

# FlexPod®

## Automate Application Infrastructure Provisioning

FlexPod Datacenter with VMware vSphere, Cisco UCS Director, Cisco Nexus 9000 Series Switches, and Cisco Application Centric Infrastructure

### Rapidly Meet Client Needs

Business needs change quickly. And your data center must change quickly, too. To keep pace, you need a data center that sets up and changes application infrastructure for you. That's exactly what this FlexPod® solution offers.

Keeping pace with dynamic priorities requires flexibility, agility, and ease of operation. Delivering these capabilities with existing platforms can be complex and expensive for many companies. That's why automated self-service provisioning is so important. With application infrastructure delivered through a self-service portal with no human intervention, this validated solution equips you to succeed.

This FlexPod solution gives you policy-based service automation that matches infrastructure with application needs. You can reduce capital and operating costs while improving the speed at which you give clients the support they need. Other

management solutions may automate individual steps of your infrastructure provisioning process. This solution provisions your complete application infrastructure across the entire data center.

### A Proven Approach

This solution gives you a unique opportunity to deliver IT as a service on a FlexPod platform with Cisco UCS® Director automating workflows for rapid, no-touch, policy-based provisioning of application infrastructure. The solution uses the FlexPod Datacenter platform based on Cisco Unified Computing System™ (Cisco UCS), Cisco Nexus® 9000 Series Switches with Cisco® Application Centric Infrastructure (Cisco ACI™), and next-generation NetApp® fabric-attached storage (FAS) systems with Clustered Data ONTAP®. VMware vSphere 5.5 supports the virtualization layer.

The solution has been tested, validated, and documented through a Cisco Validated Design. This

approach reduces risk and guesswork by giving your architects and administrators a guidebook for implementing the solution.

### What Makes This Solution Better

This solution is better because your IT staff can define a set of application architecture templates that meet your client needs and empower your administrators or your clients to deploy infrastructure on demand through a self-service portal.

- Your client needs are better satisfied because Cisco UCS Director coordinates the provisioning of both physical and virtual computing, networking, and storage components so that you can meet client needs in minutes without any human intervention.
- Time to deploy is reduced to minutes, helping your organization increase the pace of infrastructure delivery and better supporting agile development processes that create



and destroy virtual infrastructure on a frequent basis.

- A policy-based approach means that all infrastructure is delivered using the standards that you establish, helping ensure greater compliance, enhanced security, and fewer configuration problems that can cause application downtime.
- Cisco UCS Director securely provisions resources into network containers that Cisco ACI creates, resulting in complete security isolation between applications and tenants.
- Better resource utilization is achieved through complete life-cycle management. Because Cisco UCS Director handles the end of life for your clients' infrastructure, all resources are returned to a free pool, and none are left stranded.
- The solution reduces both your capital and operating costs. Ac-

ording to IDC, Cisco's own IT department expects to save 41 percent in capital and operating costs per year just from the conversion to the Cisco Nexus 9000 Series with Cisco ACI (Figure 1).

- The FlexPod Datacenter platform makes it easy to purchase exactly the infrastructure you need and to meet future needs by scaling up (by adding more resources to the FlexPod) or scale out (by adding more FlexPod instances to your data center). The massive east-west scalability of the leaf-spine network architecture means that you can deploy environments that span multiple FlexPod instances.
- Real-time health scores for network performance give you information that no software-defined network can. You can view network performance in real time and adapt and modify workload placement according to actual conditions, helping you maintain service levels.
- A cooperative support program with Cisco, NetApp, VMware, and many enterprise application vendors can quickly address any problems as they arise.

Director then manages the rest of the resources—including physical servers, virtual machines, and storage—so that your FlexPod Datacenter resources can be harnessed through a single automated, programmable management framework.

## Rapid Solution Deployment

You can order a FlexPod that has the server, network, and storage capacity that best suits your business needs, and scale up and out as your business needs change. The hardware is preintegrated, simplifying initial configuration. With the Cisco Validated Design guiding your initial setup, you can get up and running in less time and with less risk.

## Operational Excellence

To keep your business running, you need to maintain access to applications at all times. The FlexPod architecture is designed to be fully redundant at the computing, network, and storage layers so that no single point of failure can threaten your application uptime. Your IT staff can tap into visibility, telemetry, and health scores to quickly identify and resolve problems before they affect application service levels.

## Get Worry-Free Support

Many NetApp and Cisco certified channel partners sell FlexPod solutions throughout the world. With Cisco, NetApp, and VMware offering cooperative support, you can deploy FlexPod solutions with confidence.

## For More Information

- Learn more about [FlexPod](#)
- Read the [Cisco Validated Design](#)

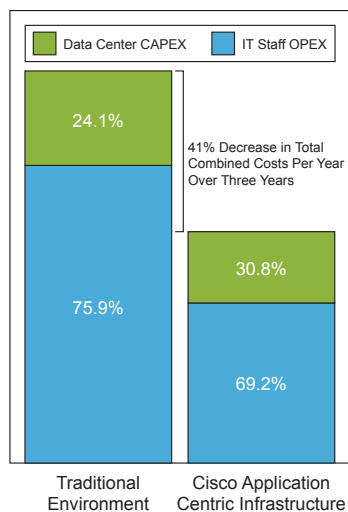


Figure 1) IDC Estimates That Cisco IT Will Save 41 Percent per Year in Capital and Operating Costs from the Transition to Cisco ACI Alone. Source: IDC, [Cisco Preparing Its Datacenters for the Next Generation of Virtualization and Hybrid Cloud with Its Application Centric Infrastructure](#), May 2014, IDC, 248604

## Rapid Application Infrastructure Deployment

The combination of standardization, workflow automation, and self-service offered by Cisco UCS Director helps you deliver IT as a service (ITaaS). Using FlexPod Datacenter as a pool of resources, Cisco UCS Director interfaces with Cisco ACI to prepare fabric resources and network services tailored to the needs of the application. Cisco UCS

