From Here to There: A Proven Path to Digital Transformation

Plotting and following a best-in-class strategy for software-defined data centers and digital transformation

Digital transformation is fast becoming one of the most important determinants of organizational success—but for most enterprises, there is much work to be done. According to the Economist Intelligence Unit only 10% of companies describe themselves as fully digital. IT systems will be the key gating factor for transformation, and this requires a new breed of IT services to power the digital age.[1]

However, this transformation does not translate into huge budget increases for the IT organization. To free up funds for systems to support digital transformation, IT organizations must find ways to reduce the cost of existing activities and processes.

Transformation requires moving away from legacy data center approaches

Transformation requires that IT move their thinking forward from legacy data center concepts to the adoption of the software-defined data center (SDDC) model. With this modern approach, all infrastructure is virtualized and delivered as a service. The data center becomes fully automated, providing vastly improved agility, efficiency and flexibility to meet the demands of a digital business. The savings from an overarching virtualization solution that leverages both cloud and on-premises infrastructure can be used to fund the transition to SDDC. Many businesses are taking this route by partnering with a cloud service provider (CSP) and using their managed services to optimize the speed and efficiency of the transition.

Cloud services have rapidly gained adoption, but wave 1 of cloud—mostly public cloud services—has not been able to meet all the demands of enterprises for running mission-critical workloads requiring performance, security and scalability.

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1   "Digital Evolution: Learning from the leaders in digital transformation," The Economist Intelligence Unit, 2015.

Public cloud only gets you part of the way

Launched more than 10 years ago, public cloud services were initially an innovative and cost-attractive way to purchase IT resources. However, after gaining experience with cloud services, most organizations now understand what the positives and negatives are. One of the most important experiential findings is that while they are quite useful, public cloud services are just one tool in the IT toolbox, not a comprehensive solution.

Armed with this knowledge, users are looking for solutions that mitigate public cloud technical issues or limitations. One such limitation is unpredictable performance levels. Other potential issues include "noisy neighbors," oversubscription rates and integration or federation of public and private resources and services. Quite often, limitations of networking and firewall capabilities make it hard to integrate those services without costly middleware. Security issues may also arise.

Further, price predictability for public cloud services, initially touted as a benefit, has been found wanting as customers regularly get billing surprises.

However, for many IT organizations, the most substantial problem is the requirement that workloads and applications must be modified to work within the specific cloud service offerings. This causes unnecessary changes and the creation of different versions of the same workload.

CenturyLink, VMware join forces to meet the demand for next-generation infrastructure

To leverage cloud services for digital transformation, CenturyLink and VMware have collaborated to deliver the Dedicated Cloud Compute Foundation (DCCF) service, which provides a hosted private cloud solution delivering next generation data center technology in a turnkey model. This service enables the transition to being a digital business by delivering a quicker path to the SDDC and simplifying deployment of hyper-converged Infrastructure (HCI) as part of a Hybrid Cloud solution. Supporting the hybrid/private cloud is a critical component of the offering, as a recent survey from Microsoft found more than 80% of organizations have a hybrid cloud strategy.[2]

2 "State of the Hybrid Cloud 2017," Microsoft, 2017.

To provide maximum value, cloud services must help IT quickly complete digital transformation, while ensuring continuity. Based on VMware Cloud Foundation, DCCF will work with and leverage current on-premises infrastructure. This eliminates the problem of creating a separate and distinct "new" environment that would only add cost and complexity, as well as adding the potential for human error and security risks.

Unlike other options, VMware is a proven virtualization platform. With more than 350,000 trained VMware administrators, adding internal IT staff or contractors is much easier than with other services that don't have that level of human infrastructure available to CIOs. Further, this is a reliable and dependable solution built on fully private HCI infrastructure that provides a higher level of performance and reliability than a multi-tenant cloud solution.

DCCF simplifies the move to a "digital-ready" IT Infrastructure

As stated above, customers now demand that their cloud services enable faster and more efficient transformation of IT infrastructure. For many IT organizations, this is an important change from merely leveraging the economics of the cloud. This operational change is central to the design of the DCCF offering.

One way that DCCF supports fast migration is the ability to "bring your own image" from existing traditional infrastructure and run it unchanged on modern infrastructure, in what is effectively real time. The VMware platform is among the most complete "digital business" solutions, including best-in-class SDDC and HCI capability. These are critical platforms to support the transformed business. Providing DCCF as a Private or part of a Hybrid Cloud solution also meets most security and compliance requirements that many organizations face. Using the common VMware platform for both the existing and new infrastructure provides unsurpassed flexibility for moving workloads to and from the cloud service as necessary. This flexibility is a hallmark of next-generation infrastructure.

The unique advantages of CenturyLink's DCCF

The strategy used to develop DCCF is focused on delivering a better cloud service, not just another cloud service. This service meets the new requirements of knowledgeable cloud users. Utilizing customer input, new technology capabilities and a fresh approach to pricing, DCCF is well positioned not only for today's requirements, but also for the rapidly evolving expectations and demands for the future.

The key benefits of this new thinking include:

1. Improved security and compliance. Compliance requirements such as data sovereignty and a need for better security infrastructure are the starting point. DCCF utilizes micro-segmentation to improve security, allowing fine-grained security policies that can be assigned at the workload level. These policies can be synchronized with the virtual environment.

2. Pricing aligned with how organizations really use cloud services. One frustrating aspect of some cloud services is monthly billing surprises. DCCF is priced per host with no incremental costs for the number of VMs, or for using additional VMware Cloud Foundation services. The result is more cost certainty, user control of over-subscription rates to meet workload performance requirements and simplified management.

3. Improved efficiency. Private cloud on SDDC/HCI provides operational efficiencies not available with traditional public cloud services. DCCF delivers greater efficiency in many areas: security, performance, operational reliability and costs.

4. Local access across the globe. There are numerous regulations, such as the EU General Data Protection Requirement (GDPR), that focus on where data is actually stored. With 32 global locations, DCCF is more likely to provide local IT infrastructure to meet this compliance requirement.

5. Greater configuration flexibility allows users to buy exactly what they need. Many first-generation cloud services have very limited configuration options, some starting with only larger instances. DCCF allows customers to start with just four nodes at the low end and seamlessly scale up to 64 nodes. And it is possible to add just one node at a time, allowing IT to optimize their spend.

6. CenturyLink has a more holistic view of next generation infrastructure. CenturyLink provides more than just cloud services, so users are not force-fit into one solution. CenturyLink is also a managed services company that delivers on hybrid IT, not just hybrid cloud. The result is a single partner that can support both virtual and non-virtual environments, as well as cloud/non-cloud workloads. The company uses their proven and documented Solution Development Workshop to help organizations choose the optimal approach.

Summary

Digital transformation is not just a business goal. The ability to use technology to transform the organization will directly determine if a business succeeds in the future or becomes digital roadkill.

In many ways, virtualization was the starting point for transforming IT infrastructure to meet the demands of digital business. The CenturyLink DCCF service takes virtualization to a higher level and provides a platform that enables next generation IT infrastructure. DCCF is designed to deliver the benefits that organizations have identified after their initial experience with cloud services highlighted many of the limitations of first-generation offerings.

DCCF provides a competitive edge for organizations, leveraging their current investments in virtual infrastructure and staff training for it, while providing a seamless path to the SDDC that is critical for a truly digital business.

About CenturyLink

CenturyLink is a global communications and IT services company focused on connecting its customers to the power of the digital world. CenturyLink offers network and data systems management, big data analytics, managed security services, hosting, cloud, and IT consulting services. The company provides broadband, voice, video, advanced data and managed network services over a robust 265,000-route-mile U.S. fiber network and a 360,000-route-mile international transport network.