



现代与转型

- VERSASTACK™

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DANCE TOGETHER
舞动未来

2018思科大中华区生态系统与合作联盟高峰会
Cisco Greater China Ecosystem and Alliance Forum 2018





Digital Transformation

BOOKSTORE



TAXI



MUSIC



PRINT ADVERTISING



HOTEL



Customers Want to Simplify More... Need a System



SPEED AND SIMPLICITY

Common Management
Policy across
Data Centers



HYBRID IT

Seamlessly Place
Workloads Where They
Run Best



POWER MORE WORKLOADS

Expand This Simplified
Approach to More
Use Cases



Why Cisco and IBM



DELIVERING INNOVATION THAT MATTERS



Cisco and IBM—Shared Strategy



Instrumented

Intelligent

Interconnected



CLOUD



ANALYTICS



MOBILE



SOCIAL



INTERNET
OF THINGS

Scalable

Application Aware

Secure





Traditional Data Center Infrastructure Challenges



76% of CIOs say it's **DIFFICULT** to stay on schedule and budget.¹



73% of all IT **SPENDING** is keeping current data centers running.²



COMPLEX
Takes Time



INEFFICIENT
Consumes Resources



RESTRICTIVE
Not Adaptable



22%³
Server Utilization



50%⁴
Storage Utilization

1. According to IDG research, Gartner—Cisco IT.
2. "Data Center Cost Portfolio".

3. Gartner—Reduce Costs and Extend the Life of Data Centers Using Server Refresh, March 2014.

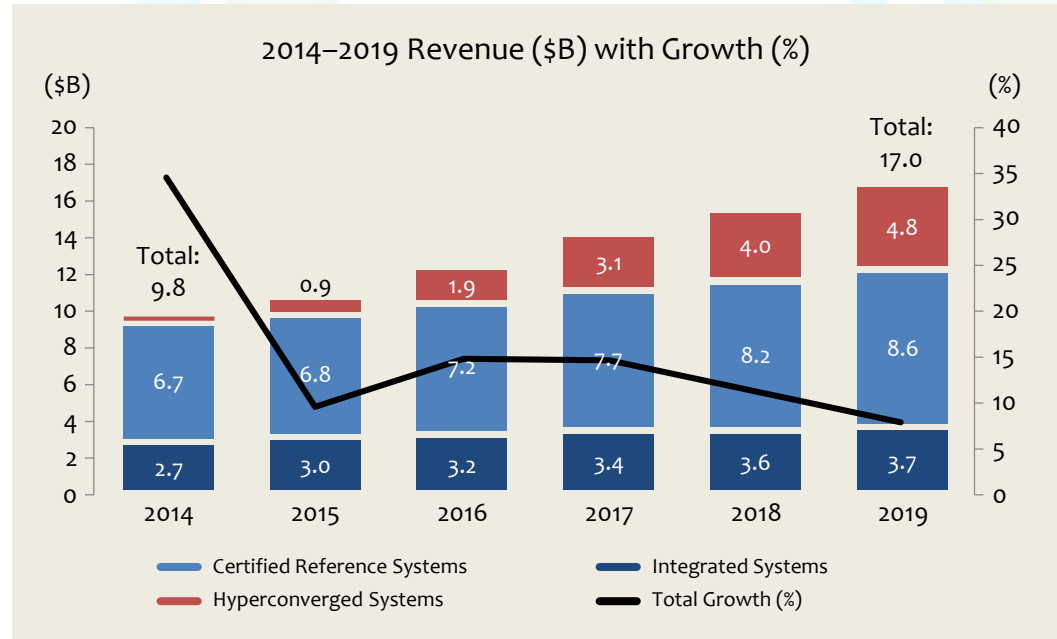
4. IBM Storage Infrastructure Optimization Studies.



Growth Opportunity: Converged Infrastructure

Worldwide Converged Systems Revenue Snapshot

- Converged Systems (+17% CAGR) a growth opportunity Combination of Certified Reference and Integrated Systems 77% of the 2017 market opportunity of \$10.4B
- Converged systems = ~50% Storage and 50% Infrastructure

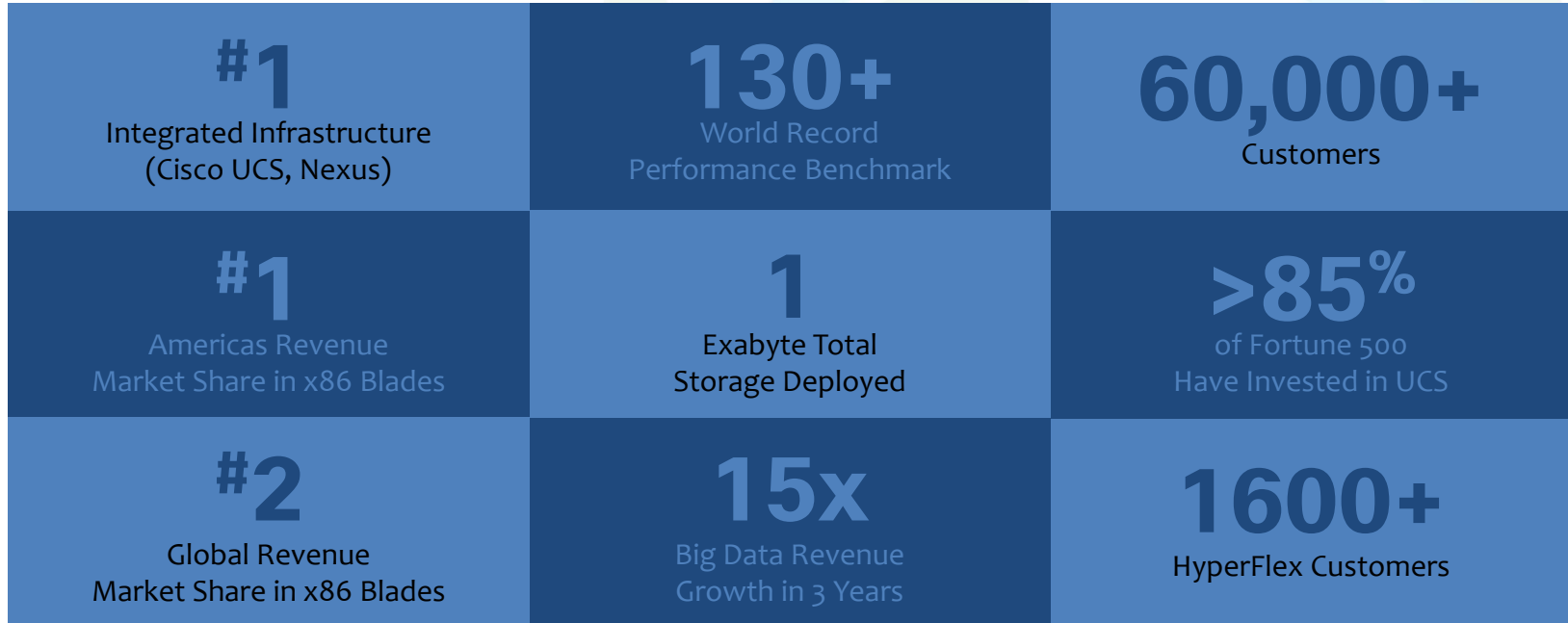


Source: IDC Worldwide Converged Infrastructure Forecast



Cisco Unified Computing System Momentum

65% Revenue CAGR FY10-FY16



Source: IDC, 2016 Q3, November 2016, Vendor Revenue Share

Source: As of Cisco Q2FY16 earnings results. Data Center Revenue is defined as Cisco UCS and Nexus 1000V.



Cisco Integrated Infrastructure Leadership

10,000+
CUSTOMERS

100+
VALIDATED
ARCHITECTURES

#1
REVENUE MARKET SHARE —
63.7% IN Q1 2017

More Customers Deploy Integrated Systems Based on
Cisco UCS Integrated Infrastructure than Any Other Vendor





IBM Storwize Family Significant Milestones

Over **75,000** total Storwize systems purchased worldwide

Including Storwize V7000 and Storwize V7000 Unified systems in addition to over **11,000** SVC systems

Over **167,000** total enclosures deployed worldwide

Average >2 expansion units per system (V7000)

Over **2.0 EB** of capacity

That's Exabytes—which is over a million TBs

Exceeding five nines availability

The Most Efficient Midrange Storage Systems in the Industry



What Is VersaStack?

VersaStack Solutions

CONVERGED INFRASTRUCTURE



Cisco Network

Nexus 5000/7000/9000
Switch Family, MDS Switches,
Fabric Interconnect

Cisco Compute

UCS B-Series and
UCS C-Series

Spectrum Virtualize

V5000, V7000,
V9000, and SVC

Spectrum Accelerate

A9000 and A9000R

Hybrid Cloud

VersaStack CI On-Premises,
Cloud Center, Public Cloud, IBM
CDM

VersaStack Solutions

OBJECT STORAGE

IBM Cloud Object Storage



IBM COS on UCS S3260

IBM Cloud Object Storage

UCS C-Series

UCS S-Series

VersaStack Solutions

SOFTWARE DEFINED STORAGE (SDS)



Spectrum Protect

UCS C-Series,
UCS S-Series

Spectrum Scale

UCS B-Series,
UCS C-Series,
and UCS S-Series



VersaStack Converged Infrastructure

CISCO ENTERPRISE CLOUD SUITE — FOUNDATION FOR CLOUD

ECS Cloud Management (CloudCenter) Invokes using Action Library

ECS Infrastructure Automation With Purpose Built VersaStack Workflows



Cisco UCS Server Options

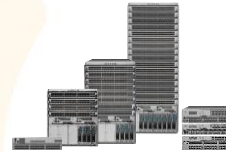
- Blade Servers
- Rack Servers

Cisco Switching Options

- Nexus 9000 Family
- ACI
- MDS Family

IBM Storage Options

- Storwize V7000 and V5000
- FlashSystem V9000
- FlashSystem A9000
- San Volume Controller (SVC)
- Spectrum Virtualize
- Spectrum Control and Protect
- Spectrum Scale
- Spectrum CDM
- COS



Wide Range of Use Cases Backed by 18 CVDs, 4 Redbooks

Virtual Infrastructure, Private Cloud, Hybrid Cloud, Database, VDI, Enterprise Apps including IBM Apps, Vertical Solutions



New VersaStack CVDs Address Nearly All Data Center and Edge Workloads



Performance-Critical, Data Center Workloads
UCS + IBM FlashSystem Storage (V9000 and A9000)



General-Purpose, Data Center Applications
UCS + IBM Storwize 7000 Storage and SVC



Edge Workloads: ROBO, Factory, Oil Well
UCS Mini + IBM Storwize 5000 Storage



UCS Management: Data Center to Edge
UCS Director, UCS Central, UCS Manager



VersaStack Market Segments and Use Cases

MARKET SEGMENT	VI UCS Mini and V50xo	VI UCS and V7000	SQL Server with V7000	All Flash VI UCS with V9000	ACI Offering with V7000 and V9000	Oracle with UCS and V9000	VDI UCS with A9000	VI on UCS and IBM SVC (V5030 and FS900)
ROBO	✓							
SMB (Small/Medium Businesses or Commercial)	✓	✓	✓		✓			✓
SP		✓	✓	✓	✓	✓	✓	✓
Large Enterprises		✓	✓	✓	✓	✓	✓	✓

TARGET WORKLOADS AND APPLICATIONS

VI: Virtualized Infrastructure



Private Cloud





VersaStack Converged Infrastructure (CI) Solutions Delivered—CVDs

	MID-MARKET/ENTERPRISE		LARGE ENTERPRISE		
TARGET ENVIRONMENTS	VI with UCS Mini and Storwize V5000	VI with UCS and Storwize V7000	IaaS with UCS and Storwize V7000 with UCSD	VersaStack All Flash Offering with UCS and FlashSystem V9000	VersaStack ACI Offering with Storwize V7000 and FlashSystem V9000
HYPERVISOR	vmware®	vmware®	vmware®	vmware®	vmware®
SERVERS AND NETWORK INFRASTRUCTURE	Cisco UCS Mini Integrated Fabric Interconnects	Nexus 9k MDS Cisco UCS Fabric Interconnects	Nexus 9k MDS Cisco UCS Fabric Interconnects	Nexus 9k MDS Cisco UCS Fabric Interconnects	Nexus 9k—ACI Mode MDS Cisco UCS Fabric Interconnects
IBM STORAGE	Storwize V5000	Storwize V7000	Storwize V7000	IBM FlashSystem V9000	V7000 and V9000
PROTOCOL	iSCSI/Fibre Channel	iSCSI/Fibre Channel	Fibre Channel	Fibre Channel	Fibre Channel



VersaStack Converged Infrastructure (CI) Solutions Delivered—CVDs

	MID-MARKET/ENTERPRISE		LARGE ENTERPRISE	
TARGET ENVIRONMENTS	VI on V5030 Gen2 and UCS Mini	VI on UCS and SVC + V5030 + FS900	VDI with UCS and FlashSystem A9000 with Horizon View—5000 Seats	Hybrid Cloud with Cloud Center
HYPERVISOR	vmware®	vmware®	vmware®	vmware®
SERVERS AND NETWORK INFRASTRUCTURE	Cisco UCS Mini Integrated Fabric Interconnects	Cisco UCS Fabric Interconnects Nexus MDS	Cisco UCS Fabric Interconnects Nexus MDS	Cisco UCS Fabric Interconnects Nexus MDS
IBM STORAGE	V5030 Gen2	SVC, V5030, FS900	FlashSystem A9000	FlashSystem V9000 and V7000
PROTOCOL	iSCSI	Fibre Channel	Fibre Channel	Fibre Channel



VersaStack Converged Infrastructure (CI) Solutions Delivered—Redbooks

TARGET ENVIRONMENTS	Microsoft SQL Server Redbook	IBM DB2 Redbook	Pure Application	Oracle-RAC 12c	IBM FlashSystem V9000
HYPERVISOR	vmware®	vmware®	vmware®	vmware®	vmware®
SERVERS AND NETWORK INFRASTRUCTURE	Nexus 9k MDS Cisco UCS Fabric Interconnects	Nexus 9k MDS Cisco UCS Fabric Interconnects	Nexus 9k MDS Cisco UCS Fabric Interconnects	Nexus 9k MDS Cisco UCS Fabric Interconnects	Nexus 9k MDS Cisco UCS Fabric Interconnects
IBM STORAGE	Storwize V7000	Storwize V7000	Storwize V7000	IBM FlashSystem V9000	IBM FlashSystem V9000
PROTOCOL	iSCSI	iSCSI	iSCSI	Fibre Channel	Fibre Channel



VersaStack CI Solution Bundles

VersaStack Data Center

DATA CENTER BUNDLE ENTRY

1x C1 Enterprise Cloud Suite
Infrastructure Automation
(C1-ECS-IAAS)



2x Nexus 93180 with
8 QSFP-40GB



2x MDS 9148S
16GB FC Switch



1x UCS SP Select 5108
AC2 Chassis with 2208 IO
(TAA Compliant)

2x UCS SP
Select 6248 FI

2x B200M4 with
2x E52609v4,
VIC1340, 4x 16GB

DATA CENTER BUNDLE STANDARD

1x C1 Enterprise Cloud Suite
Infrastructure Automation
(C1-ECS-IAAS)



2x Nexus 93180 with
8 QSFP-40GB



2x MDS 9148S
16GB FC Switch



1x UCS SP Select 5108
AC2 Chassis with 2208 IO
(TAA Compliant)

2x UCS SP
Select 6248 FI

3x B200M4 with
2x E52630v4,
VIC1340, 8x 16GB

DATA CENTER BUNDLE PERFORMANCE

1x C1 Enterprise Cloud Suite
Infrastructure Automation
(C1-ECS-IAAS)



2x Nexus 93180 with
8 QSFP-40GB



2x MDS 9148S
16GB FC Switch



1x UCS SP Select 5108
AC2 Chassis with 2208 IO
(TAA Compliant)

2x UCS SP
Select 6248 FI

4x B200M4 with
2x E52690v4,
VIC1340, 8x 32GB



VersaStack CI Solution Bundles

VersaStack Mini

MINI BUNDLE ENTRY

1x C1 Enterprise Cloud Suite
Infrastructure Automation
(C1-ECS-IAAS)



1x UCS-SP-MINI-TAA

1x UCS SP Select
5108 AC2 Chassis with
FI6324
(TAA Compliant)

2x B200M4 with
2x E52609v4,
VIC1340, **4x** 16GB

MINI BUNDLE STANDARD

1x C1 Enterprise Cloud Suite
Infrastructure Automation
(C1-ECS-IAAS)



1x UCS-SP-MINI-TAA

1x UCS SP Select
5108 AC2 Chassis with
FI6324
(TAA Compliant)

3x B200M4 with
2x E52630v4,
VIC1340, **8x** 16GB

MINI BUNDLE STANDARD

1x C1 Enterprise Cloud Suite
Infrastructure Automation
(C1-ECS-IAAS)



1x UCS-SP-MINI-TAA

1x UCS SP Select
5108 AC2 Chassis with
FI6324
(TAA Compliant)

3x B200M4 with
2x E52630v4,
VIC1340, **8x** 16GB



VersaStack Solution for Object Storage

Backed by Cisco Validated Design

PETABYTES SCALABILITY

GLOBALLY DISTRIBUTED

DATA MANAGEMENT SERVICES

HYBRID CLOUD CAPABLE

SECURITY AT THE CORE

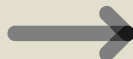
FLEXIBLE CONSUMPTION MODEL

REST-Style Architecture

IBM Cloud Object Storage



Site A



Site B





IBM Cloud Object Storage and UCS S3260

C220M4



MANAGER®



DATA SOURCES



DATA SOURCES



DATA SOURCES

1

Manager Is deployed to configure and manage the infrastructure. Manager can be physical appliance, virtual or built with Manager API.

C220M4



ACCESSER® LAYER

2

Accessers are deployed to access the underlying storage. Accesser can be a physical appliance, virtual, Docker Instance or an application.



S3260M4

SLICESTOR® LAYER

3

Slicestors are deployed to store data. Slicestors are physical appliances.



VersaStack for Software Defined Storage

DATA PROTECTION



IBM **Spectrum Protect**

- Protection with scalability
- Unified data protection platform
- Cloud ready



SCALE-OUT STORAGE



IBM **Spectrum Scale**

- Global file sharing with active file management
- Extreme scalability
- Data aware-intelligence





VersaStack Solutions Recent Wins



Advanced
Single framework for multiple requirements with VersaStack

3x faster
deployment and scaling of customized private clouds
Saves 1 FTE
in costs per year
Attracts
new clients with the best of public and private clouds



Atalmedial
Integrating two infrastructures into one IT landscape

5500 patient contacts per day facilitated by the new infrastructure
5 branches and >800 employees supported in a virtualized environment
Mobile analytics and other initiatives are now made possible with new solution



Arizona State Land Department
Government agency manages millions of acres better with IBM

7x increase
in employee productivity
87 percent
reduction in virtual machine boot times for VDI
Lower costs
of IT support realized from successful VDI implementation



CIMAC
Taking municipal services to new heights with VersaStack

5x Gb/s used
enabling fast, high-performance IT connection for citizen services
East Tier
on IBM Storwize V7000 ensures excellent price-performance
Convergence
boosts innovation by freeing up time spent on management



VersaStack Financing from Cisco and IBM

Accelerate Your Move to an Integrated Infrastructure

Maximize Your Purchasing Power

Finance the total solution:

- IBM® and Cisco® technology
- Services, support, and education
- Third-party products
- Partner-provided products and services

Overcome Budget Constraints

Meet budget requirements:

- Low monthly payments
- Time payments to meet cash flow needs
- Reduce TCO
- Maximize ROI
- Keep technology current with refresh options

Unified Approach to Financing

The best financing solutions:

- Aggressive rates
- Pay As You Grow and deferred payment options
- One source for all financial solutions

Contact me if you want to learn more!

Sun Jing Shu, IBM Storage Product Manager, sunjingshu@cn.ibm.com



THANKS !

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Cisco Greater China Ecosystem and Alliance Forum 2018

