

# Uncover the hidden insights in your data

## Unlock insights with PowerEdge and Microsoft SQL Server 2019

- Drive value from large data sets, data estates and data lakes
- Consolidate data from disparate sources
- Perform advanced analytics by incorporating AI and machine learning

## Boost SQL Server Performance with Intel® Optane™ Persistent Memory

Dell EMC PowerEdge servers integrates Intel® Optane™ persistent memory to bridge functionality between traditional memory and storage.

- **Large memory capacity**  
Optane persistent memory is available 128GB, 256GB, and 512GB.
- **Persistent memory technology**  
allows assigned applications to retain data upon power cycles



Digital information is one of the modern organization’s most valuable assets. Modern businesses need the right server foundation for their database architecture to deliver maximum results to their customers and the right insights to their decision makers. Microsoft SQL Server 2019 is equipped with several new capabilities that improve the platform’s performance and security, enabling organizations to analyze multiple data types more effectively. However, advanced database platforms such as SQL Server require a secure and scalable sever infrastructure to truly bring value.

## Dell EMC PowerEdge Servers for Microsoft SQL Server

Choosing the right infrastructure platform for your data is critical whether you are building a new application or migrating your existing infrastructure. Likewise, the right platform is necessary to take advantage of the full richness of SQL Server 2019 including:

- Support for Big Data Clusters.
- In-database machine learning.
- Analysis of both relational and unstructured big data.
- Enhanced security features to protect your data.

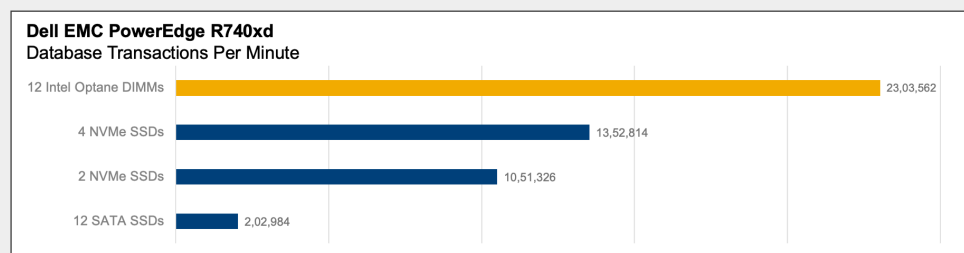
The PowerEdge server portfolio enables customers to scale SQL Server architectures, simplify management, and secure data efficiently.

## Scale SQL Server Architectures

The Dell EMC PowerEdge line of servers offers a wide array of validated options for SQL Server 2019, which gives you complete flexibility in selecting a solution to match your needs. From bare metal servers to multi-node hyper-converged infrastructure environments, there are numerous ways to run SQL Server. In most cases, the demands on your database will grow and change over time. Dell EMC PowerEdge servers are available in a variety of form factors and can be pre-installed with Windows Server or Linux. These options deliver unparalleled scalability to meet the needs of your application, whether that is maximizing database performance, scaling for future growth, or controlling costs.

PowerEdge servers are the building blocks for Dell EMC Ready Solutions for Microsoft SQL, including SQL Ready Nodes, vSAN Ready Nodes and VxFlex Hyperconverged Infrastructure. PowerEdge servers will allow your organization to easily scale from two to 16 nodes as your data grows over time if you’re running Microsoft AzureStack HCI.

## Microsoft SQL Server 2019 Performance on Dell EMC PowerEdge R740xd



Dell EMC PowerEdge R740 with Intel® Optane™ Persistent Memory achieved **up to 11.3x** the transactions per minute than a 12-drive SATA SSD configuration running Microsoft SQL Server 2019.<sup>1</sup>

## Simplify Infrastructure Management

IT teams are looking to increase productivity through automation. Routine server administration tasks can be a distraction from more important and higher value-added activities. The Dell EMC OpenManage Enterprise (OME) tool can reduce server administration time by up to 97% and has the added convenience of being available as a plug-in directly to Windows Admin Center (WAC) and Microsoft Systems Center.

The OME extension offers centralized access to each of the servers and clusters in your environment. This includes the server lifecycle management, health status, monitoring and troubleshooting.

## Secure Data Efficiently

Organizations require a secure foundation to protect the data that is vital to their business. PowerEdge servers meet this need by delivering an infrastructure environment with end-to-end security capabilities, from the hardware through the firmware and up the software stack.

SQL Server is recognized as the database with the fewest vulnerabilities of any major platform for nine years running.<sup>2</sup> PowerEdge complements SQL Server's advanced security features by building a multiple layers of defense in every server.

An integral feature is the "always-on" iDRAC, an agent-free server-management solution that is embedded in the hardware. iDRAC allows your IT staff to remotely connect to your server even when the operating system fails. It also provides system monitoring and alerts. These security features help block malicious attacks, detect deviant activity, and restore critical operations when necessary.

## Expertise to Simplify Complex Technologies

Architecting a high-performing SQL Server environment is increasingly complex, partially due to the multitude of deployment options from virtualization to cloud. According to research firm ESG, nearly a third (32%) of IT organizations report having problematic IT architecture and planning skill shortages.<sup>3</sup>

Dell Technologies and Microsoft leverage their 35 year partnership to help address these challenges. With over 16,000 Microsoft-certified employees, Dell can provide organizations of all sizes with the expertise they need to deploy and manage SQL Server. Also, Dell Technologies and VMware can assist with architecting virtualized SQL environments if you are one of the 68% of organizations that run SQL Server virtual machines on VMware.

### Getting Started with SQL Server 2019 on Dell EMC PowerEdge Servers

Dell Technologies offers a free tool to help you understand your SQL Server environment as it exists today. [Live Optics](#) is an online application you can use to collect data about your IT environment. You can then use this data to assess and implement the latest data management and analytics applications.

For a more customized assessment, Dell Technologies [Consulting Services](#) can perform a thorough, validated and rationalized view of your server and data estate. Our team can help determine which Windows Server and SQL Server versions you want to move and/or consolidate.

Dell Technologies can help customers build a dependable Microsoft SQL Server solution by offering one-stop technical support, rich tools for smart management, and multi-layer security.

<sup>1</sup> Based on [Principled Technologies](#) Report commissioned by Dell EMC comparing a Dell EMC PowerEdge R740xd with Optane DC Memory to the same system with SSD's and NVMe drives. Actual result will vary.

<sup>2</sup> [Microsoft](#), National Institute of Standards and Technology, National Vulnerability Database, October 10, 2019.

<sup>3</sup> [ESG](#)

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Learn more about PowerEdge for SQL Server



Learn more about our systems management solutions



Read the ESG Study



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