

Cisco Data Center Partner Connection



Amazing Together

3-5 March 2015
Athens, Greece



In Collaboration with Intel®



Unified Computing System Strategy and Roadmap

A photograph of three professionals in a server room. A woman in a light blue shirt and dark pants is holding a laptop and pointing at the screen. Two men in dark suits are standing next to her, looking at the laptop. They are in a long aisle of server racks with blue and white doors. The floor is light-colored with dark square tiles.

Satinder Sethi
Vice President, Data Center and Cloud

March 3, 2015

In Collaboration with Intel®



Powering Applications at Every Scale

Edge-Scale
Computing



Core Data
Center
Workloads



Cloud-Scale
Computing



Customer Needs

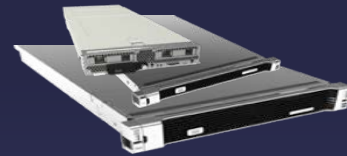
Seamless Extension of the
Data Center to the Edge

Power and Operational
Simplicity in the Data
Center Core

A More Efficient Way to
Power Cloud-Scale
Applications

Powering Applications at Every Scale

Fourth Generation
UCS Servers

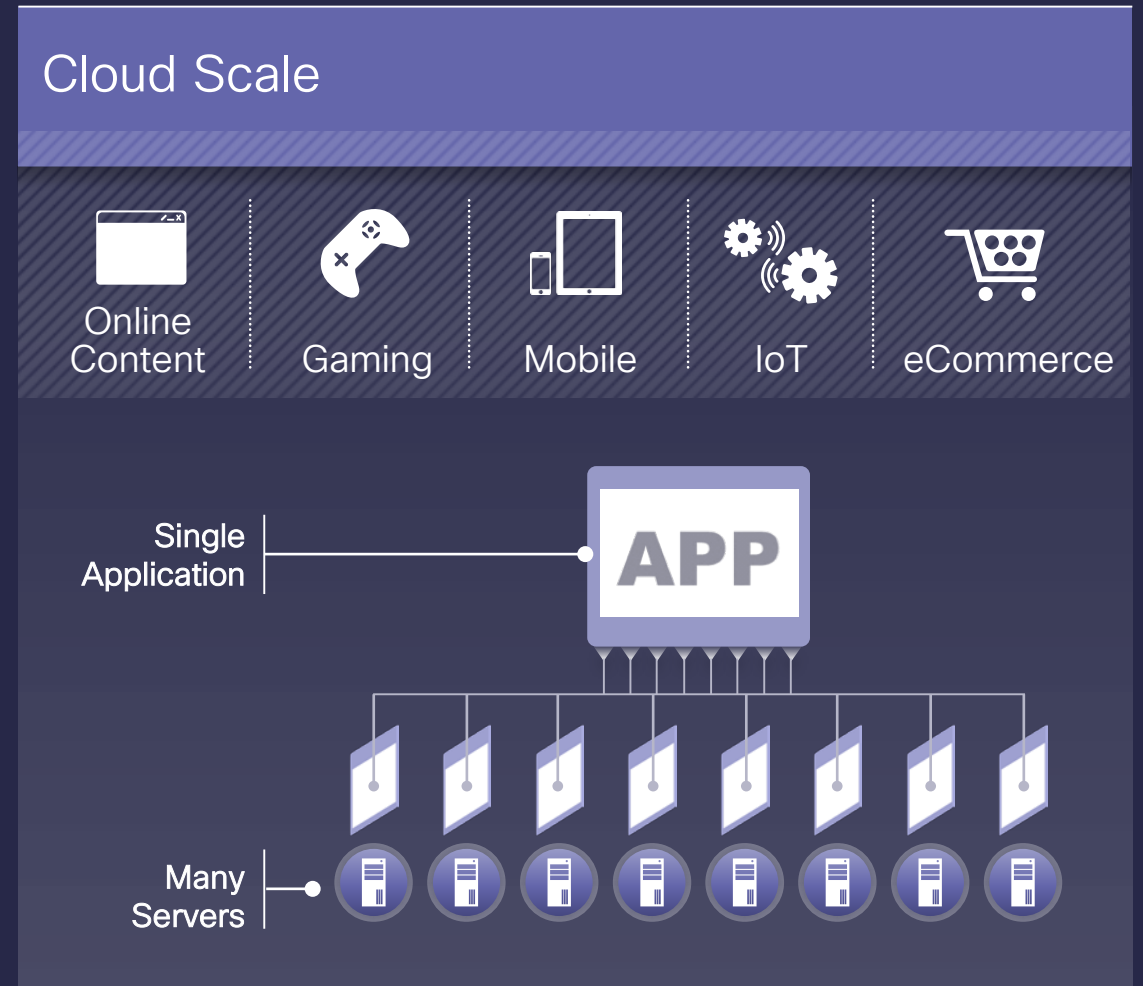
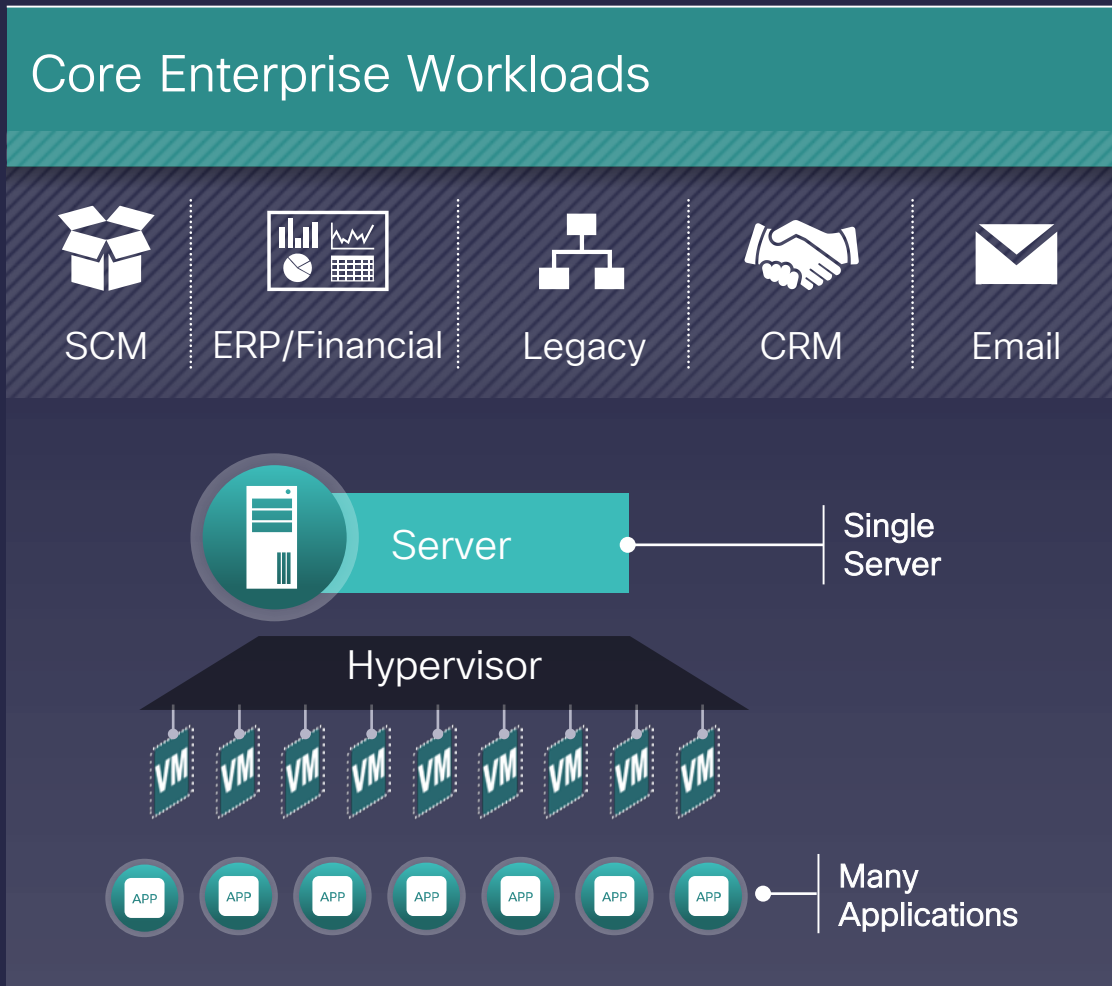


UCS Management
Innovation

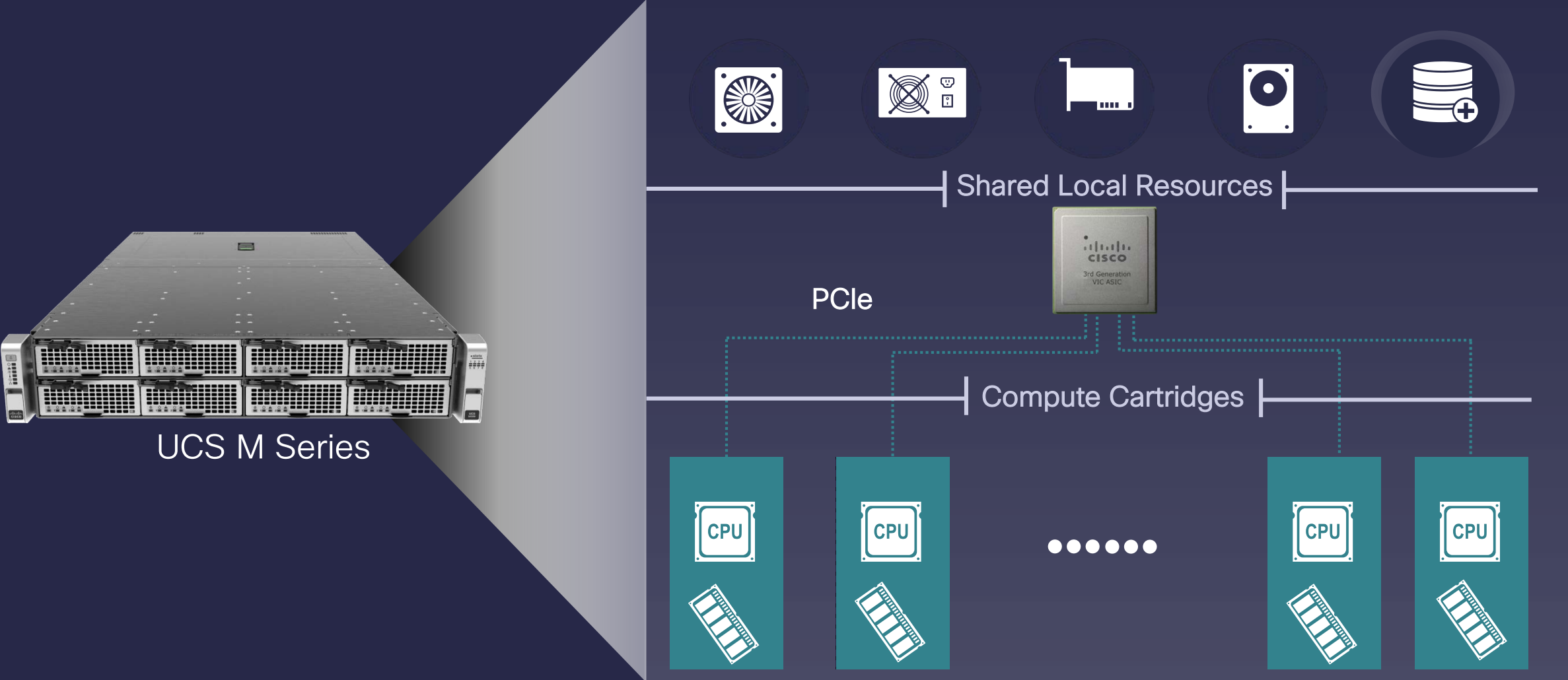


Compute • Network • Storage • Virtualization • Management and Automation

Cloud-Scale Inverts Computing Architecture



UCS M Series Composable Server



UCS M Series Composable Server



UCS M Series

Shared Local Resources

Improved utilization of resources
Resource amortization over smaller nodes

Shared Local Resources

Based on Cisco System Link Technology

Third Gen VIC extends UCS fabric to within the server

Compute Cartridges

Modular Design

Improved subsystem lifecycle management
Ability to scale individual subsystems independently

Lean Componentry

Improved compute density
Cost and power optimization

UCS M-Series Modular Servers



Compact Chassis
8 Compute cartridges

**Lightweight
Compute Cartridge**
Two Independent Intel
Xeon E3 Servers
No adapters or HDDs

Shared Local Resources
Network and storage resources

UCS
M-Series

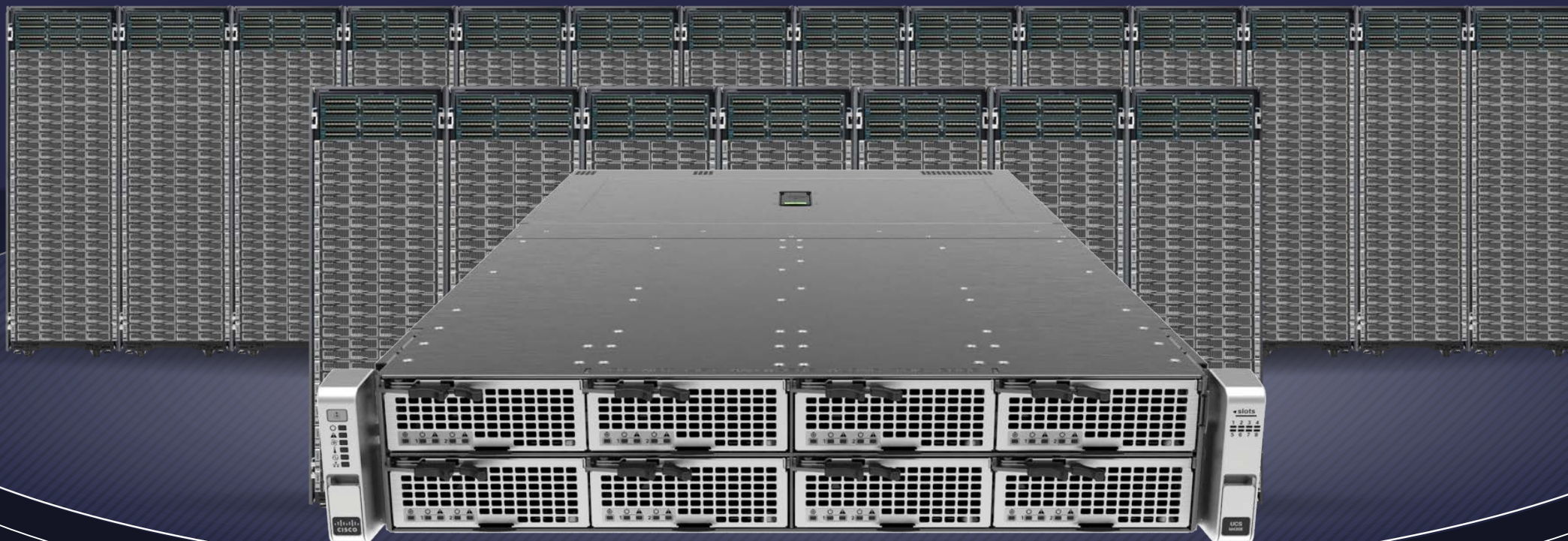
*True Server
Disaggregation*

Based on Cisco System Link Technology
3rd Gen VIC extends UCS fabric to within the server

Shared Local Resources
Four shared SSDs in the chassis
Shared dual 40Gb connectivity

Compute Density
16 Intel Xeon E3 Compute nodes in 2RU chassis
Each cartridge holds two independent
compute nodes

UCS M-Series Modular Servers



UCS Management

UP TO
77% Faster
Provisioning

UP TO
8x Server
Density

UP TO
95% Fewer
Peripherals

UP TO
38% TCO
Improvement

UP TO
22% Power
Efficiency

UCS M-Series - Targeted Workloads/Use Cases

Web Serving

- Serving static and dynamic HTML content for millions of users
- Processing internet transactions like price comparisons, stock trades, shopping cart, bill pay, etc

Online Content Delivery

- Frontend applications like Matchmaking and Leaderboards in Online Gaming
- Transcoding – Conversion of media formats to facilitate web streaming

Enterprise Grid

- Highly parallelized applications that do not need the highest clock speed SKU
- Eg: Genomic research , Monte Carlo Simulation, Other Data Analytics

Dedicated Hosting

- Bare Metal As A Service
- Virtual Desktops

Capacity Optimized Server

UCS C3000 Series Rack Server Family

C3160 Rack Storage Server



- High-density local disk combined with modular high-performance compute
- Dual processor server with up to 360TB in a compact 4U Form Factor

Bare Metal and Virtualization



BIG DATA



openstack™



ceph



redhat



- Large scale content storage and data repositories
- Distributed file-systems
- Big Data and Hadoop applications
- Media streaming and transcoding

Capacity-Optimized Server - Targeted Workloads/ Use Cases

Object Store

- Large, unstructured object storage repositories
- Openstack and Ceph deployments

Media Streaming and Content Distribution

- Repository for streaming content for applications such as Cloud DVR
- Repository for media content pre and post encoding / transcoding

Enterprise Application Storage

- Exchange - Mailbox Server Only Role Or Combined CAS and Mailbox Multi-Role Deployment
- Database Availability Group Continuous Replication for Datacenter HA and Site Resiliency

Big Data

- Hadoop
- Analytics data store

C3000 Solutions (C3160 now, C3260 2H CY15)

Shipping/In Progress (3160 based)

C3160 + Cisco VSM on Single Node

Video Surveillance Operation manager and media server co-located on same C3160

C3160 + Cisco VSM + ScaleOut

Deploying highly available VSM Media Server on C3160 with Gluster for HA configuration

C3160 + MS Exchange 2013

ESRP certification and deployment best practices for large size mailbox use cases

C3160 + CEPH

Object storage deployments (2-8 node scaling)

C3160 + BigData CPA

Integration into CPA for backup and archival

Veeam + C3160

Backup and Archival solution validation

ComVault + C3160

Backup and Archival solution validation

Roadmap

Refresh C3160 solutions

Refresh key solutions done on C3160 such as BigData, Cisco VSM and CEPH with the new platform

C3260 + MS Windows Storage Server 2012 R2

2-node deployment reference architecture leveraging Microsoft Storage Spaces

C3260 + MS SQL Server in-a-box

Microsoft SQL Server 2014 Database in-a-box solution with MS Windows clustering

UCS Mini

New architectural entry point for Unified Computing at 1~15 server scale

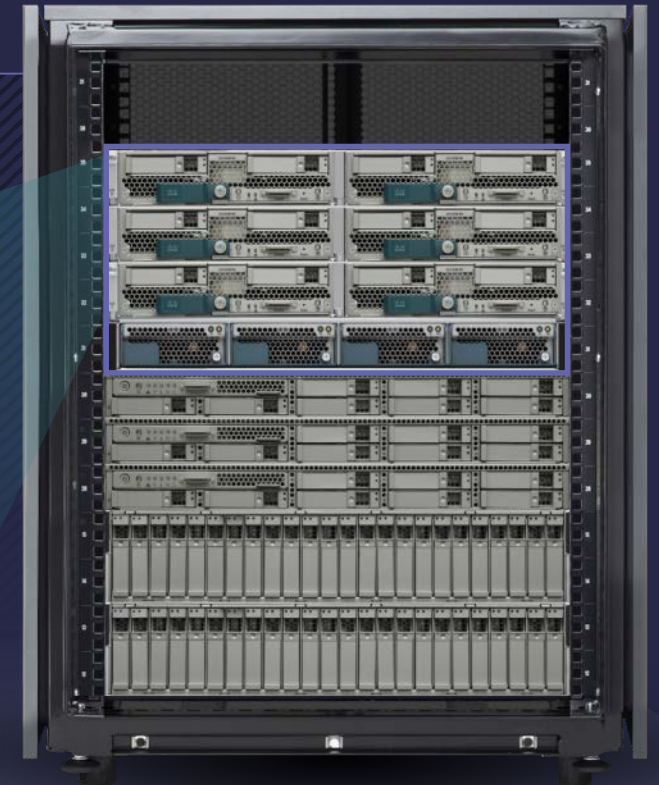
Full Power UCS in an all-in-one package:

- Compute
- Networking
- UCS Manager
- Standard UCS Blades / Fans / Power Supplies

6324 Fabric Interconnects



UCS Mini



Enterprise Capability at Edge Scale
Connect up to 7 C-Series
Rack Servers for Expanded Capacity

UP TO
29% CapEx Savings

UP TO
36% TCO

UP TO
34% Lower Power

UP TO
80% Fewer Cables

UCS Mini- Targeted Workloads/ Use Cases

Branch Office

- Computing proximity for IoE / Fog, Remote Site, Branch
- Comprehensive remote management at global scale

Small Scale IT

- “No Assembly Required” total computing solution
- Simplified systems management

Service Provider

- Common Management and service profiles required
- Smaller Form Factor provides greater flexibility for managed services

Private or Hybrid Cloud

- Compute Power needed at edge/remote sites, energy, financial, manufacturing
- Managed remotely, no need for critical IT staff on-site

UCS Mini Solutions

Shipping

VSPEX + VMWare

Virtualized infrastructure for ROBO with centralized management in the Data Center

VSPEX + Hyper-V

Virtualized infrastructure for ROBO with centralized management in the Data Center

FlexPod + VMware ^(Feb 2015)

Virtualized infrastructure for ROBO with centralized management in the Data Center

VDI + VMware Horizon View + Nimble

350 seat deployment

Oracle JDE + Nimble

Small to Medium scale deployment model

In Progress

FlexPod + Hyper-V

Virtualized infrastructure for ROBO with centralized management in the Data Center

FlexPod + VMware w/ Automation

Turnkey provisioning and infrastructure management using UCS Director

VDI + Citrix XenDesktop + Nimble

500 seat deployment.

Roadmap

Hyper Convergence

Validation of select Hyper Convergence and Software Defined Storage solutions

UCS Mini Roadmap

**Q3CY
2014**

**Q4CY
2014**

**Q1CY
2015**

**Q2CY
2015**

**2HCY
2015**



FCS July 2014

Initial Release
B200 M3 Support
Fibre Channel
Switch Mode
Ethernet End Host
Mode



B200 M4 Support
B420 M3 Support
Fibre Channel NPV Mode
HTML5 User Interface



Secondary
chassis support



Next Release
Combined 6200/6324/63xx Release

UCS Compute Portfolio

Performance Optimized for Bare Metal, Virtualized, and Cloud Applications

Cloud Scale



UCS C3160

Ideal Capacity-Optimized Platform for Large Object Storage at Scale



UCS M-Series Modular Servers

Modular servers optimized for Cloud-scale deployments

Enterprise Performance



UCS C240 M4

Ideal Platform for Big Data, ERP, and Database Applications



UCS C220 M4

Versatile, General Purpose Enterprise Infrastructure, and Application Server



UCS B200 M4

Optimal Choice for VDI, Private Cloud, or Dense Virtualization/Consolidation Workloads

Intensive/Mission Critical



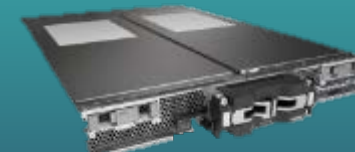
UCS C460 M4

Mission-Critical, 4-Socket Server for Large, CPU-Intensive Applications



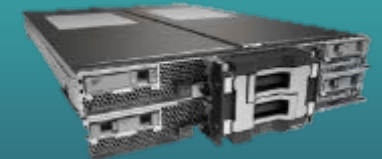
UCS B420 M4

Enterprise Class, 4-Socket Blade for Large, Memory-Intensive Bare Metal and Virtualized Applications



UCS B260 M4

Mission-Critical, 2-Socket Blade for Large, CPU-Intensive Bare Metal and Virtualized Applications



UCS B460 M4

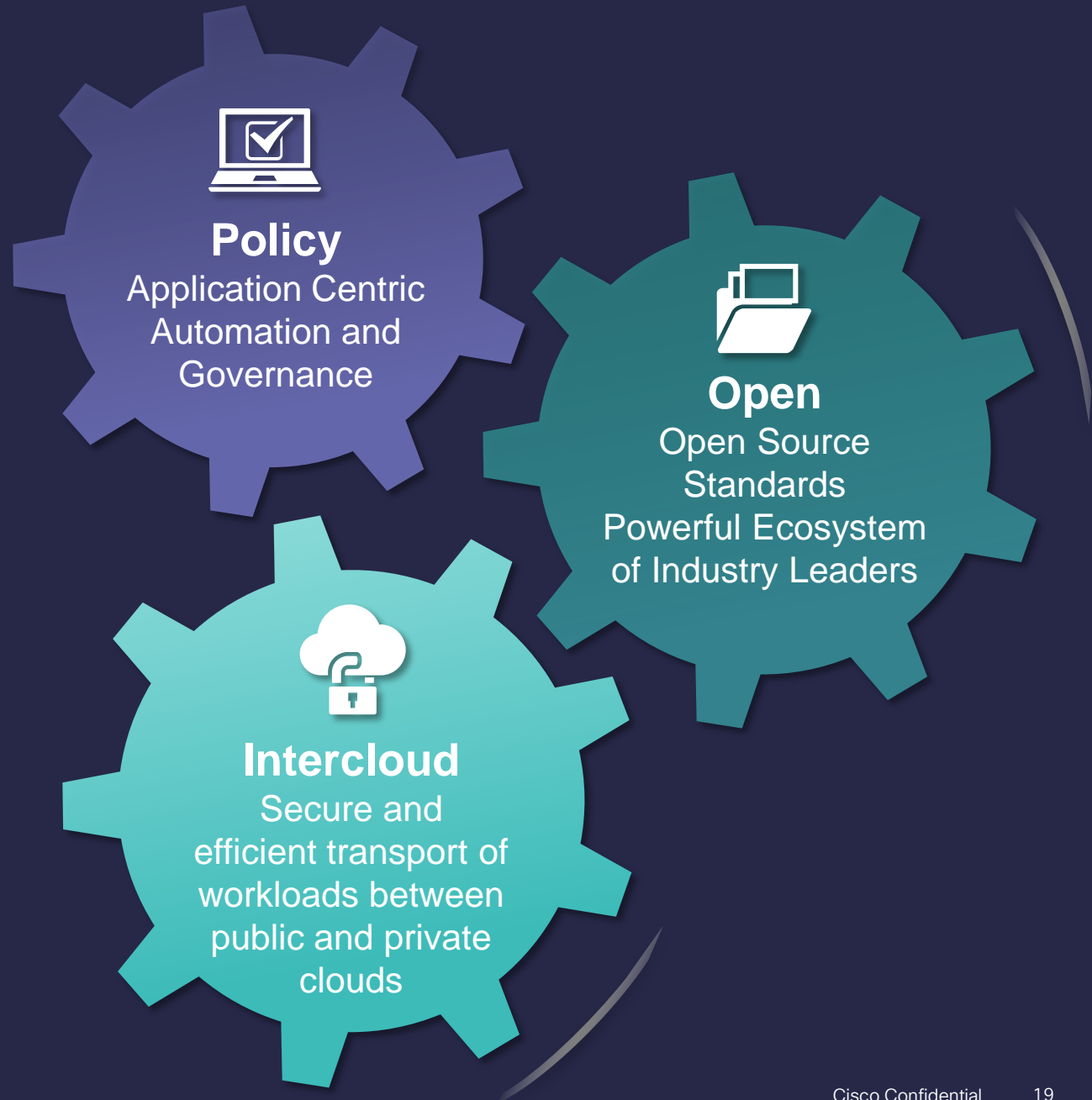
Mission-Critical, 4-Socket Blade for Large, CPU-Intensive Bare Metal and Virtualized Applications

Rack

Blade

Cisco's UCS Strategy

- Address new customer use cases with expanded portfolio
- Architectural Innovation
- Expand the depth of Integrated Solutions and Management Ecosystem
- Deliver solutions and validated designs that reduce complexity and time to deploy



Extending the Cisco UCS Advantage

Optimized App Delivery with Simplified Operational Experience



UCS Founding Principles



Application
Centricity



Operational
Simplicity



Platform for
IT Innovation

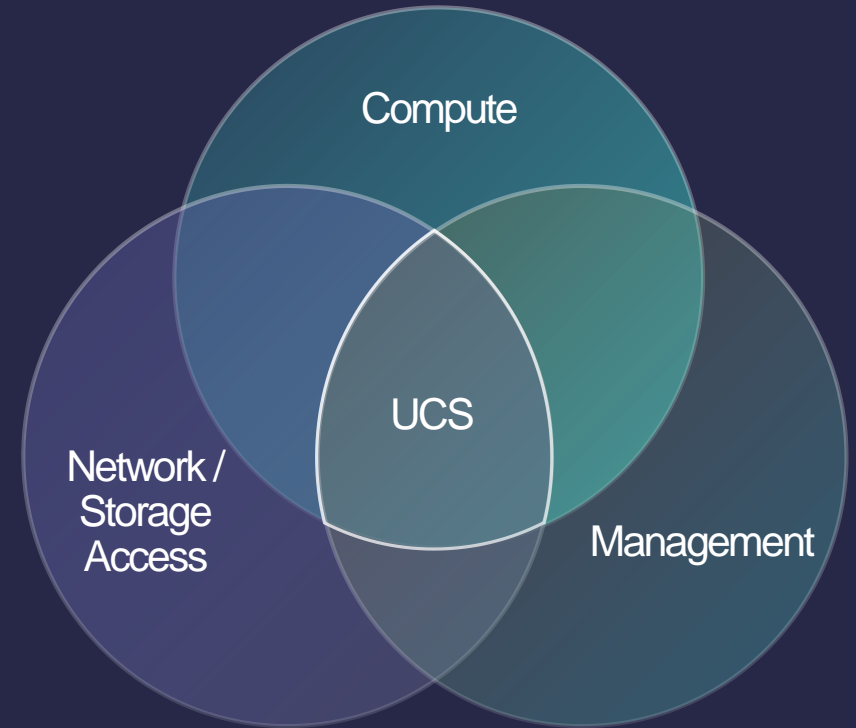
UCS SystemLink Technology



Scale server subsystems
independently



Extend policy-architected
management to Cloud Scale
Applications



Next Gen Unified Computing
Server Level Disaggregation Disrupts Mainstream Computing

Cisco UCS: Driving Business Outcomes

Proven value and over 41, 000 customers world wide

“We’re able to offer leading-edge solutions to our customers and continue to expand our business.”

Martin Breslin
Infrastructure Architect, SEI

“Our Cisco Unified Computing System decision is a game-changer.”

Wes Wright
CIO, Seattle Children’s

“With Cisco UCS, we can adapt much more quickly to user demand.”

Mark Adams
VP Information Technology, HireRight

84%

Reduction in Provisioning Times



77%

Cabling Reduction



61%

Reduction of Management Costs



54%

Reduction of Power and Cooling Costs



100+

World-record Performance Benchmarks

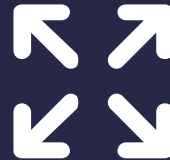


Unified Computing: Powering Applications at Every Scale

Innovation Optimized for
Application Performance



Expanding to New
Customers and Workloads



Better Business Outcomes



Applying Cisco's Application
Centric Infrastructure
strategy to new
infrastructure requirements
of location and scale.

Taking Unified Computing to
new use cases and to
customers in new market
segments.

Game-changing results for
customers fueled by
industry-leading technology
and partnerships