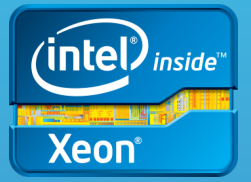
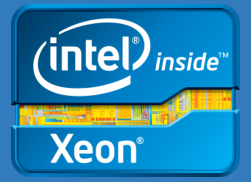


How are Oracle DBA Problems Solved by Cisco UCS?

John McAbel

Collaborate 2015

First Let's Test Your IT Knowledge



1.) According to IDC in 2014, which system vendor is 2nd in x86 blades market share in worldwide and #1 here in America?

Cisco

2.) Which vendor uses over 6,000 blades to run 1000's of Oracle Databases and the 2nd largest Oracle E-Business Suite deployment?

Cisco

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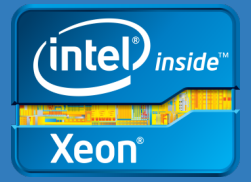
First Let's Test Your IT Knowledge



3.) Which system allows you to add an Oracle RAC node in minutes, not hours, days or even weeks?

Cisco
Unified Computing System (UCS)

4.) Which vendor on January 2015 posted two more Oracle performance world records?

Cisco

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DBA's Have Many Challenges

- Responsive to Executive data demands
- More work, but flat to declining budget
- Policy enforcement
- Set up new databases – normally takes hours/days
- Availability of applications – effect of HW failures
- Testing and upgrading applications
- Determine performance limitations
  - But…cannot take data offsite
- Meeting spikes in workload requirements
  - Example: Christmas shopping season!

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Cisco's Data Center Momentum

"UCS has now reached over $3 billion revenue run rate with over 41,000 customers. More than 85% of the Fortune 500 have chosen UCS, because of the innovative architecture, with particular traction in cloud, big data and enterprise application solutions. The innovation underlying UCS, the convergence of compute network and storage is continuing to fuel our growth in the data center and differentiates Cisco."

John Chambers
February 2015
FY15 Q2 Earnings Announcement

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Unified Computing System

Oracle Understood the UCS Value – Takes Advantage of it!

Oracle Endorsing Cisco UCS

- Hosts Oracle sales training 1000's of VM's on Oracle VM
- Oracle VM Test/Development
- Fusion QA Development
- Hosting Customer Demos at Briefing Centers
- Initial exclusive NoSQL Big Data certification on Cisco UCS

Unified Computing Solution

Server = Resource

Efficient | Agile | Transformative

Cisco UCS – A Fresh Architecture

ORACLE
ENTERPRISE MANAGER

Industry Standard APIs

UCS Manager

FABRIC INTERCONNECTS
Cisco UCS 6296 XP

Fabric Extenders
(I/O modules)

COMPUTE
Blade Form Factor

Rack Form

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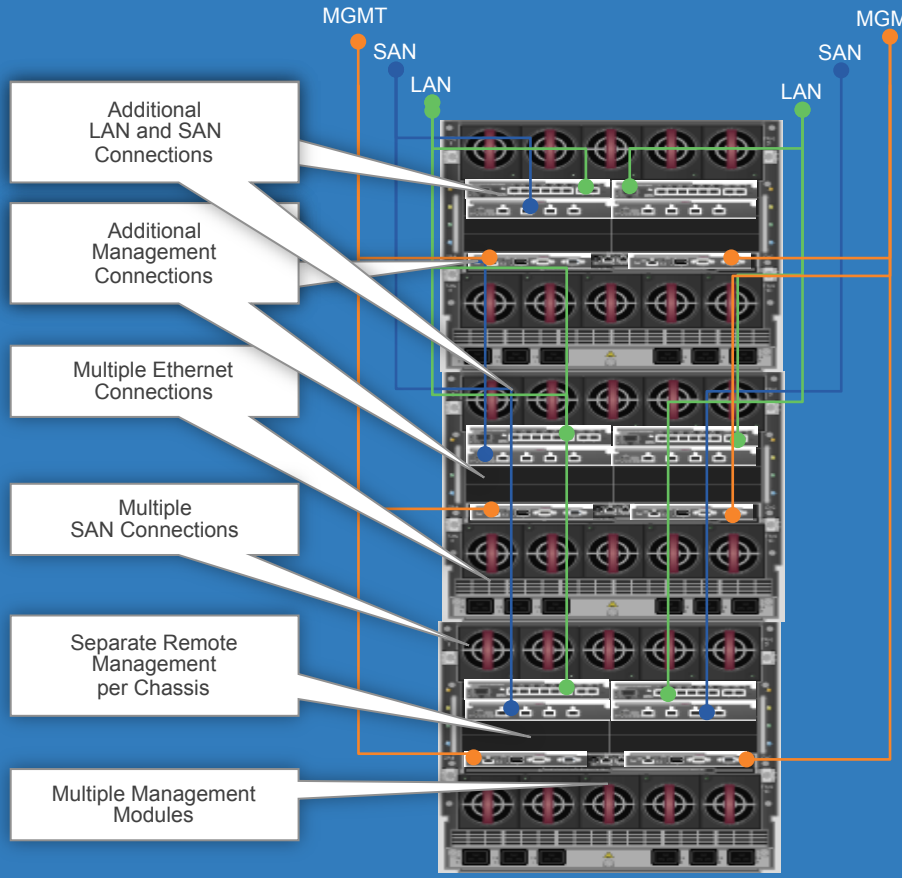
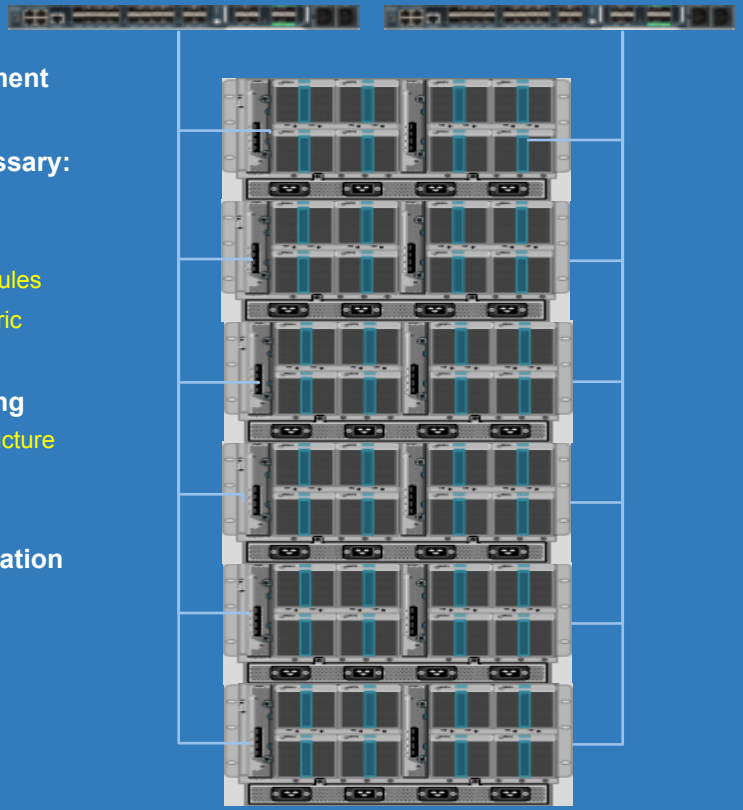
Cisco UCS = Reduced Complexity Increased Flexibility



- **Embed management**
- **Remove unnecessary:**
  - Switches
  - Adapters
  - Management modules
  - 10GbE unified fabric
- **Power and cooling**
  - 1/3rd less infrastructure
  - Lower power
- **Built for virtualisation**
  - Processor density
  - VM/host ratio
  - I/O improvement
  - Extended memory



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UCS Mini

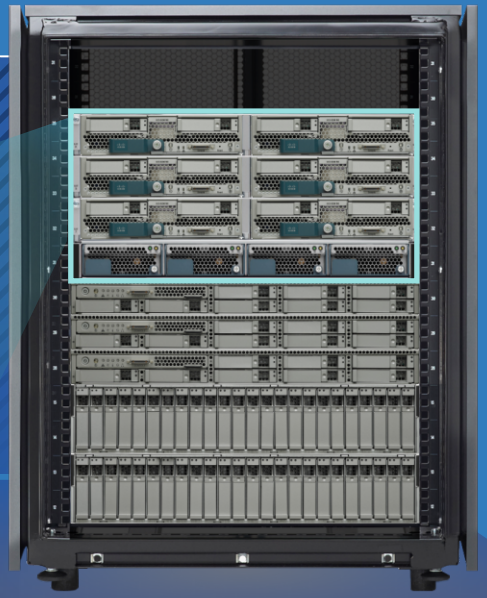
UCS Mini

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
- 120V Power – Plugs in anywhere!

UCS Mini



Enterprise Capability at Edge Scale

Connect up to 7 C-Series Rack Servers for Expanded Capacity

UP TO **29%** CapEx Savings

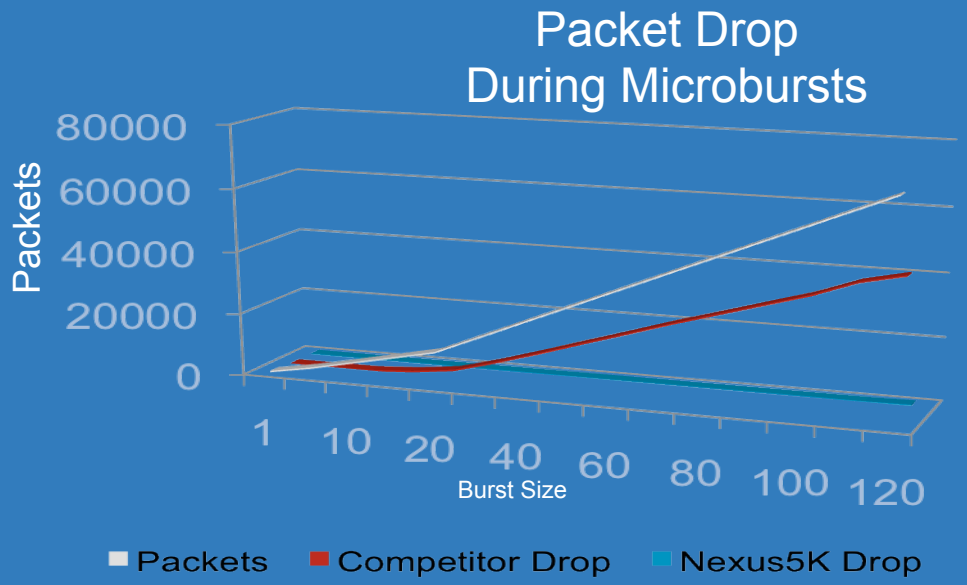
UP TO **36%** TCO

UP TO **34%** Lower Power

UP TO **80%** Fewer Cables

Leading & Predictable Network Performance

Oracle RAC – Secure Data Movement



Independent Testing Results:

- http://www.miercom.com/cisco
- Microbursts cause as much as 60% packet drop with competitor
- Nexus 5000 and Cisco UCS – better able to handle Microbursts with ***predictable*** low latency

Near Zero Data Loss, Transactions are SAFE!

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UCS Service Profiles
Configuration Portability

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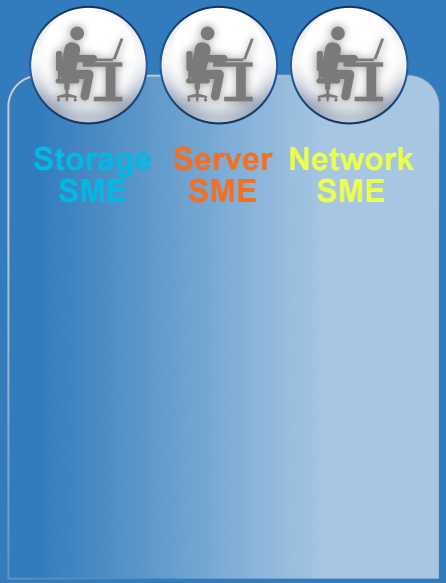
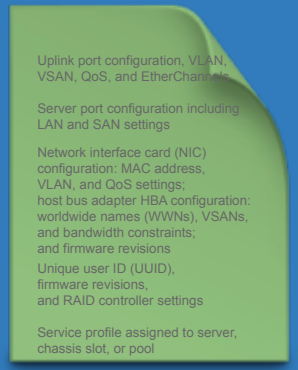
UCS: Service Profiles

- Integrated, Policy-Based Infrastructure Management





1. Subject matter expert define policies
2. Policies used to create service profile templates
3. Service profile templates create service profiles
4. Associating service profiles configures servers automatically

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Service Profiles
Hardware State Abstraction

Benefits For Oracle Users

- Enables consistent setup, reduces service calls and downtime
- Add new instance in minutes, not hours or days
- Immediately test if workload is CPU or memory constrained
- Automatically load profile when new server added to system
- Easily meet cyclical business IT requirements

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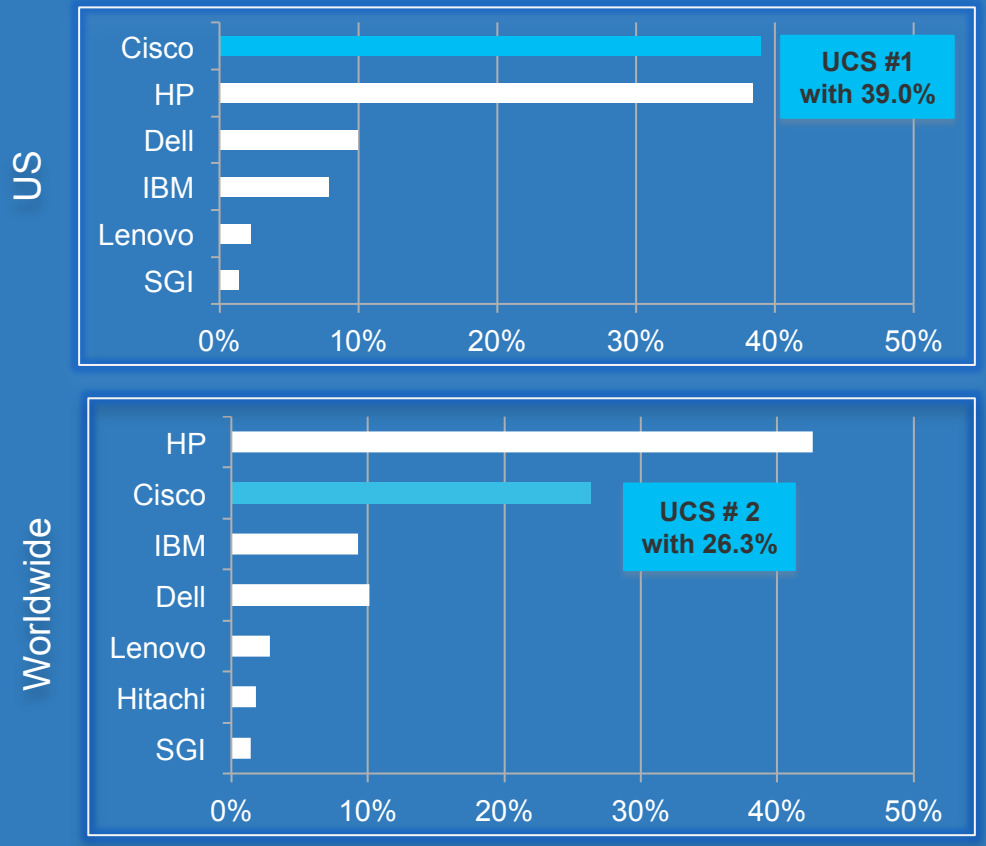
X86 Server Blade Market Share CY 2014



#1 in US for 2014 (39.0%), growing 28% YoY (IDC)

#2 Worldwide for 2014 (26.3%)1 growing 29% YoY (IDC)

UCS momentum
- 41,000+ Unique Customers
- 19,500+ Repeat Customers

1,000's running Oracle Solutions!

Source: 1 IDC Worldwide Quarterly Server Tracker, 2014 Q4, March 2015, Vendor Revenue Share

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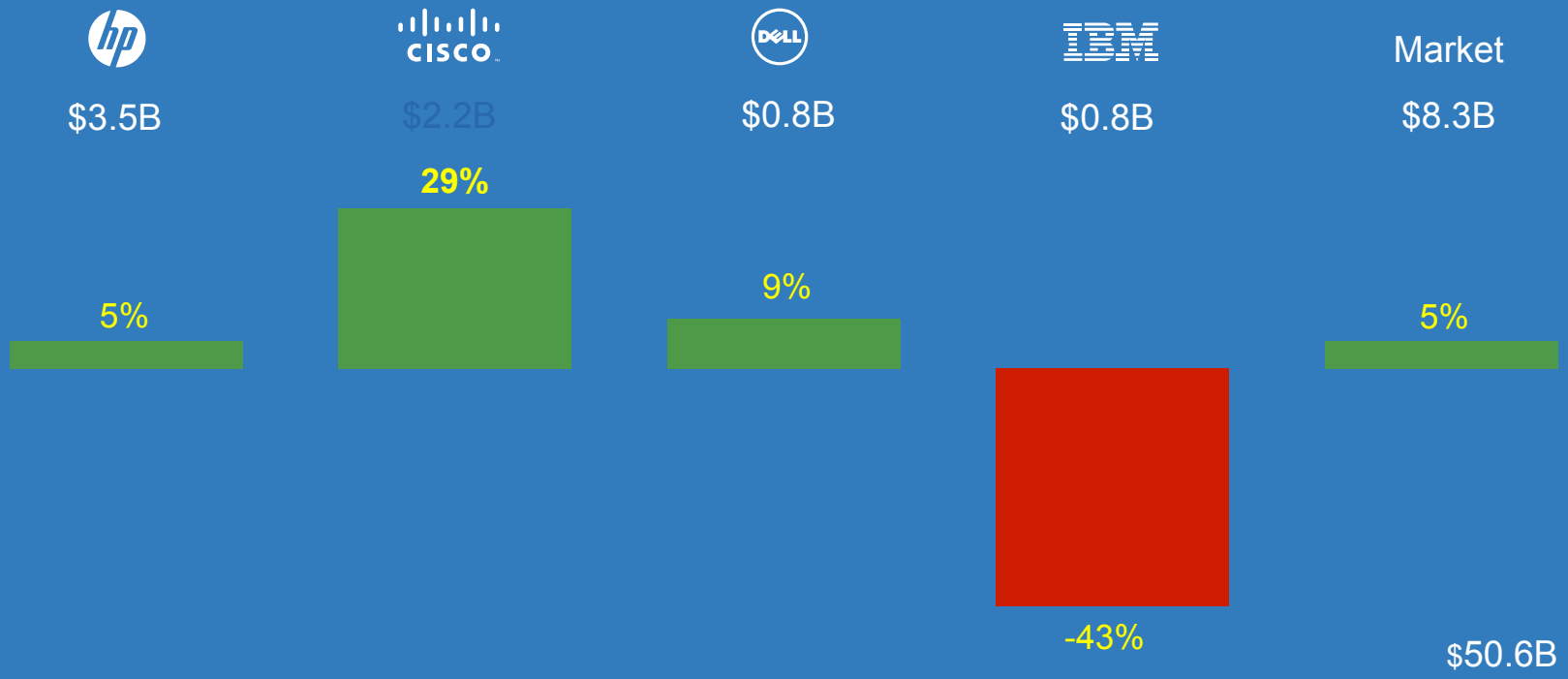
Cisco UCS Leading X86 Blade Server Growth (Y/Y)



Source: IDC Worldwide Quarterly Server Tracker, 2014 Q4, March 2015, Vendor Revenue Share for top vendors. Y/Y growth based on cumulative 4 quarters revenue (Q1CY14 – Q4CY14).

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UCS Oracle Customers

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The Best Oracle Performance
37 World Records & Proof Points

3	14	4	3	1	12
Database	E-Business Suite	PeopleSoft	JD Edwards	Siebel	Middleware

Oracle PeopleSoft HRMS 9.1 FP2 Self-Service (OLTP)

Posted January 2015 Extra-Large Data Model B460 M4 Based

New Jan 15

The online (OLTP) transactions simulated HTML page clicks that guide the user through a particular scenario such as promoting an employee. The kit requires one to process several sets of 14 different transactions:

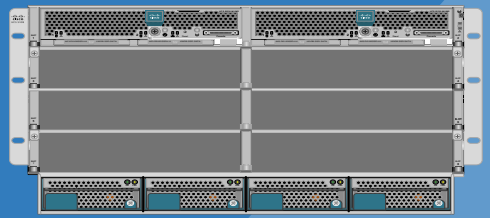
- Update Home Address
- Update Hone Phone
- View Benefits Summary
- Benefits Change Life
- View Paycheck
- Update Direct Deposit Info
- Employee Adds Profile
- View Employee Info
- Initiate Termination
- Initiate Promotion
- Initiate Employee Salary Change
- Add Employee
- Hire Employee
- Add a Position

20,000 Users

Ave. Response 0.35 sec

Ave. Save 0.17 sec

Cisco UCS 5108 Chassis



EMC VNX 5500
Data Storage
75 Drives (536 GB)
39 TB Raw Storage
~ 9.4TB used

UCS B200 M3
Web Server
(4) 2.7 GHz 12-core E7-2697 V2
256 GB memory (45 GB used)
Oracle Linux 5.8

(2) UCS B200 M3
Application Servers
(4) 2.7 GHz 12-core E7-2697 V2
256 GB memory (224 GB used)
Oracle Linux 5.8

UCS B460 M4
Database Server
(4) 2.8 GHz 15-core E7-4890 V2
1 TB memory (370 GB used)
Oracle Linux 6.3

12,000 Users	Oracle T4-4	Cisco B460 M4	Cisco Improvement
Sec. Response	0.77	0.294	62%
Sec. Save	0.51	0.139	72%

20,000 Users	Oracle M6-32	Cisco B460 M4	Cisco Improvement
Sec. Response	0.764	0.35	55%
Sec. Save	0.32	0.17	47%

http://www.oracle.com/us/solutions/benchmark/apps-benchmark/peoplesoft-167486.html

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ORACLE LINUX

Oracle PeopleSoft HRMS 9.1 FP2 Self-Service & Payroll Batch

Posted January 2015 Extra-Large Data Model B460 M4 Based

New Jan 15

This benchmark measured five Payroll application business process runtimes for one database representing an extra-large organization. Five different sets of transactions are compiled:

- Paysheet Creation
- Payroll Calculation,
- Payroll Confirmation,
- Print Advice Forms,
- Creating a Direct Deposit

1,368,055 Payments in 22 minutes!

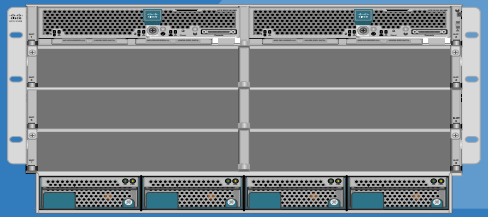
500,480 Employees

B460 M4 result beat previous top results on 64 streams of data by Oracle:

Oracle M6-32 by	**7.8%**
Oracle T4-4 by	**34.3%**

Then a massive single update to the Oracle database occurs (at night for a real customer ☺).

Cisco UCS 5108 Chassis



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UCS B460 M4
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1 TB memory (370 GB used)
Oracle Linux 6.3

***Based upon 64 streams of data**

http://www.oracle.com/us/solutions/benchmark/apps-benchmark/peoplesoft-167486.html

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DBA's Have Many Challenges

Solved with Cisco UCS & Service Profiles

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  - Example: Christmas shopping season!

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Next Steps?

Take 5 minutes to tell us what you think

You get to rate the speaker - ME

☺

Please visit the Ask The Experts area and the EXCITING KAON unit!

Request a more detailed architecture or sizing discussion **today** at:

oraclewithcisco@cisco.com

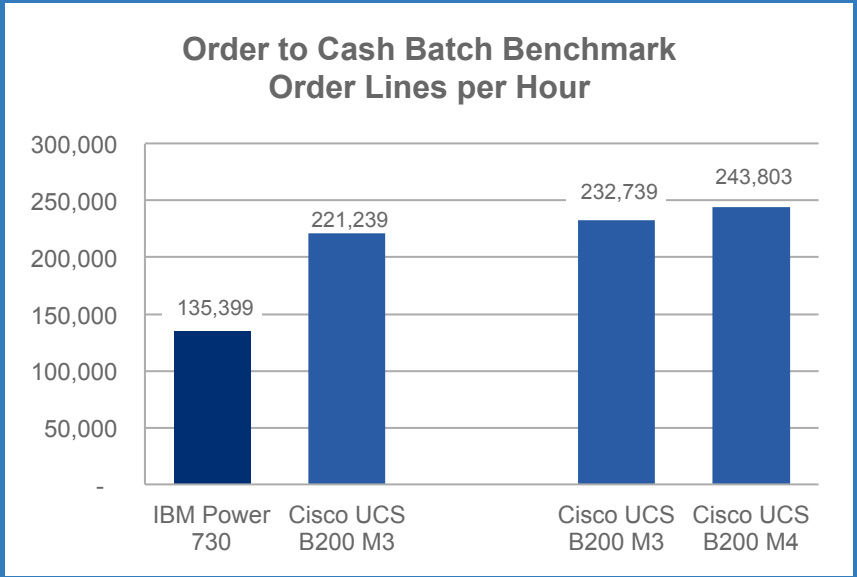
For more information, visit

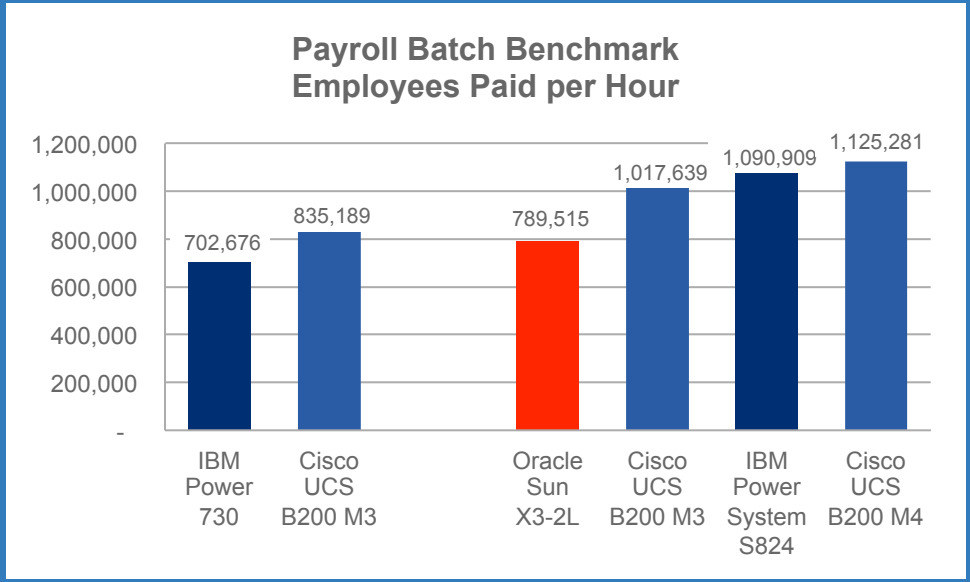
www.cisco.com/go/oracle or

email: **oraclewithcisco@cisco.com**

TOMORROW starts here.

Oracle E-Business Suite Standard Benchmark
A History of Cisco UCS Leadership





- Oracle E-Business Suite 12.1.2
- Oracle E-Business Suite 12.1.3
- Oracle E-Business Suite 12.1.2
- Oracle E-Business Suite 12.1.3

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