Microsoft SQL Server 2014 on Cisco UCS

The modern, simple, cost-effective platform for migrating to SQL Server 2014
**Make Data an Asset, not an Obstacle**

**DATABASE**

**Challenges**

- High data center operating costs
- Handling the massive influx of data
- Server sprawl
- Slow time to market
- Securing legacy systems
- Maintaining availability

**CISCO UCS**

**Benefits**

- Reduced TCO
- Industry-leading performance
- Improved security
- Top-down infrastructure management
- Server consolidation
- Task automation

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**Database Challenges**

Data is predicted to grow 44x larger in the next decade, while the number of IT pros is only predicted to grow 1.4x larger. As such, IT pros will be expected to deal with drastically increased complexity and still deliver the performance their organizations require.

Legacy infrastructures lack the flexibility and performance required to take on this burden. In an attempt to stay ahead, businesses perpetually add new infrastructure which they aren’t equipped to manage, making the problem worse. Inevitably, this results in server sprawl, underutilized hardware, and high data center operating costs.

**Why Cisco Unified Computing System (UCS)?**

Cisco UCS is a modern, simple, cost-effective platform for Microsoft SQL Server 2014 deployments. Tight integration across the Microsoft stack delivers seamless management and automation of your data center, enabling your organization to be more flexible, efficient, and agile.

Cisco UCS offers the enterprise-ready performance required to optimally support the most utilized database in the world. Take your application to the next level, rein in server sprawl, and regain control of your data with SQL Server 2014 running on Cisco UCS.
MODERN, SIMPLE, AND COST-EFFECTIVE

A future-ready data platform

Reduces data center operating costs
Cisco UCS allows customers to reduce data center TCO by 44%.

Simplified Management

Reduce data center complexity
Cisco UCS allows you to rack once, wire once, and manage everything from the software. UCS can reduce:
- The number of components required for the solution through server consolidation
- Administrative complexities through centralized management tools that integrate with Microsoft System Center
- Configuration complexities via Service Profiles and Service Profile Templates

Integrate across layers
Cisco UCS tightly integrates with the Microsoft System Center, providing a single interface to manage, monitor, measure, and automate every layer.

Foster standardization
Cisco UCS Manager provides the ability to create Service Profile Templates, smoothing the process of creating new Service Profiles. Once created, Service Profiles can be associated to a server in seconds.

Enhance security
Cisco Virtual Security Gateway (VSG) for Cisco Nexus Switches provides trusted access to secure virtualized data while meeting the requirements of dynamic policy-based operations. VSG offers the benefits of workload virtualization with the security of zone-based controls and activity monitoring.

Industry-Leading Performance

Do more with less
Cisco UCS provides robust compute, memory, and I/O capabilities, allowing you to handle larger workloads while consolidating servers. UCS Virtual Interface Cards have the ability to expose up to 256 NIC and/or HBA devices to a host and can provide between 20 Gb (1225) to 80 Gb (1280/1240) of network throughput.

Maintain availability
Traditional servers can take days to recover. Service Profiles from Cisco UCS allow you to recover both virtualized and bare metal workloads from failed servers in as little as 7 minutes.

Reduce time to market
Data center automation and the ability to re-introduce failed workloads within minutes allows you to maintain even the strictest SLAs and bring innovation to market faster.

Improve user experience
The UCS architecture can greatly enhance database implementations by empowering knowledge workers with self-service capabilities that are critical to their role. This provides them the ability to create the types of services that they require dynamically without having to ask IT to deliver it for them.
“With its use of SQL Server 2014, Progressive can run a single, larger database and avoid the cost of multiple databases. In-Memory OLTP boosted the processing rate from 5,000 transactions per second to 21,000 – a 320% increase.”

“Cassidy Turley was able to consolidate their equipment from several locations into a single Cisco UCS-based data center. They moved business critical applications, including SQL Server, for 100% performance improvement and 75% cost reduction on hardware, power, and cooling.”

“Arab Investment Bank is able to see 85% percent improvement in application performance using SQL 2014 on Cisco UCS. They also experienced savings of 70% on cabling, 90% on licensing, and 70% on power and hardware. Additionally, they were able to cut time to provision by 80% and time to recovery by 95.”

PROVEN EXCELLENCE YEAR AFTER YEAR

Why Cisco for SQL Server?

“Highest TPC-H ever reported”
“The Cisco UCS® C460 M4 Rack Server delivered the highest TPC-H result ever reported for non-clustered systems at the 1000-GB scale factor, beating Fujitsu, Dell, and IBM by 80, 31, and 13 percent respectively.”


“Fastest four-socket Intel-Xenon Processor-powered platform for SQL Server”
“A Cisco Unified Computing System C460 M2 High-Performance Rack-Mount server achieved 134,117 queries per hour (QphH@1000GB) in the TPC-H benchmark, with a price/performance ratio of $1.30 USD per QphH@1000GB.”


Cisco published the first TPCx-HS benchmark results for Big Data in January 2015, showing their performance and industry leadership in Big Data.


In TPC-H tests, Cisco UCS C240 M3 Rack server averaged $0.73 USD per QphH@1000GB, the lowest of any server on the market.

Source: Cisco Unified Computing System and Intel Xenon Processors: 100 World-Record Performance Results

FOR MORE INFO

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