



## WAVE Certified Engineer Training

### *Training Course Brief*

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#### *Abstract*

WAVE Certified Engineer Training offers two four-day certification courses. The first track is **WAVE Certified Integration Engineer (WCIE)** and is for pre-sales and post-sales support. The second certification track is **WAVE Certified Development Engineer (WCDE)** and is for software developers that will be doing WAVE custom development.

The four-day WAVE Certified Integration Engineer (WCIE) course teaches students the basics of WAVE, as well as the essentials of installing and configuring a WAVE Domain. Through hands-on labs, the students gain the knowledge and skills needed to deploy WAVE and provide post-sales support. The course is intended for qualified network engineers involved in pre and post sales integration efforts with WAVE. Students who successfully complete the course requirements will be awarded WCIE certification.

The four-day WAVE Certified Development Engineer (WCDE) training consists of two modules. Module I is a four-day course that culminates in a certification test. Class graduates who pass the exam on day four are awarded WCDE certification. Module II is an optional lab work module focusing on the partner's requirements or prototype application.

## WAVE Certified Integration Engineer (WCIE)

### WCIE Course Overview

This course teaches the basics of WAVE and the essentials of installing and configuring WAVE. Through hands-on labs the students will gain the knowledge and skills necessary to deploy WAVE and provide pre and post-sales support.

### Who Should Attend

- Pre & Post-Sales Support Engineers
- Integration Engineers

### Pre-requisites

Students are required to be experienced support or integration engineers with VOIP, IP Multicast and traditional data networking expertise.

(Certification in the various disciplines is highly recommended):

- Data Networking (TCP/IP, UDP and IP Multicast)
- Voice over IP (H.323 and RTP)

Each student is recommended to bringing their own notebook computer and headset with microphone.

### Course Objectives

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

- Present a high-level overview of WAVE and how it works
- Provide technical pre-sales support including design, component identification and pricing
- Perform a thorough WAVE demo based on end-user requirements (e.g. LMR)
- Integrate WAVE in multiple environments
- Support a WAVE installation
- Learn troubleshooting techniques

### Course Outline

- Twisted Pair Solutions and WAVE Overview
- WAVE Components
- Drawing WAVE Functional and Logical Diagrams
- Pricing WAVE Solutions
- Hands-on labs
  1. Installing WAVE Management Server
  2. Users, Profiles, Channels and Sessions
  3. Installing WAVE Clients
  4. Installing WAVE Media Server
  5. IP Telephony Integration
  6. Land Mobile Radio Integration
  7. WAVE Domain, Zones, and Supernodes
- Certification Exam

### Duration

4 days

### Certification

WCIE certification is obtained at the end of this course by successfully completing all lab work and passing an open book written exam. Certification is good for 2 years.

Twisted Pair Solutions, Inc. reserves the right to make changes to the course syllabus.

If you would like additional information please contact us at [training@twistpair.com](mailto:training@twistpair.com)

## WAVE Certified Development Engineer (WCDE)

### WCDE Course Overview

Module I is a four-day lab-environment class which gives students an introduction to the Twisted Pair Solutions, Inc. WAVE SDK. Attendees learn about the WAVE platform and how to use the WAVE SDK to create applications which provide interoperable communications solutions.

Attendees will learn how to connect to a WAVE domain, select user profiles, establish audio communication with radios, phones, and other applications, join and leave channels, create chat sessions with other WAVE applications, and more.

Module I consists of several Lab modules which allow developers to work on a sample application and continually add features to the application. WCDE Module I is intended to give developers both a good overview of the available tools and development options, as well as the necessary technical skills to develop applications which provide communications solutions using the WAVE SDK.

Module II is a 3-4 day training and consulting opportunity for students to come back and work directly with TPS developers in our lab environment. Consult with trained WAVE SDK developers in our lab while you design and implement custom solutions. Module II is designed for experienced WAVE developers with specific needs and requirements. This is a great opportunity for developers to design and build proofs of concept and prototypes.

### Who Should Attend

- Software Developers writing interoperability applications

### Pre-requisites

Students are required to be qualified Java software Developers. Specific skills in the following areas are a plus:

- IP Multicast
- Voice over IP protocols including TCP/IP, UDP, RTP
- WAVE knowledge (WAVE Certified Integration Engineer strongly recommended)

Each student is responsible for bringing their own notebook computer and headset with microphone.

### Course Objectives

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

- Install and configure a WAVE domain
- Use the WAVE SDK to write applications that can connect people who are using disparate and often incompatible communications technologies into a single, interoperable, and highly manageable communications system.

### Course Outline

The course consists of both lecture and hands-on lab.

### Topics Covered

#### Day 1 09:00-17:00:

- WAVE Overview
- Installing and Configuring a WAVE Domain
- Installing and Configuring the WAVE SDK in your environment
- Lab 1: Connect and login to a WAVE Domain

## WAVE Certified Training Brief

### Day 2 09:00-17:00:

- WAVE capabilities accessible from the WAVE SDK
- WAVE SDK overview
- WAVE SDK classes and class hierarchy
- Lab 2: WAVE Audio

### Day 3 09:00-17:00:

- Overview of existing applications
- Lab 3: WAVE Text chat
- Lab 4: WAVE Status and presence

### Day 4 09:00-15:00:

- WAVE roadmap
- Review course material as appropriate
- Testing & Certification
- Lab 5: Open lab module

### Duration

4 days

### Training Kit

Students will receive a comprehensive training workbook.

### Certification

WCDE certification is obtained at the end of this course by successfully completing all lab work and passing an open book written exam. Certification is good for 2 years. Each certified student will receive a free WAVE demo software license good for 12 months (options to renew will be provided upon expiration).

Twisted Pair Solutions, Inc. reserves the right to make changes to the course syllabus.

If you would like additional information please contact us at [training@twistpair.com](mailto:training@twistpair.com)