
WTM 4000 ADVANCED FEATURES

TRN-WTM4K-ADVCFG-A/B/C/D

Course Specifics

Duration:	2 days
Class capacity:	10 students
Materials provided:	Instruction and user Manuals (USB) Student Handbook (e-Book) Datasheets (USB)



Course Description

The WTM 4000 is the industry's first microwave router. It is a fully integrated microwave networking solution, delivering a unique combination of high capacity all-packet transport, Carrier Ethernet, IP/MPLS and PWE services and comprehensive mission critical microwave features. The WTM 4000 is purpose-built for microwave, enabling operators to prepare for the all-IP future.

The **WTM 4000 Advanced features** course teaches students advanced functions of the WTM 4000 platform. Extensive hands-on labs (nearly 50% of the course duration) and case studies offer students with scenarios they will face in real deployments in their networks.

Courses are conducted by **AVIAT expert trainers** in a mentoring environment backed by their deep technology expertise and experience in implementation of microwave wireless and IP networks.

The WTM 4000 advanced features course is conducted at the Aviat Training locations or can be arranged at customer sites

Target Audience

This course is intended for installation and service personnel responsible for installation, configuration, test and maintenance procedures for the WTM 4000 product.

Prerequisites

1. Students must demonstrate prior completion of the WTM 4000 System Overview and WTM 4000 Installation, Operation and Maintenance 2-day Instructor led course. An attendance record from the TRN-WTM4K-IOM course such as the certification of completion will be requested during the registration process.
2. Participants should have a basic understanding of Microwave and IP Fundamentals and have basic computer skills.
3. Each student must bring an IBM compatible laptop PC or an equivalent and have administrator rights on the PC.

The PC must have minimum parameters of:

- Pentium 4 or later w/ 1GB of RAM and 250 Mb of free hard drive space
- Microsoft Windows XP, Vista, Windows 7, or Windows 8
- USB Port
- Network card (LAN Port)
- DB9 serial port connection or adapter

Objectives

Upon successfully completing this course, participants will be able to:

- Basic installation and configuration of WTM 4000 equipment
- Provisioning of features such as Link Aggregation, L2 control protocol Tunneling
- Provisioning advanced features like EOAM, ERPS, RSTP, MSTP...
- Advanced diagnostics, troubleshooting and preventive maintenance for WTM 4000

Course Outline

Routing and Switching

- Customer mode Vlan
- Provided mode Vlan (Q&Q)

Link aggregation

- Layer 2 link aggregation
 - LAG
 - LACP
- Layer 1 Link Aggregation

L2 Control Protocol Tunneling

- Configuration and activation

NMS routing

- Static routing
- Dynamic routing with OSPF

Synchronization

- Synch-E
- PTP

Advanced QOS

- Classification
- Remarking
- Policing
- Scheduling
- WRED

Ethernet Ring protection / EOAM

- ERP single ring with ECFM
- ERP Main & Sub ring with ECFM
- Policing
- Scheduling
- WRED

Spanning tree operation

- STP / RSTP
- MSTP

Required Equipment for Training Sessions at Customer Sites

RADIO	<p>One equipment rack with 48VDC power supply</p> <p>At least 1 Traffic free hop – 2 radios talking to each other. (Path has been simulated with at least 60dB of attenuation, for troubleshooting training variable attenuators are preferred however not mandatory)</p> <p>Chassis configurations should include as a minimum:</p> <ul style="list-style-type: none"> •PoE adaptor with shielded CAT6 cable to connect to ODR •ODUs should be a matching pair that is same sub band and TR spacing with one being Tx High and the other Tx Lo. •ODRs should be a matching pair that is same sub band and TR spacing with one being Tx High and the other Tx Lo.
OTHER EQUIPMENT	<p>Ethernet tester</p> <p>Digital Multimeter.</p>
CLASSROOM SET UP	<p>Sufficient in size to handle all participants, instructor, desks, chairs, classroom equipment. The room must have enough 110 AC (220) AC power and air conditioning to operate equipment, all student's client's PC's and the server or radio as required.</p> <p>Classroom Equipment</p> <p>Marker board, SVGA or Overhead projector and screen.</p> <p>Desk and Chairs</p> <p>Desks or workstations with enough room for each student to write have open books, client PC and / or, keyboard and monitor.</p> <p>Internet Access</p> <p>Internet access through the server or through client PC.</p>

Pricing & Scheduling

Please contact your Aviat local sales team for a quote or email aviatcareeducate@aviatnet.com and request pricing.

TRN-WTM4K-ADVCFG-A	WTM4000: Configuring Advance Features - ILT, 2 DAYS, Aviat Training Center - Open Enrollment -per Student
TRN-WTM4K-ADVCFG-B	WTM4000: Configuring Advance Features - ILT, 2 DAYS, Aviat Training Center- 10 Students Max
TRN-WTM4K-ADVCFG-C	WTM4000: Configuring Advance Features - ILT, 2 DAYS, Customer Location- 10 Students Max
TRN-WTM4K-ADVCFG-D	WTM4000: Configuring Advance Features - ILT, 2 DAYS, Customer Location-with Equipment- only for US- 10 Students Max