



Cisco Data Center Solutions for Data Warehouse Environments Based on Microsoft SQL Server 2008 R2

Overview

Cisco® data center solutions bring together the power of Cisco Unified Network Services, Cisco Unified Fabric, and the Cisco Unified Computing System™ to deliver a complete framework and services portfolio for data warehousing with Microsoft SQL Server 2008 R2. As a main component, the Cisco Unified Computing System provides a next-generation data center platform that unites computing, networking, storage access, and virtualization into a cohesive server platform and provides an excellent environment for optimizing the powerful data warehousing capabilities of SQL Server 2008 R2. In addition, a Cisco data center solution for data warehousing with SQL Server 2008 R2 provides a range of reference architectures that help you speed deployment and is supported by the expertise of Cisco Professional Services and Cisco Certified Partners. With such a solution in place, you can reduce IT cost and complexity, increase organizational agility, and improve business decision making.

Data Warehousing Challenges

Today's main data warehousing challenges include:

- **Hardware requirements:** Network and storage traffic can require that a large number of devices be powered, cooled, secured, and managed to function properly.
- **Systems management:** Data warehouses can require multiple systems for configuration and operation, complicating IT administration.
- **Cost-effective performance:** Traditional two-socket servers are limited in memory capacity, requiring the purchase of additional server hardware to add performance, rather than simply the purchase of more memory.

- **Security:** Maintaining the network profiles of virtual machines can be cumbersome and can impede the security of the data warehouse.
- **Scalability of storage and computing resources:** Provisioning new servers, scaling storage, and establishing network connectivity can be a complex effort that takes days.

Cisco Data Center Solutions for Microsoft SQL Server 2008 R2 Data Warehouse Environments

Cisco and Microsoft can help customers deploy a robust, dependable data warehousing solution by taking a life-cycle approach that addresses all aspects of deployment, operations, and optimization. The solution encompasses a comprehensive set of components, including:

- **SQL Server 2008 R2:** By using SQL Server 2008 R2, you can manage growing data volumes, integrate with Microsoft business intelligence products, and scale a data warehouse to handle hundreds of terabytes of data.
- **Cisco Unified Computing System:** The Cisco Unified Computing System is a next-generation data center platform that unites computing, networking, storage access, and virtualization into a cohesive system. The solution integrates a low-latency, lossless 10 Gigabit Ethernet unified network fabric with enterprise-class, x86-based architecture. In addition, the server platform uses unified, model-based management to automatically deploy servers with click-of-the-mouse simplicity.
- **Cisco Unified Fabric:** A high-bandwidth, low-latency, virtualization-aware unified network fabric, Cisco Unified Fabric carries all server I/O over a single

set of cables to access either Fibre Channel or network-attached storage (NAS).

- **Cisco Unified Network Services:** Cisco Unified Network Services provides a portfolio of Cisco Application Networking Services (ANS) products and technologies that enable organizations to deliver cost-reducing, end-to-end business application performance improvements and reliability across their entire infrastructures.
- **EMC and NetApp Storage:** Cisco data center solutions for SQL Server 2008 R2 data warehouse environments take advantage of leading storage solutions from NetApp and EMC.
- **Cisco Professional Services:** The Cisco Professional Services team helps ensure a smooth production rollout of your SQL Server 2008 R2-based data warehousing solution that is on time and on budget and takes advantage of best practices and tools to scale and meet your business and IT objectives. Cisco Professional Services includes:
 - **Microsoft SQL Pre-Production Pilot Service:** A four week validation service for a pilot database migration in a lab based on expected business and technical objectives, documents your design, and runs a system test plan; also includes an operational run book and documents operational procedures and configurations to enable easy transition from the pilot implementation to a scaled production environment
 - **Microsoft SQL Database Migration Service:** A service that migrates your Microsoft SQL environment to Cisco UCS. This service documents your production design, develops and executes a system test plan, and includes an operational run book that documents operational procedures and configurations for your production environment.



Benefits

By using a SQL Server 2008 R2 data warehousing solution on the Cisco Unified Computing System, your business can do the following:

- Speed deployment and time-to-value by taking advantage of a range of reference architectures for data warehousing prebuilt by experts from Cisco, Cisco Professional Services, and Cisco Certified Partners. Reference architectures can help you assess, pilot, and accelerate deployment of the solution in your production environment.
- Reduce data center costs while increasing IT agility by using a single, unified system that eases IT management and requires less hardware and power than competitors' offerings.
- Increase IT staff productivity and business agility through just-in-time provisioning and mobility support for both virtualized and nonvirtualized environments.
- Reduce total cost of ownership (TCO) at the platform, site, and organizational levels.
- Simplify IT management and administration by using a transparent, integrated system.
- Support growth with the capability to scale to up to 320 discrete servers and thousands of virtual machines.
- Ease support now and in the future by using a solution that incorporates open industry standards supported by a vast partner ecosystem and Cisco award-winning service and support.

Why Cisco?

We recognize that the intersection of networking and software is at the center of a new era of innovation. The Microsoft and Cisco alliance delivers a complete framework and services portfolio for data warehousing with SQL Server 2008 R2, helping accelerate time-to-value and increase ROI.

For More Information

- Learn more about Microsoft solutions from Cisco at www.cisco.com/go/microsoft.
- Discover the power of Microsoft SQL Server 2008 R2 Fast Track Data Warehouse at www.microsoft.com/sqlserver/en/us/solutions-technologies/data-warehousing/fast-track.aspx.