

Aruba Mobility Fundamentals, Rev. 20.11

Course Description

This course teaches the knowledge, skills, and practical experience required to set up and configure a basic Aruba WLAN utilizing the OS 8.X architecture and features. Using lectures and labs, this course provides the technical understanding and hands-on experience of configuring a single Mobility Conductor with one controller and AP Aruba WLAN. Participants will learn how to use Aruba hardware and ArubaOS to install and build a complete, secure controller network with multiple SSIDs. This course provides the underlying material required to prepare candidates for the Aruba Certified Mobility Associate (ACMA) certification exam.

Objectives

After you successfully complete this course, expect to be able to:

- Explain how Aruba's wireless networking solutions meet customers' requirements
- Explain fundamental WLAN technologies, RF concepts, and 802.11 Standards
- Learn to configure the Mobility Conductor and Mobility Controller to control access to the Employee and Guest WLAN
- Control secure access to the WLAN using Aruba Firewall Policies and Roles
- Recognize and explain Radio Frequency Bands and channels, and the standards used to regulate them
- Describe the concept of radio frequency coverage and interference and the successful implementation and diagnosis of WLAN systems
- Identify and differentiate antenna technology options to ensure optimal coverage in various deployment scenarios
- Describe RF power technology including, signal strength, how it is measured and why it is critical in designing wireless networks
- Learn to configure and optimize Aruba ARM and Client Match and Client Insight features
- Learn how to perform network monitoring functions and troubleshooting

Topics

WLAN Fundamentals

- Describes the fundamentals of 802.11, RF frequencies and channels
- Explain RF Patterns and coverage including SNR
- Roaming Standards and QoS requirements

Mobile First Architecture

- An introduction to Aruba Products including controller types and modes
- OS 8.X Architecture and features
- License types and distribution

Mobility Conductor Mobility Controller Configuration

- Understanding Groups and Subgroups
- Different methods to join Mobility Controller with Mobility Conductor
- Understanding Hierarchical Configuration

Secure WLAN configuration

- Identifying WLAN requirements such as SSID name, encryption, authentication
- Explain AP group's structure and profiles
- Configuration of WLAN using the Mobility Conductor GUI

AP Provisioning

- Describes the communication between AP and Mobility controller
- Explain the AP booting sequence and requirements
- Explores the APs controller discovery mechanisms
- Explains how to secure AP to controller communication using CPSec
- Describes AP provisioning and operations

WLAN Security

- Describes the 802.11 discovery, authentication, and association
- Explores the various authentication methods, 802.1x with WPA/WPA2, Mac auth
- Describes the authentication server communication
- Explains symmetric vs asymmetric Keys, encryption methods
- WIPS is described along with rogue discovery and protection

Firewall Roles and Policies

- An introduction to Firewall Roles and Policies
- Explains Aruba's Identity-based Firewall
- Configuration of Policies and Rules including aliases
- Explains how to assign Roles to users

Dynamic RF Management

- Explain how ARM calibrates the network selecting channels and power settings
- Explores OS 8.X Airmatch to calibrate the network
- How Client Match and Client Insight match steer clients to better APs

Guest Access

- Introduces Aruba's solutions for Guest Access and the Captive portal process

- Configuration of secure guest access using the internal Captive portal
- The configuration of the Captive portal using ClearPass and its benefits
- Creating a guest provisioning account
- Troubleshooting guest access

Network Monitoring and Troubleshooting

- Using the Mobility Conductor dashboard to monitor and diagnose client, WLAN, and AP issues
- Traffic analysis using APPrf with filtering capabilities
- A view of AirWave's capabilities for monitoring and diagnosing client, WLAN and AP issues