

Enterasys Cloud Wireless Solution Brief



Enterprise networks are evolving to service a highly mobile workforce outfitted with an ever-growing assortment of WiFi enabled devices and an insatiable need for continuous network access. Consequently, the market is experiencing high growth in wireless LAN deployments throughout all vertical markets, including schools, hospitals, warehouses, small and medium-sized businesses and virtually every location where workers or people congregate. Today's business environment requires network access to be omni-present as well as reliable and it must provide strong performance with seamless roaming capabilities. While wired networking is still an important component of an enterprise network in data centers and other points of aggregation, the wireless edge continues to grow and has become a dominant factor in all network rollouts and upgrades.

Even though wireless networking provides numerous benefits for the user, it also imposes many challenges for network IT staff. Managing a wireless LAN requires a different set of skills as compared to managing a wired LAN. Unfortunately, many IT teams lack such expertise. This raises the barrier of entry for wireless LAN deployments and puts the efficacy of the wireless LAN at risk. However, managing the WLAN doesn't need to be an obstacle to the goal of providing ubiquitous network access with high availability.

One of the biggest strengths of the Enterasys Wireless products is their deployment flexibility. Enterasys provides complete flexibility over the location of the controller as well as how the WLAN is managed, which reduces costs, simplifies management, and removes the barriers to deploying a wireless edge. Customer deployment options include:

1. A typical on-premise wireless deployment where controllers are collocated in proximity to the access points and self-managed by the customer.

Solution Benefits

Business Alignment

- Intelligent access points enable private and public cloud deployment models as well as self-managed and managed wireless services operational models
- Advanced QoS capabilities to support multimedia applications in a mobile environment
- Role-based network access and service provisioning support differentiated services for customer-specified user roles (e.g., management, staff, and guest)

Operational Efficiency

- Integrated wired/wireless network management enables comprehensive network visibility and control, which simplifies network management and delivers ongoing operational cost savings
- Enterasys NMS Mobile offers anytime, anywhere wired and wireless network visibility and control, enabling mobile IT staff to quickly assess and remediate problems
- Virtualized management running under VMware eliminates costs associated with dedicated management appliances
- Prevent disruptions and minimize time-to-troubleshoot through centralized configuration and change management

Security and Compliance

- Ensure user privacy and access control based upon Acceptable Use Policies
- Built-in protection against disruptions plus value-add visibility, monitoring, and reporting functionality

Support and Service

- Industry leading customer satisfaction and first call resolution rates
- Lifetime warranty on access points and controllers to minimize total cost of ownership

2. A private cloud model where the controller is centralized in the customer's data center and self-managed by the customer.
3. A managed services model where the controller is centralized in the customer's data center and remotely managed by Siemens Enterprise Communications.
4. A public cloud/managed services model where the customer's controller is located in a provider's data center as part of a hosted service, which is then combined with a managed service where Siemens Enterprise Communications remotely manages the controller.

Intelligent Controller Yields to Intelligent Access Points

A controller-based wireless network architecture was an adequate operational model when the wireless LAN was relegated to a large, single location. However, with the need to provide wireless connectivity for small and medium-sized businesses as well as branch offices, a controller-based architecture can add significant cost to the wireless LAN deployment, complicate network management, and have a negative impact on the overall performance of the wireless LAN.

An Enterasys WLAN obviates these problems through the use of intelligent access points. By embedding intelligence into the access points, the access points provide wireless connectivity and data forwarding without the involvement of the controller. The controller provides management and control functionality, but it is not part of the data forwarding process so there is no single point of failure and it cannot create a bottleneck in the data path. Therefore, the controller can be centralized in the cloud, which reduces hardware costs, simplifies wireless LAN management, and enhances the reliability of wireless communications because data communications are able to survive a controller failure. In addition, overall wireless performance is enhanced because all of the data forwarding is handled by the access points, which provide filtering, rate limiting, as well as prioritization for quality of service to support multi-media traffic.

Private Cloud

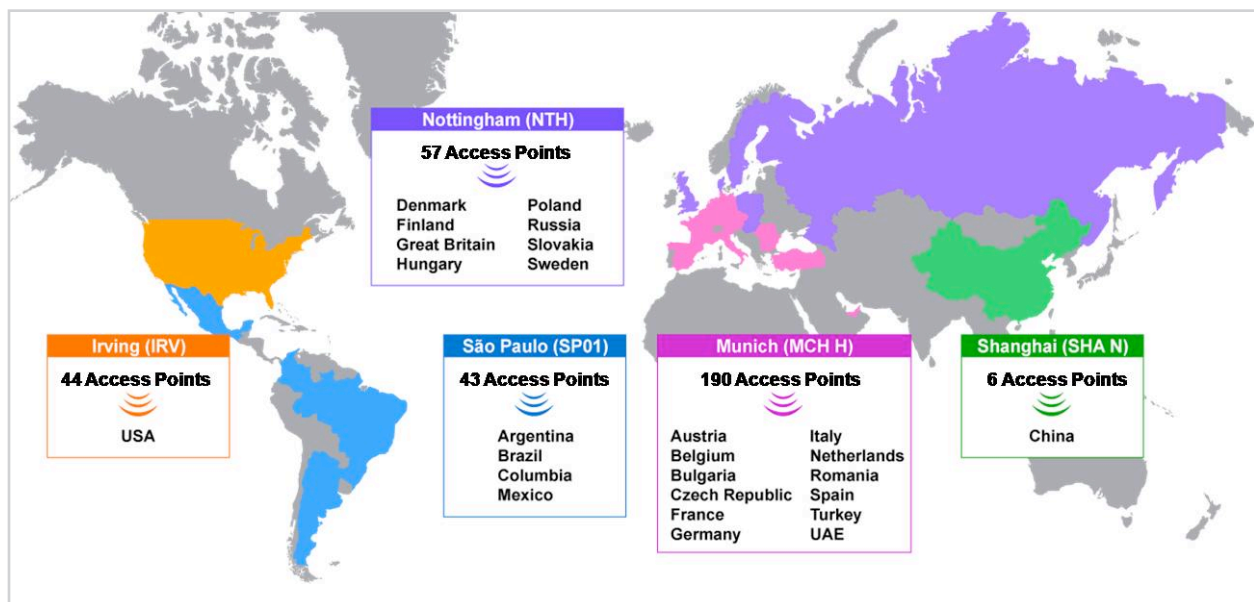
Since the controller is not required to be part of the data forwarding path and only plays a role in the management of the wireless LAN, the controller functionality can be located virtually anywhere in the network. Centralizing the controller significantly reduces the cost of the network while improving the manageability. Therefore, the controller can reside at a data center at corporate headquarters where the use of a second controller can provide redundancy in a cost-effective manner. In addition, wireless management and controller management can be distributed across multiple data centers to further enhance reliability as shown in the diagram below.

Managed Services

The skills associated with deploying and managing WLANs differ from those associated with managing a traditional LAN infrastructure and the WLAN skills aren't always a core competency of an enterprise IT network team. Organizations that manage wireless environments internally generally experience a range of common issues around throughput, security, service quality and, potentially RF interference. Often there is no dedicated support or they are insufficiently trained, making it difficult to troubleshoot issues. In those enterprises where trained staff is available, they often rely on manual intervention, so either associated support staff costs are high or support levels are poor. As a result, organizations that wish to maximize the efficiency and effectiveness of the WLAN are increasingly turning to managed service providers to bolster in-house resources with outsourced capabilities.

Siemens Enterprise Communications managed wireless services are operational service offerings for IT infrastructure and management across an organization's WLAN infrastructure. Managed data services cover a complete range of activities from the provisioning of pre-defined packaged offerings to complete outsourcing of the entire network infrastructure via a packaged or custom managed service agreement.

Extending the concept of putting the controller functionality in the cloud with a managed wireless service, the controller can be located in the



public or private cloud (i.e., somewhere on the customer's premise), which enables the enterprise to treat their WLAN as a service. In a managed services model, customers simply deploy the intelligent access points throughout their facilities, the controller is placed at either the customer premise or in a third-party cloud location, and Siemens Enterprise Communications manages the entire WLAN infrastructure.

Network Management

Network management is complicated by the fact that most enterprise networks typically comprise both wired and wireless LANs, which is why Enterasys has taken a leadership role in integrating wired and wireless LAN management. The two network infrastructures can be managed and secured as a single entity to significantly simplify network management and deliver ongoing operational cost savings. A hallmark feature of Enterasys solutions is the ability to eliminate the inefficient and time-consuming task of manual, switch-by-switch or controller-by-controller network configuration changes. The benefits are not only efficiency but also error reduction, since manual operations for network configuration changes (e.g., setting up individual telnet sessions to each switch and performing access control list changes and re-ordering) are eliminated.

Adding to the cost of managing enterprise networks is the fact that network management often requires a dedicated appliance running specialized software; however, a dedicated appliance isn't always necessary. In fact, certain cost efficiencies as well as operational efficiencies can be realized if the management functionality is simply a software application running on a generic server platform. Enterasys has done exactly that by creating a virtualized network management application that runs under VMware on a third-party server, which reduces costs for customers as well as wireless management providers who can now leverage existing servers rather than buying specialized hardware components.

Today's IT professionals require mobile access and Enterasys NMS Mobile offers anytime, anywhere wired and wireless network visibility

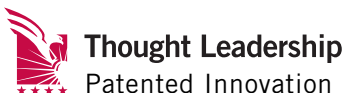
and control. It is optimized for popular mobile devices including iPad®, iPhone®, and Android® and provides real-time access to wireless network status and management information, NAC, Compass searches, event logs, and more. In addition, the interactive views enable IT staff to quickly assess and remediate problems from their mobile device.

Summary

Enterasys provides great flexibility for supporting wireless in the cloud by embedding intelligence into its access points, which enables the wireless LAN controller to reside anywhere in either a private or public cloud where it can be self-managed or managed by Siemens Enterprise Communications or another third-party wireless services provider. The controller is required only to provide management and control functionality, but it is not part of the data forwarding process so there is no single point of failure and it can't create a bottleneck in the data path. Therefore, centralizing the controller in the cloud reduces hardware costs, simplifies WLAN management, and enhances the reliability of wireless communications because data communications are able to survive a controller failure. The entire network can be managed via an integrated wired / wireless management solution that runs as a virtualized management application with mobile access to provide anytime, anywhere visibility and control. Since the access points and the controller are covered by a lifetime warranty, an Enterasys WLAN solution also minimizes the total cost of ownership.

Contact Us

For more information, call Enterasys Networks toll free at **1-877-801-7082**, or +1-978-684-1000 and visit us on the Web at enterasys.com



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