



Service Description: Advanced Services – Fixed Price

Cisco Wireless LAN RF Design (ASF-CORE-WLAN-RF-D)

This document describes the Cisco Advanced Services Wireless LAN Radio Frequency (RF) Design service.

Related Documents: This document should be read in conjunction with the following documents also posted at www.cisco.com/go/servicedescriptions/: (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 Design Service

Service Summary

The pre-defined scope of this service, as defined below, is to conduct on-premise RF site survey of Customer's Greenfield facilities and submit a RF Design prior to deployment of Wireless Network Infrastructure.

The services are comprised of the following:

- Onsite Site Survey
- RF Design Document

The services offered align to the following criteria:

- Site Survey and RF Design of Greenfield 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") Design Document, which includes,

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

RF Design

The responsibilities include capturing and validating Customer design requirements, performing onsite RF site survey, and submitting a detailed RF design.

Cisco Responsibilities

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

- Provide requirements questionnaire for Customer to complete.
- Review WLAN requirements for the following:
 - Required signal strength / SNR design levels;
 - Required data rates, throughput, coverage model and availability;
 - Capacity requirements (number of users), and application usage for the users
 - AP placement, antenna specifications, Infrastructure considerations, Installation and aesthetic limitations
- Review with Customer technical documentation including network topology, architecture diagrams, floor plans, provisioning policies, site readiness, proposed bill of materials etc.
- Perform verification and validation of site by (including, but not limited to) physical walk-through, visual inspection and measurement of physical building(s), operations and wireless network requirements. Take note of physical construction within the facility that might affect the transmission and reception of radio signals. This includes the installation of other wireless communication devices such as cordless phones, cameras, or monitoring systems.
- Scan for other WLAN networks or sources of non-802.11 interference.
- Place RF transmitters within Customer facility to test propagation characteristics, coverage area, and signal quality.
- Based on gathered data, determine optimal placement of access points and antennas, and determine antenna type(s). Record observations and findings.
- Create a WLAN RF Design document which includes:
 - Bill of materials of equipment needed for WLAN implementation;
 - Floor plan with physical locations of access points (same format of Customer provided documentation)
 - Antenna type, location, and orientation for APs using external antennas
 - Special mounting or cabling recommendations
 - Recommended AP power / channel settings
 - Known or measured sources of interference;
 - RF design assumptions or caveats.
- Review with Customer a draft of the WLAN RF Design Document post survey for comment and approval.
- One (1) requirements gathering workshop;
 - Interviews of key stakeholders conducted with Cisco;
 - Completing requirements questionnaire provided by Cisco.
- Provide tools, safety equipment's, special attire and resources if needed to help Cisco carry out the onsite survey
- Identify client device types and applications and/or required performance levels
- Customer and Cisco shall mutually agree on requirements and information collected.
- Review with Cisco the technical documentation including network architecture, topology diagrams, floor maps, provisioning policies, site readiness, bill of materials etc.
- Provide current, high-resolution softcopy drawings of Customer building layout, floor plan for each area where coverage is desired. (AutoCAD format is preferred however Visio, .JPG or .PDF are acceptable formats).
- All drawings require accurate dimension markings and square footage of areas requiring survey.
- Identify areas where WLAN coverage is to be included and specifically excluded.
- The scope doesn't include WLAN coverage for 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 survey work in advance of survey team and equipment arrival
- Provide timely physical access to all areas where the survey 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 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 expected changes to Customer's building/office, equipment installation, LAN design or architecture occurring before/after the wireless site survey is completed.
- Identify building construction (material used, firewalls, etc.), areas requiring high density of end users, wireless data and/or voice requirements, areas which are outdoors that require wireless coverage, and areas where access point is subject to special installation requirements (i.e., hidden, exposed, or special antennas).
- Review with Cisco the WLAN RF Design Document for comment and approval.

Customer Responsibilities

- Provide a single, designated point of contact (such as a project manager or engineering team lead) for all WLAN RF Design related tasks.
- Provide Customer requirements and desired wireless RF design specifications through one (1) or more of the following methods:

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.
- 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.