



Service Description: Advanced Services – Fixed Price

Cisco Wireless LAN RF Validation Services (ASF-CORE-WLAN-RF-V)

This document describes Advanced Services Fixed Price Cisco Wireless LAN Radio Frequency (RF) Validation service

Related Documents: This document should be read in conjunction with the following documents also posted at www.cisco.com/go/servicesdescriptions/: (1) Glossary of Terms; (2) List of Services Not Covered. All capitalized terms in this description have the meaning ascribed to them in the Glossary of Terms.

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RF Validation Service

Service Summary

The pre-defined scope of this service, as defined below, is to conduct on-premise RF site survey of existing Customer's Wireless Infrastructure (Brownfield) and submit a RF Validation Report.

The services are comprised of the following:

- Onsite Site Survey
- RF Design Validation

The services offered align to the following criteria:

- Site Survey and RF Design validation of Brownfield facilities up to 100,000 sq.ft (up to 5 facilities in one city).
- Facility Types included - Office, Medical Center, Schools, Retail, Warehouse
- Application Types included – Data, voice, video
- Facility Types excluded - Manufacturing, Sports/concert venues
- Application Types excluded – High-Density, Hyper location and specialized outdoor/mesh deployments

Location of Services

Services are delivered both onsite and remotely to Customer.

Deliverable

WLAN Radio Frequency ("RF") Validation Report which includes,

- Soft copy of Floor plan with installed AP locations
- Site survey data
- RF heat maps showing RF coverage levels of existing deployment

RF Validation

The responsibilities include assessing an implemented RF network and validating if the current deployment meets Customer requirements by performing onsite RF site survey, and submitting a detailed RF validation report.

Cisco Responsibilities

- Review Customer requirements for wireless LAN using one (1) or more of the following methods:
 - Conduct interviews with Customer key stakeholders;

- Provide requirements questionnaire for Customer to complete.
- Review with Customer the technical documentation of (including but not limited to) currently deployed network
- Work with the Customer to assess their existing RF infrastructure and analyze the readiness of the current network to support the implementation of new WLAN network services by reviewing the following documentation:
 - Customer's WLAN Detailed Design document (if available)
 - Customer RF Design and/or Site Survey document (if available)
 - Network topology, architecture diagrams,
 - End user device types and configuration, applications
 - Floor plans, site details, bill of materials, etc.,
- Perform an onsite site survey to validate RF Design which includes:
 - **RF Coverage Analysis** – includes reviewing site survey results, AP locations, antenna types, frequency plan, and power levels. Evaluate the existing signal coverage of the wireless network against Customer wireless application, use case, and device requirements by performing onsite RF measurement and testing in required coverage areas. Identify locations and areas of sub-optimal RF coverage, poor signal quality in the existing wireless deployment.
 - **Interference Analysis** – including measurement of internal and external interference sources if present at the time of the analysis. Depending on the need, identify levels of interference and specific interference sources, which may adversely impact wireless network performance.
 - **Evaluate WLAN network performance** – Assessment of the wireless network readiness to support Customer-specified wireless LAN applications and/or devices.
- Create a WLAN RF Design Validation Report which includes analysis and recommendations for:
 - **RF coverage** – Onsite validation of existing access point placements, updates to blueprints/floor plans including any adds/moves/changes of existing or new access points and antennas.
 - **RF interference** – Onsite spectrum analysis to identify in-band and possible out-of-band interference sources.
- Review with Customer the summary of the findings of the WLAN RF Design Validation Report for comments and approval.
- Provide a single point of contact (such as a project manager or engineering team lead) for all Wireless LAN RF Validation Services related tasks.
- Provide Customer requirements and desired wireless RF design specifications through one (1) or more of the following methods:
 - One (1) requirements gathering workshop;
 - Interviews of key stakeholders conducted with Cisco;
 - Completing requirements questionnaire provided by Cisco.
- Provide Customer information on the existing WLAN design and implementation to Cisco for analysis including:
 - Customer's WLAN Detailed Design document;
 - Customer RF Design document;
- Provide an existing RF site survey report or existing access point placement diagram that includes:
 - Physical locations of Access Points;
 - Antenna Type/Location/Orientation;
 - Any known or measured sources of interference;
 - RF/WLAN Design Assumptions
 - Any design or implementation caveats if known
- Provide physical access to facilities for all areas within the scope of the RF Implementation Validation service and provide remote network access via IPSec VPN).
- Identify areas where WLAN coverage is specifically included and excluded.
- The scope doesn't include survey of any hazardous areas.
- Provide required security and safety clearances, including any required training and sponsorship, and physical access to areas in the facility to be surveyed.
- Notify facility staff and security of scheduled validation work in advance of survey team and equipment arrival
- Provide timely physical access to all areas where the validation will be conducted. A full time Customer-provided escort is required when mandated by the Customer or by existing safety or security regulations and guidelines.
- Provide timely notification if physical access will be prohibited to any areas due to business-related use, inspections, construction, maintenance, or similar activities.
- Provide tools, safety equipment's, special attire and resources if needed to help Cisco carry out the onsite survey
- Provide any mechanical high lift and all necessary safety equipment associated with operating those mechanical high lift and/or licensed lift operator resource necessary to test and simulate wireless equipment mounting locations
- Identify any changes to Customer's building/office, equipment installation, wired network design or architecture occurring after the RF design was implemented.

Customer Responsibilities

- Provide Cisco administrator-level access to wireless LAN infrastructure components including access points, wireless LAN controllers, LAN switches, access control servers, network management systems, and related components.
- Provide technical documentation, network diagrams, topologies and network device configurations for all areas within the scope of the RF Validation service.
- Identify Customer locations that require wireless network coverage and provide information on the following:
 - Location type of each site (e.g. campus, branch office);
 - Wireless network business and technical requirements for each location type;
 - Information with respect to existing network infrastructure at each location, which may include detailed, current, high-resolution site floor plans with AP locations and names called out in one of the acceptable (EMF, WMF, GIF, JPEG) formats
 - Information on the number, category, and types of client devices, Hardware & Software version, current and future applications etc.,
 - Information about current and/or future Wireless LAN implementation like SSID, Radio's enabled, standards in use or desired (e.g., 802.11a/b/g/n/ac), network services like DHCP, DNS, NTP, RADIUS etc., Deployment model – Local/FlexConnect, capacity requirements, performance requirements, accessibility/reliability requirements, infrastructure management;
- Review with Cisco the summary of the findings of the WLAN RF Design Validation Report, provide comments and approval.
- Customer acknowledges that the completion of Services is dependent upon Customer meeting its responsibilities as indicated herein.
- Identify Customer's personnel and define their roles in the participation of the Services. Such personnel may include but is not limited to: architecture design and planning engineers, and network engineers.
- Ensure Customer's personnel are available to participate during the course of the Services to provide information and to participate in scheduled information gathering sessions, interviews, meetings and conference calls.
- Customer expressly understands and agrees that the Services shall take place and complete within ninety (90) calendar days from issuing a Purchase Order to Cisco for the Services herein.

Invoicing and Completion

Invoicing

Services will be invoiced upon completion of the Services.

Completion of Services

Cisco will provide written notification upon completion of the Services to Customer. The Customer shall within five (5) Business Days of receipt of such notification provide written acknowledgement of Cisco's completion of the Services. Customer's failure to acknowledge completion of the Services or to provide reasons for rejection of the Services within the five (5) Business Day period signifies Customer's acceptance of completion of the Services in accordance with this Service Description.

General Customer Responsibilities

- Customer will allow Cisco to both use the collected Customer Network Information and related data in connection with performance of the Service described herein, to recommend additional products/services to assist Customer in the execution of related activities and generally for commercial and business purposes to the extent such Customer Network Information cannot be attributable to the Customer. To the extent any Customer Network Information collected is deemed Confidential Information, Cisco will protect the information consistent with the terms of the Agreement between the parties and Cisco's data storage/retention policy.
- All information (such as but not limited to: designs, topologies, requirements) provided by Customer is assumed to be up-to-date and valid for the Customer's current environment. Cisco Services are based upon information provided to Cisco by Customer at the time of the Services.