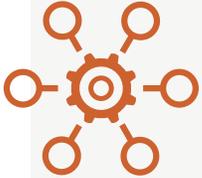# A Successful Digital Business Needs an Agile Network

In the age of the digital economy, there's more pressure than ever on businesses to employ IT in ways that transform end customer experiences. That generally means finding ways to build and deploy a new generation of modern applications at much faster rates than ever before.

The fundamental application deployment challenge most organizations have historically faced is that it takes time to provision legacy networking resources. With the rise of software-defined networking (SDN) and network virtualization technologies, however, networks are rapidly evolving to the point where they can now keep pace with the speed at which new applications must be built and deployed.

Rather than having to wait for IT departments to allocate resources, organizations now have the option to give application owners control over the network with governance and security policies that enable them to self-service their IT infrastructure requirements within the confines of well-defined rules set up by the IT organization.

What makes this possible is that network functions can be programmatically managed via SDN. Instead of having to manually manage each device on the network separately, IT organizations can provision and manage networks at unprecedented scale. This capability is at the heart of a new generation of networking technologies that transform the way a business operates in the digital age.

Agile Applications and Networks Transform Business

SDN enables IT departments to be more responsive to the needs of the business by automating the provisioning of networks in tandem with virtual server and storage resources. Cisco created the Application Centric Infrastructure (ACI) platform to automate IT tasks and accelerate data center application deployments. ACI makes it possible to holistically address IT infrastructure requirements attached to each application through automation.

Working in collaboration with Citrix, it is now also possible to extend the Cisco ACI architecture to the application delivery controller (ADC). Citrix NetScaler ADCs are now a natural extension of the ACI environment that can be programmatically invoked alongside Cisco switches and firewalls. From an application owner's perspective, this results in a dramatic decrease in the amount of time it takes to deploy a given application workload.

Thanks to the rise of agile development methodologies, enterprise applications are mushrooming at an exponential rate. At the same time, organizations are under more pressure than ever to deliver a new generation of digital business applications. Organizations need access to an agile IT environment that enables them to not only roll out applications faster, but also dynamically scale IT infrastructure resources both up and down to meet unpredictable usage requirements.

If usage of that application suddenly spikes, the additional IT infrastructure resources required to support that application via ACI can be dynamically brought online in minutes by either the application owner or an IT administrator working on their behalf. At the same time, if or when utilization of the application declines, the IT infrastructure resources assigned to it can be dynamically reallocated. That means an application owner can, for example, roll out a mobile or web application without having to worry about over or under provisioning IT infrastructure.

Value of Embedded Analytics in the Network

One of the most valuable attributes of ACI is the investment Cisco has made in advanced analytics. ACI not only includes tools that assist in determining performance levels across the data center, it also assists in identifying all the application dependencies that exist in that environment. Because the network touches every aspect of the IT environment, ACI uniquely provides unprecedented visibility into the application environment.

For application owners, that results in actionable intelligence that can be employed to optimize the data center environment to meet the unique requirements of any application workload at any time. Best of all, application owners can even model various data center scenarios before an application is deployed.

The modern network is not just the pipe over which data travels. It becomes the primary source of truth about the IT environment that gives application owners the confidence that they need to assure the best end user application experience is being delivered.

Tapping into New Era of IT Automation

When armed with advanced analytics, any number of IT functions can be automated and secured at scale. Cisco-Citrix collaboration enables customers to take the analytics capabilities of Cisco ACI to programmatically allocate IT infrastructure resources delivered by the Citrix NetScaler ADC. Instead of having to allocate IT staff to manually adjust IT infrastructure, IT infrastructure resources can automatically be allocated as application usage dictates.

This approach not only increases overall utilization of the network infrastructure; it limits the overall cost of IT labor associated with managing a network at scale because the number of applications that can be supported by an existing IT staff can increase exponentially.

In short, most organizations going forward will not be able to keep pace with rising application demand without relying more on automation to manage IT infrastructure at scale.

Conclusion

The degree to which any organization can succeed in the digital age is directly tied to how agile the IT environment is. However, it's the deployment of modern networking infrastructure that will enable a thousand digital business ideas to flourish.

▲ NetScaler

Once organizations are unshackled from the underlying IT infrastructure, it becomes possible for application owners to rapidly test and experiment with new applications to better serve customers. The primary goal of the IT organization should be to enable application owners to deploy as many applications with the minimum amount of intervention from the IT department. Citrix NetScaler and Cisco ACI makes it possible for the organization in the best interest of its unique digital business strategy to decide exactly just how much control over the network it wants to give application owner. Whatever that ultimate decision is, the one thing that is for certain is, thanks to Citrix NetScaler and Cisco ACI, the network can now keep up with demand for more bandwidth both wherever and whenever needed. ■

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