“When is Cloud-managed WLAN a Good Fit?”
August 2015
Mobile and Cloud Computing Transform the IT Landscape

Mobility and cloud computing are two of the most fundamental changes in technology over the past two decades. These two technology trends have changed the trajectory of computing and the face of IT services. Virtualization and cloud computing kicked off a wave of transformation in the corporate data center.

Instead of spending millions on data center technology, enterprises and start-ups could buy computing power on demand and scale it as needed. These services provide the opportunity to buy just the right amount of computing power and request additional services on demand. The availability of virtualization software and cloud services means businesses don’t have to buy computing resources to meet peak demand. It also means a company can easily scale its IT services to meet fluctuations in business demand. These on-demand and highly scalable services have changed the economies of purchasing data center technology. It also provides businesses of all sizes with a more flexible and agile computing infrastructure. Cloud computing has changed where computing lives and what it can do.

Mobility created a second wave of massive transformation in the computing landscape. Almost three quarters (74%) of the mobile phones used in the U.S. are smartphones. By 2016, there will be two billion smartphones in use worldwide. Meanwhile Employees are also bringing their personal devices into the workplace and over seventy percent of the companies Lopez Research interviewed had begun to offer a Bring Your Own Device (BYOD) program. Smartphones and tablets have clearly changed how people connect with each other and with corporate services. This is only the beginning of the connected devices wave. There are supposed to be over 50 billion connected devices by 2020. These connected devices are known as the Internet of Things or IOT. IT must support multiple devices per person, a new
set of connected devices and a diverse range of wireless connectivity options.

**Mobility Changes WLAN Network Needs**

The rise in popularity of smartphones and tablets, combined with enterprise Bring Your Own Device (BYOD) programs, has sent the demand for enterprise-grade Wi-Fi connectivity in many organizations through the roof. Given the influx of devices and the diversity of applications, IT must support more users, more devices and deliver greater bandwidth per user. Times were easy when IT issued a single type of device, to a small number of employees, with email-only access. Now employees want to use whatever device they currently own and expect to access much more than email. In the office, employees expect the same high-quality network service that they have at home.

Instead employees are frequently met with wireless LANs (WLAN) that weren’t designed to handle an influx of diverse devices. The need to minimize Radio Frequency (RF) interference and offer differentiated quality of service (QoS) is greater now than it’s ever been. Networks must also be engineered to support the fact that various devices connect to the wireless LAN network at different speeds, which can vary from 10s to 100s of megabits per second (Mbps).

IT needs a method for insuring slower mobile device can operate at its maximum speed without degrading the performance of faster computing clients such as PCs. This is a daunting task at best. The same needs apply regardless of the size of the company or how many locations the company has. It also requires companies to provide robust and resilient networks across the entire company regardless of the location and the presence of IT talent within those organizations.
Cloud-Managed WLAN Offers A Way To Meet New Network Demands

Upgrading the network every five years won’t provide the wireless network that IT needs to support rapidly changing user demands. The good news is that companies now have options for supporting these new IT requirements. Cloud computing has moved beyond supporting just the data center. Cloud computing offers a foundation for many types of services in the cloud. Many organizations are familiar with Software as a Service (SaaS), which are business applications that run in the cloud. These services are typically paid for on a monthly basis. WLAN vendors, similar to SaaS and virtualized hardware, are now offering cloud-resident WLAN management services. Lopez Research defines cloud-managed WLAN services as:

“Subscription-based WLAN virtual controllers and management software that is hosted in the public cloud. It provides a single point of management in the cloud for provisioning, troubleshooting, configuration and firmware management.”

What Are The Benefits?

While cloud-managed WLAN services aren’t new, the number of companies offering these services continues to grow. The quality of the solutions, similar to other cloud services, continues to evolve and improve. Companies can expect cloud-managed WLAN to offer:

• **Enterprise-quality management.** These services offer remote monitoring & troubleshooting, central configuration & firmware management, as well as compliance records and historical data. Cloud- based WLAN services offer the same rich monitoring and
management software that is offered in premise-based solutions. A streamlined interface also reduces time spent managing the network.

- **Scalability.** Cloud-based WLANs can scale to support small through large sites. These services can support companies with everything from a single location with one AP to a firms that has up to thousands of locations with many APs per each location. Management of one or more locations is possible from a single login.

- **Zero-touch provisioning.** The network administrator, whether they’re an employee or outsourced IT staff member, can access the management system from a browser. Each access point's configuration can then be fine-tuned to suit the needs of its particular location. On-site staff plugs in the access points (APs) and the APs automatically self-configure the appropriate software.

- **Consistent policies across all of a company’s sites.** Companies with multiple geographically disbursed sites had enterprise-grade WLAN at the headquarters while some sites without IT staff used consumer-grade access points and routers. This heterogeneous environment made it difficult for administrators to have one set of policies and configurations that would work across the company. Cloud-managed WLAN eliminates this complexity.

- **Reduced cost.** Like other cloud services, cloud-based WLAN doesn’t require an upfront software purchase. It also minimized hardware costs because the company doesn’t have to purchase a management server appliance, nor a WLAN controller. One of the key benefits of cloud services is that the service includes support and firmware updates in the cost of the monthly subscription. The monthly fees for range from $60-$150 plus the cost of the Access Points.
What Type Of Companies Should Use Cloud-managed WLAN?

Many businesses make the mistake of thinking Cloud-managed WLAN offers a less robust solution than our deployed WLAN solutions. This isn’t the case. Cloud-managed WLAN has the ability to serve a wide range of businesses. It’s particularly useful for companies that have:

• **Many geographically distributed branches.** Many wireless networks are managed using a server-based management system and a controller. But while these systems work well in large enterprise environments with local IT staff, they are less suited to distributed businesses, such as retail chains with a large number of small sites. Cloud-managed WLAN services can distribute intelligence from the cloud to the Access Points, which means non-technical staff just need to plug in the device and turn it on.

• **Limited or no IT staff.** Small and medium business still need robust solutions but often don’t have the IT resources to required to evaluate, install and manage WLAN. One way to embrace mobility while maximizing IT resources is to consider cloud infrastructure services such as cloud-based WLAN and cloud-based enterprise mobility management (EMM) services. Cloud-managed WLAN requires one administrator for the entire company. If the company doesn’t have an IT department, it can hire a part-time administrator to update configurations.

• **Businesses that constantly struggle with escalating and unpredictable network demands.** All businesses are struggling with escalating network demands but some industries are experiencing greater demands than others. For example, educational institutions have limited ability to control what is brought into the building or what is used. Students expect to connect three devices and run streaming Netflix. Hospitals and
medical facilities have multiple buildings; visitors that expect Wi-Fi and doctors that expect to bring in their own devices. Cloud-managed WLAN can help companies manage unpredictable demand.

**What should you look for in cloud-managed WLAN?**

There are numerous features that a cloud-managed WLAN service should provide several of the key functions such as uplink and VPN fail overs for mission critical services; local survivability in the event of a WAN link outage and the flexibility to grow with items such as adding controllers at a later date. There are also numerous planning, management and ease of use questions to consider. For example, Companies should also evaluate how cloud-managed WLAN will integrate with your existing infrastructure. Can you integrate and manage premise-based wired and WLAN networks from your cloud-managed service? How easy is it to plan and configure networks? and What is the process for supporting guest access and overall client on-boarding?

If your company has concerns over public multi-tenant cloud services, then Cloud-managed WLAN isn’t right for you. However, cloud-managed WLAN is one of the important technology shifts that can provide the flexibility a company needs to support the growing demands of BYOD; enable consistent services across a highly distributed corporation as well as support firms with limited IT resources.

**Conclusion**

Businesses need to offer consistent, high performing wireless network services, support for personal and corporate-owned devices
and a method to manage and secure corporate data and applications. Until recently, there was only one way to build and manage WLAN networks. Now organizations of any size can leverage the power of the cloud to provision and manage scalable, high performing WLAN services that allow a business to focus on building competitive advantage.

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