CISCO SYSTEMS

White Paper

Why Migrate to the Cisco Unified Wireless Network?

Cisco Systems® is encouraging our customers to migrate to the Cisco® Unified Wireless Network. This paper reviews the advantages of and reasons for migrating to the Cisco Unified Wireless Network.

CHALLENGE

Organizations want to deploy business-class wireless networks that offer investment protection and support mobility services such as guest networking, voice over WLAN (VoWLAN), location services and advanced security features. They need a WLAN that supports new business applications, future technology developments, and enterprise-class network demands. Network designers need to take full advantage of their existing tools, knowledge, and network resources to cost-effectively put their RF environment to work to improve the way they do business. Organizations need to feel confident that their WLAN investments are protected—today and tomorrow.

SOLUTION

As the worldwide wireless networking technology innovator and market leader, Cisco offers the industry's most comprehensive product line for enterprise WLANs. The Cisco Unified Wireless Network solution combines the best elements of wireless and wired networking to deliver the same level of security, scalability, reliability, ease of deployment, and management for wireless LANs that organizations expect from their wired LANs. (Figure 1)

Customers that have deployed a Cisco wireless solution using Cisco Aironet® autonomous access points, the CiscoWorks® Wireless LAN Solution Engine (WLSE), and the Cisco Catalyst® 6500 Series Wireless LAN Services Module (WLSM) are encouraged to migrate to the Cisco Unified Wireless Network to reap numerous benefits including ease of management, scalability, advanced feature velocity, lowered total cost of ownership, and mobility services such as VoWLAN, guest access, location services, and enhanced security.
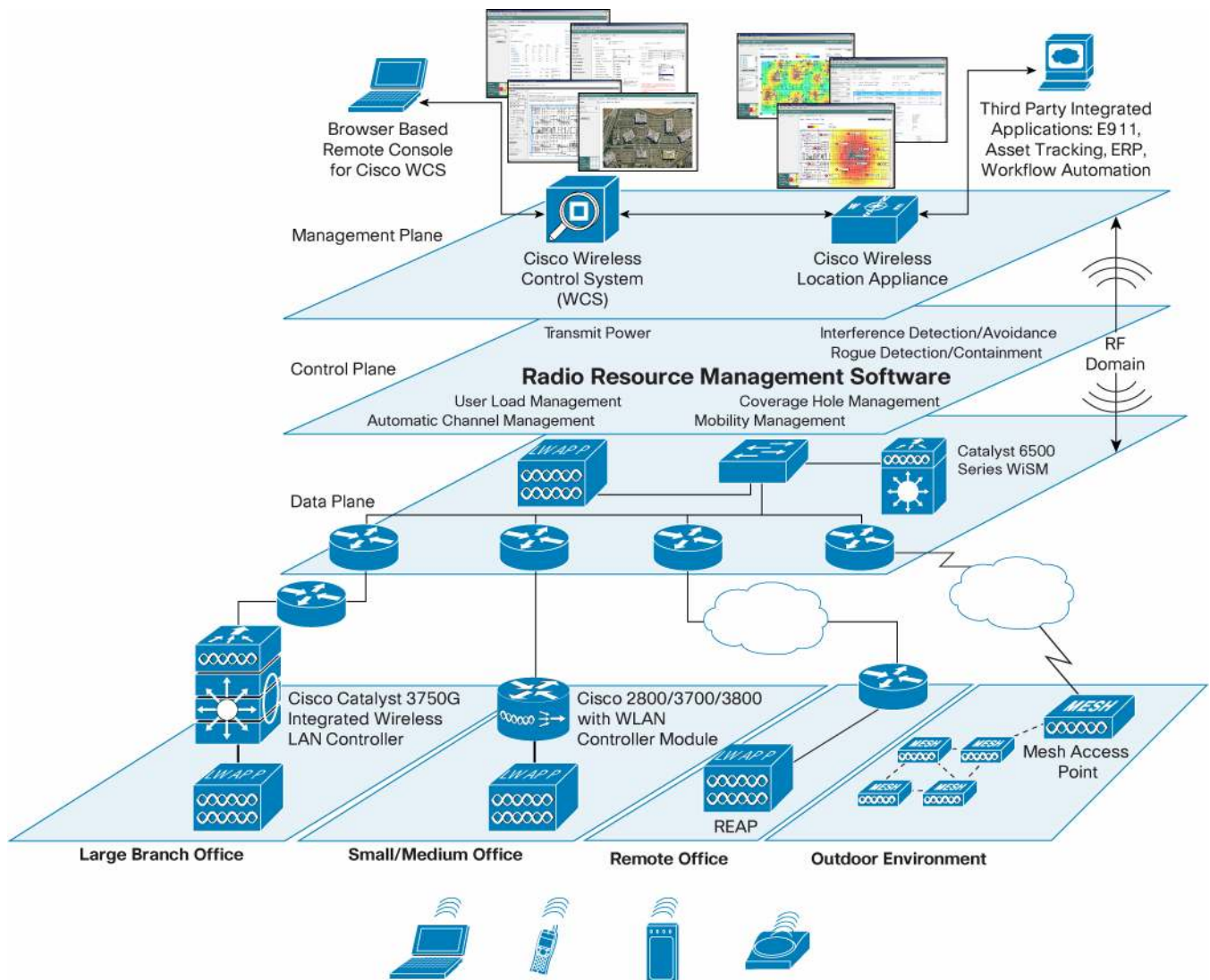
This paper reviews the advantages of and reasons for migrating to the Cisco Unified Wireless Network. For guidelines, tools, and programs to assist organizations with planning their migration to the Cisco Unified Wireless Network, please read the following white paper Guidelines and Tools for Migrating to the Cisco Unified Wireless Network.

Cisco Unified Wireless Network

The Cisco Unified Wireless Network is the industry's only solution that cost-effectively addresses the WLAN security, deployment, management, and control issues facing enterprises. This powerful solution includes innovative RF capabilities that enable real-time access to core business applications and provides proven enterprise-class secure connectivity.

The Cisco Unified Wireless Network is composed of five interconnected elements that work together to deliver an enterprise-class wireless solution: client devices, access points, network unification, world-class network management, and mobility services. Beginning with a base of client devices, each element adds capabilities as network needs evolve and grow, interconnecting with the elements above and below it to create a comprehensive, secure WLAN solution.

Figure 1.   Cisco Unified Wireless Network

Products for the five interconnected elements include:

- **Client devices**—Cisco Compatible Extensions client devices and Cisco Aironet client devices

- **Access points**—Cisco Aironet lightweight access points and Cisco wireless LAN bridges

- **Network unification**—Cisco 4400 and 2000 Series wireless LAN controllers, Cisco Catalyst 6500 Series Wireless Services Module (WiSM), the Cisco Wireless LAN Controller Module (WLCM) for Integrated Services Routers and the Cisco Catalyst 3750 Series Integrated Wireless LAN Controller.

- **Network management**—Cisco Wireless Control System (WCS)

- **Mobility services**—Cisco Wireless Location Appliance, Cisco Self-Defending Network, Network Admission Control, and single and dual mode Wi-Fi phones such as Cisco 7900 Series Unified IP Phones.

For details about the features, benefits, and components of the Cisco Unified Wireless Network, please read the Cisco Unified Wireless Network Overview.

Advantages of Migrating to the Cisco Unified Wireless Network

The Cisco Unified Wireless Network delivers advanced features and benefits that are easy to deploy, scale, and manage. By migrating to the Cisco Unified Wireless Network and deploying Cisco Aironet lightweight access points with a Cisco wireless LAN controller, organizations can experience the following features and benefits:

- Simplified WLAN deployment and centralized management for lowered operational costs
- Easy-to-use, intuitive GUI that minimizes IT training requirements
- Fast, easy, automated access point image upgrades and configurations which help ensure network compatibility and eliminate image mismatches on the network
- Built-in system planning and configuration tools, as well as specialized deployment tools for mobility services that deliver complete lifecycle management
- Scalability from one, to hundreds, to tens of thousands of central or remotely located access points to deliver services from the smallest to largest networks
- Flexible deployment as a highly integrated network or a simple overlay network
- Reliable, dynamic RF management that is self-configuring, self-healing, and self-optimizing
- Easy-to-deploy location services that simultaneously track thousands of devices from directly within the WLAN infrastructure
- Guest access that keeps the wireless network secure while providing customers, vendors, and partners with controlled WLAN access
- Cost-effective, real-time VoWLAN, delivering secure, intelligent voice services
- Advanced WLAN security and network protection through an integrated intrusion prevention system (IPS), the Cisco Self-Defending Network, and Network Admission Control (NAC)
- Significant savings in operational costs and capital investments through centralized management and unification of the wired and wireless LAN

To learn more about the benefits of this innovative solution, please read the following white paper: Benefits of Centralization in Wireless LANs via the Cisco Unified Wireless Network.

Mobility Services

The Cisco Unified Wireless Network supports new mobility applications, emerging Wi-Fi technologies, and advanced threat detection and prevention capabilities. It delivers unified support of leading-edge applications such as voice over WLAN, location services, guest access, and advanced wireless security features such as wireless IDS/IPS, NAC and the Cisco Self-Defending Network.

Support for wireless LAN mobility services is built into the Cisco Unified Wireless Network. By migrating to this innovative solution and deploying lightweight access points and wireless LAN controllers, organizations can cost-effectively implement these services in conjunction with their migration plans.

Cisco will continue to develop new mobility services to empower organizations with mobility solutions that solve business challenges, keep businesses competitive, and support anywhere, anytime connectivity.

Why Migrate to the Cisco Unified Wireless Network?

Organizations are encouraged to migrate to the Cisco Unified Wireless Network to increase employee productivity and efficiency, gain a competitive advantage, and provide network users with a new level of freedom and flexibility. Some of the major reasons customers are choosing to migrate to the Cisco Unified Wireless Network include:

- **Simplified WLAN deployment**—Customers want the simplified deployment capabilities of the Cisco Unified Wireless Network. The zero-configuration deployment capabilities of this solution deliver WLAN capabilities without modifying the existing routing or switching infrastructure. New access points are easily added. Each lightweight access point automatically detects the best available Cisco wireless LAN controller and downloads the appropriate policies and configuration information with no need for hands-on modification.

- **Low-cost centralized management**—Having better visibility and control of the RF environment reduces operational costs. A few to hundreds to tens of thousands of lightweight access points are easily managed by wireless LAN controllers, which are centrally managed by Cisco' management tool the Cisco WCS. The intuitive GUI of the Cisco WCS allows IT staff to easily configure, monitor, and troubleshoot the WLAN with minimal training. Up to 150 wireless LAN controllers and 2500 access points can be managed by one Cisco WCS.

- **Reduced total cost of ownership (TCO)**—The Cisco Unified Wireless Network helps customers minimize the operational and capital costs associated with managing and deploying their wireless network. The centralized management features and dynamic RF management capabilities of the Cisco Unified Wireless Network offer significant cost reductions. To learn more about how an integrated approach using the Cisco Catalyst 6500 Series WiSM or Cisco WLCM can help organizations save significant costs in ongoing operations, support, and lost productivity over a five-year period, please read the following white papers: Cisco Unified Wireless Network: Reducing Large-Scale Enterprise Wireless LAN Total Cost of Ownership and Cisco Unified Wireless Network: Reducing SMB and Branch Office Wireless LAN TCO.

- **Scalability**—The Cisco Unified Wireless Network is highly scalable. It supports business-critical wireless services across the LAN and WAN for deployment of several, hundreds, or thousands of central or remotely located lightweight access points in the campus, branch offices, remote sites, and outdoor locations.

- **Mobility**—The Cisco Unified Wireless Network delivers advanced mobility through intersubnet roaming that is supported without client software. This facilitates device management with no required changes to the core routing infrastructure.

- **Location services**—Organizations that need visibility into the RF environment are embracing the location services available in the Cisco Unified Wireless Network. Cisco location services support simultaneous tracking of thousands of Wi-Fi devices from directly within the wireless LAN infrastructure via the Cisco Wireless Location Appliance. With location services, an organization can enhance business applications, improve productivity and support critical applications, such as high-value asset tracking, location-based security, enhanced network management, and business policy enforcement. Customers and partners can also use Cisco's free Location Appliance API to deploy new and important business applications.

- **Secure guest access**—The Cisco Unified Wireless Network supports simplified configuration and deployment of guest access for customers, vendors, and partners. Guest access increases company productivity, facilitates real-time collaboration, and helps companies be more competitive in today's anywhere, anytime business climate. With Cisco's guest access solution, internal user traffic is segregated from guest user traffic using Ethernet over IP (EoIP) tunnels and VLANs. To learn more about secure guest access, please read the white paper: Achieving Business Goals and Enhancing Customer Relationships with a Secure Guest Access Wi-Fi Network

- **VoWLAN**—The Cisco Unified Wireless Network supports cost-effective, real-time intelligent voice services across an end-to-end Cisco network. Organizations can use the Cisco Unified Wireless IP Phone 7920 or other Wi-Fi phones with this solution. To learn more about VoWLAN, please read the white paper: Boosting Business Mobility and Responsiveness with the Cisco Unified Wireless Network.

- **Wireless IPS**—The Cisco Unified Wireless Network leads the industry in delivering enterprise-class, standards-based wireless LAN security and intrusion prevention. The solution supports flexible security policies that adapt to changing corporate security needs. For example, with Cisco's IPS, a Cisco access point, in conjunction with Cisco WCS, can detect a malicious attack from an associated wireless client device and send shun requests to Cisco wireless LAN controllers, to disassociate the client device. The Cisco Unified Wireless Network's IPS integrates with the Cisco Self-Defending Network and NAC to limit damage from emerging security threats such as viruses, worms, and spy ware. To learn more about wireless IDS and IPS please read the white paper: [Addressing Wireless Threats with Integrated Wireless IDS and IPS in the Cisco Unified Wireless Network](#).

- **Wireless mesh networking**—The Cisco Unified Wireless Network supports deployment of a Cisco wireless mesh networking solution that uses lightweight outdoor mesh access points. This outdoor solution supports enterprise campus to metropolitan-scale outdoor Wi-Fi networks, using the same Lightweight Access Point Protocol (LWAPP) architecture as Cisco indoor lightweight access point deployments. Customers can maximize their WLAN investment by using their existing wireless LAN controllers and the Cisco WCS to centrally manage both the indoor and outdoor WLANs to provide seamless indoor and outdoor connectivity. To learn more about wireless mesh networking please read the brochure: [Cisco Wireless Mesh Networking Solution Overview](#).

- **Advanced feature velocity**—Customers are migrating to the Cisco Unified Wireless Network for the wide array of feature enhancements that are planned for the solution and its products.

SUMMARY

The Cisco Unified Wireless Network supports the industry's most comprehensive product line for enterprise WLANs. It combines the best elements of wireless and wired networking to deliver secure, scalable WLANs with a low total cost of ownership. Cisco will evolve the Cisco Unified Wireless Network to support new business applications, WLAN technology developments, and enterprise-class network demands.

Cisco customers are encouraged to migrate to the Cisco Unified Wireless Network to enjoy the advanced features of this innovative solution. Customers that migrate to the Cisco Unified Wireless Network will immediately experience numerous benefits including ease of management, scalability, advanced feature velocity, lowered total cost of ownership, and mobility services such as voice, guest access, location services, and enhanced security.

Cisco will help to ensure customer investment protection for the Cisco Unified Wireless Network through field firmware upgrades, software upgrades, and careful attention to future hardware requirements. Customers can feel confident that with Cisco, their WLAN investments are protected both today and tomorrow.

FOR MORE INFORMATION

Contact your local account representative or visit the locations below for more information.

For more information about the Cisco Unified Wireless Network, please visit: http://www.cisco.com/go/unifiedwireless

For more information about Cisco wireless products, please visit: http://www.cisco.com/go/wireless

CISCO SYSTEMS

Printed in USA   C11-359616-00 07/06