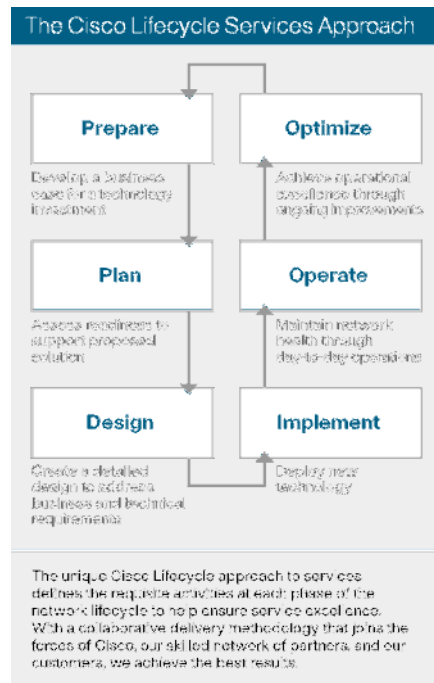


Cisco Context-Aware Services

Context-Aware Services help enable an intelligent, high-performance network and critical application integration



Cisco® Context-Aware Mobility Solution provides value-added functionality to business applications by capturing, integrating, and consolidating intelligence from various points in the network. This intelligence is then translated into business processes to optimize the delivery of business mobility applications. Cisco Context-Aware Mobility Solution and Cisco Context-Aware Services together deliver mobility services to enhance application performance by providing real-time information from the network and critical business applications.

Cisco Context-Aware software is a primary component of the Cisco Context-Aware Mobility solution, which expands the foundation of the Cisco Unified Wireless Network architecture. Cisco Context-Aware software runs on the Cisco 3300 Series Mobility Services Engine (MSE) and provides the capability to simultaneously track thousands of mobile assets.

A mobility service is a software instance running on the MSE and has the following characteristics:

- The service acts across multiple edge technologies such as 802.11 wireless and 802.3 wired networks.
- The service provides a value-add function across multiple network elements.
- The service provides an interface to that value-add function to external applications and servers using a mobility services engine API.
- The service adds intelligence to the network through its function to enhance the usability of the network.
- The service provides visibility into the network that otherwise applications and servers would not easily obtain.
- The service can be combined with other mobility services to achieve higher order functions.
- The service can be managed using the mobility service API.
- The service can be deployed across multiple MSEs to scale the function it provides.

IT must evolve existing wireless networks to support a variety of new mobility applications that must extend across multiple networks and scale from small businesses to the very largest enterprises. To achieve this transition, IT must transform the wireless LAN (WLAN) into mobility networks by abstracting the application layer from the network layer. The Cisco Motion strategy for Mobility Services provides a holistic approach to business mobility that delivers industry relevant mobility solutions with complementary services such as context-aware solutions, mobile intelligent roaming, secure client management, and adaptive wireless intrusion prevention systems (IPS).

Location Services associated with Cisco Context-Aware Mobility Solution provide a single unified view of contextual information, including location for network clients through the mobility services engine API. Cisco Context-Aware Location Services enable both queries for context information as well as registration for asynchronous events based on movement, containment, absence, and other advanced context-aware event triggers. Applications and servers that consume context-aware information no longer have to be written to multiple disparate APIs across a wide variety of technologies. The context-aware service running on the MSE has simplified the task of building context-aware applications and services.

Challenge

The integration of services, control, and data planes adds complexity and limits the network's ability to adapt to new services while maintaining consistent performance. As businesses start to architect their networks to natively support mobility, the integration of services, control, and data planes becomes a limiting factor in the flexibility and scale the network can provide to support mobile applications. Although still critical to the network's ability to provide the intelligence for optimal mobile application performance, mobility services should be abstracted from the control and data planes in order to be centralized into a services engine. This centralization of services offers several benefits, including scalability and improved provisioning and management. Additionally, a centralized services architecture removes the direct linkage between service and network, allowing services to extend across a variety of networks, including Wi-Fi, Ethernet, WiMAX, and cellular.

System reliability, connectivity, and availability are crucial when integrating and maintaining a system that is capable of locating assets and people with efficiency that is effective. Regulatory compliance and privacy considerations are of particular importance.

Enabling rapid location through a converged infrastructure and making information accessible only to the few individuals and business applications that need it are dependent on expert system design, implementation, integration, and maintenance.

Solution

The Cisco Unified Wireless Network is a solution that provides enterprise-class wireless connectivity. It delivers strong security, management, innovation, and investment protection, all crucial for enabling mobility services (including voice, guest access, advanced security, and context-aware location services) in pervasive deployments.

Cisco and our Wireless LAN Specialized Partners offer a broad portfolio of end-to-end services based on proven methodologies for planning, designing, implementing, operating, and optimizing the performance of a variety of secure voice and data wireless network solutions, mobility service solutions, technologies, and strategies.

A wide variety of specialized networking services and support services is available to help deliver a secure context-aware location services solution with a low total cost of ownership.

Cisco Wireless LAN Location Planning and Design Service Bundle

For a WLAN context-aware location services solution to do the job of rapidly locating equipment, inventory, people, and other assets, it must be properly designed for your environment. Because WLANs deployed for secure data access might not provide adequate location performance, it is necessary to establish appropriate RF coverage and to calibrate and implement the system correctly so as to achieve the desired performance.

Through the Cisco Wireless LAN re Location Solution Planning and Design Service bundle, Cisco and our Wireless LAN Specialized Partners can work with you to assess your physical environment to determine the requirements for meeting your location-based services coverage needs and for integrating the solution into your existing WLAN for secure data or voice access.

Cisco and our Wireless LAN Specialized Partners can then develop a design to meet your business needs and establish the steps for deploying it. Our teams of engineers are WLAN subject matter experts who offer expertise and guidance in designing and deploying context-aware location solutions. They have an intimate understanding of Cisco WLAN products and technologies, including the Cisco 3300 Series MSE

The Cisco Wireless LAN Location Planning and Design Service bundle delivers an integrated solution that includes the services Cisco has identified as essential for successful deployment of a secure context-aware location services solution. Each service can also be purchased individually as a scoped service and is described in further detail within this document:

- The **Cisco Wireless LAN Architectural and Security Design Service** is a comprehensive set of methodologies that help you manage your technical and applications requirements while providing various architectural options. The first steps in deploying a secure WLAN solution are translating business application requirements into solution requirements and aligning those solution requirements to the multitude of technologies available.
- The **Cisco Wireless LAN RF Assessment Service** gauges the ability of your environment to allow secure WLAN access in the desired coverage area. It helps you assess your current state and future needs so you can make informed decisions about how to build your wireless network architecture. Assessments enable Cisco to make recommendations for locating access points and establishing their frequencies, antenna selections, and power and cabling specifications. Resulting recommendations help you achieve reliable WLAN data access and mitigate risk by providing a foundation for addressing coverage challenges and interference during later design development.
- The **Cisco Wireless LAN Configuration Service** helps you configure your secure Cisco secure access control servers (ACSs) and sample client devices, implement your wireless control system (WCS) and MSE, and more. We provide onsite support for implementing your WCS and can configure WLAN controllers, policy provisioning, RF optimization, security monitoring, and customized fault settings.

We can implement an indoor IEEE 802.11–based, context-aware location solution by incorporating the Cisco 3300 Series MSE into the design framework of your Cisco Unified WLAN architecture and transfer knowledge to help you effectively and efficiently manage your WLAN network with the WCS and intelligent data from the MSE.

- The **Cisco Wireless LAN Postdeployment Validation Service** validates that the system is operating in accordance with the design by surveying the RF environment for coverage, interference, and general performance after the WLAN access points are installed and the network is configured. In providing onsite and remote WLAN postdeployment validation, our team of WLAN specialists assesses coverage, measures interference, and evaluates overall WLAN network capacity to help ensure optimal performance.

Cisco Wireless LAN Optimization Service

Maintaining your WLAN to help keep business-critical applications available and operational through the lifetime of the network can increase employee productivity while reducing operational expenses. In supporting these applications, it is critical to proactively address quality-of-service, coverage, interference, and compatibility issues. If your WLAN has coverage gaps, poor quality of service, or software compatibility problems, your network users might not be able to complete business-critical transactions.

The Cisco Wireless LAN Optimization Service is a proactive optimization service that provides software, configuration, and coverage recommendations to help improve the performance level of your Cisco WLAN. Delivered by engineers with detailed knowledge of your WLAN network design and architecture, this service helps you support changes, while analyzing designs that enable your network to support additional applications and users. It allows you to assess your WLAN's performance using periodic onsite coverage, interference, throughput, and utilization measurements.

The service also assesses wireless applications and develops a strategy to manage Cisco WLAN software in a standardized way, helping improve network availability and reliability.

Benefits of Cisco Location Services

Cisco Context-Aware Location Services help you to achieve a high-performance Cisco Unified Wireless Network solution supporting context-aware services by establishing appropriate RF coverage and calibrating and implementing the system in accordance with your design. In addition, these services help you to:

- Reduce risk and resolve problems quickly during your WLAN context-aware location services solution deployment by helping you to establish deployment project parameters, identify primary sponsors, and develop a project plan
- Protect the integrity of the network and reduce downtime, which can affect your business by keeping software applications current
- Improve system reliability by resolving network-level issues quickly
- Optimize asset usage and reduce operational and capital expenses by keeping context-aware location services solution applications available and operational

Why Cisco Services

Cisco Services make networks, applications, and the people who use them work better together.

Today, the network is a strategic platform in a world that demands better integration between people, information, and ideas. The network works better when services, together with products, create solutions aligned with business needs and opportunities.

The unique Cisco Lifecycle approach to services defines the requisite activities at each phase of the network lifecycle to help ensure service excellence. With a collaborative delivery methodology that joins the forces of Cisco, our skilled network of partners, and our customers, we achieve superior results.

For More Information

For more information about Cisco Wireless LAN Services, visit www.cisco.com/go/wirelesslanservices or contact your local account representative.

For more information about Cisco wireless LAN context-aware location-based services solutions, visit www.cisco.com/go/contextaware.

Cisco Services.
**Making Networks Work
 Better Together.**



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