



The Next Wave Of Virtualization

Capturing Revenue And Profit With
Converged Infrastructure



The Rise Of Virtualization

Cloud has revolutionized computing from the desktop to the data center and, perhaps even more meaningfully, down to the mobile devices we work and play with. The cloud approach of scalable shared infrastructure has allowed customers to consider both purchasing and deploying information technology resources in more flexible, cost-effective ways. They've saved money and invested in only the capacity they needed and are enjoying the benefits of consolidated infrastructure. Virtualization has been at the epicenter of this revolution and has enabled racks of disparate hardware to become one. But the move to virtualization has not come without bumps in the road.

Application leaders and business owners clung to the idea that a server with their data on it had to be physically separate from others. Budget-pressured CFOs partnered with visionary CIOs to win these battles and virtualization took hold. They convinced organizations and skeptics that the benefits of shared resources far outweighed the perceived risks.

We are many years into this shift to virtualization, and the technology has become the norm in both the data center and for the SMB. Customers and partners took highly scalable components including servers, storage and networking, then waved the metaphorical magic wand of virtualization. A patchwork of components became a single manageable system capable of supporting many applications and users. But as it turns out, it wasn't quite that simple.

The Realities Of Virtual Sprawl

While virtualization has largely delivered on its promises, attitudes around computing were slow to catch up, and the hardware platforms were not fully optimized for this new way of computing. Virtual sprawl began as users bought into the idea of virtualization but still wanted their own virtual platform for their application. So instead of a single unified virtual service, companies ended up with virtualization silos spread all over the data center. Virtualization deployments continued to expand under the old model of dedicated, though consolidated, hardware for different applications. In addition, challenges in integration and interoperability grew. To get more and more bang for the virtualization dollar, IT departments deployed larger and larger hardware platforms with more complex components. This aggregation and the consolidation of virtual systems produced new bottlenecks and management challenges from systems that were not properly tuned, nor maintained. At the same time, the software automation layer lagged behind the promises of service-defined infrastructure.

Today, we are at the cusp of the next stage of cloud computing and customers are embracing strategies around predictive analytics and big data to drive business value directly from their computing decisions. This coincides with many customers looking to make major technology refresh decisions around their

current virtualization platforms. The net result is that this is the perfect time for customers to consider converged infrastructure.

Why Converged Infrastructure Now

Much of the low-hanging fruit in the data center has been virtualized. It became easy to consolidate test/dev, print servers, file servers and general-purpose systems. Sophisticated customers did move many Tier 1 applications to virtualization, but struggled with load balancing and scale due in part to the lack of tight hardware integration. A new approach is needed to bring virtualization to the next level. Leading-edge customers are already recognizing the benefits of converged infrastructure and are starting to make the move. According to the media firm Penton, a survey sponsored by Dell EMC, with support from Intel, that nearly 50% of respondents (82% of whom have IT decision-making authority) stated that they had already, or planned to move to converged infrastructure in the next 12 months. The top three reasons given for this move were:

- Reduction in overall data center capacity
- Deeper integration with virtual platforms
- Enabling virtualization initiatives (applications)

But in addition to simply outgrowing the life of their current virtualization platforms, cloud and big data have become drivers for customers to think differently about the future. Virtualization in and of itself represents a huge win in terms of cost savings and consolidation, however, private or hybrid cloud and analytics offer fundamentally new ways to provide IT services and business value. This move to private

or hybrid cloud along with refreshing the virtualization infrastructure makes converged infrastructure not just a consideration, but an imperative for performance, scale, stability and security. These are truly, bet-the-business applications.

Converged infrastructure helps remove complexity from the already daunting proposition of integrating disparate hardware and software components. While customers may still shy away from virtualization for some

applications today, believing that putting all of their eggs in one basket is inherently risky, converged infrastructure helps mitigate these risks. Custom-built virtual environments often have hidden bottlenecks that become difficult to identify and troubleshoot based on the nature of a virtualized system. Converged infrastructure solves that issue with integration between server, storage and networking components.

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Penton - Data Center Trends Survey, CI, HPC, Big Data, and Cloud, August 2016, Sponsored by Dell

Validated systems bring this concept even one step further by pre-certifying components in combination for certain levels of workload, applications and use cases.

In addition to revolutionizing how the hardware supports virtual infrastructure, [service-defined-infrastructure](#) is bringing a whole new thought process to table. Layered on top of an integrated virtualized system, service-defined infrastructure anchors the platform with a software layer providing ease of management, automatic provisioning and de-provisioning, and tools for capacity planning. It also provides a framework for flexibility in building converged infrastructure. First-generation converged infrastructure systems were tightly integrated hardware packages with limited options for capacity or hardware selection. If a vendor didn't certify the package your customer wanted, with the specific type of storage they needed, then they might have to build it themselves. A service-defined infrastructure approach, making software automation central to the system, allows more flexibility in the choice of components to tailor a solution specifically to customer needs. This provides more options, while still retaining the "validation" element that all components are certified to work well together.

The Opportunity For You

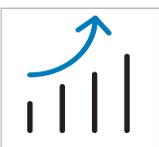
The days of adding value by building servers in your back room and pre-staging racks are long over. Partners of all shapes and sizes are moving upstream to provide consulting, application and development expertise for their clients. Dell EMC's technology expertise and Intel based validated systems approach means not only less time in the sales cycle, but more opportunity to show value whether it's billed consulting or pre-sales. Converged systems represent a three-fold value opportunity for partners.



Value-Led Approach: The pre-integration and ease of configuration of converged infrastructure allows partners to spend their time talking value with customers, not cables and connectivity. Discussions surround applications, user requirements, provisioning, process and growth of the platform. These discussions uncover far more additional business than figuring out exactly how much CPU and storage will fit in a rack.



Reduced Sales Cycle Time: Tools like the Dell EMC System Builder and Active System Manager automation allow partners to configure converged infrastructure, accelerating time to both solution and deployment. On the front end, designs come together quickly based on requirements. On the back end, deployment delays are avoided by not missing components and by pre-certifying designs. Configurations move quickly into production and projects complete faster.



Services Add-Ons: Dell EMC is the ideal partner for those who want to lead the discussion with services and consulting. Focusing less on the hardware means focusing more on software and design services, which generate higher margins. Partners can more easily build out the

consulting capabilities their customers value to help deploy and tune applications. Valuable resources can spend more time billing for software configuration and less time burning in systems in the back room.

The Dell EMC Advantage

Through the pairing of world-class tools and a partner program designed to make you more competitive and profitable, Dell EMC, along with Intel, offers one of the best combinations of technology and business benefits to help build your business. It starts, of course, with Intel powered Dell EMC technology.

The Dell EMC Validated System for Virtualization takes converged infrastructure to the next level in terms of both a foundational platform for your customers and ease of configuration and deployment for partners. Dell EMC leads the market in what has become known as [service-defined infrastructure](#). While the benefits of integrating and validating hardware components are enormous to ensure scalability, service-defined infrastructure puts automation software at the heart of the Dell EMC Validated System for Virtualization. Server, storage and networking components can be customized without being constrained by rigid pre-defined options.

Dell EMC Program Benefits

The [Dell EMC partner program](#) starts with competencies and training. Your skills are what create your competitive advantage and unlock the opportunities within the Dell EMC program. The more competencies and training you invest in, the deeper the incentives, the larger the rebates and benefits. But beyond just profitability, the Dell EMC partner program offers access to deal registration, co-marketing materials, demo and seed units, as well as financing tools to help grow and scale your business. In the case of converged infrastructure, Dell EMC partners enjoy access to the Dell EMC System Builder and Active System Manager design and automation tools. System Builder reduces by weeks the amount of time it takes to create converged infrastructure

SUCCESS STORY

Nagasaki University Hospital

From its founding nearly 160 years ago, Nagasaki University Hospital has always strived to improve the quality of patient care throughout the region it serves. Most recently, the hospital had been focused on Electronic Health Record (EHR) projects and connecting its databases at a regional level to other hospitals. The hospital turned to virtualization to modernize its infrastructure and achieve its goals. “At a hospital, all data is directly connected to a patient’s well-being and must always be available,” according to Masayuki Honda, Professor and Director of Medical Informatics and Nagasaki University Hospital. The hospital chose a solution anchored with the Dell EMC, Intel based, PowerEdge VRTX converged system platform to provide the highest level of interoperability for the platform running its virtualization. This removed much of the complexity of the hospital’s disparate legacy systems and ensured that events like basic maintenance or re-provisioning of services would not cause downtime for patient-critical applications. “With this in place, we can expand our storage capacity without ever having to shut down or take a system offline. This is why we partnered with Dell,” says Honda.

by allowing partners access to pre-validated and tested options. Partners gather information starting with application information such as cloud, data analytics, VDI and many others. These use cases then feed into workloads, capacities, deployment sizes and other critical criteria to follow down a path to create validated systems tailored to meet your customers' needs. The System Builder tool not only allows for faster sales cycles, but it reduces the inherent risk of building systems piece by piece. Dell EMC engineering, combined with technology from Intel, stands behind every configuration. This tool is exclusively available to Dell EMC partners.

Powered By Intel

The Dell EMC/Intel partnership offers a unique opportunity for Dell EMC partners to bring tremendous value to their customers. Intel has become a leading player in the future of the data center, aligning its technology development investments directly to the concepts of software-defined infrastructure. Looking far into the future of the digital services economy, Intel is "future-proofing" customer investments by planning for innovations such as 5G networks, Network Functions Virtualization (NFV) and building cloud-ready technology into every system. Dell EMC customers, through partnership with Intel, also have access to road map information so customers can plan for the long-term future of data center transformation on Intel technologies.

Conclusion

The time is right to talk about converged infrastructure with your customers, and the right partner to help you with that conversation is Dell EMC. Converged infrastructure is a sales play whose time has come. You'll find your customers eager to discuss how to get to the next level with their virtualization initiatives, and Dell EMC provides the technology, tools and training to help you differentiate yourself versus the competition and provide outside-the-box value. For additional information, contact your channel account manager, [visit dell.com/partners](http://visit.dell.com/partners), and/or dell.com/virtualization.