

Top 5 Things CIOs Need to Know About Wireless LAN Virtualization

Virtualization has already made servers, storage and other IT assets more flexible, letting IT 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 unpredictable workloads or grow with business needs, all while lowering overall cost.

1. Lower Cost – Capital and Operating

Lowers infrastructure cost by using 30% fewer AP

Virtual Cell enables all access points to transmit at full power, providing a larger radio footprint per AP than in a microcell network. This reduces the number of APs required by 30%, saving on deployment and ongoing maintenance costs. 30% fewer APs also means 30% less spending on back-end infrastructure including cable runs, Ethernet switches and wireless controllers.

Lowers installation cost by eliminating channel planning

Virtual Cell enables all APs in a wireless network to use the same channel. This simplifies deployments 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 Virtual Cell, there is no need for the often inaccurate simulation software that microcells rely on to predict interference, and no risk of cascading affects 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.

Lowers management cost by putting the network in control

Virtual Port gives every wireless device 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.

Lowers power cost by requiring less hardware

30% fewer APs means 30% lower power consumption on the infrastructure side. The Virtual Port's control of client connections also saves energy on the client side by allowing devices to transmit at a lower power as they are always connected through the nearest AP and never need to scan multiple channels. As well as smaller electric bills and a greener IT organization, that means a longer battery life for users and extended uptime in the event of a power outage.

2. Improves User Productivity and Satisfaction

High reliability through network-controlled handoffs

Meru Networks' virtualized architecture makes the network more reliable in multiple ways, all leading to less downtime and fewer complaints from end users. 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. Finally, granular management of individual client links makes it easy to ensure that bandwidth and quality-of-service go to the applications that need them the most.

3. Predictable Performance

Just like wired Ethernet, but mobile

Virtual Port gives every user a dedicated, private link, just like wired Ethernet. As far as users and applications are concerned, there is no difference: 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 take the Virtual Port everywhere they go.

Runs voice, data and any application

The smooth roaming enabled by the Virtual Port is ideal for real-time applications like 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 devices like the iPhone that can be both voice and data clients.

4. Improves Wireless Security

Each user gets a private network

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

5. Easy to Scale

Channel Layering makes it easy to add capacity as and where needed

Virtual Cell is designed to handle tomorrow's applications on an all-wireless edge. It scales up to multiple gigabits of capacity by using Channel Layering, which stacks 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 re-architecting and with no disruption to existing applications.