FlexPod

Four Reasons to Refresh Your FlexPod

With the latest Cisco UCS servers, Nexus fabric switches, and NetApp all-flash storage

We live in an era of intensifying IT pressure in which organizations are asked to perform at high levels and improve responsiveness to the business while reducing costs. The need to accelerate application delivery and meet security and governance requirements continues to rise, even as budgets shrink. The lightning-fast pace of the marketplace demands agile teams and almost instantaneous delivery of products and services. Enterprises must have a secure and seamless compute, storage, and management experience; without it, they risk being left behind.

This situation poses a significant challenge to teams with cumbersome legacy infrastructures that can't serve up the necessary functionality—including policy, quality of service, and traffic prioritization—or optimize appropriate application resources. Challenges such as slow and expensive deployments, application silos, burdensome network automation, and complex multitenancy support can be daily struggles. Organizations must perform at world-class levels without adding cost or complexity, and they are often asked to so do without the help of experienced specialists. More and more, the need for simplicity and agility is driving consolidation of workloads onto converged infrastructure (CI) platforms.

SINCE 2010

Since 2010, the FlexPod® data center platform has been solving these challenges as a leader in data center solutions. Six years later, new technical innovations offer an advantageous refresh opportunity to FlexPod customers—one with significant cost savings and greater business value than other options.

2010 2011 2012 2013 2014 2015 TODAY

TODAY

Today, FlexPod lowers costs and drives higher performance through groundbreaking new features, interoperability, and all-flash-array storage performance. By delivering low-latency performance, superior data management and security, as well as multiprotocol support and nondisruptive operations, FlexPod provides a leading platform for virtualized environments. Organizations enjoy faster deployments, high-performance workloads, and enhanced application security at a lower cost and smaller footprint. They get the simplicity and power of the latest Cisco UCS servers, the high performance and low latency of Nexus switches, and the speed and economic advantages of NetApp® all-flash storage.

Superior Performance. Increased Agility. Exceptional Economics.

208%

SQL RESPONSE TIMES THROUGH UCS WITH M4 PROCESSORS*

UP TO 20 TIMES GREATER STORAGE PERFORMANCE WITH ALL FLASH FAS

100+ WORLD RECORD BENCHMARKS WITH UCS

Performance

FlexPod with All Flash FAS optimizes data centers and accelerates delivery for even the most demanding applications. Disruptive downtime is eliminated while data stays secure across the stack and into the cloud.

83%

FASTER PROVISIONING WITH CISCO ACI*

20–30% REDUCTION IN APPLICATION TESTING TIME

70% OF ENGINEERING TIME RECLAIMED

Agility

Organizations can deploy new hardware and software in minutes, which helps them to respond quickly to business needs. In addition to seamless scaling, FlexPod supports virtually any cloud strategy.

76%

ROI IN JUST 17 MONTHS*

FREE STORAGE CONTROLLER UPGRADE

FLASH AT THE PRICE OF DISK

Economic Value

FlexPod simplifies IT, streamlining management and saving money by reducing IT risk and leveraging innovation from other technology leaders.

*Source: NetApp Spotlight on Technologies-FlexPod Advantage: Performance, Agility, Economics, http://www.netapp.com/us/media/ds-flexpod-advantage.pdf

Discover the FlexPod Difference

Four Reasons to Refresh

1. BUSINESS: Accelerated Deployment, Stronger Security

FlexPod has always streamlined IT management for heightened efficiency. Now, new infrastructure automation simplifies and accelerates business processes to an even more profitable degree. As integrated infrastructure that enables data management across flash, disk, and the cloud in a single platform, FlexPod reduces the need for specialized skills while freeing skilled staff to focus on revenue-driving tasks.

One benefit of the automation is a highly efficient preracked, precabled infrastructure assembly model that enables teams to deploy within an hour. Instead of having individual component-level assembly in which teams must decide which cable goes into which port, teams can immediately load applications through a no-nonsense GUI, letting them complete deployment without specialized skills.

This simplified architecture enables a faster time to market, empowering businesses to deliver their services faster, respond nimbly to business needs, and prioritize their resources, accelerating the revenue cycle.

FlexPod also improves security and risk management across the data center and into the cloud. NetApp ONTAP® management software keeps applications running smoothly with Integrated Data Protection and delivers near-instant backup and recovery as well as synchronous and asynchronous replication. The Data Fabric enabled by NetApp allows operation across hybrid cloud resources, seamlessly moving data between flash, disk, and cloud environments. The Cisco Intercloud Fabric maintains security, control, and portability.

By isolating workloads and users with secure multitenancy, FlexPod enables businesses to safely run consolidated workloads and securely meet the needs of hybrid cloud applications. End-to-end quality-of-service settings provide administrators with security and performance control over multiple tenants sharing compute, storage, and networking resources. The final result: Resources and data for each tenancy are securely isolated within the FlexPod environment.

2. FINANCIAL: Reducing Costs and Driving ROI

FlexPod cuts costs by delivering higher performance and capacity in a smaller footprint. Flash advances, including a new 15-terabyte drive that boosts IOPS, consolidate racks of data into a significantly smaller footprint. By boosting efficiencies in rack space, power, and cooling, FlexPod reduces the associated capex and opex costs almost immediately.

One example: Organizations running FlexPod systems in a clustered operation mode can use the ONTAP upgrading system to incorporate an all-flash array and move their workload to an all-flash system without disruption. As another example, FlexPod offers great cost savings over hyperconverged infrastructure (HCI). HCI often involves software license costs and unnecessary spending on compute, since it's purchased with storage all in one box. FlexPod can scale modularly and dimensionally, eliminating spending on compute when only additional storage is needed, and on storage if only compute or bandwidth is needed.

There are also operational savings with FlexPod with All Flash FAS. According to Gartner, with the simplicity of administration of flash, IT can see a 48% savings in terms of time and money.[1] Performance gains can alleviate database tuning and free up valuable DBA time spent on tedious tasks.

In addition to lowering data center costs through simplified management, FlexPod lowers the overall total cost of ownership. Also according to Gartner, upgrading to flash storage reduces space, heat, and power over HDD storage for payback within five to six months. Forrester reports that organizations realized 76% ROI by adopting the FlexPod platform.[2]

48%
Savings in terms of time and money[1]

76%
Savings in power and cooling costs[1]

63%
Savings in terms of rack space[1]

3. OPERATIONS: Mirroring Business Speed with Operational Efficiency

Although FlexPod has always streamlined and simplified data center transformations, FlexPod with All Flash FAS accelerates operations through end-to-end automation that smoothly orchestrates the platform's setup, configuration, maintenance, and operations.

Organizations have traditionally taken delivery of the FlexPod system through two modes. The first option involves working with a partner who handles the prestaging and integration before delivering a plug-and-play solution. The second option is to purchase a factory-configured fully racked and cabled solution delivered to the customer ready for deployment. A set of standard configurations is also available, with delivery to the customer two weeks after order placement in some locations.

The new FlexPod design automation tool can drastically reduce delivery time for a custom FlexPod platform. This capability provides organizations with a fully designed custom data center in a few weeks instead of several months. With the new infrastructure automation capabilities, some FlexPod designs can deploy workloads in less than 60 minutes—acceleration that translates to faster service delivery cycles. An automation engine on a separate server walks the team through the deployment process by asking them to answer a few questions about IP addressing and naming conventions. FlexPod then automatically sets the configuration of all underlying systems.

FlexPod lifecycle management is also simplified and automated. The Config Advisor checks configurations for FlexPod and makes recommendations. Teams can upgrade their entire stack of equipment, both firmware and software, through lab-tested, lab-documented recommendations over the life of their FlexPod solution.

4. TECHNICAL: Unparalleled Performance

Today's advances in application complexity are mirrored in rising consumer expectations. Both have created a demand for higher performance; sites that can't offer an immediate response lose customers and revenue to competitors. Fast, powerful application performance is mandatory.

FlexPod with All Flash FAS delivers this advanced performance by maximizing flash architecture through greater storage along with high-powered UCS M4 processors. Depending on the age of the server they are replacing, organizations can see a fivefold or even a sevenfold increase in performance with the newest processors.

As a result, the data center is optimized for cost and performance for even the most demanding applications. Such optimization provides quicker access to information to help organizations make smarter decisions and drive revenue through faster business transactions and response times. Teams can modify and update without disruption or outages thanks to UCS, Nexus, and ONTAP technologies that enhance FlexPod without changing existing practices and operations.

The new FlexPod platform also empowers teams to scale infrastructure seamlessly by easily calibrating their compute, storage, and networking requirements. Because teams can scale those areas in nearly any increment without purchasing blocks of capacity or compute, they can easily onboard additional workloads with lower capex. And because FlexPod extends to the public cloud, teams can scale elastically between public and private clouds, quickly moving data and virtual machines between clouds without disruption. Given how many businesses now live in a hybrid cloud environment, the unparalleled capability of FlexPod to deliver consistent, enforceable service levels and IT governance is unique.

SPEED THROUGH SIMPLICITY

Ready for use in less than 60 minutes

Application deployment reduced from months to weeks

83%
faster provisioning with Cisco ACI architecture

20% to 30%
reduction in application testing time

FLASH FORWARD: POWERFUL PERFORMANCE

Up to 4 million IOPS with 1ms latencies on All Flash FAS

20x Up to 20x faster enterprise application performance on All Flash FAS.

All Flash FAS delivers 685,281.71 IOPS at 1.23ms average response time (ART).

#5 All Flash FAS was rated #5 in SPC-1's "Top Ten" by performance, with the second-best ART (1.23ms) and SPC-1 LRT (0.48ms) in the top 5.

4x 4x improvement in storage IOPS, 4x improvement in SQL Server CPU utilization.

Faster response times for business-critical SAP, Oracle, and Microsoft enterprise applications

208% faster SQL Server response time.[3]

100+ world record benchmarks for UCS,

including SPECCINT2006: SPECint_rate_base=1760 best 2-socket x86-architecture result, representing a 27.5% increase.[4]

Simplify. Accelerate. Perform. Refresh.

Only FlexPod with All Flash FAS delivers the superior performance, increased agility, and exceptional value required for enterprise success today. By helping organizations simplify IT management and reduce their costs, FlexPod amplifies IT responsiveness while providing a cost-efficient path to the future. In an era in which organizations must partner speed with simplicity, FlexPod with All Flash FAS offers the smarter path to infrastructure innovation and performance.

Learn more about FlexPod at www.flexpod.com and NetApp.com/flexpod

1. Savings compared with previously installed HDD-based ECB storage systems. Source: Gartner, "Solid-State Array TCO Reality Check," Joseph Unsworth and Arun Chandrasekaran, 22 January 2016.
2. Forrester, "Total Economic Impact of NetApp's and Cisco's FlexPod Data Center Platform," Bob Cormier, http://www.netapp.com/us/forms/gatedassetonnetappcom-forrester.aspx.
3. Cisco, "FlexPod Advantage: Performance, Agility, Economics," 2016
4. Cisco, "Cisco UCS Servers Claim Nine New World Records on Industry-Standard Benchmarks," 2016