Meru NETWORKS®
Powering the All-Wireless Enterprise™

WHITE PAPER

Top 10 Things CIOs Need to Know About Virtualized Wireless LANs

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1. Is as agile as server virtualization

Virtualization has already made servers, storage and other IT assets more flexible, giving IT the power to adjust the resources available to each application on demand. WLAN Virtualization does the same for the network. The Virtual Cell pools access points so that an entire network can be treated as one AP; the Virtual Port partitions the pool into individual networks tailored to fit each user. With WLAN virtualization, CIOs gain granular control over every client and a network that can adapt to varying workloads or grow with business demands, all while achieving lower overall cost.

2. As reliable as wired Ethernet

The Virtual Port technology makes wireless predictable enough to run mission-critical applications. It gives every user a dedicated and private link, just like wired Ethernet. As far as users and applications are concerned, there is no difference between wireless and wired: The network has the same performance, reliability and security that they expect from a desktop connected to an Ethernet switch. The only difference is that users are freed from wires and assured of reliable service everywhere they go.

3. Lowers infrastructure costs by using 20-50% fewer APs

Meru's innovative Virtual Cell architecture enables all access points to transmit at full power, providing a larger radio footprint per AP than in a microcell network and giving users a a stronger signal. This reduces the number of APs required by 20-50%, saving on deployment and ongoing maintenance costs. Fewer APs further simplifies the network by reducing spending on back-end infrastructure including cable runs, Ethernet switches, wireless controllers and power systems.

4. Lowers management costs by simplifying the putting the network in control

The Virtual Port gives every wireless client its own network connection with policies customized for each device, application or user. With this level of granularity, it is easy for the network to adjust the bandwidth, quality-of-service and access privileges available to each wireless client. Unlike other vendors that talk about client control, Meru requires no complex and proprietary client-side extensions or software for the Virtual Port. That saves on administration costs and gives the network control over even guest devices.

5. Saves time and boosts IT productivity by simplifying the network

In a virtualized Wireless LAN, all APs throughout a wireless network can use the same channels. This simplifies deployment and eliminates the need for the complex RF channel planning that microcell architectures require both before the network is built and whenever a change is made. With the Virtual Cell, there is no need for the often inaccurate simulation software that microcells rely on to predict interference, and no risk of cascading effects across networks whenever an AP is added or changed. With Meru, the wireless network spends more time as a productive asset, less time as a burden on IT staff.

6. Reliable network boosts user productivity and satisfaction

Virtualized Wireless LANs make the network more reliable in multiple ways, all leading to less downtime and fewer complaints from end users while supporting innovative new applications. The network-controlled handoffs ensure that connections are not dropped as devices move, letting the Virtual Port offer constant, consistent connectivity. Backup is built-in with unique Channel Layering technology that ensures failover in the event of an outage. Granular management of individual client links and proactive monitoring of the entire network make it easy to ensure that bandwidth and quality-of-service go to the applications that need them the most.

7. Cuts power consumption– by the network and by client devices

Fewer APs mean lower power consumption on the infrastructure side. The Virtual Port's control of client connections also saves increases battery life on the client side by allowing devices to transmit at a lower power because they are always connected through the optimum AP and never need to scan multiple channels. As well as smaller electric bills and a greener IT organization, that means extended uptime in the event of a power outage.

8. Makes the network more trustworthy by giving each user a sandbox

With the Virtual Port, each user's traffic is contained within his or her private network. There is no contention for access to the airwaves and no risk that one client may overhear another's traffic. Access rights of each Virtual Port are limited to the resources that its user needs to do his or her job, protecting against insider threats and mitigating the risk from stolen devices.

9. Makes wireless VoIP better than toll-quality

The smooth roaming enabled by the Virtual Port is ideal for wireless VoIP. Handoffs are invisible from the client perspective, ensuring no dropped calls no matter how much users move around. The network is also intelligent enough to recognize different kinds of traffic automatically, easily handling converged devices like the iPhone that can be both voice and data clients.

10. Scalable to any application using Channel Layering

Virtualized Wireless LANs don't just make today's applications more predictable. The innovative architecture is designed to handle tomorrow's applications in the All-Wireless Enterprise, an organization in which every user relies on wireless for primary connectivity. The network can scale up to multiple gigabits of capacity through Channel Layering, stacking multiple Virtual Cells within the same physical space. The available bandwidth is multiplied by the number of radios used. Unlike microcell systems that claim to be multi-channel, Virtual Cell makes each channel available network-wide. New Virtual Cells can be added at any time, without expensive redesign and with no disruption to existing applications.