Course Outline

Certified Wireless Solutions Administrator (CWSA)

Course Summary

Description

While no wireless training can cover every single wireless technology in use today, it is important for wireless professionals to grasp the most frequently used wireless solutions in organizations. The Enterprise Wireless Solutions Administration course and associated certification exam will ensure candidates know several common wireless solutions and prove their knowledge through certification. The Certified Wireless Solutions Administrator (CWSA) certification is built upon two decades of historic quality in WLAN (802.11) training and certifications and begins the extension of CWNP offerings into the non-802.11 wireless technologies.

When one passes the CWSA exam, they earn the CWSA certification and credit towards the CWSE certification should they choose to pursue it. The Certified Wireless Solutions Administrator (CWSA) implements, administers and troubleshoots technologies that heavily rely upon, or directly integrate with, wireless systems in enterprise, government, and manufacturing environments. This individual is able to install, customize, and coordinate appropriate solutions to meet an organization's requirements and constraints.

Topics

- Introducing Wireless Technologies
- Wireless Network Use Cases
- Planning Wireless Solutions
- RF Communications
- Radio Frequency Hardware
- Cellular Networks
- Short-Range, Low-Rate, and Low-Power Networks
- Wireless Sensor Networks
- The Internet of Things (IoT)
- Securing Wireless Networks
- Programming, Scripting, and Automation

Audience

This course is designed for wireless professionals.

Prerequisites

Good to have but not required: Basic networking knowledge, including OSI model and IP subnetting

Duration

Four days

Course Outline

Certified Wireless Solutions Administrator (CWSA)

Course Outline

I. Introducing Wireless Technologies
- A. Maintain continued awareness of wireless technologies and applications of those technologies
- B. Understand industry standard, certification and regulatory organizations and standards development processes

II. Wireless Network Use Cases
- A. Define wireless network types
- B. Administer the wireless solution while considering the implications of various vertical markets

III. Planning Wireless Solutions
- A. Identify and document wireless system requirements
- B. Identify and document system constraints
- C. Select appropriate wireless solutions based on requirements and constraints
- D. Implement effective project management practices for wireless solution planning and implementation

IV. RF Communications
- A. Explain the basic RF wave characteristics, behaviors and measurements used for wireless communications
- B. Describe the fundamentals of modulation techniques used in wireless communications
  Describe the basic use and capabilities of the RF bands and other wireless carriers (light and sound) used for communications

V. Radio Frequency Hardware
- A. Explain the basic capabilities of components used in RF communications

VI. Cellular Networks
- A. Describe the fundamentals of modulation techniques used in wireless communication
- B. Plan for technical requirements of the wireless solution
- C. Understand the basic features and capabilities of common wireless solutions and plan for their implementation

VII. Short-Range, Low-Rate, and Low-Power Networks
- A. Describe the fundamentals of modulation techniques used in wireless communications
- B. Plan for the technical requirements of the wireless solution
- C. Understand the basic features and capabilities of common wireless solutions and plan for their implementation

VIII. Wireless Sensor Networks
- A. Define wireless network types
- B. Administer the wireless solution while considering the implications of various vertical markets

IX. The Internet of Things (IoT)
- A. Define wireless network types
- B. Understand the basic features and capabilities of common wireless solutions and plan for their implementation

X. Securing Wireless Networks
- A. Understand and implement basic installation procedures

XI. Troubleshooting Wireless Solutions
- A. Validate wireless solution implementations including RF communications and application functionality
- B. Understand and implement basic installation procedures
- C. Troubleshoot common problems in wireless solutions

Course Outline

Certified Wireless Solutions Administrator (CWSA)

Course Outline (cont'd)

XII. Programming, Scripting, and Automation

A. Identify and document the wireless system requirements
B. Understand the wireless solution and consider key issues related to automation, integration, monitoring, and management
C. Plan for the technical requirements of the wireless solution
D. Understand and determine the best use of scripting and programming solutions for wireless implementations
E. Understand application architectures and their impact on wireless solutions