WHY ARE BUNDLING AND CONVERGED NETWORKS THE BETTER SOLUTION?

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Overview

The main factor in building network infrastructure is the overall base design. Design considerations that come into play include flexibility, growth, performance, upfront cost and ongoing support cost. But what is the most optimal network solution to provide the best total cost of ownership (TCO) and return on investment (ROI)? A converged network will be optimal across all criteria because of its ability to bundle voice, data and video across a shared infrastructure. This provides reduced cost, increased network performance, less equipment to manage and increased flexibility and growth options. The additional benefits gained when bundling these services can significantly lower the TCO and easily add the ability to have advanced feature sets making the ROI greater.

Cost Reduction

In a converged network with bundled data, voice and video services, a site can save 15% to 20% in upfront cost when factoring in hardware, installation, and configuration. On a converged network, for example, these types of bundled solutions a site can fully utilize all ports available to any specific closet before having to add an incremental cost. Assuming a per port cost of $40 including hardware, installation and configuration a non-converged network can incrementally cost a standard hotel, with fourteen rooms per floor and a network closet for every two floors, $1,920 per closet (see table 1). The cost benefits of a converged network vs non-converged network for even a small number of rooms can be significant depending on the layout and design of a property. At the same time, the power of bundling the voice, data and video services with a single partner can increase the labor efficiency by 10% to 15% by installing and configuring as part of a single implementation. This info is based on multiple recent deployments by Allbridge.

ONE CONNECTED EXPERIENCE.

Floor	Network Ports	Voice Ports	Video Ports	Total Separate Networks	Converged Solution
Floor A	14	14	14	42	42
Floor B	14	14	14	42	42
Total Ports	28	28	28	84	84
24 Port Switches Required	2	2	2	6	4
Leftover Ports from Switches	20	20	20	60	12
Cost of Unused Ports Per System	$800	$800	$800	**$2400**	**$480**

*As of March 8, 2018. Numbers based on multiple recent deployments conducted by Allbridge. Note most switches are available in 24 or 48 ports.

Increased Performance

One of the main performance increases seen in a converged network is not in throughput in terms of packets per second but rather in the ability to provide enhanced services that can flow from one network segment to another via routing and firewall policies. This ability allows different devices to deliver services uniquely to guests while still providing security and stability that would otherwise be much more difficult to accomplish. Via a converged network a guest can cast video over the wireless to the TV in their room, the phone can integrate apps, the video solution can provide the guest a seamless and tailored hotel experience, and the Wi-Fi and voice can provide a seamless experience for staff moving from their mobile UC client on their portable device back to a desk or soft phone in their office. In converging a network, the design allows for the network architecture to be flattened and consolidated, removing additional points of failure and latency. In most converged networks a centralized core can be implemented and the distribution layer can be removed allowing for a 2-tier architecture (Image 1) of just core layer ■ access layer versus a 3-tier architecture (Image 2) of core layer ■ distribution layer ■ access layer. By removing the distribution layer, the design removes points of failure and decreases latency by having the access layer connect directly back to the core layer. This architecture provides better performance and fewer points of failure, and if designed optimally, can provide additional redundancy, resiliency and speed to the network by uplinking directly to the core via multiple paths.
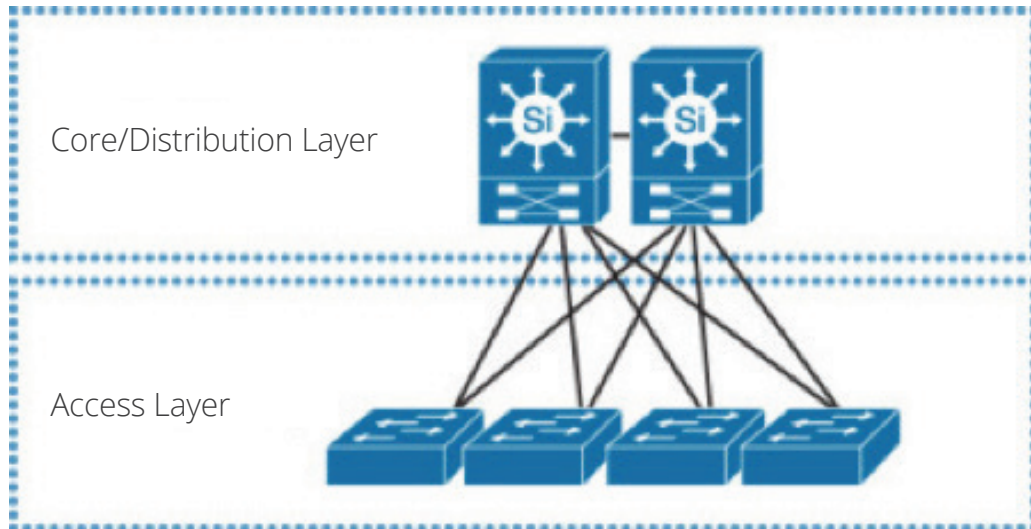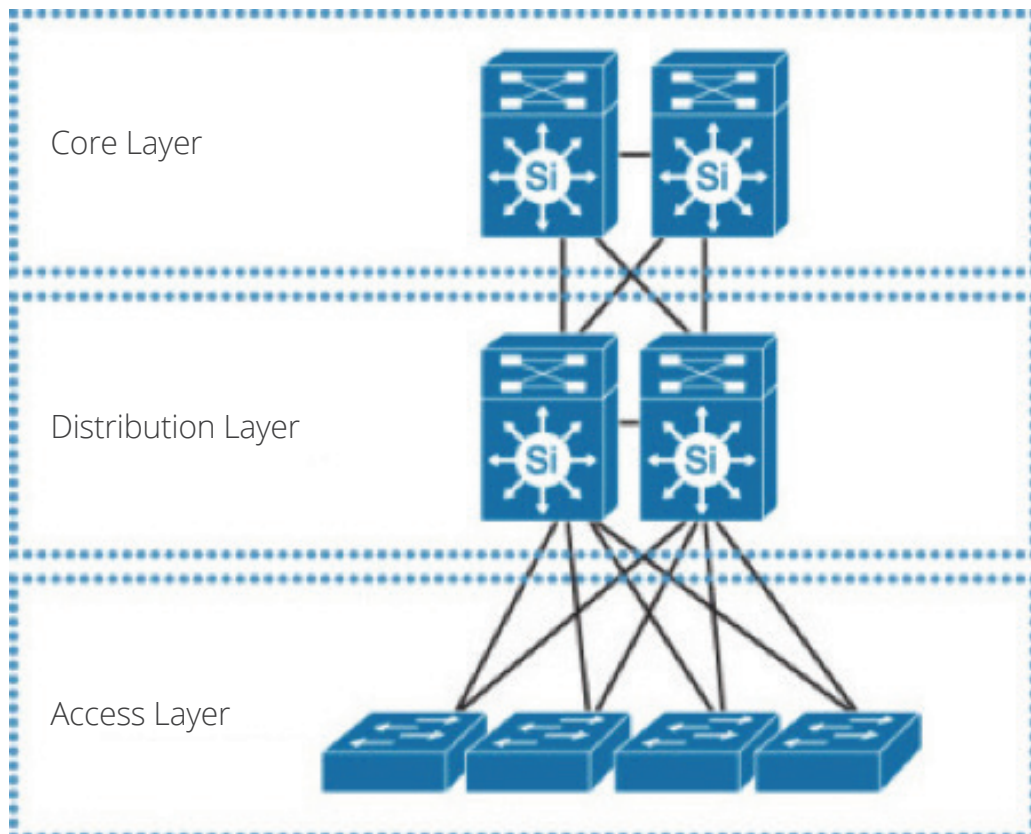
Image 1

Core/Distribution Layer

Access Layer

Image 2

Core Layer

Distribution Layer

Access Layer

Easier Management and Supportability, Lower TCO

Hotels focus their attention on guest satisfaction and cannot afford to spend undue time on technology and systems. By limiting the quantity of network devices and points of failure, the network can be managed and supported more efficiently and effectively, ultimately lowering TCO for the following reasons:

- Hotel staff does not have to be involved in troubleshooting and coordinating between vendors, as that is all handled from a main system integrator.

- A system integrator manages the entire network backbone that all other pieces of technology reside on, whether it be voice, Wi-Fi, video delivery or other device either directly or through trusted partners. By having full access to the network backbone network issues and network failures can be resolved quickly and in many cases proactively corrected without interruption. In the unfortunate case of a network failure the network integrator, by having full visibility and control, can work quickly to find a solution to restore as many services as possible via redundant connections or other methods, such as wireless mesh, until the failed equipment can be replaced.

- Multiple sets of equipment do not need to be maintained, managed or reconfigured. By eliminating extraneous hardware and making the network architecture as efficient as possible, the support cost of managing the system is minimized.

These three benefits ultimately lower TCO by decreasing time spent by staff, decreasing time spent to troubleshoot issues, decreasing time to manage the disparate systems and decreasing total downtime.

Greater Flexibility and Growth

Deploying a converged network allows for easy future growth and flexibility as all network services reside on one physical network and are defined virtually, with VLANS, within that same physical network. Through routing and firewall policies, new devices and applications can be easily added to the network securely and with limited interruption to the current infrastructure. If additional ports or switching is required to deploy new devices or services they can easily be added to the current backbone while maintaining resiliency and redundancy to allow the hotel to run with little interruption and without adding points of failure. The ability to grow the network as your property adds services and solutions provides a level of scalability not found in traditional network deployments.

Summary

If you would like to learn more on how converged networks, bundling and Allbridge can help lower your hotels systems TCO, increase your systems ROI and make new technology easier to add to your hotel, please email us at marketing@allbridge.com for more information.