



## Service Description: Advanced Services – Fixed Price

### Cisco Wireless LAN Plan and Build Services – Fixed (ASF-CORE-WLAN)

This document describes Advanced Services Fixed Price: Cisco Wireless LAN Plan and Build Services.

**Related Documents:** This document should be read in conjunction with the following documents also posted at [www.cisco.com/go/servicedescriptions/](http://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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#### Cisco Wireless LAN Plan and Build Services

##### Service Summary

This service provides a planning, design, implementation, and knowledge transfer services for the following:

##### Applications:

- Secure Mobility for Data Applications
- Voice over WLAN (VoWLAN)
- Video over WLAN

##### Technologies:

- Cisco Wireless LAN Controller
- Cisco Access Points
- 802.11x
- Clean Air
- WLAN Client devices
- Tablets

The services align to the following deployment parameters for both new and pre-existing deployments:

SKU	AP Count	Concurrent Endpoints	End Users
ASF-CORE-WLAN	11 - 50	151 - 1500	500

The Services are comprised of the following:

- WLAN Architectural Design Development
- WLAN Detailed Design Development
- WLAN Implementation

##### Deliverables

- Project Plan
- Wireless LAN Architecture Design Document
- WLAN Detailed Design Document
- Deployment Documents (Configuration, Testing, and Implementation Plans)

##### Location of Services

Services are delivered on-site and remotely to Customer.

## **Project Management**

### **Cisco Responsibilities**

- Provide Customer with a list of designated Cisco personnel roles and responsibilities under this service description.
- Provide a Project Management Plan ("PMP"). PMP is a baseline document from which the Cisco PM can manage deliverables, assess progress, and manage change management issues and any on-going questions.
- Work with Customer to identify and document dependencies, risks and issues associated with the successful completion of the project.
- Provide a Project Schedule highlighting deliverables, corresponding milestones, planned project events, resource(s) and timescales.
- Participate in scheduled project review meetings or conference calls, if required.
- Provide Customer with the identity of personnel requiring access to Customer premises, at least ten (10) Business Days prior to the scheduled date such personnel requires access.
- Deliver a weekly project status report to the Customer.
- Provide a handover, follow on actions, lessons learned, and exception reports (if necessary) upon project completion.

### **Customer Responsibilities**

- Provide the Cisco PM with a list of designated Customer personnel roles and responsibilities under this service description.
- Ensure that key Customer personnel (such as architecture design and planning, network engineering, network operations personnel) are available to provide information and to participate in review sessions and other information gathering activities. The Customer PM will also ensure that Cisco is provided with all information, data and documentation as Cisco reasonably requires to provide Services and comply with Cisco's responsibilities in this Service Description. This information includes, but is not limited to: (i) information relating to Customer's network, design, business and other applicable requirements; (ii) functional and/or technical documentation relating to such requirements; and (iii) topology maps, configuration information and existing and proposed network infrastructure.
- Identifying primary and backup Customer authorized site contacts who shall provide necessary information, obtain access clearances and coordinate with other organizations/third parties with respect to Services at that site.
- Participate in scheduled project review meetings or conference calls, if required.
- Coordinate with any external third parties, such as in country Carrier/Telco activities, deliverables and schedules.
- Ensure that Cisco's request for information or documentation needed for the project is provided within

ten (10) Business Days of Cisco's request, unless the parties agree to another time period for response.

## **WLAN Architectural Design Development**

Remotely capture and validate Customer architecture design requirements and create a WLAN high level architecture design

### **Cisco Responsibilities**

- Review Customer requirements for each wireless LAN technology and mobility application using one (1) or more of the following methods:
  - conduct Customer requirements interview with Customer key stakeholders;
  - provide requirements questionnaire for Customer to complete.
- Review the following:
  - business, technical and operational requirements;
  - architectural, topological, and functional requirements including performance, scalability, capacity, availability, resiliency and security;
  - future technology plans.
- Review with Customer relevant technical documentation, including high level design, network topology diagrams, network device configurations, software releases, floor maps, provisioning policies, Bills of Materials, and any relevant documents, as required.
- Cisco and Customer shall mutually agree on requirements and information collected
  - WLAN client devices, interoperability, performance, and security;
  - WLAN network infrastructure management, availability, performance, and scalability;
  - WLAN applications services identified above
- Work with Customer to review existing architecture and analyze readiness of existing infrastructure to support new WLAN services and applications. Areas to be addressed include the following:
  - existing and planned authentication infrastructure such as RADIUS servers, and external authentication databases (e.g., Active Directory, LDAP);
  - existing and planned wired network infrastructure design and implementation;
  - existing and planned network management infrastructure;
  - existing and planned client devices, applications and management processes.
- Create a high level WLAN Architecture Design which includes:
  - Customer WLAN Architecture Design requirements;
  - WLAN architecture diagram and recommendations;
  - suggested wireless design requirements, including:

- required signal strength and SNR design targets;
  - required data rates, target throughput, and desired availability;
  - capacity requirements (number of users);
  - remote site WLAN management and access considerations using Cisco FlexConnect feature
- WLAN security recommendations;
- network management recommendations;
- hardware and software release recommendations.
- Remotely present a summary of the analysis and recommendations of the Wireless LAN Architecture Design to the Customer key stakeholders and project sponsor.
- Review with Customer a draft of the Wireless LAN Architecture Design Document for comment and approval before it is formally completed and released.

### **Customer Responsibilities**

- Provide a single point of contact (such as a project manager or engineering team lead) for all WLAN planning and design related issues.
- Provide Customer requirements and desired wireless network design specifications for each WLAN technology and mobility application through one or more of the following methods:
  - one (1) requirements workshop;
  - interviews of key stakeholders conducted with Cisco;
  - completing requirements questionnaire provided by Cisco.
- Provide and review with Cisco:
  - business, technical and operational requirements;
  - architectural, topological, and functional requirements;
  - future technology plans.
- Customer and Cisco shall mutually agree on requirements and information collected
- Provide information and review with Cisco technical documentation, including high level design, network topology diagrams, network device configurations, software releases, floor maps, provisioning policies, Bills of Materials, and any relevant documents, as required.
- Provide information and review with Cisco:
  - type of client devices, radio technology (i.e., 802.11a/b/g/n), voice/data support, capacity requirements, performance requirements, accessibility/reliability requirements, infrastructure management, and client management;
  - list of Wireless client cards with driver versions.
- Identify and review with Cisco locations that require WLAN coverage;

- provide information on the business and technical requirements including mobility applications for each type of location (campus/branch office, etc);
- provide information on the existing network infrastructure at each location.
- Provide information and review with Cisco:
  - existing and planned wired network infrastructure, QoS, and network design;
  - existing/planned WLAN devices, code versions and configuration files of appropriate devices;
  - existing/planned security infrastructure such as VPN concentrators, RADIUS servers, and external authentication databases (e.g., Active Directory, NT, LDAP);
  - existing and planned network management infrastructure and operational procedures;
  - existing and planned client management processes;
  - information on current and planned traffic characteristics.
- Provide detailed information that the existing IP telephony network infrastructure (i.e., wired network infrastructure, CallManager, QoS, etc.) is consistent with Cisco IP Telephony design recommendations and document any pre-existing performance or stability problems in the existing wired IP telephony network that may adversely impact the Voice over WLAN implementation.
- Specify the planned camera types, frame rates, and video CODECs.
- Ensure that key Customer stakeholders and project sponsors are available to attend Cisco presentation of the WLAN Architecture Design.
- Review with Cisco a draft of the WLAN Architecture Design Document, providing comment and approval before it is formally completed and released.

### **WLAN Detailed Design Development**

Develop an in-depth, WLAN detailed design aligning with Customer's business and technical requirements.

### **Cisco Responsibilities**

- Review Customer requirements for each WLAN technology and mobility application using one (1) or more of the following methods:
  - conduct Customer requirements interview with Customer key stakeholders;
  - provide requirements questionnaire for Customer to complete.
- Review the following:
  - business, technical and operational requirements;
  - detailed design, topological, and functional requirements including scalability, capacity, availability, resiliency and security;
  - future technology plans.
- Review with Customer relevant technical documentation, including high level design,

network topology diagrams, network device configurations, software releases, floor maps, provisioning policies, Bills of Materials, and any relevant documents, as required.

- Evaluate network device configurations and technical documentation. Design elements may include:
  - WLAN infrastructure including WLAN security, management and performance features available via the Cisco Prime Infrastructure (PI), the Cisco Wireless LAN Controllers (WLC), and the Cisco WLAN Access Points including 802.1x and Clean Air capabilities;
  - Mobility Services Engine applications including context-aware, adaptive wireless Intrusion Prevention Systems (wIPS);
  - Cisco Unified Wireless Network infrastructure;
  - Access Point configuration;
  - type of client devices, 802.11a/b/g, voice/data support, capacity requirements, performance requirements, accessibility/reliability requirements, infrastructure management, and client management;
  - security infrastructure;
  - IP addressing scheme;
  - switching and routing infrastructure;
  - network management infrastructure;
  - WLAN client devices;
  - IP telephony infrastructure.
- Complete the detailed design discovery to integrate technical requirements and design goals into the detailed design.
- Cisco and Customer shall mutually agree on technical requirements and information collected.
- Create a WLAN Detailed Design. The WLAN Detailed Design typically includes some or all of the following:
  - network logical and physical topology;
  - IP addressing scheme;
  - switching and routing design;
  - WLAN design;
  - Access Point configuration (SSIDs, VLANs, Security, RF settings, etc);
  - type of client devices, 802.11a/b/g, voice/data support, capacity requirements, performance requirements, accessibility/reliability requirements, infrastructure management, and client management;
  - security design;
  - software protocols and feature configurations;
  - Wireless LAN network management design;
  - WLAN IP telephony design;
  - sample configurations templates for Cisco wireless infrastructure devices;
  - software recommendations based on feature/functionality;
  - hardware recommendations, as applicable.
- Provide software image recommendations for all Cisco WLAN devices, as required.
- Remotely present a summary of the analysis and recommendations of the Wireless LAN

Detailed Design to the Customer key stakeholders and project sponsor.

- Review with Customer a draft of the WLAN Detailed Design Document for comment and approval before it is formally completed and released.

<b>Customer Responsibilities</b>
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- Provide a single point of contact (such as a project manager or engineering team lead) for all WLAN planning and design related issues.
- Provide Customer requirements and desired wireless network design specifications for each WLAN technology and mobility application through one (1) or more of the following methods:
  - one (1) requirements workshop;
  - interviews of key stakeholders conducted with Cisco;
  - completing requirements questionnaire provided by Cisco.
- Provide and review with Cisco:
  - business, technical and operational requirements;
  - detailed design, topological, and functional requirements scalability, capacity, availability, resiliency and security;
  - future technology plans.
- Provide information and review with Cisco technical documentation, including high level design, network topology diagrams, network device configurations, software releases, floor maps, provisioning policies, Bills of Materials, and any relevant documents, as required.
- Customer and Cisco shall mutually agree on requirements and information collected.
- Provide information on the current network as required, which may include:

- business and technical requirements;
- o planned network architecture and high level design;
- o existing/planned Access Point Configuration (SSIDs, VLANs, Security, RF settings, etc);
- o detailed inventory of all access points including their physical location, Ethernet MAC address, Radio MAC addresses, connected LAN switch and interface;
- o type of client devices, 802.11a/b/g, voice/data support, capacity requirements, performance requirements, accessibility/reliability requirements, infrastructure management, and client management;
- o existing/planned security infrastructure such as VPN concentrators, RADIUS servers, and backend authentication databases (Active Directory, LDAP, NT);
- o existing/planned switching & routing infrastructure, QoS, network design, etc.;
- o existing/planned network management infrastructure and operational procedures;
- o existing/planned IP telephony network infrastructure;
- o information on current and planned traffic characteristics.
- Work with Cisco to analyze and develop detailed design and configuration recommendations.
- Ensure that key Customer stakeholders and project sponsors are available to attend Cisco presentation of the WLAN Detailed Design.
- Review with Cisco the WLAN Detailed Design Document, providing comment and approval before it is formally completed and released.

### **Cisco Wireless LAN Implementation**

Configure, test and verify a WLAN technology implementation against Customer WLAN Detailed Design, WLAN Network Implementation Plan and WLAN Test Plan specifications.

#### **Cisco Responsibilities**

- Gather information on existing WLAN infrastructure and validate all implementation prerequisites for successful implementation.
- Gather information on existing WLAN security infrastructure and operational procedures.
- Provide Customer with implementation activities, either on site or remote, which may include:
  - o verify all hardware/software versions and upgrade, as appropriate;
  - o configure hardware and software.
- Update the WLAN Detailed Design to document implemented components, devices and applications to reflect the final “as-built” design
- Obtaining sign-off signature from Customer on completion of the WLAN Implementation Test Plan testing

#### **Customer Responsibilities**

- Provide Customer stakeholders responsible for performing implementation planning tasks, which may include:
  - o assisting Cisco engineers in developing or updating the WLAN Detailed Design;
  - o assisting Cisco engineers in developing or updating any needed detailed implementation procedures and device-specific configurations;
  - o assisting Cisco engineers in developing or updating test procedures as needed based on changes to the WLAN Implementation Test Plan test cases;
  - o defining and documenting failure recovery procedures.
- Coordinate and develop with Cisco’s input an implementation schedule that meets the Customer’s change and release management processes and Cisco consultants’ availability
- Install the Cisco products in accordance with the Cisco product specification.
- Provide all necessary specialist test equipment, unless otherwise agreed with Cisco.
- Manage the delivery, installation, and configuration of equipment not provided by Cisco, that is required to work with, or act as, part of the Cisco-provided equipment.
- Make available any personnel and/or access to End Customer site as necessary for Cisco to perform the WLAN Implementation Test Plan test cases.
- Manage any Customer internal change management procedures.
- Provide access to network devices.
- Provide physical access to facilities, remote network access (e.g., via IPSec VPN), relevant network documentation and device configurations.
- Provide Customer stakeholders responsible for performing Implementation tasks, to include:
  - o assemble system components in staging area, if required;
  - o install hardware and software, if required;
  - o complete cabling and other physical connectivity, if required;
  - o implementing and configuring the detailed design with the assistance of Cisco engineers;
  - o executing the Implementation Plan Use test cases with the assistance of Cisco engineers;
  - o evaluating the test results against acceptance criteria with the assistance of Cisco engineers.
- Make any corrections to Customer-provided and/or installed equipment, as required.
- Provide input and assist in updating the WLAN Detailed Design document with final, “as-deployed” information.

#### **General Customer Responsibilities**

- Unless otherwise agreed to by both parties, Customer shall respond within two (2) business days of Cisco’s

request for documentation and information needed for the Services.

- 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.
- Support services provided by Cisco comprise technical advice, assistance and guidance only.
- Customer expressly understands and agrees that the Services shall take place and complete within 150 calendar days from issuing a Purchase Order to Cisco.
- Customer to notify Cisco of any scheduling changes related to the project at least ten (10) Business Days prior of the scheduled activity.
- Customer expressly understands that the following are out of scope for the Services:
  - Dedicated Project Management
  - High Level Architectural Design
  - Low Level Configuration Design
  - RF Design outside of the areas specified in section 1.0

- Elevators, stairwells, workshops and mechanical spaces, unless specified
- Power Over Ethernet requirements for access points
- Ethernet switch location specifications
- Configuration of wireless infrastructure
- Extensive post implementation network performance validation
- Implementation or design of Wireless Intrusion Prevention (wIPS)
- Implementation or design of Context Aware Location including calibration
- Formal training for staff (outside of informal knowledge transfer)
- Cabling and physical installation of any equipment

## 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.