



Cisco and EMC Release Joint Validated Design for Desktop Virtualization with Citrix XenDesktop



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Cisco, Citrix, and EMC Partnership

Collaborative solutions for scalability, user experience, cost savings

Industry leaders combine to provide:

- Integrated solutions to speed deployment
- Validated reference architectures
- Cooperative customer support
- Open architecture for easy integration
- Support for any device, anywhere
- Provide secure ubiquitous access



EMC VNX: The Leading Flash-Optimized Array

Optimized for today's virtualized IT and virtual desktop

EMC Unisphere



VNX



EMC VNX = UNIFIED: Get both SAN and NAS in One Storage Solution

VNX^e



Affordable. Simple. Efficient. Powerful.



VNX/VNXe for Citrix XenDesktop

Storage solutions that don't sacrifice end user experience

Unified Infrastructure



- Single solution (multi-protocol) for:
 - Block (FC, FCoE, iSCSI)
 - File (CIFS/SMB3.0, NFS)
- Built for five 9's availability

VNX for Multiple Applications



- Designed to handle multiple applications for the virtual environment
- Increased application availability

Scalable & Efficient



- Single, unified management framework
- Virtual Storage Integrator enables ease of provisioning of XenDesktop VMs
- Built-in snapshots, compression, file de-dupe
- Scalable to meet demanding capacity growth

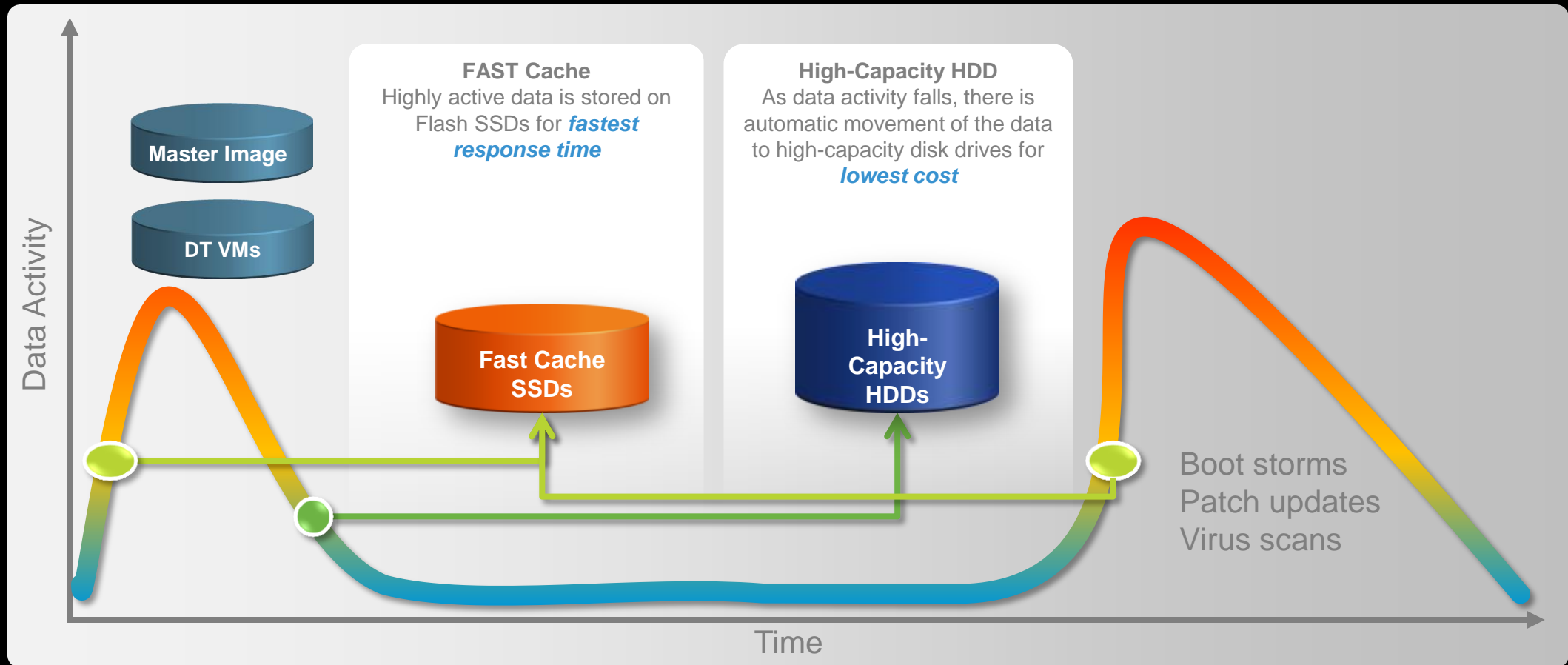
FAST Suite



- Optimized use of Solid-State Drives
- Lowers **\$/GB** and **\$/IOPs**
- Absorb **80% IOPs** with FAST Suite
- Boot **1,000 Citrix XenDesktops in 8 minutes**

FAST Cache Benefits Desktop Virtualization

Hot data on Flash SSDs—cold data on dense disks

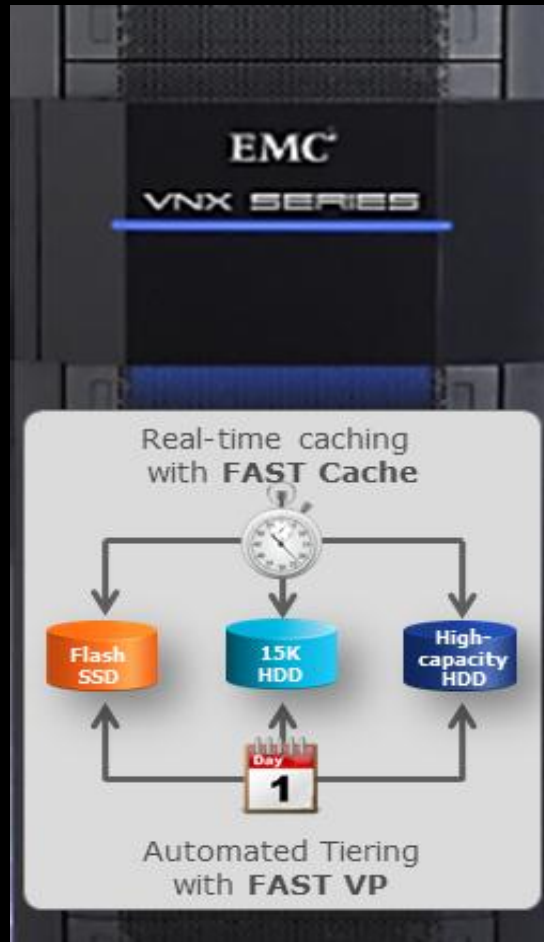


Future Proof Your Desktop Infrastructure



Dynamically optimize IO ensuring fast, responsive virtual desktops

Citrix XenDesktop at
Scale with **FAST
Suite**



- FAST Cache
 - Improves performance during steady-state and I/O storms
- FAST VP
 - Dynamic and automated storage-tiering
 - End-user application data
- Virtual desktops enjoy lowest response time possible for data that matters
- Use less SAN/NAS storage with just a little bit of SSDs
- Lower \$/IOP and \$/GB



Cisco Validated Design for 5,000 Seats

First 3-way solution for deploying a scalable VDI solution

CITRIX[®]

Citrix Executive Briefing Center hosts 100's of customer demonstrations a year. To meet this scalability challenge & ensure a quality experience for users, Citrix uses EMC VNX Unified Storage infrastructure to support its Citrix XenDesktop virtual desktops. ([Factsheet](#))



EMC²

Building Technology to Drive Business Progress

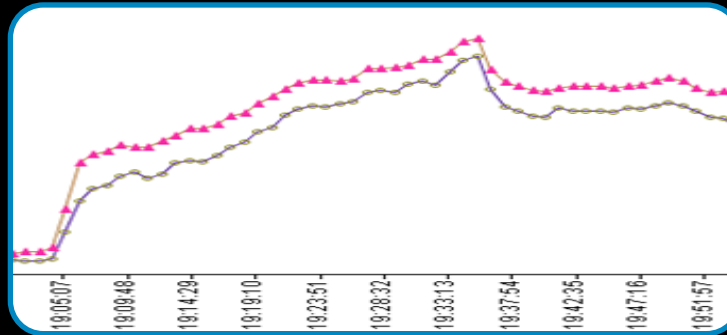
Solution components:

- EMC VNX7500 and FAST Suite
- Citrix XenDesktop 5.6 (PVS)
- Cisco UCS
- VMware vSphere 5.1

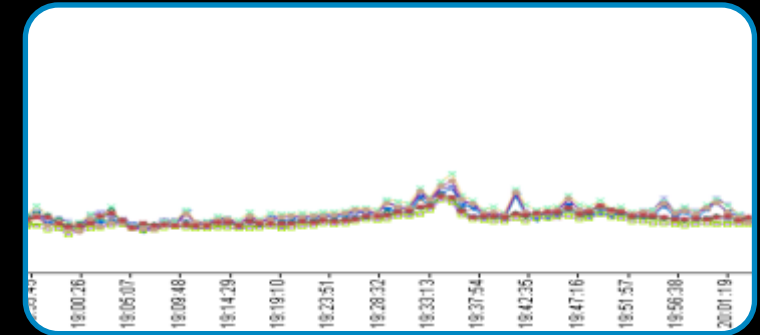
VNX7500 Performance - 5,000 Desktop CVD



10 FAST Cache
Drives + 101 SAS
Desktop Drives



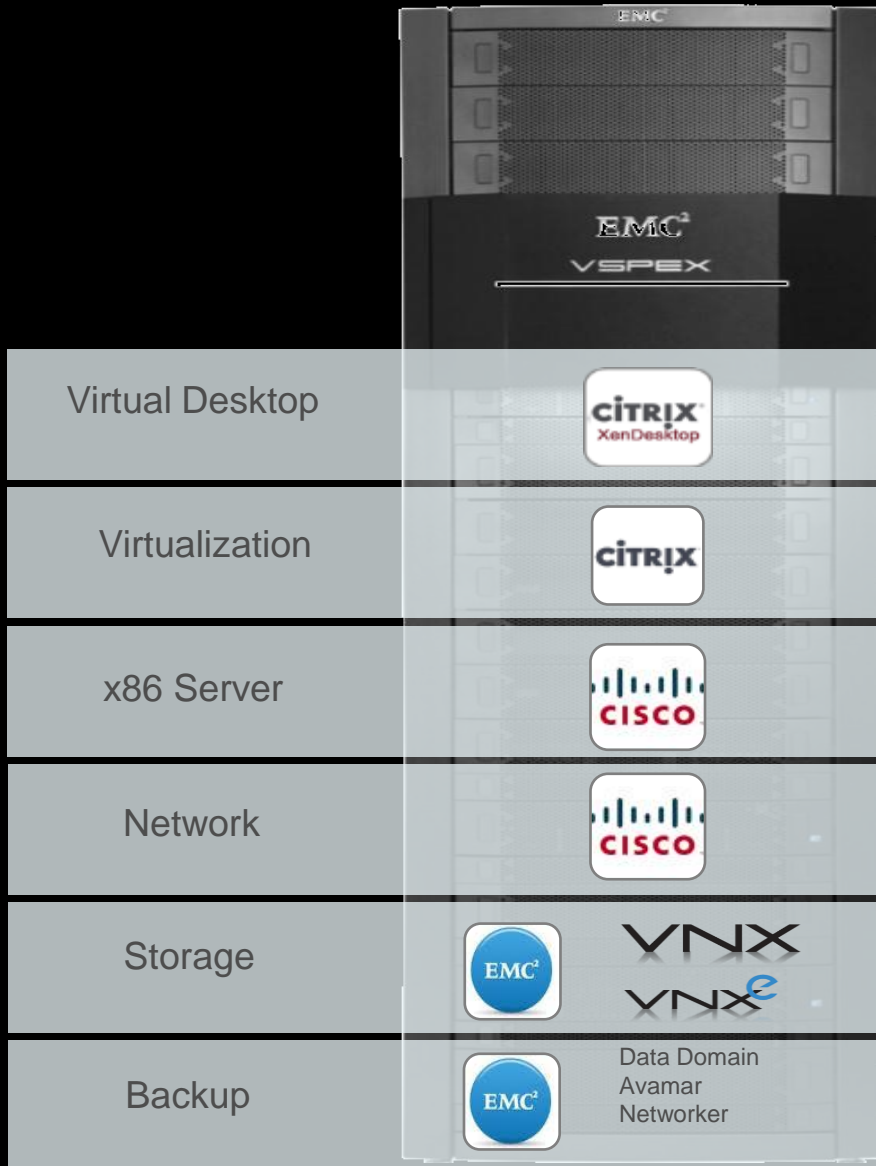
Backend Max at
30,000 IOPS



LUN response
time below 1
millisecond

EMC VSPEX

Simple. Efficient. Flexible.



- Proven Infrastructure Reference Architecture
 - Citrix XenDesktop repeatable deployments
 - 250, 500, 1000, & 2000 virtual desktop deployments
 - VNXe3300/VNX5300/VNX5500/Avamar
- Low Risk, Modular, & Scalable
- Investment Protection
 - Flexible Choice of Virtualization
 - Flexible Choice of Server
 - Flexible Choice of Network
 - Re-use existing HW/SW/Licensing Assets



VSPEX – Partner Benefits

1



Proven Infrastructures

2



Branding & Enablement

3



VSPEX Demos & Validation

4



Aligned Sales Incentives

5



Partner Seminar Kits



VSPEX Customer Benefits

- Simple
 - Reduce server and data sprawl challenges with a single Proven Infrastructure
 - Reduce management headaches and cost
 - EMC tested and Proven for faster, worry free deployment
- Efficient
 - Centrally deploy, manage, and protect virtual machines with tight API integrations
 - Thin provision, compression, and deduplication will save you up to 50% storage acquisition costs
- Flexible
 - Application Reference Architectures for businesses of different sizes and needs
 - Scale up or down to meet changing business requirements

Managed Growth with Virtualization

Baptist Memorial Health Care uses VNX and Cisco UCS for Citrix VDI



Challenge

- Oversee 14,000 physical desktops scattered across 14 sites with limited IT resources
- Efficiently ensure and manage universal access to critical patient care information on any type of device
- Provide software updates quickly and easily

CHARLES ROSSE
Systems Administrator II



“Since the VNX has been built into the design of our VDI from the beginning, it can easily accommodate growth- all we need to do is to plug in another drive or tray of drives and we get incrementally better performance.”



Results

- Expected savings of up to \$3 million through server virtualization
- Entire virtual desktop environment takes fewer than 30 minutes to boot up



