An ADTRAN Buyer's Guide

ADTRAN®

Cloud Wireless
Key Buying Tips for a Cloud-Managed Wireless Network

Smartphones. Tablets.
Intelligent "Things."

Today, everybody relies on wireless devices in their business and personal lives. Each day, more devices are connecting to Wi-Fi® networks, and more users are demanding always-on services that deliver excellent performance for streaming media and other high bandwidth applications.

Traditional Wi-Fi architecture just can't keep up with the wireless demands of today. The typical Wireless LAN (WLAN) controller has become a bottleneck, requiring IT to incessantly add more controllers as more users and devices come onto the network.

There's a better way. A cloud-managed wireless network offers a far more flexible, cost-effective solution to delivering nimble, reliable, secure and scalable wireless access. With this design, management and control of the network takes place through intelligent Access Points (APs) and virtual controllers that run in the cloud, eliminating the need for a hardware controller. A cloud-managed wireless network greatly increases scalability to meet increasing Bring Your Own Device (BYOD) demands and quickly expand coverage across the enterprise.

Traditional Controller-based Architecture

vWLAN Architecture
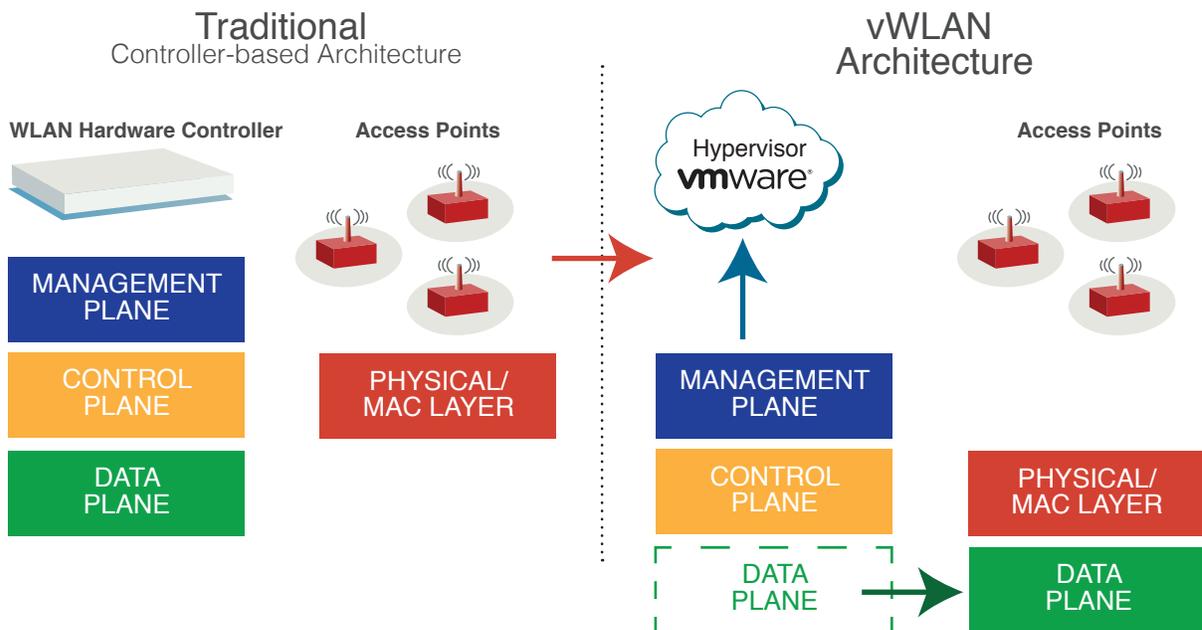
A cloud wireless solution also opens up a much broader and more flexible range of implementation options to offload the network management burden from your in-house IT by using managed and hosted services.

So how do you find the right cloud wireless solution for your organization? Keep in mind the following key buying guidelines to ensure your Wi-Fi network can stand up to the demands of your users and your business.

Buying Checklist

- ✓ **Maximize Flexibility**

- ✓ **Provide Wi-Fi Everywhere**

- ✓ **Optimize Wi-Fi Performance**

- ✓ **Make Setup and Access Fast and Easy**

- ✓ **Maintain Tight Network Security**

- ✓ **Ensure Control is Policy-Based**

- ✓ **Monetize your Wi-Fi**

- ✓ **Leverage a Robust Professional Services Package**

- ✓ **Reap the Advantages of a Turnkey Solution**

1. Maximize Flexibility

GOAL
Achieve business and network agility by working with a service provider who offers maximum deployment flexibility.

WHY
As your organizational and wireless needs change and grow, you need flexibility when it comes to managing your network. While there are many benefits to using a fully managed and hosted service, it is important not be locked into a single subscription service and to maintain options to move to an on-premises or partner-managed solution.

Buying Checklist

Deployment flexibility. Work with a service provider who offers the flexibility to move between deployment models, whether that is on-premises, vendor-managed or partner-managed.

Environmentally appropriate. Ensure the deployment model matches your environment. For example, for VMware users, a private cloud is likely the best choice. If you have limited IT staff, a vendor-managed public cloud might best fit your needs.

Flexible wireless management software. Look for software for managing your wireless network that can run in either the public or private cloud.

2. Provide Wi-Fi Everywhere

GOAL
Nothing short of 100% uninterrupted coverage for all your users—employees, students, faculty, contractors, visitors and guests.

WHY
Users need high-performance Wi-Fi everywhere, whether it's an office, classroom or high-density areas such as sports stadiums and convention centers. As users move around your facility, they should remain connected without having to re-login multiple times—a common problem with many Wi-Fi networks.

Buying Checklist

High-Performance Access Points. Look for APs that are designed to deliver maximum wireless coverage with the fewest number of APs.

Flexible Ethernet switching. Every AP needs to connect back to an Ethernet port, so it's important to have switches that can support your existing infrastructure, such as Cat3 or Cat5.

Detailed site analysis. Make sure your service provider offers a detailed survey of the environment to ensure proper coverage.

Support every device. Given the BYOD trend, the wireless network should be easily adaptable to support new devices.

3. Optimize Wi-Fi Performance

GOAL

Implement a network design and monitoring system that achieves 99.99% availability, even when taking equipment failures into account.

WHY

Internet and Wi-Fi services are now a necessity. A failure in the system that impacts services can quickly impact organizational performance, annoy customers and drive up support costs.

Buying Checklist

- **Carrier grade network.** The network design must be carrier grade with built-in redundancy for critical elements such as the Internet connection and router, Ethernet switch, APs in high-density areas and the controllers.

- **Performance guarantees.** Require guaranteed Service Level Agreements (SLAs) for the network and services.

- **Multiple service and recovery locations.** The provider should have redundant network operations centers in different regions to guarantee uninterrupted service.

- **All-day, everyday monitoring.** Your service provider should offer 24x7x365 monitoring and advance hardware replacements.

- **Controller redundancy.** Virtual controllers should be optionally redundant with the loss of one controller automatically failing over to a backup.

- **Continuous service.** Ensure that loss of connectivity to the controller does not prevent data traffic and Wi-Fi service from being delivered successfully.

4. Make Setup and Access Fast and Easy

GOAL

Installation and access of APs is "zero-touch". Once physically installed, APs are immediately usable. At the same time, on boarding users is quick and easy requiring minimal to no IT assistance.

WHY

To minimize service calls, costs and demands on scarce IT resources, adding and replacing APs as well as providing users with access needs to be fast and simple.

Buying Checklist

- **Instant install and run.** Adding and replacing APs should be easy and automated. Adding a new unit requires no more than physically adding it to the network with network discovery and configuration done automatically using a pre-defined profile.

- **Rapid replacement.** Replacement requires simply switching out the older unit for the new one with configuration settings automatically downloaded.

- **Simple, rapid access for users.** It should be easy to set up Guest Access networks as well as those for employees, with the appropriate roles and access privileges built into the system.

5. Maintain Tight Network Security

GOAL

Security is enforced at every entry point with malicious traffic blocked before it gets onto the wireless network.

WHY

With more wireless data traffic, maintaining data security is very challenging, especially for public networks. The challenge is even more substantial if the Wi-Fi network is carrying operational data, as a hacker could not only steal data but take down the network. This is especially crucial when it comes to meeting the requirements for strict industry standards such as PCI, HIPAA, Sarbanes-Oxley, etc.

Buying Checklist

- ✅ **Intelligent APs.** "Dumb" APs paired with onsite hardware controllers put security in the controller, allowing all traffic—including malicious traffic—onto the LAN. Intelligent APs block malicious traffic at the edge rather than within the network.

- ✅ **Advanced AP security features.** Ensure that your intelligent APs have built-in firewalls and wireless intrusion-detection systems.

- ✅ **Centralized security.** Look for cloud wireless solutions that centralize security policies, which ensure that all policies are consistently deployed to all APs in a timely fashion.

6. Ensure Control is Policy-Based

GOAL

Gain the flexibility to segment use of your Wi-Fi network into multiple levels of service.

WHY

Many facilities need to deploy multiple levels of service for different users as well as keep user and operations traffic separate. For example, you may want to provide slower free guest service, higher bandwidth for premium (paying) customers, another level for employees and a fourth level for business operations.

Buying Checklist

- ✅ **Multiple service levels.** The cloud wireless system should provide a minimum of four levels of service.

- ✅ **Ease of access.** It should be intuitive and easy for users to pick the level of service that best fits their needs with appropriate controls to block unauthorized access.

- ✅ **Revenue generation capability.** When appropriate, you should be able to monetize the network with charges automatically captured in your billing system.

- ✅ **Simple configuration levels.** Configuration tools must be easy to use so that you can define multiple levels with minimal training and impact on IT.

7. Monetize Your Wi-Fi

GOAL

Gain insight into your end user customer through the use of cloud-based analytics.

WHY

Many organizations, whether it is a retail shop, public park or sports stadium, are realizing they have a treasure trove of data from customers who log onto their free Wi-Fi network. For example, a fan at a ballpark can be sent an instant coupon for the concessions stand. Likewise, a customer at a car service repair shop could be sent an offer for a discounted wheel alignment while they wait for an oil change.

Buying Checklist

- ✅ **Cloud-based platform.** The cloud wireless analytics system should be able to easily scale on a global basis.

- ✅ **Ease of access.** It should be easy for users to get onto the network, whether it is through a social media log-in or simple form to fill out.

- ✅ **Revenue generation capability.** When appropriate, you should be able to monetize the network with personalized offers and coupons which can be based upon the user's preferences and profile information.

8. Leverage a Robust Professional Services Package

GOAL

Ensure optimal performance, reduce the burden on your IT staff and gain predictable costs with professional monitoring and management services.

WHY

IT departments are overwhelmed with work. A constantly growing and changing Wi-Fi network adds to the work and cost pressures. A business-class management service can maximize network performance, security and scalability with predictable costs.

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Buying Checklist

✓ **Continuous coverage.** Look for proactive 7x24x265 monitoring, technical issue resolution, hardware replacement and upgrades/moves/adds/changes.

✓ **Local expertise.** Select a provider who is intimately familiar with your network and equipment, not just the APs.

✓ **Qualified help desk services.** The service provider should offer an end user helpdesk that is staffed by trained personnel in order to quickly resolve user issues.

✓ **Language appropriate.** Make sure the help desk can provide assistance in the languages appropriate for your users.

✓ **Robust, scheduled reporting.** Monthly management reports on network health and usage are a must.

✓ **Service flexibility.** Be sure you have the freedom to migrate to in-house management anytime.

9. Reap the Benefits of a Turnkey Solution

GOAL

Optimize the performance of your wireless network at an affordable, predictable cost.

WHY

While it may be possible to meet all of the requirements listed in these guidelines using a variety of resources, a far better approach is to use a solution in which network elements and services are designed to work together. A turnkey solution can successfully deliver the levels of performance, reliability, scalability and security your network—and your users—demand.

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Buying Checklist

✓ **End-to-end service.** Look for a service provider who can deliver all of the buying requirements as a single, unified package, including installation as well as monitoring and management services.

✓ **Maintain flexibility.** Make sure your turnkey service provider continues to provide flexibility, enabling you to change your deployment model to meet your business needs.

✓ **Predictable pricing.** Ensure that your management company provides fixed pricing, such as a fixed monthly price per AP.

Next Steps

If you would like to find out how ADTRAN vWLAN and the ADTRAN ProCloud service can help you optimize your Wi-Fi network, please visit: *www.adtran.com/web/page/portal/Adtran/wp_procloud*

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and a TL 9000 certified supplier.