

# Data Center Virtualization and Orchestration

*Optimizing the data center with Cisco VFrame Data Center solutions*

Over the past several years, the virtualization of server, network and storage resources has received a lot of IT, media and vendor attention because of its promise for reducing capital and operating expenses within the enterprise. It offers data center consolidation and reduced power and cooling costs, and can even defer the need for additional data center sites. Virtualization decouples the application environment from the constraints of the host hardware. This decoupling can mean logically partitioning one device into many, consolidating many physical devices into one logical resource pool or doing both at once. In this sense, it can produce a short-term capital expenditure slowdown when it equalizes and improves utilization rates of existing equipment. However, siloed virtualization can have unintended downstream consequences that limit its effectiveness and even create complicated and potentially costly security and compliance concerns. Long-term rewards only come from understanding network,

storage and computing devices as interdependent pools of resources within the data center ecosystem, tied together by the network underpinning. Another aspect of holistic virtualization involves next-generation provisioning and orchestration that offers service-level abstraction on top of virtualization engines. Security, content load balancing, high availability, demand pool capacity and disaster recovery configurations are all orchestrated as a set of virtualized resources. With the inclusion of real-time policy-based engines, these products can quickly reconfigure virtualized resource pools based on capacity changes, outages, security events and the need to quickly bring new applications online.

## **Plan architecturally, deploy incrementally**

In many enterprise IT organizations, service-level provisioning and orchestration is viewed as challenging because these products require collaboration as they span multiple functional areas including server, network and storage

operations. Many IT managers are so focused on day-to-day challenges that they find it hard to plan for and justify this cross-functional process and operational integration.

However, the user community is often moving faster and demanding



*Cisco VFrame Data Center offers a modular approach for configuring and rapidly deploying application services across the data center infrastructure*

more than many IT departments are prepared to handle.

Well-orchestrated, virtualized infrastructures with highly available pools of resources offer clear competitive advantages. Business process changes become faster and easier to operationalize, allowing an enterprise to respond



*Cisco VFrame Data Center is a cross-functional, rapid services orchestration and provisioning platform.*



*Cisco enables your server, network and storage chassis to be provisioned as an orchestrated, virtualized set of hosting services.*

