There are no clear distinctions nor any differences between virtualization on a carrier-grade network and that of virtualization on a data center network. And regardless of what the crazy kids call it these days, the fundamentals to choose, purchase and deploy virtualized networks remains the same across all options.

“Excuse me, what exactly are you virtualizing if not the functions? What defines network virtualization if not the decoupling of network hardware from the software running on top of it (hence, software-defined)?”


The Purpose of Virtualization
To enhance infrastructure agility and flexibility.

As more companies virtualize servers within data centers, IT is finding that often it’s the network that impedes speed and adaption for new applications. Along with Ethernet services, virtualization is the next thing for companies to focus on to increase network performance.

Key Benefits to IT Organizations
• Ability to rapidly provision network resources
• Lower operational and capital costs
• Improved network visibility
• Migration to modern network management systems
Deployment Considerations
- Who owns the implementation?
- In what part of the network will you deploy virtualization? WAN, Data Center or Network wide?
- How will you implement? Will it be centralized architecture or a distributed model with network protocols communicating with the physical network?
- Do you want to separate virtualization deployment or integrate with the underlying network?
- Do you have the resources, time and ability for custom integration?
- How is the organization set up to address security threats and what does the security offering look like from the vendor?

Offerings
- Cisco or others contingent on specific network hardware and features for performance
- VMware or others that offer virtual overlays (no changes to network hardware)
- Open source software
- White box switches
- IT suppliers (often datacenter-centric)
- Start ups
- Enterprise network suppliers

Pricing
- All virtualization network options have various and complex pricing models and options:
  - Software license
  - Subscription, monthly fees
  - Bundled with hardware/software
  - Open source: free but pay for support and security

Due to confusion in definitions, options, pricing models and the complex nature of deployment and implementation, service providers often drive deployment decision.

For greater impact, the channel manager and partner should work together to help the end-user navigate this purchase decisions.

- **Understand** who owns this and how it will affect network, server, storage, etc.
- **Audit** existing and future applications and workloads to identify scalable solutions
- **Provide** detail on the carriers’ vision and portfolio
- **Assess** the size of the organization’s network
- **Know** the number of virtual machines across the network
- **Help** them make decisions based on personnel and capital resources