

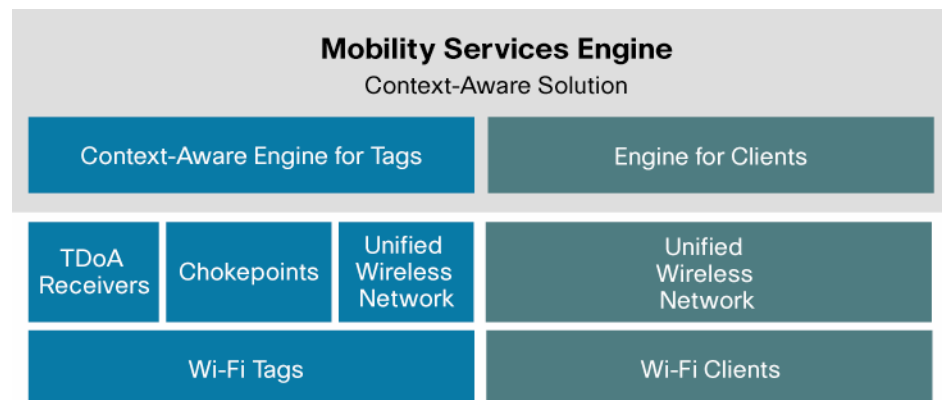
Cisco Context-Aware Software

Product Overview

The Cisco® Context-Aware Mobility solution provides the ability to capture and integrate into business processes detailed contextual information about such things as location, temperature, and the availability of an asset. The integration of contextual information with business process applications is fast becoming the next level of true enterprise mobility. With the Cisco Context-Aware Mobility solution, mobile users can go beyond anytime, anywhere connectivity to automatically having the right device, the right application, and the right environment while on the go. They will now be able to answer business-critical questions about both mobile assets and the users of those assets, to directly improve their organization's profitability.

The Cisco Context-Aware software is a key component of the Cisco's Context-Aware Mobility solution, part of the Cisco Unified Wireless Network. Figure 1 gives an overview of the Context-Aware Mobility solution. The Cisco Context-Aware Software runs on the Cisco 3300 Series Mobility Services Engine and provides the capability to simultaneously track thousands of mobile assets. If the mobile asset is a wireless device like a laptop or a dual-band phone, the contextual information will be directly sent from the device radio module over the Wi-Fi network. When the mobile asset does not have radio capability, wireless tags can be attached to it to collect the parameters needed. Making contextual information available to the rest of the business in a timely and simple manner is crucial to ensuring a fast adoption and allowing corporations to reap the benefits of context awareness for a range of industries, including healthcare, manufacturing, retail, and education.

Figure 1. Context-Aware Software



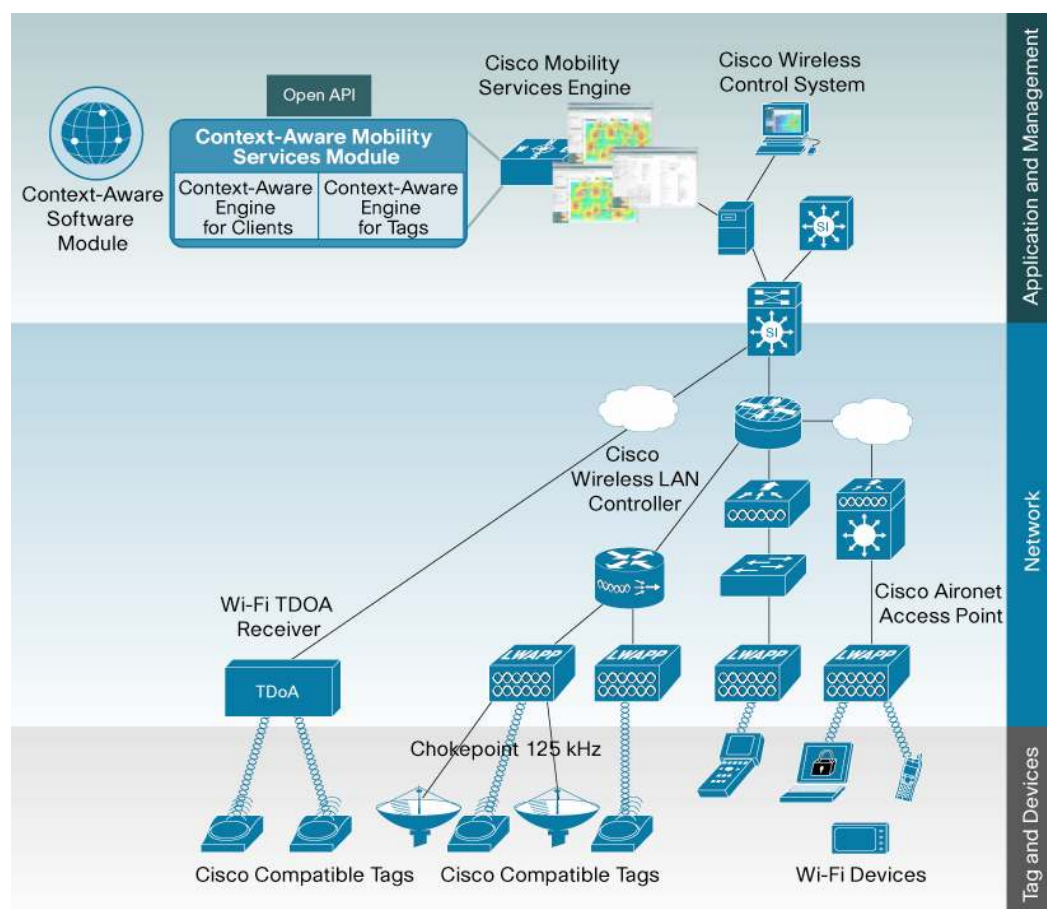
Cisco Context-Aware Software relies on two engines for processing the contextual information it receives. The context-aware engine for clients processes data received from Wi-Fi clients and the context-aware engine for tags processes data received from Wi-Fi tags. Both engines can be deployed together or separately, depending on business needs.

The Cisco Context-Aware software is available for deployment in indoor, indoor high-ceiling, and outdoor environments. A combination of received signal strength indication (RSSI) technology for indoor environments and time difference of arrival (TDoA) technology for outdoor and indoor high-ceiling environments allows customers to continuously and seamlessly track assets as they move across different environments.

Solution Architecture

The foundation of the Cisco Context-Aware Mobility solution is the controller-based architecture of the Cisco Unified Wireless Network, as described in Figure 2. The Cisco Unified Wireless Network includes the following primary components: access points, WLAN controllers, the Cisco Wireless Control System, and the Cisco Mobility Services Engine. The solution uses the same access points that deliver data traffic to also gather contextual information from Wi-Fi clients and Wi-Fi tags. The modular architecture makes it possible to use the processing engines separately for tags and clients.

Figure 2. Architectural View of the Context-Aware Mobility Solution



Features and Benefits

Table 1 lists the features and benefits of Cisco Context-Aware Software.

Table 1. Features and Benefits of Cisco Context-Aware software

Features	Benefits
Scalability	Cisco Context-Aware software has the capacity to track up to 18,000 assets, including Wi-Fi clients and assets with Wi-Fi tags simultaneously. This scalability helps to ensure that context-aware services can be applied to the entire enterprise environment.
Multiple Context-Aware Engines	The modular design of the software allows for the use of the context-aware engine for clients and the context-aware engine for tags simultaneously or separately to estimate the location of any asset using either Wi-Fi client or Wi-Fi tag information.
Multiple Location Technologies	Clients and tags can be tracked in indoor, indoor high-ceiling, and outdoor environments. Tracking is done using the RSSI-based RF fingerprinting technology for indoor environments and TDoA technology for outdoor and high-ceiling environments. The Context-Aware Mobility Service module also supports the use of chokepoints for applications requiring high fidelity and deterministic context-aware information.
Open Platform for Business Applications	To facilitate the deployment of context-aware-based applications in the enterprise, the Context-Aware software allows for the integration of business applications via a rich and open Simple Object Access Protocol (SOAP)/XML-based API. The API is available at no cost from Cisco.
Alerts and Notifications	Alerts and notifications can be customized by the user based on business policy requirements. These alerts help in the enforcement of business policies. Alerts and notifications can also be set up based on the severity of the condition being reported.
Deployment Planning Optimization	The process of planning and deploying data, voice, and context-aware services is made simpler by the identification of coverage holes for the particular deployment scenario. The intelligence provided makes it possible to plan deployments more effectively.
Enhanced Security	By providing the location of rogue access points and devices, the system simplifies and enhances detection. This helps in improving the overall security of the enterprise network.
Information Exchange Configuration	Information Exchange Configuration allows for control of which layer of information gets forwarded from the Cisco Unified Wireless Network controller to the Context-Aware software. This helps in reducing the amount of contextual information gathered and transmitted across the network, thus reducing the absolute bandwidth requirements between the controller and the Cisco Context-Aware software.
Historical Data	Historical data on the elements being tracked is collected and stored. This information can be used for drawing up trends and troubleshooting as well as for other purposes.
Scalable License Management	The license management of the Cisco Context-Aware software allows for the flexibility in the type and quantity of licenses purchased to match the various scenarios. The licenses are additive (up to 18,000 assets tracked) and thus provide for the growth of the system. The pay-as-you-scale license model is designed for enterprises that need to scale quickly and to have extra capacity to meet future needs.
Manageability	The Cisco Context-Aware software provides for features such as: <ul style="list-style-type: none"> • Backup and restore • Backup scheduler • E-library • Alerts dashboard • Easy import and export of asset information • Filtering and exclusion of tags and clients • Access control lists • Auto-synchronization with WCS • Interfloor differentiation • Rails and regions • Logs and reports

Product Specifications

The Cisco Context-Aware software runs on the Cisco 3300 Series Mobility Services Engine. A Cisco Wireless Control System (WCS) along with location license must be installed in order to interface with the Cisco Context-Aware software. The WCS interface allows for the control and management of the module.

Cisco Context-Aware Software Compatibility

- Cisco Wireless Control System (WCS): Requires 5.1.xxx or later
- Cisco Wireless LAN Controller (WLC): Requires 4.2.xxx (xxx>112) or 5.0.xxx (xxx>148) or later
- Cisco Aironet 1000 Series Access Points for Context-Aware software are supported only with version 4.2.xxx (xxx>112)

Ordering Information

Table 2 lists ordering information for the Cisco Context-Aware software. To place an order, visit: <http://www.cisco.com/en/US/ordering/index.shtml>.

Table 2. Ordering Information

Part Number	Product Name	Usage Guidance
AIR-CAS-3KC-K9	Context-Aware Engine for Clients License for 3K Clients	Track Wi-Fi clients in indoor environments
AIR-CAS-6KC-K9	Context-Aware Engine for Clients License for 6K Clients	
AIR-CAS-12KC-K9	Context-Aware Engine for Clients License for 12K Clients	
AIR-CAS-3KT-K9	Context-Aware Engine for Tags License for 3K Tags	Track Wi-Fi tags in indoor, outdoor, and high-ceiling environments
AIR-CAS-6KT-K9	Context-Aware Engine for Tags License for 6K Tags	
AIR-CAS-12KT-K9	Context-Aware Engine for Tags License for 12K Tags	

Service and Support

Cisco offers a wide range of services programs to accelerate customer success. These innovative services programs are delivered through a unique combination of people, processes, tools, and partners, resulting in high levels of customer satisfaction. Cisco services help you to protect your network investment, optimize network operations, and prepare your network for new applications to extend network intelligence and the power of your business. For more information about Cisco services, refer to Cisco Technical Support Services or Cisco Advanced Services. For more information about the Cisco Context-Aware Mobility Solution, visit

<http://www.cisco.com/go/contextaware> or contact your local Cisco account representative.



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