Admin Tool for Public Safety, its key features, and roles within the portal. It includes clickable software simulations showing the operations that can be performed by administrators.

### TARGET AUDIENCE

Public Safety Administrators who use the Central Admin Tool to manage internal, external, and integrated users, user sets, talkgroups, interop connections, user and group profiles, and operational status messaging.

### COURSE OBJECTIVES

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


- Navigate and configure the Central Admin Tool.
- Add, activate, and manage PTT, external, and integrated users.
- Create and utilize user sets.
- Configure Operational Status Messaging.
- Create and utilize group profiles.
- Create and manage talkgroups.
- Create and utilize user profiles.
- Manage interop connections

### REQUISITE KNOWLEDGE

None

### PREREQUISITES

None



**WAVE PTX USER  
PROVISIONING PORTAL**

0.5 DAYS

PSA0077

### COURSE OVERVIEW

This course provides a detailed description and parameters required to provision users on the WAVE PTX platform.

### TARGET AUDIENCE

Personnel responsible for provisioning and managing the end users on the WAVE platform.

### COURSE OBJECTIVES

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


- Understand the concepts of Push-to-Talk
- Provision individual subscribers on WAVE platform
- Modify individual subscribers data
- Delete subscription
- View the features enabled for individual subscribers
- Select the feature packages as required by individual subscribers

### REQUISITE KNOWLEDGE

None

### PREREQUISITES

None



**WAVE PTX ENTERPRISE  
CONTACTS AND GROUP  
MANAGEMENT PORTAL**

0.5 DAYS

PSA0078

### COURSE OVERVIEW

The course is designed for the corporate/enterprise/agency administrator's responsible to manage the end users and their associated groups in their corporate/enterprise/agency. Discussion and explanation about certain features that can be enabled using CAT portal for the subscribers provisioned corporate/enterprise/agency on WAVE PTX platform.

### TARGET AUDIENCE

Personnel responsible for provisioning and managing corporate (enterprise) contacts and groups for the end users on the WAVE PTX platform.

### COURSE OBJECTIVES

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

- Manage contacts at an enterprise level for individual subscribers
- Create Talkgroups at an enterprise level
- Create User Profiles and add them to users
- Create Group Profiles and assign permissions
- Manage and assign features for individual subscribers
- Manage external subscribers

### REQUISITE KNOWLEDGE

None

### PREREQUISITES


None



## PRIVATE BROADBAND

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

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[training.apac@motorolasolutions.com](mailto:training.apac@motorolasolutions.com)



**WAVE PTX HANDSET  
STANDARD MODE**

0.5 DAYS

PSA0079

### COURSE OVERVIEW

This course provides a detailed description of handset client usage for enterprise and features (as applicable and enabled at a customer level) on WAVE PTX platform. Topics include activation of handset standard client, usability of features such as IPA, Presence, Private Calls, Group Calls, Broadcast Group calling, PTX messaging and Location features.

### TARGET AUDIENCE

End users and Tier-1 engineers responsible for troubleshooting end user's usage experiences.

### COURSE OBJECTIVES

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


- Understand the Handset Standard client.
- Activate the handset standard client.
- Understand and work on the handset standard client features
- Make/receive different call types
- Send/receive multimedia messages
- Use the Handset Standard client for Enterprise or Corporate use cases

### REQUISITE KNOWLEDGE

None

### PREREQUISITES

None



**WAVE PTX HANDSET PTT  
RADIO MODE**

0.5 DAYS

PSA0080

### COURSE OVERVIEW

This course provides a detailed description of handset PTT Radio client (a.k.a LMR client) usage and features (as applicable and enabled at a customer level) on WAVE PTX platform. Topics include activation of handset PTT Radio client, usability of features such as IPA, Presence, Private Calls, Group Calls, Broadcast Group calling, PTX messaging, Ambient call, Discreet call, Location features and Emergency calling.

### TARGET AUDIENCE

End users and Tier-1 engineers responsible for troubleshooting end user's usage experiences.

### COURSE OBJECTIVES

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


- Differentiate between Handset Standard and Handset PTT Radio client types.
- Activate the Handset PTT Radio client type.
- Understand and work on the Handset PTT Radio client features.
- Make/receive different call types.
- Send/receive multimedia messages.
- Use the Emergency feature options
- Use and apply the unique features available in Handset PTT Radio client.
- Use the Handset PTT Radio client for Public Safety and Emergency Response use cases.

### REQUISITE KNOWLEDGE

None

### PREREQUISITES

None



**WAVE PTX DISPATCH  
CONSOLE AND FEATURES**

1 DAY

PSA0081

### COURSE OVERVIEW

This course provides a detailed description of Dispatch Console usage and features (as applicable and enabled for dispatch at customer level) on WAVE PTX platform. Topics include activation of Dispatch Console, usability of features such as Maps, Emergency calling, ABDG, Fleet member management, monitoring services, Location services and features, Private Calls, Group Calls, Broadcast Group calling, PTX messaging, Ambient call and Discreet call, status messaging, emergency services.

### TARGET AUDIENCE

End users and Tier-1 engineers responsible for troubleshooting end user's usage experiences.

### COURSE OBJECTIVES

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

- Differentiate between Handset clients and Dispatch client types.
- Activate the Dispatch console
- Understand and work on the Dispatch console and its features
- Locate and Manage fleet members
- Make and receive different call types on the Dispatch console
- Send and receive multimedia messages on the Dispatch console
- Use the Emergency feature options
- Use and apply the unique features available in the Dispatch console.
- Use the Dispatch console for Public Safety and Emergency Response use cases.

### REQUISITE KNOWLEDGE

None

### PREREQUISITES

None

## PRIVATE BROADBAND

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**WAVE PTX SYSTEM  
OVERVIEW AND  
ARCHITECTURE**

0.5 DAYS

PTT0071

### COURSE OVERVIEW

This course provides a detailed insight into the customized architecture, components, interfaces, protocols used, port numbers, and virtual elements involved in forming the WAVE PTX platform for Broadband PTT applications and features.

### TARGET AUDIENCE

This is a foundation course aimed at all engineering, operations, and technical support groups being trained to support the WAVE PTX network, platform, and services.

### COURSE OBJECTIVES

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

- Recognize the WAVE PTX product supplied by Motorola Solutions.
- Identify the major components of the WAVE PTX platform.
- Identify different subsystems and discuss the generic WAVE PTX architecture.

### REQUISITE KNOWLEDGE

- Key Organization Network and IT Systems
- Networking Knowledge, Components And Functions

### PREREQUISITES

None



**WAVE GATEWAY  
SYSTEM OVERVIEW AND  
ARCHITECTURE**

0.5 DAYS

PTT0072

### COURSE OVERVIEW

The course is designed to provide a detailed insight into the architecture, components, and virtual elements involved in forming the WAVE Gateway platform for Broadband to LMR interoperability and its features.

### TARGET AUDIENCE

This is a foundation course aimed at all engineering, operations, and technical support groups being trained to support the WAVE Gateway network, platform, and services.

### COURSE OBJECTIVES

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


- Recognize the WAVE Gateway product.
- Identify and understand the functionalities of major components available in the WAVE Gateway platform.
- Identify and understand different subsystems.
- Discuss the generic WAVE Gateway architecture.
- Locate technical reference documentation providing further detail.

### REQUISITE KNOWLEDGE

- Key Organization Network and IT Systems
- Networking Knowledge, Components And Functions
- Basic knowledge on respective radio networks such as ASTRO®, DIMETRA™, and MOTOTRBO™

### PREREQUISITES

None



**WAVE SYSTEM ALARMS  
DASHBOARD**

0.5 DAYS

PTT0073

### COURSE OVERVIEW

The course is designed to provide exposure to the Alarms Dashboard tool used for real time alarm monitoring on both the WAVE Push-to-Talk and LMR Solution.

### TARGET AUDIENCE

Engineering or operations groups responsible for monitoring the alarm system for the WAVE PTT network, platform, and services.

### COURSE OBJECTIVES

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

- Describe the process of alarm generation and integration with other external alarm systems owned by the customer.
- Understand alarms with codes and descriptions for different subsystems.
- Troubleshoot alarms generated by different subsystems.
- Locate technical reference documentation providing further detail.

### REQUISITE KNOWLEDGE

- Knowledge on basic functionalities and features on WAVE Platform
- Key organization network and IT systems
- Networking knowledge, components and functions

### PREREQUISITES

None

## PRIVATE BROADBAND

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**WAVE SYSTEM FIELD UTILITIES TOOL**

0.5 DAYS

PTT0074

### COURSE OVERVIEW

The course is designed to provide exposure to the Filed Utilities tool which is used for collection of logs, filed checks from different components of the WAVE platform.

### TARGET AUDIENCE

This is a maintenance course aimed at system operators responsible for troubleshooting the system by collecting logs and packets on broadband PTT network and services.

### COURSE OBJECTIVES

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


- Operate on the field utilities tool and use all the features available on the tool.
- Collect the logs from different subsystems on WAVE platforms and WAVE Gateway platforms.
- Collect the packets at appropriate interfaces from different subsystems on WAVE platforms and WAVE Gateway platforms.
- Locate technical reference documentation providing further detail.

### REQUISITE KNOWLEDGE

Knowledge on basic functionalities and features on WAVE and WAVE Gateway Platform.

### PREREQUISITES

None



**CRITICAL CONNECT (GATEWAY) PORTAL FOR INTEROPERABILITY WITH WAVE SYSTEM**

0.5 DAYS

PTT0075

### COURSE OVERVIEW

The course is designed to explain the onboarding process of an LMR network, devices, users, and application as suited for Gateway platform. This course also explains the patch process between different talkgroups from LMR to LMR and LMR to Broadband networks.

### TARGET AUDIENCE

Personnel responsible for configuring, managing, and integrating the LMR network with the broadband network. Personnel responsible for creating and managing talkgroup patches from an Agency/customer's end.

### COURSE OBJECTIVES

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

- Configure and integrate the existing LMR network with the Broadband network.
- Add new LMR devices, talkgroups, and applications as suitable.
- Configure logins for customer/agency, create new data access controls.
- Monitor the LMR interfaces and networks.
- Create/delete new patches by customer/agency.

### REQUISITE KNOWLEDGE

Knowledge on basic functionalities and features on WAVE and WAVE Gateway Platform.

### PREREQUISITES

None



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