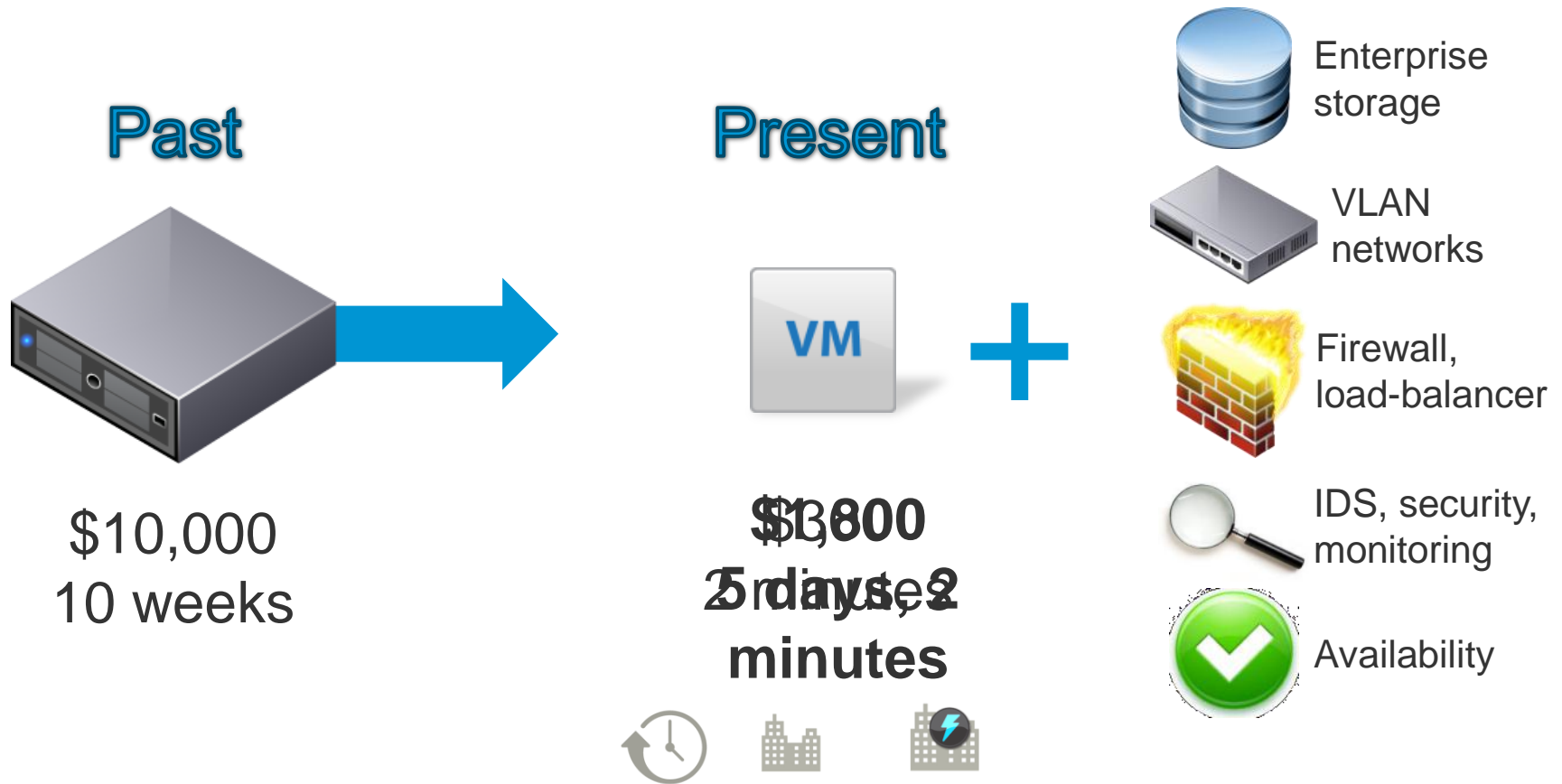# Software Defined Datacenter
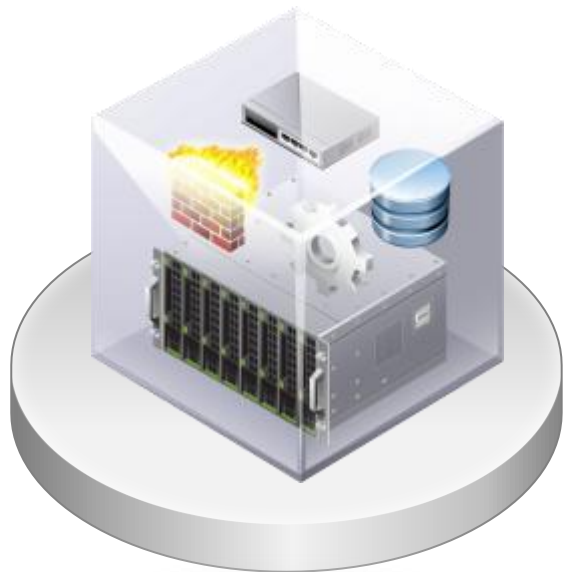
Thanos Sioutas
Senior Systems Engineer, VMware
asioutas@vmware.com

Virtualization Simplifies Provisioning of VMs, But Steps Needed to Deploy in a Production Environment Cause These Challenges
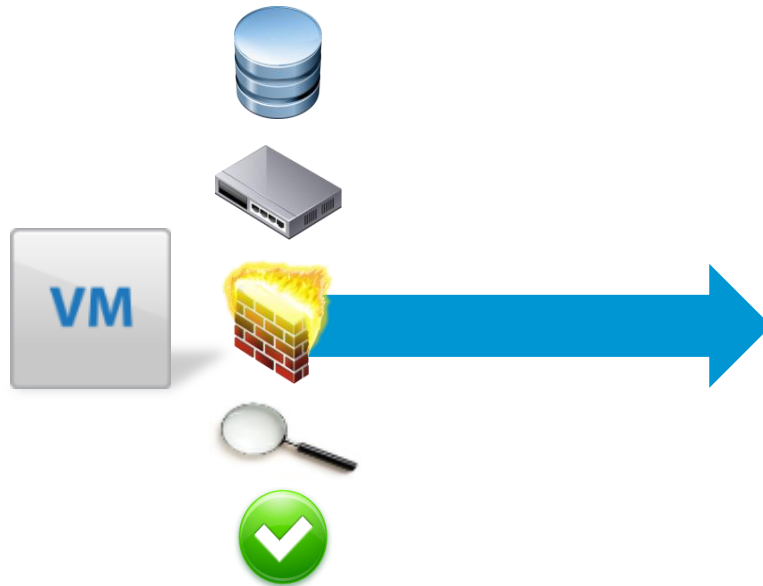
Past

$10,000
10 weeks

Present

$13,800
$1,600
3 days, 2
5 minutes
minutes

Enterprise storage

VLAN networks

Firewall, load-balancer

IDS, security, monitoring

Availability

vmware®

The Software-defined Datacenter Addresses These Challenges

Software-defined Datacenter:

All infrastructure is virtualized and delivered as a service, and the control of this datacenter is entirely driven by software.
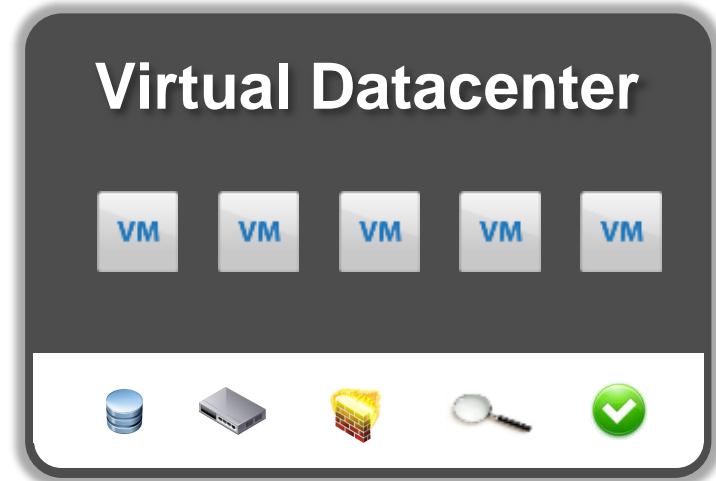
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Software-Defined Datacenters Simplifies Process to Define an Application and All the Resources It Needs

Future

Virtual Datacenter

5 days, 2 minutes

2 minutes

vmware®

This Eliminates Operational Inefficiency

From Servers To Services

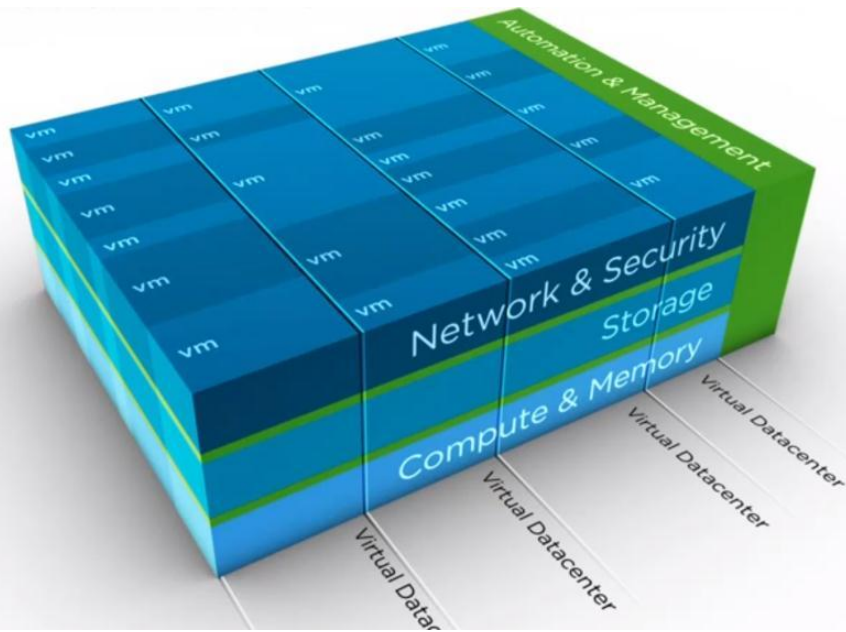|		
Weeks	~~46~~ **Days/ Hours**	46 **Minutes/ Seconds**
2008	**2012**	**Future**

* Recent healthcare customer

vmware®

VMware vCloud Suite Delivers The Software-defined Datacenter

Productivity

Reliability

Innovation

- **Based On Virtualization**
  - Delivered by VMware vSphere

- **Recasting all datacenter services as software**
  - Compute, storage, network
  - Security, Availability
  - Automation and Management

vCloud Suite: Complete offering delivering the Software-defined Datacenter

vmware®

What is the vCloud Suite?

Components of a Complete, Integrated Cloud Infrastructure

Standard services catalog

High-frequency Task Automation

Testable Disaster Recovery

Monitoring, Planning, Out-of-box Compliance

Software-defined network and security

Intelligent Infrastructure

Software-defined compute

vCloud Suite

vCloud Automation Center

vFabric Application Director

vCenter Site Recovery Manager

vCenter Operations Management Suite

vCloud Networking and Security

| vCloud Director | vCloud Connector |

vSphere Enterprise+

vmware®

ACCELERATING THE JOURNEY TO *YOUR* CLOUD COMPUTING

With CISCO, Vmware and EMC

K. Aggelakopoulos - Sr. Systems Engineer / EMC

VCE VBLOCK SYSTEMS

A fully integrated and fully virtualized cloud infrastructure system

VCE MODEL – THE BEST OF THE BEST

CISCO
- Undisputed leader in networking
- Leading innovator in blade technology

EMC² where information lives®
- Undisputed leader in storage
- Leading innovator in information management & security

Converged Infrastructure & Cloud Deployment

(intel)
- Undisputed leader in platforms
- Leading innovator in core architecture

vmware®
- Undisputed leader in virtualization
- Leading innovator in cloud application enablement

VCE

A NEW WAY TO DELIVER IT

Vblock™ Infrastructure Platforms

Management and Orchestration: Unified Infrastructure Manager (UIM) framework

Virtualization: VMware

Compute: Cisco UCS

Network: Cisco Nexus and MDS switching

Storage: EMC Unified or EMC Symmetrix VMAX

Solutions and Services

Accelerate time to value of business applications

Seamless Support

ORCHESTRATION & MANAGEMENT

VIRTUALIZATION

COMPUTE

STORAGE

VBLOCK™

ENGINEERED

TESTED

VALIDATED

VCE

VCE PRODUCT STANDARDIZATION

Converged Infrastructure and Cloud Computing

System Mgmt

Virtualization

Storage

Network

Compute
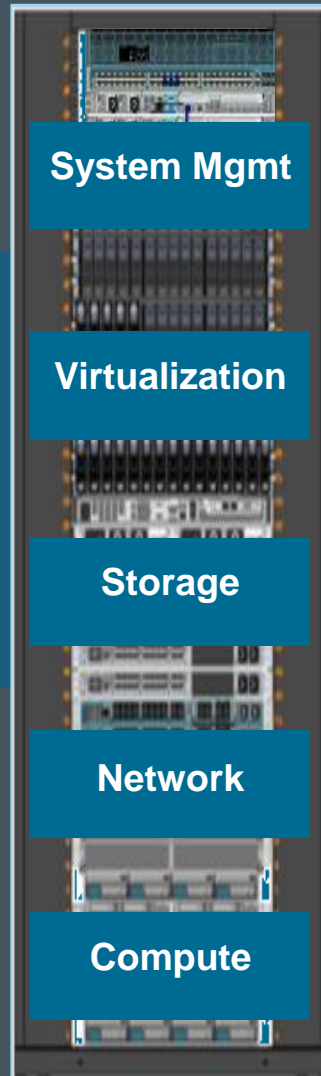
- Virtualization, server, storage, networking, and security
- Pre-engineered, pre-tested and validated
- Physical and logical integration
- Simplified management
- Solutions validation
- Roadmap planning, interoperability testing, change management, and upgrades
- VCE™ Support

VBLOCK SYSTEMS PRODUCT PORTFOLIO
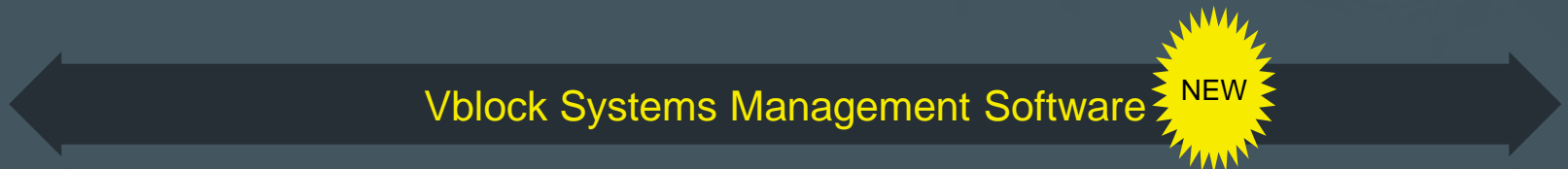
NEW

NEW

NEW
Modular
Design

**VBLOCK
SYSTEM 100**

**VBLOCK
SYSTEM 200**

**VBLOCK
SYSTEM 300**

**VBLOCK
SYSTEM 700**

Vblock Systems Management Software   NEW
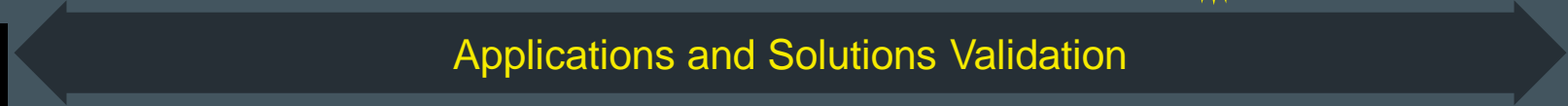
Applications and Solutions Validation

VCE

EXTENDING THE VBLOCK SYSTEMS FAMILY

VBLOCK SYSTEM 100

VBLOCK SYSTEM 200

A "right-sized" system to meet capacity, workload, and space requirements

- Brings the power and benefits of the Vblock Systems family into a smaller form factor solution

- Delivers core IT services for distributed and mid-sized datacenters

VBLOCK SYSTEM COMPONENTS

	COMPUTE	NETWORK	STORAGE	VIRTUALIZATION	MANAGEMENT SOFTWARE
VBLOCK SYSTEM 100	BX – 3-4 UCS C220 M3 DX – 3-8 UCS C220 M3 (BX 2 Configs, DX 6 Configs)	Cisco Catalyst 3750-X Ethernet (iSCSI & NFS)	EMC VNXe (3150/3300)	VMware vSphere 5.x Enterprise Plus Nexus 1000v Essentials	VCE Vision™ Intelligent Operations Software
VBLOCK SYSTEM 200	3 – 12 UCS C220 M3	Cisco Nexus 5548 – Ethernet (iSCSI & NFS/CIFS), FC (10Gb)	EMC VNX 5300	VMware vSphere 5.x Enterprise Plus Nexus 1000v Advanced, Essentials	VCE Vision™ Intelligent Operations Software

VBLOCK SYSTEM 100: RIGHT-SIZED…

… Compute resources, with up to 8 servers per Vblock System 100

… IOPS of 720 to 6K that is well optimized for intensive I/O workloads

... Drives for recovering more usable storage of up to 16TB

… For VDI use cases that support 50 to 200 users

… For messaging use cases to support up to 10K mailboxes

… For collaborative work spaces to support up to 400 SharePoint users

VBLOCK SYSTEM 200: RIGHT-SIZED…

… Compute resources with choice of CPUs, processor types

… IOPS of up to 10K that is well optimized for intensive I/O workloads

… Drives for recovering more usable storage of up to 100TB

… For VDI use cases that support up to 450 users

… For messaging use cases to support up to 30K Exchange mailboxes

… For collaborative work spaces support of up to 4K SharePoint users

LOGICAL ADVANCED MANAGEMENT POD

Logical Advanced Management Pod (LAMP)

Advanced Management Pod (AMP) to host all of software used to manage the system

VM-based logical AMP to provide the most cost-effective and efficient solution

- Cisco Integrated Management Console (CIMC) for UCS C220 M3
- Cisco IOS CLI for Catalyst 3750
- EMC Unisphere for EMC VNX storage
- VMware vSphere for EXSi

CUSTOMER VALUE

Vblock System 100

Pre-defined *fixed* configurations

Approximately 30 days from order to deployment

"Right-sized" to meet capacity, workload, and space requirements

Vblock System 200

Pre-defined *variable* configurations

Approximately 45 days from order to deployment

Core mixed-workload IT infrastructure for mid-sized datacenters

WHY VBLOCK SYSTEMS

Highest Efficiency

Highest Agility

Rapid Time to Value

Low Risk

Highest Reliability

Lowest TCO

Pre-Engineered, Pre-Validated, Pre-tested