RCWA

RUCKUS Certified Wi-Fi Associate Exam

Price: $150 USD

RUCKUS Certification Store

Passing Score: 65%

Questions: 60

Exam Duration: 2 Hours

Study time: 20-60 hours

Language: English only

Validity Period

RCNI Certification is valid for a period of three (3) years.

Retake Policy

Five (5) retakes allowed within one year.

Retakes are restricted as follows:
1st: one (1) immediate retake
2nd: 14-days after first retake
3rd–5th: 30-days between each retake

Each attempt is subject to exam fee.

Exam Description

As a RUCKUS Certified Wi-Fi Associate (RCWA), you must be able to design, deploy and manage RUCKUS Wi-Fi solutions in a variety of production environments. This exam assesses your ability to design, configure, administer, troubleshoot, and optimize RUCKUS Wi-Fi solutions.

Ideal Candidate

Before attempting the exam, you should have these critical competencies and experience:

- Foundational Wi-Fi technologies, standards, and concepts
- RUCKUS technologies, products, and solutions
- Designing and planning RUCKUS Wi-Fi solutions
- Wi-Fi solution installation, configuration, and setup
- Wi-Fi solution enhancement through tuning and optimization
- Wi-Fi solution troubleshooting and repair
- RUCKUS Wi-Fi solution management

Preparatory Courses and Study Materials

RUCKUS provides a variety of free online supporting courses listed on page 3 of this document. The Exam Blueprint starting on page 2 an overview of the topics covered in the exam. You can also use the *RCWA Nutshell Study Guide* (see Other Online Resources below).

Target Audience

This certification is designed for wireless network designers, installers and administrators, Wi-Fi solutions architects and Wi-Fi support engineers tasked with design, installation, configuration, management, administration and troubleshooting of RUCKUS Wi-Fi deployments.

Self-Assessment Worksheet

To help you identify areas to focus your study activities, we offer a self-assessment worksheet that allows you to rate your confidence on the many topics covered in the exam. Below you'll find a blueprint of these topics with links into support documentation, followed by a list of supporting courseware.

BEFORE SCHEDULING YOUR EXAM
Prepare and test your system by following the instructions in What to Expect and this video.
QUESTIONS?
Contact ruckuscerts@commscope.com

Blueprint & Study Materials

The RUCKUS Certified Wi-Fi Associate (RCWA) Exam is a rigorous assessment of your ability to design, configure, manage, optimize and troubleshoot RUCKUS Wi-Fi solutions, covering our full product portfolio across different deployment scenarios. Be prepared to spend up to 100 hours studying. Even if you have extensive field experience, use these study materials to refresh areas that may not be part of your day-to-day work.

These free online resources are provided as materials to assist in your exam preparation. Online courses are available in CommScope University, and you will need a MyCommScope account to access these courses.

The exam blueprint outlines the range of content that may be included in the exam. Section weights are approximate and not all topics have associated questions.

20-60 hours of study is highly recommended. The exam is rigorous.

Weight	Section Name & Objectives
5%	**Foundational Wi-Fi technologies, standards & concepts** **RF concepts and relations to 802.11 standard** • 802.11 channelization and frequency bands (a/b/g/n/ac/ax/BE) • Antenna patterns and characteristics • Fresnel Zone • Mesh vs. P2P bridge • OFDM vs. OFDMA **Wi-Fi authentication methods** • Wi-Fi authentication methods and association steps • Certificate signing process, certificate management/PKI • Hotspot 2.0, OSU, 802.11u, ANQP, WISPr, WebAuth **Client roaming** • Client roaming across APs (high-level concept)
15%	**RUCKUS Technologies, products & solutions** **RUCKUS proprietary technologies** • RUCKUS proprietary Wi-Fi technologies • RUCKUS implementation of Bonjour Gateway and Fencing • Auto-cell sizing • RUCKUS approach to Zero Touch: SWIPE, deploy APs, Registrar , utilizing for SmartZone and R1 **RUCKUS controllers & access points (AP)** • Appropriate choice of controller/platform sizing: SmartZone, ZD, UnL, R1/Cloud, limitations • SmartZone options • ICX switch management from controller • API capabilities • Data planes: SmartZone-144D, SmartZone-100D, vDP • AP software types • Clustering, geo-redundancy, and failover • IoT basics, integration into APs, and related hardware and software modules **Positioning additional RUCKUS services and products** • Positioning of additional services: CloudPath, RUCKUS Analytics/RUCKUS AI, Network Director **RUCKUS support tools** • Licensing and registration for RUCKUS Products (including R1) • Support site documentation, sofware, firmware downloads
30%	**Designing & Planning a RUCKUS Wi-Fi Solution** **Design requirements gathering** • Process, methods, and tools used in site survey at basic levels • Wireless planning add parameters • Processes for gathering needs and system requirements • Use cases for tunneling v. local breakout

- Network segmentation — tunneling, Edge (premise cloud), VXLAN, DPSK, verticals

Traffic and load planning
- Traffic management and security strategies
- Load and band balancing

Product selection for solution
- Appropriate products for design/verticals
- Requirements for additional RUCKUS services
- Appropriate hypervisor/host/resource sizing

Security planning & access control
- Security planning
- Role-based access control (RBAC)
- Fundamentals of firewall
- Basics of PKI protocols and sequence

WLAN management planning
- AP discovery methods
- PoE budget and priorities and link speed
- Zone, domain, group planning, and templates
- Cluster, redundancy, failover planning
- VLAN tagging scheme

30%	**RUCKUS Wi-Fi Solutions**

System setup & configuration for SmartZone and RUCKUS One
- Initial wirless network design
- Basic controller setup
- Licensing implementation (controllers, APs, Google Maps, clusters)
- WLAN and AP groups, zones, and domains
- Licensing (APs, Switches, MSP, essentials vs professional)
- AP groups and venues

Access point (AP) configuration
- Deployment best practices
- Preprovisioning
- Discovery methods
- Attributes
- Migration and reimaging
- CLI set-up, configuration, and management

Advanced WLAN Configuration
- Bonjour Gateway and fencing
- Additional RUCKUS services (IoT, AI, CloudPath, etc.)
- Traffic-management policies
- VLAN pooling and dynamic VLANs
- Floor plan/maps
- Mesh, SmartMesh, Zero Touch Mesh

Security & access control
- WLAN Security, authentication, and encryption (MAC)
- Role-based access control (RBAC)
- Guest access configuation: WISPr, walled garden, captive portal, CloudPath for specific services

10%	**Wi-Fi Solution Enhancement through Tuning & Optimization**

- Wi-Fi performance optimization
- Load and band balancing
- Airtime fairness, decongestion
- 802.11k, 802.11r, 802.11v, sticky client
- Client Admission Control (CAC)
- Enabling & configuring OFDM-Only, BSS Minrate, and Tx Management rates
- Channel selection and optimization: DFS, pros and cons of DFS, R1, RUCKUS AI
- Automatic v. manual power optimization

5%	Wi-Fi Solution Troubleshooting & Repair
	• Data gathering, analysis and troubleshooting
	• Client connectivity troubleshooting tools and processes
	• AP to controller troubleshooting
	• Packet/frame capture
	• 3rd party and internal communication: APIs, NBI, AAA logs, Syslog, SNMP services
5%	RUCKUS Wi-Fi Solution Management
	• Solution management functions (SmartZone and RUCKUS One)
	• Upgrade path and process mangement
	• Administrators and administrative role mangement
	• Events and alarms (SNMP, Syslog)
	• Administrative action monitoriing and audit logging
	• Backup and restoration on SmartZone
	• Report creation
	• Health dashboards and threshold settings
	• Rogue APs and locate on map (SSID spoofing, MAC spoofing)

Study Materials

Supporting Online Courses & Product Documentation	**Online Courses**
	RSP 100- Routing and Switching Protocols
	RWF 100- RUCKUS Wi-Fi Fundamentals Online Course
	RASZA 200- RUCKUS SmartZone 5.2 Online Course
	RWD 200- RUCKUS Wi-Fi Design Online Course
	RWTS 300- RUCKUS Wireless Troubleshooting Online Course
	UNL 200- RUCKUS Unleashed Administrator Online Course
	CLD 200- RUCKUS Cloud Online Course
	CPA 200- RUCKUS Cloudpath Administrator Online Course
	RAA 200- RUCKUS Analytics Administrator Online Course
	Smart Licensing Online Course
	Product Manuals
	RUCKUS SmartZone 100, SmartZone 144, and Virtual SmartZone-Essentials Administrator Guide, 5.2.2
	RUCKUS SmartZone 300 and Virtual SmartZone-High Scale Administrator Guide, 5.2.2
	RUCKUS Virtual SmartZone Getting Started Guide
	RUCKUS SmartZone Data Plane Configuration Guide
	RUCKUS SmartZone Upgrade Guide, 5.2.2
	RUCKUS SmartZone 100 and Virtual SmartZone-Essentials Command Reference, 5.2.2
	RUCKUS SmartZone 300 and Virtual SmartZone-High-Scale Command Reference Guide, 5.2.2
	RUCKUS Unleashed 200.9 User Guide
	RUCKUS Cloud User Guide, 21.03
	Cloud-managed Systems
	RUCKUS One Datasheet
Other Online Resources	RUCKUS One Online Help
	CommScope University > RUCKUS Networking
	CommScope RUCKUS Support Website
	RUCKUS Education YouTube Channel
	RCWA Nutshell Study Guide