IGUS® a New "All Wireless Warehouse" with Samsung Wireless Enterprise™

Overview

Business Need

Igus® had deployed a small, controller-less solution in their original manufacturing facility and was less than impressed with the performance and management it provided. When plans were finalized to move to a new, larger facility, Igus® began to look for a more scalable, manageable and robust WLAN solution. Igus® immediate needs were focused on a dedicated WLAN infrastructure able to integrate with their current communication system.

Solution

A complete Samsung solution was installed and deployed with the following:

- A WLAN solution comprised of one access point controller and 24 APs.
- An OfficeServ 7400 telephone system that provides connectivity for 90 digital office phones and 35 Wi-Fi handsets.
- Seven Network Switches for IP connectivity and power supply to the APs.

Results

A single, integrated Samsung solution provided Igus® a seamless transition to their new facility without a hitch and provided immediate benefits by eliminating any downtime or voice outages. Additionally, the integration of Samsung components brought simplicity, speed and flexibility to the network administrator as well as enhancing employee's productivity and connectivity regardless of their location.

About the Customer

Based in Rhode Island, Igus® is an industry-leading manufacturer of Energy Chain® cable carriers, Chainflex® continuous-flex cables, DryLin® linear bearings and linear guides, iglide® plastic bushings, and igubal® spherical bearings. These seemingly unrelated products are linked together through a belief in making functionally advanced, yet affordable plastic components and assemblies. With plastic bearing experience since 1964, cable carrier experience since 1971 and continuous-flex cable since 1989, Igus® provides the right solution from over 80,000 products available from stock.

Challenge

A160,000 square foot manufacturing facility filled with heavy machinery and variety of products along with a 2-story office space required a seamless transition to its new location with minimal downtime. Samsung, in conjunction with Adams Communications, a Samsung's Corporate Reseller, worked hand in hand to develop and deploy a turnkey voice, data and WLAN solution to support Igus' intense 8am – 8pm customer service and late shipping services –where downtime and poor performance were not an option.

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Seamless relocation and robust Wi-Fi coverage in a integrated management platform

Solution

In summer 2013, Igus® approached Samsung Wireless Enterprise Corporate Reseller, Adams Communications, to help relocate its communications infrastructure to a new, larger facility located in Rhode Island, NY. Igus® wanted to upgrade their existing Samsung OfficeServ telephone system and also integrate it with a new WLAN system. The list of requirements included smooth, quick, and seamless transition with minimal downtime. Igus® management wanted to implement an integrated WLAN solution that could provide seamless connectivity to office staff and workers who use wireless handsets to carry out warehousing operation functions that are essential to their operational productivity.

The single source solution from Samsung provided exactly what Igus® was looking for: seamless integration, Unified Communications features, scalability in an integrated management platform.

The new WLAN solution provides seamless Wi-Fi coverage across the entire 160,000 square foot manufacturing plant as well as for the 2-story office space. The infrastructure enabled Igus® to support simultaneous voice connectivity for all 35 Wi-Fi handsets that have been deployed across the facility. A key requirement of the installation was to integrate the new WLAN product with an upgraded and expanded Samsung OfficeServ communication system. This system now supports ninety digital handsets dedicated to back office activities, 35 wireless handsets to seamlessly keep workers connected to the office, and seven Samsung Ubigate switches to provide IP connectivity and power over Ethernet (PoE) for the access points.

Bandwidth requirements were designed for voice access and application data for all Samsung wireless handsets. The density requirements were defined by the work areas that needed to support simultaneous Wi-Fi handset calls.

The transition to the new building was smooth and quick. The deployment and installation of the new equipment was simplified to only a few hours and Igus® now enjoys a completely integrated mobility solution that provides optimized and seamless coverage throughout their facility.

Benefits

Igus® main concerns were successfully resolved. Igus® now enjoys a completely integrated mobile communications solution that provides reliable and seamless coverage throughout their facility that is easy to manage and maintain.

Key benefits include:

- 100% Mobility to the entire staff

- Extended range of Wi-Fi coverage

- More productive and agile employees

- Easy to manage and easy-to-maintain wireless infrastructure and voice over wireless LAN

- Scalability that allows seamless growth and cost-efficiency

- Greater ROI on their communications investment

The WLAN was installed in our new 160,000 square foot facility without any issues in the summer of 2013. After 6+ months of heavy usage, we are very happy with the system clarity of the calls and the reliability of the network.

Carsten Blase, IT-Vice President

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Samsung Components

- WLAN Controller WEC8500
- Ubigate Switches
- Access Points WEA302
- Wireless Handsets
- OfficeServ 7400
- Digital Handsets

WLAN Controller WEC8500

This high-performance WLAN controller is specially designed for mission-critical wireless networking. It can manage up to 500 access points, 10,000 client devices with a 20 Gbps data plan. WEC8500 offers cost effective operations by providing support for L3 routing, stateful firewall, 10G interface, and power redundancy.

WLAN Access Points WEA302

The Samsung WEA302 is a two spatial streams 802.11a/b/g/n WLAN access point that delivers data rate of 300 Mbps and ensures ultimate coverage, easy management and secure wireless network.for mission-critical wireless networking.

	WLAN Controller: WEC8500	
Capacity & Performance	Maximum # of APs	500
	Maximum # of Stations	10K
	MAC Address	12K
	Number of IPv4 Unicast Routes	10K
	System BSSIDs	16K
	Firewall Throughput	20 Gbps
	Encrypted Throughput (AES)	10 Gbps
Network	Routing	Static routing, OSPF v1/v2, IGMP v1/v2
	VLANs	1024
	DHCP	Server, Relay, Proxy
	QoS	Shaping, Policing, 802.1p, Voice Quality Monitoring (VQM)
	System Redundancy	Active-Active, Active-Standby
Security	Rogue AP Detection	Yes
	Firewall Throughput	Statefule firewall (License Required)
	Authentication	802.1X
	MAC Filtering, ACL	Yes
	Encryption	* WEP : RC4 40 and 104 bits * TKIP/AES
		* SSL : RC4, AES_128_CBC, AEA_256_CBC, 3DES_CBC * DTLS : RSA_WITH_AES_128_CBC_SHA, RSA_WITH_ AES_256_CBC_SHA
	AAA	Radius Server
RF Management	SON	Power, Channel, Coverage Hole
	RF Spectrum Analysis	Yes
Handover	L2/L3	Inter/Intra controller

Legal and additional information

About Samsung Telecommunications America

Samsung Telecommunications America, LLC, a Dallas-based subsidiary of Samsung Electronics Co., Ltd., researches, develops and markets wireless handsets, wireless infrastructure and other telecommunications products throughout North America. For more information, please visit www.samsung.com.

About Samsung Electronics Co., Ltd.

Samsung Electronics Co., Ltd. is a global leader in semiconductor, telecommunication, digital media and digital convergence technologies with 2011 consolidated sales of US$143.1 billion. Employing approximately 206,000 people in 197 offices across 72 countries, the company operates two separate organizations to coordinate its nine independent business units: Digital Media & Communications, comprising Visual Display, Mobile Communications, Telecommunication Systems, Digital Appliances, IT Solutions, and Digital Imaging; and Device Solutions, consisting of Memory, System LSI and LED. Recognized for its industry-leading performance across a range of economic, environmental and social criteria, Samsung Electronics was named the world's most sustainable technology company in the 2011 Dow Jones Sustainability Index. For more information, please visit www.samsung.com.

About Samsung Wireless Enterprise

Samsung Wireless Enterprise™ offers communication solutions specially designed to help businesses transform their traditional fixed communications infrastructure into a mobile-ready wireless network. From optimized WLAN infrastructure, enterprise-grade applications, and robust phone systems to full-featured IP phones, Samsung Wireless Enterprise™ portfolio provides a dynamic system architecture that scales to accommodate growth and meets a variety of business communications needs. For more information, please visit www.samsung.com/us/business.

About Adams Communications

Adams Communications is a Samsung Corporate Reseller, founded to serve the telecommunications needs of the business community in Southeastern, Massachusetts and Cape Cod and dedicated to providing cost effective and comprehensive telecommunications solutions. Clearly focused on the challenges facing business operations, Adams Communications help companies contain operating costs, and enable mobility. Adams Communications works alongside its clients to help them better understand how to apply communication technology to their operations and achieve optimum results. For more information, please visit http://www.adamscomm.net