



Cisco Unified Computing System

What's New in UCS B-Series

The Power of Unification

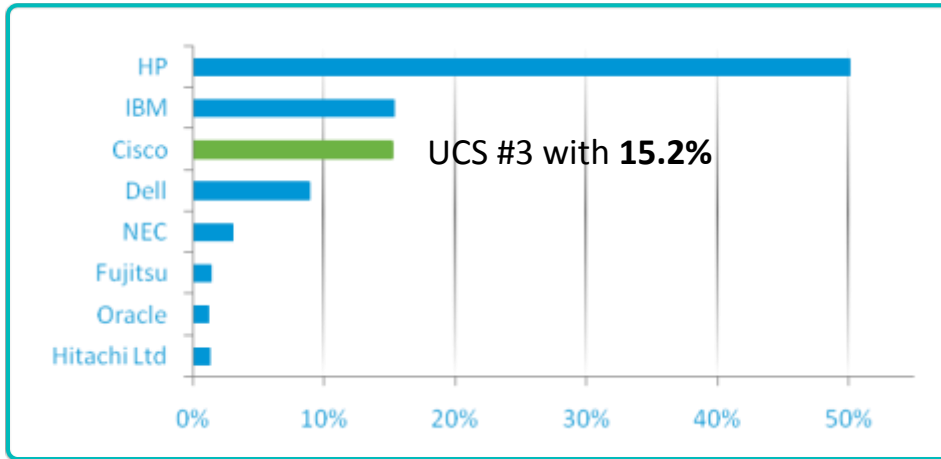


Customer's Have Spoken

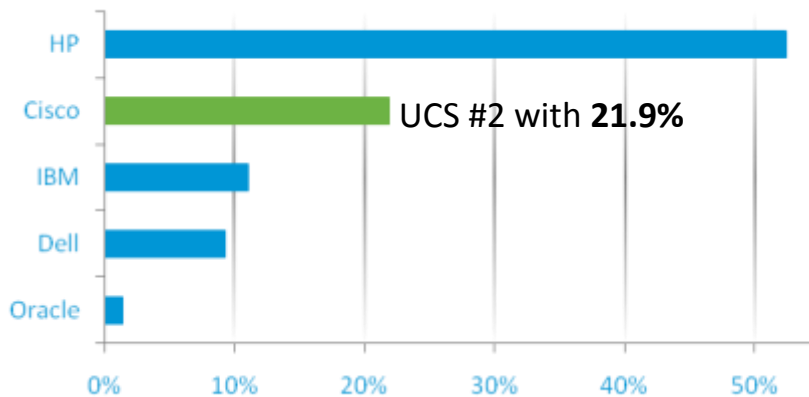
UCS Continuing to Gain Momentum in the Market

X86 Server Blade Market Share, Q2CY12¹

Worldwide



North America



Source: ¹ IDC Worldwide Quarterly Server Tracker, Q2 2012, August, 2012, Revenue Share

UCS momentum is fueled by innovation and the efforts to deploy by our leading customers

UCS Bookings grew 58% year over year as of Cisco Q4FY2012

UCS has 15,800 customers, including more than half the Fortune 500

UCS After Only Three Years

Maintained #2 in N. America (21.9%) and #2 in the US (22.2%)¹

Maintained #3 worldwide in x86 Blades with 15.2%, just behind IBM's 15.4%¹



Recent Additions to UCS Product Line

What's Recent: Networking

Increasing Performance, Flexibility and Scalability



Highest Scale,
Low Latency
Networking



New Building Blocks at Every Level

Fabric Interconnect 6296UP

Double the current fabric bandwidth to **2Tbps**
Infrastructure agility with **Unified Ports**
40% reduction in latency—2uS across 100s of servers



Chassis I/O Module 2204XP

Enhanced Resiliency and Utilization with Port Channeling
Options for both **80 Gbps** and **160 Gbps** to each chassis



I/O Options VIC 1240

Up to 40 Gbps bandwidth
Industry's **1st 80 Gbps** to the blade solution



What's Recent: Compute

Performance Optimized for Bare-Metal, Virtualized and Cloud Applications

Industry-leading compute without compromise

Scale Out

Enterprise Performance

Intensive / Mission Critical

Rack

Avail



UCS C24 M3

Entry, expandable rack server for storage intensive workloads

Avail



UCS C240 M3

Ideal platform for Big Data, ERP and database applications

Q4'12



UCS C420 M3

Unified Computing in an Enterprise Class, 4-socket rack server for large, memory intensive bare metal & virtualized applications

Avail



UCS C22 M3

Entry rack server for distributed & web infrastructure applications

Avail



UCS C220 M3

Versatile, general purpose enterprise infrastructure and application server

Blade

Avail



UCS B22 M3

Entry blade server for IT infrastructure and web applications

Avail



UCS B200 M3

Optimal choice for VDI, Private Cloud or dense virtualization / consolidation workloads

Sep'12



UCS B420 M3

Unified Computing in an Enterprise Class, 4-socket blade for large, memory intensive bare metal & virtualized applications

Cisco UCS: Many Server Form Factors, One System

What's Recent: B200 M3 Blade Server

Industry-Leading Density Without Compromise



Unified Computing in an enterprise-class blade server for memory and I/O-intensive collaboration, decision support and virtualized applications

- Enterprise performance and advanced capabilities
- Expanded feature set I/O and integrated dual 20GbE
- Balanced performance and density
- Advanced features without compromise



UCS B200 M3
Performance-Optimized Enterprise
Blade Server

Half-Width Blade Form
Factor

2 x Flexible Flash
16GB SD Cards

Dual 2 x 10Gb Modular
I/O

2 x Hot Plug SAS / SATA
HDD / SSD

2 x E5-2600 CPUs

Internal USB 2.0
port

24 x DDR3 DIMMs

1 x Mezzanine slot
(Gen 3)

What's Recent: B22 M3 Blade Server

Expanding the Unified Computing Portfolio



Balanced price/performance feature set to address quick deployment of scalable IT infrastructure and Web 2.0 applications

- Ideal for distributed workloads
- Two-socket expandable capabilities with cost-optimized feature set
- Up to 8x10 GbE throughput (redundant 4x10GbE)
- Integrated LSI HW RAID



UCS B22 M3
Cost-Optimized, Entry-Level Blade Server

Half width blade form factor

12 x DDR3 1600-MHz DIMMs

2 x Flexible Flash 16GB SD Cards

1 x Mezzanine slot for VIC 1280 or 3rd party mezzanine

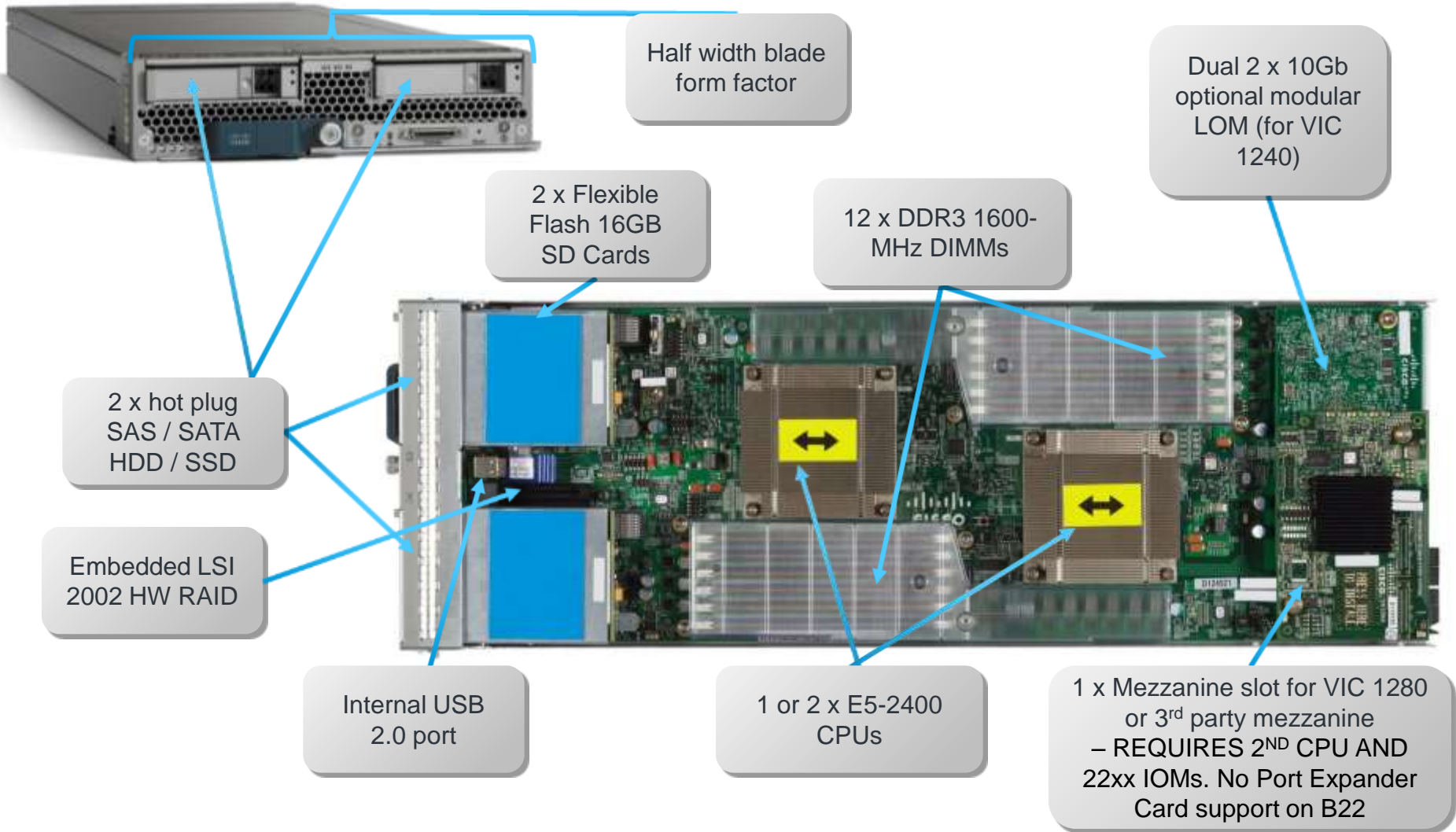
1 or 2 x E5-2400 CPUs

2 x hot plug SAS / SATA HDD / SSD

Internal USB 2.0 port

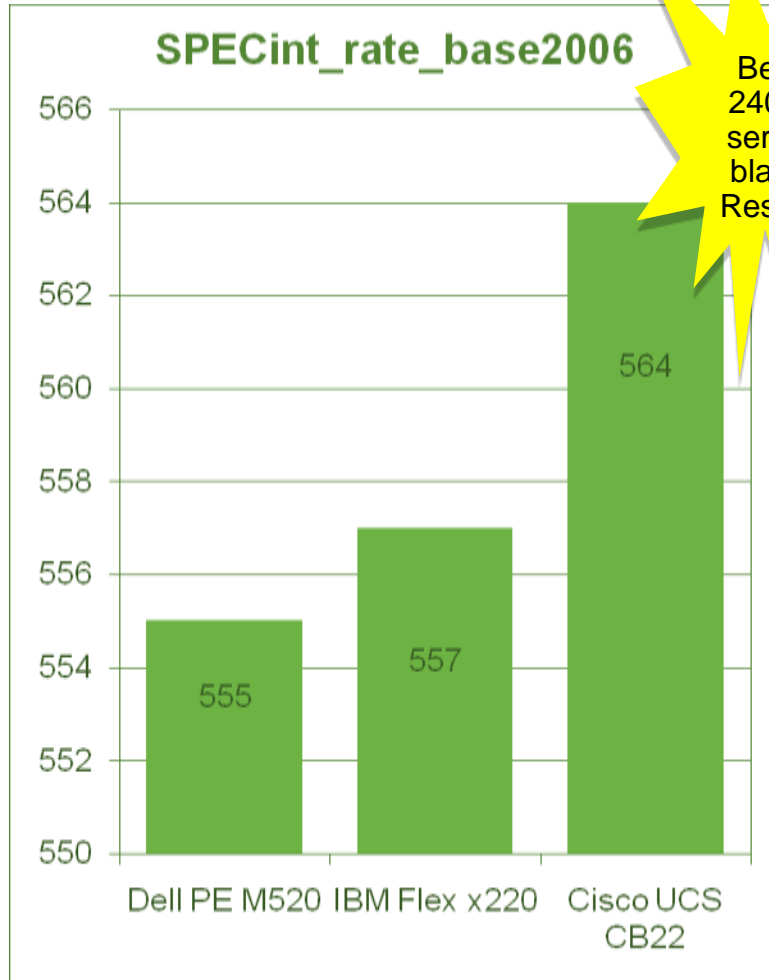
Dual 2 x 10Gb optional modular LOM (VIC 1240)

UCS B22 M3

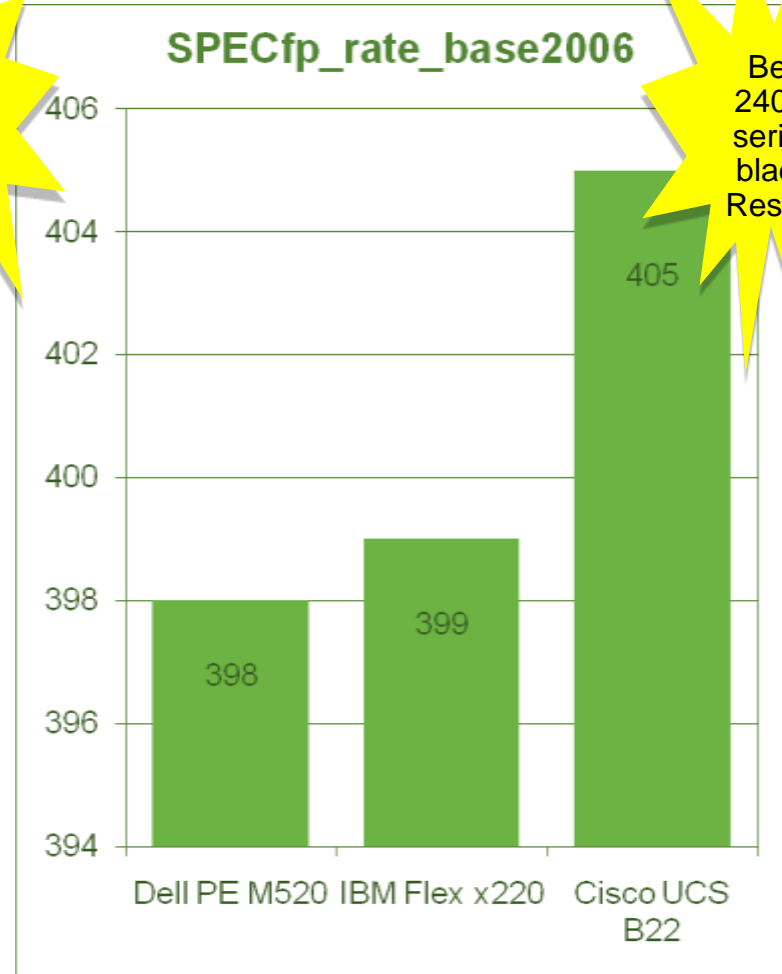


UCS B22 SPECcpu Performance E5-2470

Multi-Threaded Integer Tests



Multi-Threaded Floating Point Tests



Based on 2-socket E5-2400 blade results published on www.spec.org as of 9/17/2012

What's Coming: B420 M3 Blade Server

Expanding the Unified Computing Portfolio

3Q'CY12

Unified Computing in an enterprise-class, 4-socket blade for large, memory-intensive bare-metal and virtualized applications

- Performance intensive and high density virtualization
- 4-socket capabilities with the economics of a 2-socket platform
- Expanded storage feature set
- Integrated dual 20GbE + two mezzanine slots



UCS B420 M3

Dense, Performance-Optimized Enterprise Blade Server
Availability 3Q'CY12

4 x E5-4600 CPUs

4 x SFF Hot Plug
SAS / SATA HDD /SSD

48 DDR3 DIMMs

Full width blade
form factor

Up to 160 Gb I/O Bandwidth

1GB Flash-Backed Write Cache
(Optional)

UCS B420 M3

Four Intel E5-4600 series processors
(2 & 4 CPU configurations supported)

Four hot plug drive bays
supporting SAS, SATA, SSD

Mezz connector 2
8 x 10Gb*

Supercap module
installed here (part of
optional 1GB FB write
cache module)

Mezz connector 1
4 x 10Gb*

Dedicated mezz
connector for VIC 1240
4 x 10Gb*

Optional
1GB flash-backed write
cache module
installed here (supercap
also included in option)

Internal USB 2.0 port

48 DIMM slots
• 4 channels per CPU
• 3 DIMMs per channel

*B420 M3 max I/O bandwidth = 160Gb/s

4S EP Comparison

Intel Xeon 4S EP

Efficient Performance

*Up to 8 cores / 16 threads per processor
20MB cache
Standard reliability features*

Intel Xeon EX

Expandable

*Up to 10 cores / 20 threads per processor
30MB cache
Advanced reliability features*

Mission Critical Business Processing *(DB, ERP, CRN, batch)*

Decision Support *(data warehouse, Business Intelligence)*

Large-scale Virtualization

Application Development

High Performance Computing

Collaboration

Web Infrastructure

IT Infrastructure

UCS Blade Servers



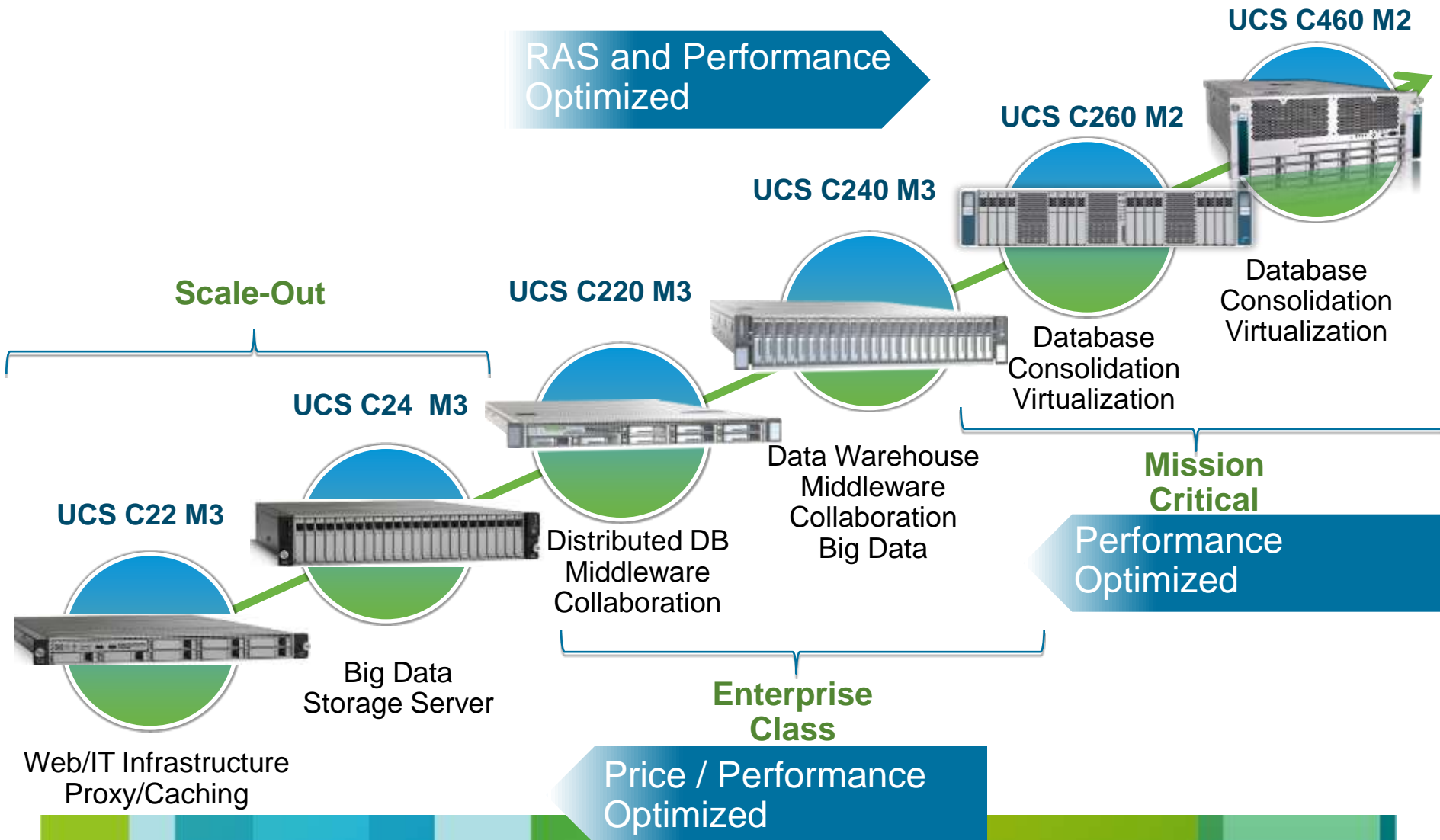
	B22 M3	B200 M3	B230 M2	B420 M3	B440 M2
Slots	1	1	1	2	2
CPU	E5-2400	E5-2600	E7-2800	E5-4600	E7-4800
Cores	16	16	20	32	40
DIMMs	12	24	32	48	32
Max GB	384GB*	768GB*	512GB	1.5TB*	1TB
Disk	2 x 2.5"	2 x 2.5"	2 SSD	4 x 2.5"	4 x 2.5"
RAID	0/1	0/1	0/1	0/1/5/6	0/1/5/6
Integrated I/O	Dual 20Gb	Dual 20Gb	No	Dual 20Gb	No
Mezz	1	1	1	2	2

*with 32GB DIMMs (post-FCS)

World's Only Stateless Rack Servers

- Unify management of blade & rack servers
- Stateless computing using service profiles
- Innovations maximize hardware investment

Cisco's Rack Portfolio UCS C-Series Rack Server Portfolio



C-Series Rack Server Solutions

Private Cloud Solutions with VMware/Hyper-V

- **EMC VSPEX** Server Virtualization Solutions for VMware, Hyper-V for SMB and Midsized Companies - 50-125 VMs
- **FlexPod Entry solution** for VMware and Hyper-V with IP Based Shared Storage

VDI

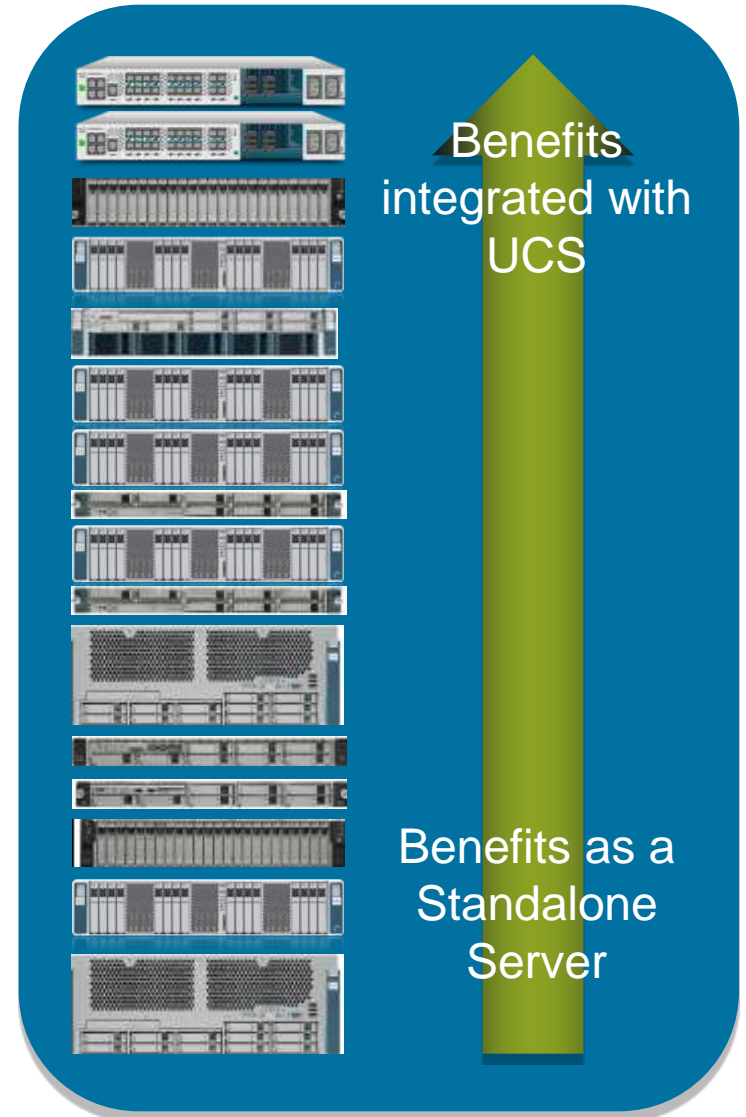
- **Citrix VDI-In-a-Box** solution (up to 300 desktops)
- **Citrix Xen Desktop 500 desktop solution** with EMC VSPEX

Business Analytics

- **Big Data solutions** - deploy, manage, and monitor
- **SAP HANA** small and medium appliances
- **Microsoft SQL Server Fast Track** solutions w/ EMC

Applications

- **Microsoft Exchange 2010** in a box
- **Microsoft SharePoint 2010** in a box
- Microsoft Server based “**Windows Storage Server**”



Recent Additions to UCS Product Line

What's Recent: C220 M3 Rack Server

Expanding the Unified Computing Portfolio



Unified Computing in an enterprise-class, rack-mount server for EDA, decision support and virtualized applications

- Industrial design enhancements
- Best server consolidation economics and footprint
- Silicon and system level enterprise features for datacenter general purpose compute
- Expanded feature set Storage and I/O



UCS C220 M3
Density-optimized, Enterprise-class
1 RU Rack Server

2 x E5-2600 CPUs

8 x SFF Hot Plug
SAS / SATA HDD /SSD

2 x Common Form-Factor PSUs
(90+ Platinum)

1RU Rack form factor

Dual 1GbE LOM

2 x PCIe Gen 3 Slots

What's Recent: C240 M3 Rack Server

Expanding the Unified Computing Portfolio



Unified Computing in an enterprise-class, rack-mount for storage-intensive, collaboration, decision support and virtualized applications

- Ideal for Storage-optimize enterprise workloads
- Expanded feature set for Storage, network and I/O
- Silicon and system level enterprise features for datacenter general purpose compute
- Tool-less access and enhanced usability features



UCS C240 M3
Storage-Optimized, Enterprise Class,
2 RU Rack Server

2 x E5-2600 CPUs

24 x SFF Hot Plug
SAS / SATA HDD /SSD

2 x Common Form-Factor PSUs
(90+ Platinum)

2RU Rack form factor

24 x DDR3 DIMMs

5 x PCIe Gen 3 Slots

What's Recent: C22 M3 Rack Server

Expanding the Unified Computing Portfolio



Unified Computing in an entry-level, efficient and affordable rack-mount server for HPC, big data, IT, distributed and web infrastructure workloads

- Ideal for HPC scale out applications and SMB customers
- Enterprise compute with entry-level economics
- Industrial Design Enhancements
- Most dense, cost-optimized rack server



UCS C22 M3
Affordable, Space-Optimized
1 RU Rack Server

2 x E5-2400 CPUs

8 x SFF Hot Plug
SAS / SATA HDD /SSD

2 x PCIe Gen 3 Slots

1RU Rack form factor

Dual 1GbE LOM

Common Form-Factor PSUs
(90+ Platinum)

What's Recent: C24 M3 Rack Server

Expanding the Unified Computing Portfolio



Unified Computing in an entry-level, efficient and expandable, rack-mount server for storage-intensive big data, IT infrastructure and small database workloads

- Ideal for distributed, storage-intensive applications
- Expanded feature set Storage, I/O and Quad 1 GbE LOM
- Large, 24 HDDs of internal storage
- 1 + 1 redundant power



UCS C24 M3
Affordable, Storage-Optimized
2RU Rack Server

2 x E5-2400 CPUs

24 x SFF Hot Plug
SAS / SATA HDD / SSD

5 x PCIe Gen 3 Slots

2RU Rack form factor

12 x DDR3 DIMMs
up to 192GB

2 x Common Form-Factor PSUs
(90+ Platinum)

What's Coming: C420 M3 Rack Server

Expanding the Unified Computing Portfolio

4Q'CY12

Unified Computing in a cost-optimized, 4-socket rack-mount server for large, enterprise-class, memory-intensive, bare-metal and virtualized applications

- 4-socket performance with 2-socket economics
- Performance-intensive and large-scale virtualization
- Expanded storage feature-set and options
- Tool-less Access, light-guided diagnostics



UCS C420 M3

Memory-Optimized , Enterprise Class,
4-socket, 2 RU Rack Server
Availability 4Q'CY12

4 x E5-4600 CPUs

16 x SFF Hot Plug
SAS / SATA HDD /SSD

7 x PCIe Gen 3 Slots

2RU Rack form factor

48 x DDR3 DIMMs
up to 1.5TB

2 x Common Form-Factor PSUs
(90+ Platinum)

UCS Rack Servers



	C22 M3	C24 M3	C220 M3	C240 M3	C260 M2	C420 M3	C460 M2
RU	1	2	1	2	2	2	4
Cores	16	16	16	16	20	32	40
DIMMs	12	12	16	24	64	48	64
Max GB	192GB*	192GB*	512GB	768GB	1TB	1,5TB	512GB
Disk	8 x 2.5" or 4 x 3.5"	24 x 2.5" or 12 x 3.5"	8 x 2.5" or 4 x 3.5"	24 x 2.5" or 12 x 3.5"	16 x 2.5" or 32 x SSD	16 x 2.5"	16 x 2.5"
LoM	2 x 1Gb	2 x 1Gb	2 x 1Gb	4 x 1Gb	2 x 1Gb + 2 x 10Gb	2 x 10Gb	2 x 1Gb + 2 x 10Gb
PCIe Slots	2 x PCIe 3.0	5 x PCIe 3.0	2 x PCIe 3.0	5 x PCIe 3.0	6 x PCIe 2.0	6 x PCIe 3.0	10 x PCIe 2.0
Internal Storage	USB Port	USB Port	USB Port FlexFlash	USB Port FlexFlash	USB Port FlexFlash	USB Port FlexFlash	eUSB

Standalone Management Model – Simple, Reliable, Secure

- Embedded remote management
 - No host agents
 - No additional fees
 - Future XML API support
- Investment protection: 1-to-many model scales as you grow

Cisco Integrated Management Controller (CIMC)

Integrated 'Agent-less' Out of Band Remote Management

Customer Benefits

- Embedded Management Solution
 - No host agents required
 - No additional license fees
- Consistent Server Definition (*'look and feel'*) between Standalone and UCSM modes
 - XML API (UCS Programmatic Interface)
 - SNMP
- Out of Band Management
- Scriptable Interface – Large Scale Management

Feature Details

- Firmware Management
- BIOS Configuration
- Export Technical Support Data
- Power Shell Support
- RAID Controller, Battery Backup Unit, Storage Media Configuration and Monitoring
- All FRU Components

UCS Management Solutions

- Central Management
- Power Shell
- ISV Integration
 - MSFT SCOM/ SCCM
 - HP Operations Manager
 - Zenoss
 - Aliris – Deployment Server

XML API & SNMP

GUI

CIMC

CLI

Embedded on Server



Simplify Server Deployments and Firmware Upgrade Tools

For Individual or One-to-Many Server Access

Server Configuration Utility (SCU)

Powerful tool speeds time to deployment

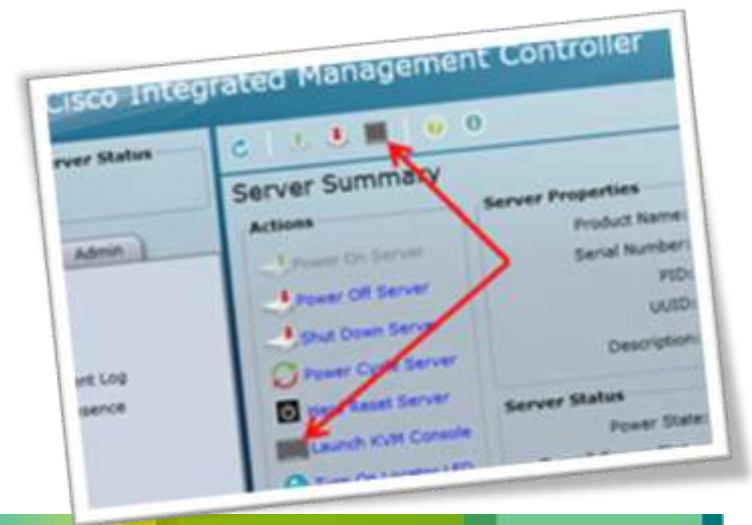
- Unattended OS installation
- RAID & boot order configuration
- Server inventory & offline diagnostics
- Automated OS driver updates from cisco.com



Host Upgrade Utility (HUU)

Simplify firmware & system software updates

- BIOS
- CIMC
- LOM
- RAID Controller
- Cisco VIC



UCS Software Update

PSSVT October 2012

October 2012

What Are The Types Of UCS Software?

- **C-Series On Server Software**

1 instance per rack server



Release internal names use alphabetical order of **California Mountain Peaks**

- **UCS Manager**

1 instance per domain

Release internal names use alphabetical order of **California Beaches**



- **UCS Central**

1 instance for many UCS domains

Release internal names will use alphabetical order of **California State Parks**



What UCS Releases Are On Cisco.com?

Application Networking Services
Cisco IOS and NX-OS Software
Cisco Interfaces and Modules
Collaboration
Network Management and Automation
Optical Networking
Physical Security
Routers
Security
Service Exchange
Storage Networking
Switches
TelePresence

Unified Computing and Servers

Universal Gateways and Access Servers
Video
Voice and Unified Communications
WebEx
Wireless

Cisco UCS B-Series Blade Server Software

Cisco UCS C-Series Rack-Mount Standalone Server Software

Cisco UCS C-Series Rack-Mount UCS-Managed Server Software

Cisco UCS Central Software

Cisco UCS E-Series Software

Cisco UCS Express

Cisco UCS Infrastructure and UCS Manager Software

Cisco UCS Management Partner Ecosystem Software

C-Series On Server Software UCS C-Series Standalone Servers



UCS C-series Standalone Software Stack: What Is In It?

Component	Description
BIOS	Basic Input Output System. Today's x86 BIOSes are UEFI compatible based on Intel source code. The BIOS is responsible for initial platform power on self test, memory configuration OS boot and runtime configuration and power management services.
CIMC	Cisco Integrated Management Controller (CIMC)
Firmware	Most if not all PCIe devices include flow level firmware sometimes referred to as Option ROMs (OPROMs) or UEFI device drivers. Cisco may provide firmware maintenance upgrades for all supported PCIe devices. In some cases such as for Cisco UCS VIC adaptors and LSI MegaRAID options, CIMC includes embedded configuration management.
OS Drivers	UCS C-Series software includes a set of OS device drivers as required. In most cases appropriate drivers are included with the Operating System.
OS Management Agents	UCS C-Series software includes a set of OS management agents for SNMP and CIM. In the case of ESXi, CIMC agents are included with the OS.

C-series Standalone Software

Diamond-peak (D-peak) Release Expected Dec '12

Feature	Benefit
Single Wire Management	Better integration with UCSM - Del Mar release / CP MR6
Scriptable vMedia	Remote installs without PXE and <u>multi-server</u> FW upgrades using HUU
Remote Syslog & consistent error reporting	Improved remote monitoring , improved fault isolation and failure analysis
RAID Config + Monitoring Phase III enhancements.	<u>Monitoring:</u> Incorporate storage sub-system faults into overall server health <u>Configuration Support</u> storage configuration through WebUI and CLI + Interfaces for UCSM integration
SNMP & XML API phase II	<u>Instrumentation for 3rd party mgmt integration:</u> 100% coverage of UCSM MIBs & XML API
Graphical DIMM Representation	Similar to UCSM
Display all MAC addresses	Enable <u>multi-server</u> deployment
Lexington iSCSI boot support	Enables iSCSI boot configuration from CIMC
CIMC triggered NMI crash dump	Enable improved fault isolation and failure analysis
Dual SD 'Flex Flash'	RAID 1 support for their embedded Hypervisor
Automation Tool Kit (HUU / HUU-NI / UCScfg)	Make these utilities unattended & improve error handling and reporting to enable <u>multi-server</u> upgrades

Which 3rd Party Tools Can Manage UCS C-series Standalone Servers Today?

Monitoring

- MSFT Systems Center Operation Manager
- Nagios
- HP Operations Manager
- Zenoss
- Vmware vCenter Ops
- Tivoli Monitoring
- CA Spectrum
- BMC BPPM (refresh)

OS provisioning (drivers and PE images)

- Altiris Deployment Server (in progress)
- MSFT System Center Config Manager
- Cisco Intelligent Automation/LinMin (funded by IASBU)

Firmware management

- MSFT System Center Configuration Manager
- Cisco Intelligent Automation (funded by IASBU)

Orchestration

- PowerShell
- Cisco Intelligent Automation
- MSFT Systems Center Orchestrator
- HP Operations Orchestration

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1 instance per rack server



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1 instance per domain

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- **UCS Central**

1 instance for many UCS domains

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What Is The Scope Of Management For UCS Manager?

Supported

- ✓ Fabric Interconnects (FI)
- ✓ I/O Modules
- ✓ Chassis
- ✓ B-Series Blades
- ✓ C-Series Rack mounts
(connected to Fabric Interconnects)
- ✓ Nexus 2232PP FEX connecting C-Series Servers
- ✓ Supported Adapters

Not Supported

- X Provisioning of Operating Systems
- X Provisioning of Hypervisors
- X Configuration of Switches on the FI Uplinks
- X 3rd party PCIe Adapters on C-Series

How Is UCS Manager Software Bundled?

Old model (pre 1.4)

All software bundled as a single entity

- CMC
- CIMC
- BIOS
- Mezz. Adapter Firmware
- RAID Controller Firmware
- UCSM
- NX-OS Switch
- IOM Firmware



Current model (1.4 & above)

Infrastructure software bundled separately from server software

Infrastructure Bundle:

UCSM
NX-OS Switch
IOM Firmware
CMC

Server Bundle (B-Series & C-Series):

CIMC
BIOS
RAID Controller Firmware
Catalog File

Capability Catalog

XML Directory of All Supported Devices under UCSM

What UCS Releases Are On Cisco.com?

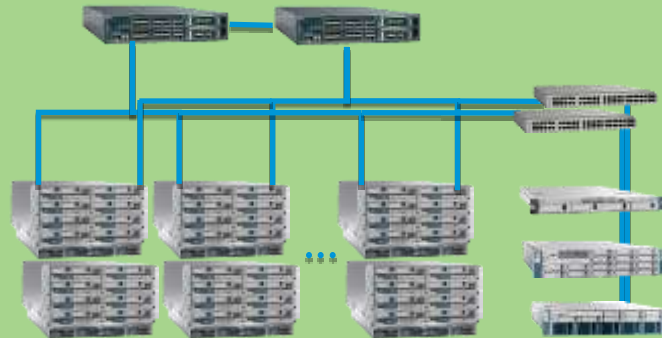
- CIMC
- BIOS
- RAID Controller Firmware
- Catalog File

- UCS Manager
- NX-OS Switch
- IOM Firmware
- Chassis Mgmt.

- Cisco UCS B-Series Blade Server Software
- Cisco UCS C-Series Rack-Mount Standalone Server Software
- Cisco UCS C-Series Rack-Mount UCS-Managed Server Software
- Cisco UCS Central Software
- Cisco UCS E-Series Software
- Cisco UCS Express
- Cisco UCS Infrastructure and UCS Manager Software
- Cisco UCS Management Partner Ecosystem Software

UCS Manager Software

UCS with Fabric Interconnect
B-Series and integrated C-Series

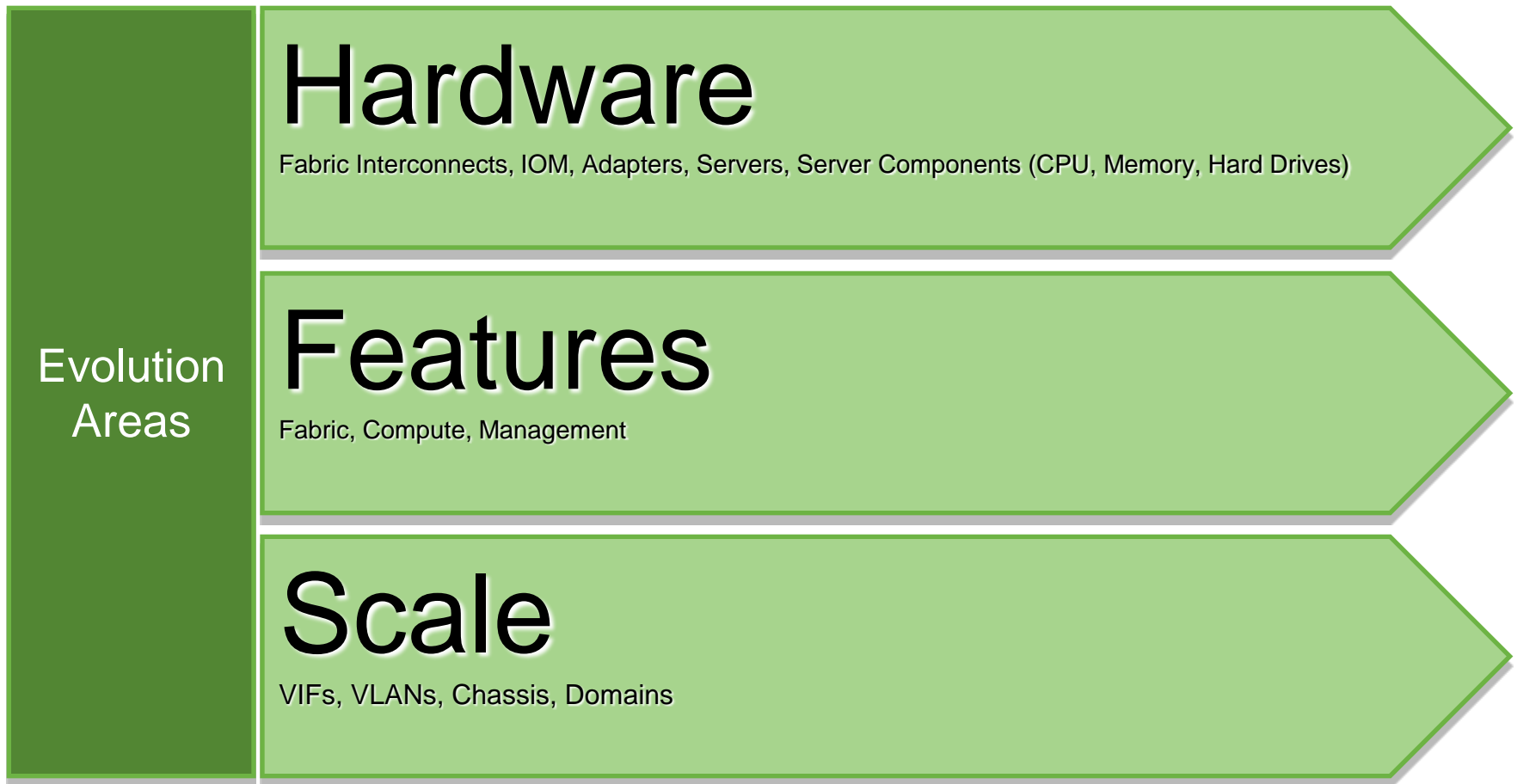


What UCS Manager Software Should You Download?

- If your environment has
 - Fabric Interconnect and B-Series Chassis only:
 - Infrastructure Bundle**
 - B-Series Blade Server Bundle**
 - C-Series servers as well:
 - + **C-Series Rack-Mount Server Bundle**
- Off-cycle addition of memory DIMMs or hard drives
 - + **Capability Catalog**

If you install the latest Infrastructure Bundle you don't need to install a Capability Catalog separately. The Capability Catalog is always bundled with all of the above software.

How Does UCS Manager Software Evolve?



What Is Coming In The Next Major UCSM Release?

“Del Mar” UCS 2.1 Targeted 4Q CY12

Storage

- 1 Multi-hop FCoE
- 2 Zoning configuration in UCSM
- 3 PCIe Flash – Discovery and support
- 4 Unified Appliance Port

C-series

- 5 Single wire management w/ VIC 1225

Operational Enhancements

- 6 Firmware upgrade usability (“Firmware Auto Install”)
- 7 Service Profile “renaming”
- 8 Fault suppression
- 9 Flexible network resource consumption
 - Privileges documentation
 - Troubleshooting enhancements
 - Mixed infrastructure and server pack support

10

Networking

- IGMP querying
- VLAN Group (P, V) count optimization

11

VM-FEX

- 12 VM-FEX for Windows Server 8 HyperV (including SRIOV)

UCS Central Support

- Support for UCS Central operations

How Does UCS Manager C-series Integration Work?

Release 2.1 And Above

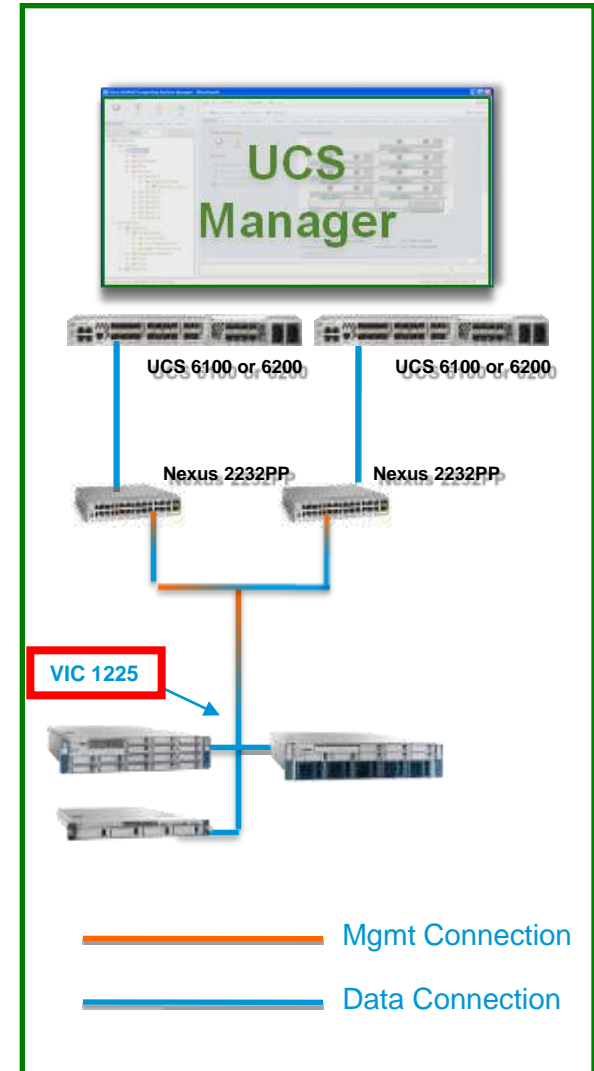
Customer benefits

Single wire for Ethernet, Fibre Channel & Management

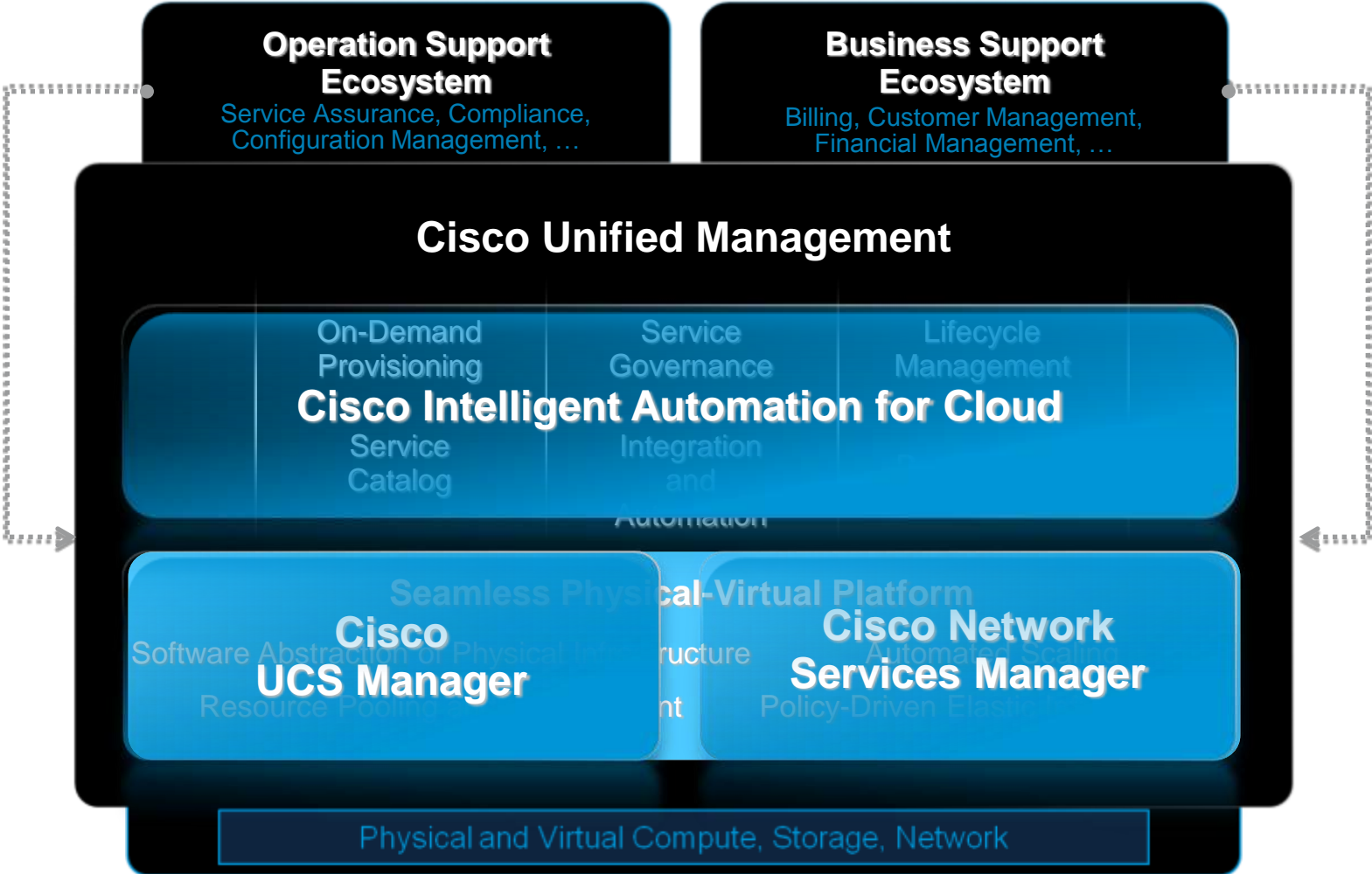
Connectivity identical to B-Series with the addition of Nexus 2232

Feature details

- Stateless computing and management services
- Improved C-Series server connectivity
 - Management and data connectivity through 2232PP FEX
- Expanded server support
- All C-series M2 models supported
- M3 models supported with hardware FCS or short time after
- Parity with blade management features
- iSCSI boot with C-series VIC



How Does UCS Manager Fit Into The Cisco SW Portfolio?



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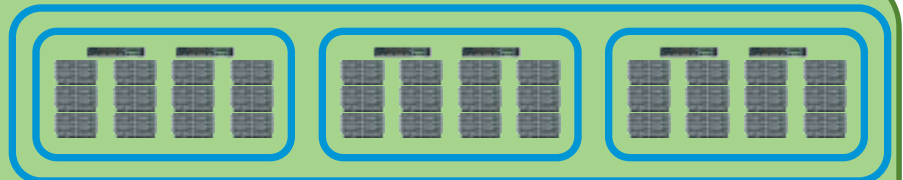
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Multi-UCS Management Strategy

Balanced Investments Provide Choice

Do It Yourself

SDK & Emulator
GoUCS
PowerShell & .NET

Most flexible
Most powerful

Open Source

UCS Dashboard

Flexible
Leverage power of community

Cisco Product

UCS Central
Tidal & Newscale
Linesider

Cisco support and roadmap
Reduce vendors

ISV Partners

System Center plug-in
BMC Integration
CA integration
Etc.....

Multi-vendor support
Incumbency
Broadest use cases

Multi-UCS Management Solutions

UCS XML API



UCS XML API



UCS XML API



UCS XML API



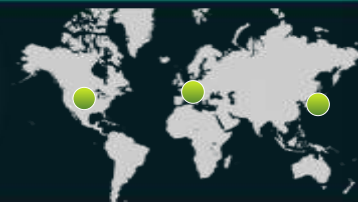
What Is UCS Central?

Unified Management
at Scale



Coming
in 4Q
2012

UCS Central



UCS Central

Data Center 1

UCS Manager

UCS Manager



Data Center 2

UCS Manager

UCS Manager



Data Center 3

UCS Manager



- Unifies management of multi UCS domains
- Leverages UCS Manager technology
- Simplify global operations with centralized inventory, faults, logs and server consoles

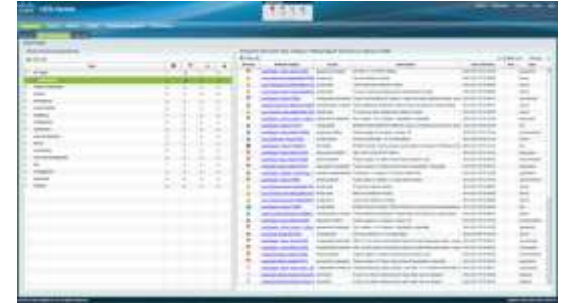
- Delivers global policies, service profiles, ID pools and templates

Foundation for high availability, disaster recovery and workload mobility

- Model based API for large scale automation

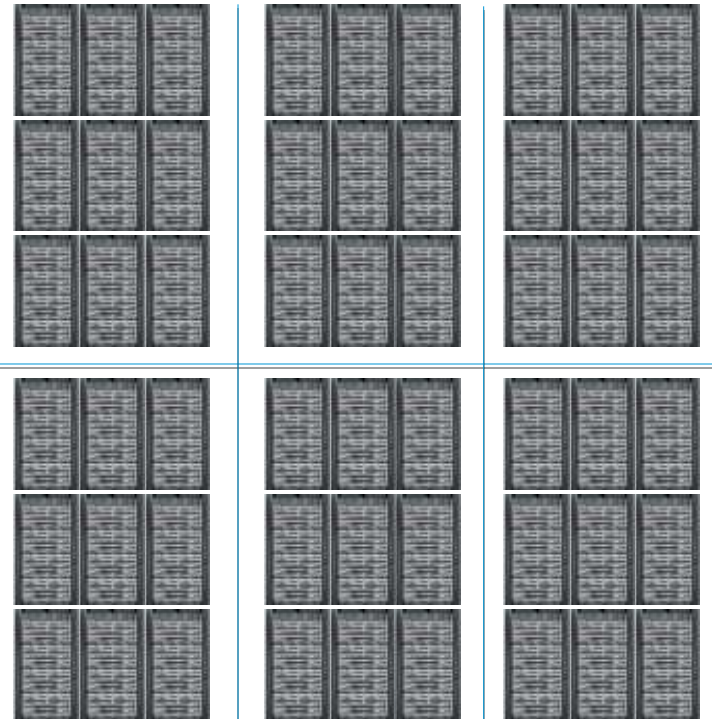
UCS Central Detail

- External Virtual Machine Based Application
- VM available for VMware & Hyper-V hypervisors
- Closely integrated with UCS Manager



Delivered in two phases:

- **Phase 1:** (To be delivered with UCS Del Mar release 4QCY2012)
 - Inventory, Fault, Log, Aggregation
 - Global ID Pools, Firmware Updates, Backups and Global Admin Policies
- **Phase 2:** (Expected delivery first half CY 2013 with Del Mar MR1)
 - Global Service Profiles, Templates & Policies
 - Statistics Aggregation



What UCS Releases Will Be On Cisco.com?

Application Networking Services

Cisco IOS and NX-OS Software

Cisco Interfaces and Modules

Collaboration

Network Management and Automation

Optical Networking

Physical Security

Routers

Security

Service Exchange

Storage Networking

Switches

TelePresence

Unified Computing and Servers

Universal Gateways and Access Servers

Video

Voice and Unified Communications

WebEx

Wireless

Cisco UCS B-Series Blade Server Software

Cisco UCS C-Series Rack-Mount Standalone Server Software

Cisco UCS C-Series Rack-Mount UCS-Managed Server Software

Cisco UCS Central Software

Cisco UCS E-Series Software

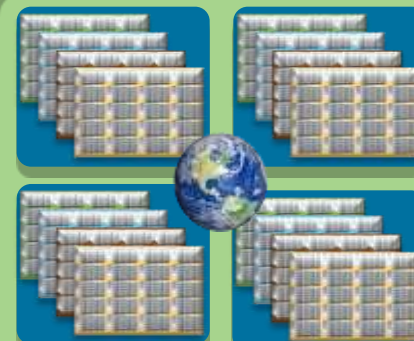
Cisco UCS Express

Cisco UCS Infrastructure and UCS Manager Software

Cisco UCS Management Partner Ecosystem Software

UCS Central Software

Multi UCS Environments
(to be released)



UCS in VM environments

UCS Automates vSphere Deployment

Profile-Based Provisioning Integrated with vSphere 5

VMware vSphere 5 Auto Deploy

- Boot servers over IP networks using shared storage
- Link each new physical server to a vCenter boot image



UCS enhanced Auto Deploy

- Link service profile template to a vCenter boot image
- Deploy many vSphere servers with a single click
- Policy enforced: saves time and reduces errors

Without UCS

Associate boot image one server at a time

Server #1

Server #2

Server #3

Server #...



Select a server: go to server element manager, find server, copy MAC address

Find Auto-Deploy image: go to vCenter, select image, enter server MAC address

Boot server

UCS Enhanced Auto Deploy

Automatically associate boot image

Server #1

Server #2

Server #3

Server #...



Select template
Deploy new server

UCS vCenter Plugin

Demonstrated at VMworld 2012, GA Target CQ4'2012

- Single point to manage physical and virtual infrastructure
- Phase 1: view UCS health, configuration
 - Track virtual and physical relationships
 - Faults/events
 - Click-to-open UCSM GUI and KVM
- Phase 2: configure
 - UCS resource pools
 - Associate service profiles
 - Boot nodes w/Auto Deploy
 - Target CQ1'2013

The screenshot displays the UCS vCenter Plugin interface, divided into several sections:

- Cisco UCS Configuration:**

UCS	savbu-tpi01
Server Location	1/3
UUID	2b5a6ba3-028b-11df-b1b7-000bab01c0fb
Service Profile	org-root/ls-Shreya_HPOM_SP_Blade_3
Serial	QC1140202TE
Overall Status	↑ ok
- Configuration:**

ESX Version	VMware ESXi, 5.0.0, 469512
Image Profile	ESXi-5.0.0-469512-standard
vMotion Enabled	No
vSphere HA State	⊗ N/A
Host Configured for FT	No
EVC Mode	Disabled
- Inventory:**

Type	name	model	runningVersion	startupVersion	backupVersion	updateStatus	activateStatus
CIMC Controller	CIMC Contro	N20-B6620-	2.0(0.282)	2.0(0.282)	2.0(0.121)	ready	ready
Adaptors	adaptor-1	N20-AJ0002	2.1.11.0.70	2.1.11.0.70			ready
Storage Controllers	storage-SAS	SAS1064E P	01.32.04.00	01.32.04.00	N/A	N/A	ready
BIOS	BIOS		S5500.2.0.1	S5500.2.0.1	N/A	N/A	ready
- Fault Summary:**

severity	code	id	dn	cause	lastTransition	descr
(major)	F0283	4919715	sys/chassis-1/bt	link-down	2012-07-30T16:	ether VIF 1 / 3 B-885 down, reason: Unknown
(major)	F0283	4919721	sys/chassis-1/bt	link-down	2012-07-21T18:	ether VIF 1 / 3 A-886 down, reason: Unknown
(info)	F0461	4027965	sys/chassis-1/bt	log-capacity	2012-07-22T10:	Log capacity on Management Controller on server 1/2 is very low

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Cisco UCS Express

Cisco UCS Infrastructure and UCS Manager Software

Cisco UCS Management Partner Ecosystem Software

UCS Partner Management Ecosystem Software

Microsoft
System Center
Operations Manager

vmware

Cisco Developer Network

The screenshot displays the Cisco Developer Network website. At the top, the Cisco logo and 'Cisco Developer Network' are visible. A navigation bar includes links for Home, Membership, Technologies, Community, Technology Partners, News & Events, and My C. The main content area is titled 'UCS Manager' and features sub-links for UCS Manager, Forums, Blogs, and Documentation. A descriptive paragraph explains the UCS XML API. Below this, there are three columns of content: 'What Is It?' (Overview), 'How Do I Get Started?' (Getting Started), and 'What Resources Are Available?' (Resources). At the bottom, there are three more columns: 'Developer Forums' (Business Solutions, Technical Discussions, UCS Sandbox), 'Recent Bloggers' (a table with columns for User, Posts, and Date), and 'Recent Downloads' (Cisco UCS Platform Emulator, Cisco UCS Manager API, UCS Emulator v1.3.zip).

UCS Manager

UCS Manager Forums Blogs Documentation

UCS Manager

The Cisco Unified Computing System (UCS) includes an innovative XML API which offers you a programmatic way to integrate or interact with any of the over 9,000 managed objects in UCS. Managed objects are abstractions of UCS physical and logical components such as adaptors, chassis, blade servers, and fabric interconnects.

Developers can use any programming language to generate XML documents containing UCS API methods. The complete and standard structure of the UCS XML API makes it a powerful tool that is simple to learn and implement.

What Is It?

Overview

Explore UCS Manager and the business benefits it provides

How Do I Get Started?

Getting Started

Learn what is required to download or further develop with the UCS Manager

What Resources Are Available?

Resources

Access resources that will help you utilize and learn UCS Manager

Developer Forums

Business Solutions
Technical Discussions
UCS Sandbox

> View All Forums

Recent Bloggers

User	Posts	Date
Sheryl Sage	3	8/27/10
John McDonough	3	7/14/10
Pranod Borkar	1	8/23/10

Recent Downloads

- Cisco UCS Platform Emulator...
- Cisco UCS Manager API...
- UCS Emulator v1.3.zip

- **Web based developer community**

- <http://developer.cisco.com/web/unifiedcomputing/home>

- **Downloads:**

- UCS Platform Emulator
- goUCS Automation Tool
- XML API, Perl, PowerShell code samples (44 and counting)
- Microsoft – PowerShell library, SCOM MP
- HP Ops. Mgr. MP, HPOO Integration Module

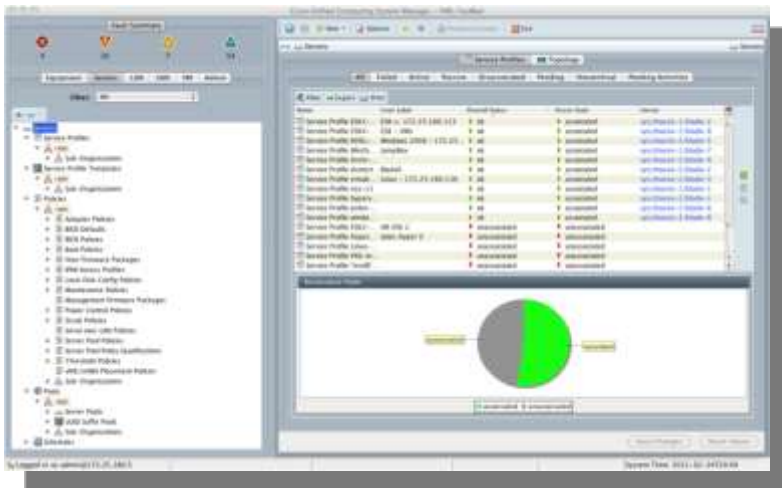
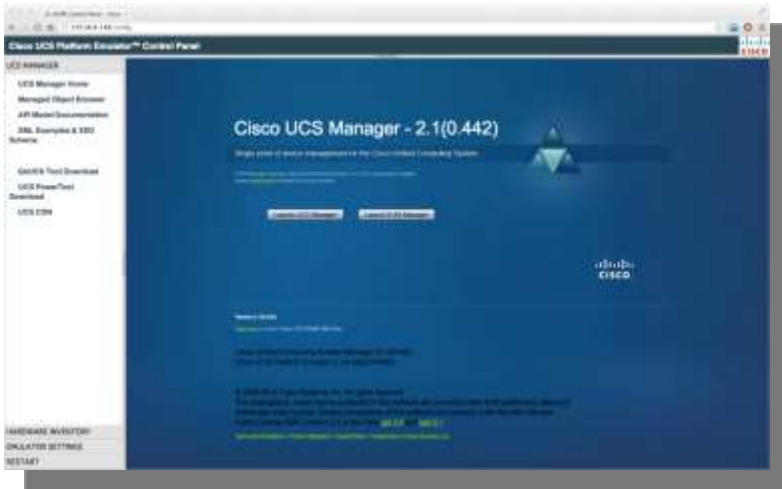
- **Documentation:**

- Programming & developer guides
- White papers
- Reference guides (XML model, Faults)

- **Collaboration:**

- Blogs
- Peer to peer forums
- Videos
- Access to Cisco subject matter experts

UCS Platform Emulator



- Full featured emulator for the UCS Manager
- Installs as a Virtual Machine
- Provides complete support for all XML API calls
- Object Browser to peruse the UCSM model
- Import & replicate existing live UCS Manager physical inventory
- Share saved physical inventories among UCS Platform Emulators
- Drag-n-drop hardware builder to create custom physical inventory
- Use cases: Developers, dry-run changes, training, demonstrations

Cisco UCS Powertool: An Award Winning API Example

Bringing More Power To Powershell

The Essential Tool Kit

- PowerShell is the common management platform used across all Microsoft operating systems and applications
- UCS PowerTool is a Cisco-built, user-friendly, PowerShell-based library that Microsoft tools understand
- A simple way to utilize Windows PowerShell and customize tools to business needs

