



## SOLUTION BRIEF

# The Right Foundation for Scalable Virtual Server Infrastructure

### **VIRTUALIZE YOUR WAY**

*Deploy the virtual server software that works for your users and applications on innovative FlashStack platforms.*

### **ACCELERATE**

*Run your virtual servers on Cisco Unified Computing System™ (Cisco UCS®) M5 blade and rack servers and Pure Storage all-flash arrays to deliver fast processing power and quick access to data.*

### **SAVE**

*Use of a prevalidated design provides significant data reduction and management simplicity, lowering your cost per virtual server and the costs associated with ongoing maintenance.*

When it's time to optimize the data center, IT managers turn to FlashStack to simplify the expansion, operation, and management of their virtual server deployments.

With today's tight budgets and the need to do more with less, server virtualization has proven to be an important strategy for optimizing the data center. But as many IT managers recognize, traditional approaches to IT infrastructure and virtual server implementation result in a sprawling and complex set of servers, virtual machines, and storage systems that are difficult to scale, optimize, and manage on a daily basis. FlashStack offers the rapid deployment, flexible scaling, and high performance you need to simplify your data center and optimize the use of IT resources.

### **FLASHSTACK: THE RIGHT FOUNDATION**

Consolidating more workloads allows you to optimize the use of your server—but doing so requires systems that can keep pace and perform. Our streamlined, flexible, transformative approach combines the latest in computing, network, storage, and management components into a single, integrated architecture that accelerates IT service delivery. Based on the latest Cisco Unified Computing System™ (Cisco UCS®) server technology





*Whether you need a few or tens of thousands of virtual servers, the building block approach of FlashStack, combined with your choice of virtual server solutions, gives you the IT resources you need today and the flexibility to grow on demand.*

and 100 percent flash-memory storage, FlashStack provides the performance and reliability that virtual server infrastructure deployments demand while lowering overall IT costs and reducing deployment risk.

#### **PERFORMANCE AT SCALE**

FlashStack now includes Cisco UCS M5 blade and rack servers. Based on Intel® Xeon® Scalable processors, these fifth-generation servers have faster processors, more cores, and a faster, larger memory capacity than previous-generation servers. Plus, they are ready for Intel 3D XPoint nonvolatile memory, which can be used both as storage and as system memory, increasing your virtual server configuration options and flexibility for applications.

#### **Fast access to data**

Unlike solutions based on slow and inefficient disk or hybrid storage systems, FlashStack unleashes the power of an all-flash storage architecture. With latency of less than a millisecond and hundreds of thousands of I/O operations per second (IOPS), you can consistently deliver fast virtual infrastructure that accelerates



applications.

#### **Fast access to new resources**

When you need to upgrade or expand your deployment, nondisruptive operations allow your users to keep working without experiencing degraded performance or any delay in service delivery. The result: always-available, high-performance virtual environments that can help your staff achieve better business outcomes faster.

#### **HIGH DATA AVAILABILITY**

The Pure Storage FlashArray//M array used in FlashStack delivers breakthrough resiliency that doesn't quit. Its proven availability—greater than 99.9999 percent—means that your user data is always available, always performing, and always protected, with no performance loss. With its predictive support, you can take preemptive action to reduce your risk of downtime.

#### **EASY EXPANSION**

With FlashStack, you can increase storage capacity, computing capacity, and network performance independently and in real time without the need for significant infrastructure change





COMPUTING	FLASH STORAGE	FABRIC INTERCONNECT
<ul style="list-style-type: none"> <li>Cisco UCS M5 blade and rack servers deliver exceptional system and GPU performance, expandability, and efficiency for virtual server infrastructure.</li> </ul>	<ul style="list-style-type: none"> <li>Pure Storage FlashArray //M, an all-flash system, offers inline deduplication and compression for significant space savings without compromising virtual server and application performance.</li> </ul>	<ul style="list-style-type: none"> <li>Cisco UCS fabric interconnects provide the management and communication backbone for FlashStack, increase capacity and port density, and reduce power consumption.</li> </ul>

or disruption. By taking advantage of the FlashStack flexible upgrade approach, you can start small and grow with confidence. Whether you need just a few or thousands of virtual servers, FlashStack can help you deliver the IT resources that users and applications need on a moment's notice.

**STREAMLINED OPERATION**

By consolidating onto FlashStack, you can manage your virtual servers in a unified and standardized way that allows you to automate and simplify your processes and workflows. And the capability to eliminate manual configuration processes that can cause errors and downtime helps reduce both risk and costs. With easy-to-use, familiar Cisco management tools

such as Cisco UCS Manager, Cisco UCS Director, and Project Starship, a new Cisco® cloud-based management platform, you can reduce your staff's work time while protecting your data and virtual server infrastructure.

**TRUST A PROVEN SOLUTION**

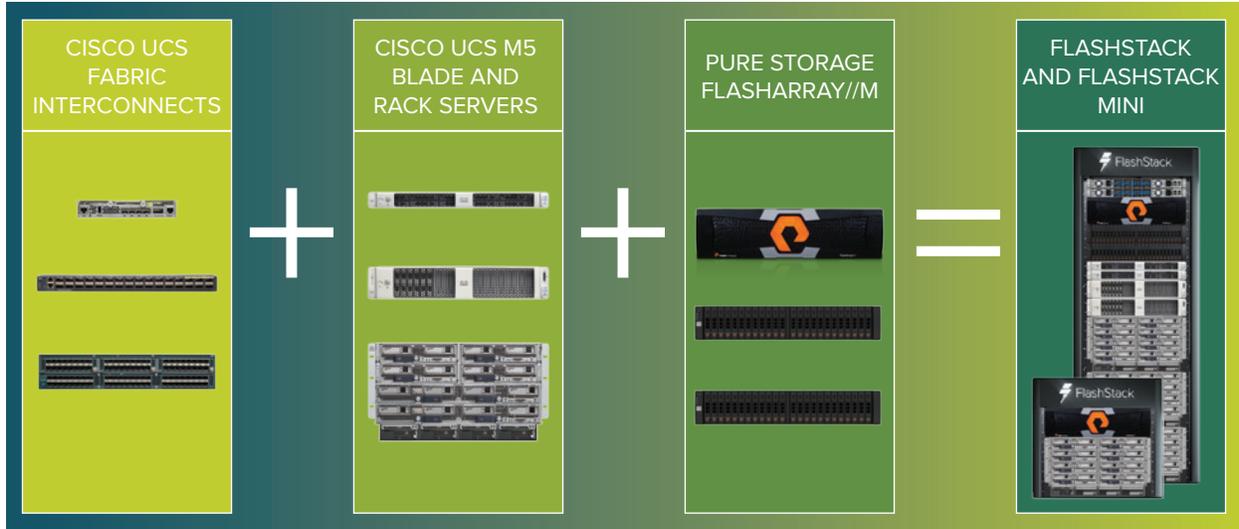
When point products are added in an ad hoc manner, your IT staff spends a lot of time selecting, connecting, integrating, testing, and managing hardware and software components. Cisco and Pure Storage make it easy to deploy technologies and implement an effective virtual server infrastructure using FlashStack. Verified, lab-tested architectures provide detailed design and implementation guidance that helps reduce

risk and guesswork by giving administrators and architects a guidebook for implementation. By following the guidelines in these Cisco Validated Designs, IT staff can quickly deploy trusted virtual server infrastructure that optimizes IT resources.

**CHOICE AND TRANSFORMATION**

You can empower your entire organization with cloud-like capabilities that also give you the control and security you require. With the power and flexibility of FlashStack, you can roll out virtual server infrastructure quickly and transform your end-user experiences with simple, fast, on-demand IT. Using the latest innovative technology, our solution supports even the most aggressive data center workloads.





#### VIRTUALIZE MORE WITH FLASHSTACK

If your IT infrastructure is holding your business back, it's time to consider FlashStack. With our building-block approach, you can move from inflexible systems to agile, virtual server infrastructure that supports dynamic business operations.

#### FOR MORE INFORMATION

Read the *Cisco Validated Designs for FlashStack*.

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