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## Aironet Wireless LAN Advanced Topics v1.0

Keyword: AWLAT

4 Days – List Price \$2,295

### Course Description

This course is instructor-led training and includes instructor assisted, hands-on labs. The curriculum is designed to give students a firm understanding of the Cisco's Integrated Wireless Network (formerly know as Cisco's Structured Wireless Aware Network or SWAN), with emphasis on advanced WLAN design integrating Cisco access points into a wired infrastructure including the Cisco Secure ACS, WLSE, and Series 6500 switch with the WLSM module. This design will include Layer 2 and Layer 3 roaming and security.

To participate in the hands-on labs, please bring a laptop computer with an available 32-bit Card-Bus slot and an Ethernet port. The laptop's operating systems must be either MS Windows 2000 (SP4) or XP. The laptop should also have a 9-pin serial port or USB to serial adapter. IN ADDITION, you will need administrator rights to the laptop to install drivers for the wireless client used in class.

### You Learn...

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

- Determine the components and basic configurations of Cisco SWAN
- Configure various Cisco components to create Cisco's Integrated Wireless Network
- Determine the necessary processes to manage the WLAN with the CiscoWorks WLSE
- Utilize location manager to create and monitor the radio coverage of the WLAN
- Determine the best practices for implementing security on an enterprise scale integrated wired and wireless network
- Describe the processes used by the WLSM and Supervisor Engine 720 and determine the procedures to implement a Layer 3 roaming WLAN

### Who Would Benefit

The Cisco Aironet Advanced Wireless LAN course is targeted to technical engineers, network integrators and technical sales personnel, who need to know how to sell, design, install, support wireless networks or tasked with performing or overseeing site surveys for wireless LAN solution implementations.

### Prerequisite

- Cisco Aironet Wireless LAN Fundamentals and Site Survey (AWFSS)
- Managing your Wireless LAN with Cisco's Wireless LAN Solution Engine (WLSE)

### Follow-On Courses

- Cisco Aironet WLAN Security (CWLS)
- Cisco Aironet Essentials of Wireless Bridging (CABE)
- Cisco Aironet Advanced Wireless Bridging Lab (CAAB)

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### Course Content

#### Module 0 -- Introduction

##### Module 1 – Cisco's Integrated Wireless Network Framework Concepts

Centralized vs. Decentralized Deployments  
Features and Components  
Cisco Integrated Services Routers  
Cisco Catalyst 6500 Series Switch and WLSM

##### Module 2 – Implementing the Cisco's Integrated Wireless Network Framework

- Configuring the WLSE's Network Information
- Switch and Router Setup
- AAA Server Setup
- Connecting to the Device
- Login with Setup
- Enter Setup Prompts
- Enter SSL Certification Configuration Information
- Configuring for Fast Secure Roaming (Voice)

##### Lab 1 – Cisco's Integrated Wireless Network Configuration

##### Module 3 – Wireless Network Management

- Managing Devices
- Duplicate IP Address
- Device Description
- Faults
- Reports
- Configurations
- Upgrading WLSE Software
- WLSE Redundancy
- Troubleshooting

##### Lab 2 -- Wireless Network Management

##### Module 4 – Radio Management

- WLSE Radio Management Operation
- Self Healing
- Ad-Hoc Network Detection
- Location Manager and Assisted Site Survey
- Radio Coverage
- Wireless Domain Services and Radio Management Verifier

##### Lab 3 – Radio Management

##### Module 5 – Advanced WLAN Security

- Reasons for Wireless LAN Security
- WLAN Security Standards
- WLAN Security Vulnerabilities and Threats
- WLAN Security Best Practices
- IEEE 80211i and WPA Encryption and Authentication
- Using VPNs for Security
- RADIUS Server Scalability and Availability
- Wireless Intrusion Detection System
- Best Practices for Integrating Wired and Wireless Networks

##### Lab 4 – Security

##### Module 6 – Layer 3 Roaming

- WLAN Evolution
- Layer 3 Mobility Solutions
- Major Components of Layer 3 Mobility
- Layer 3 Control Protocol
- A Day in the Life of a Packet
- Layer 3 Mobility Configuration
- Design and Deployment
- Implementation Details
- Design Considerations

##### Lab 5 – Fast Secure Roaming and WLSM