

## How databases have changed



Cisco and Intel® partnering in innovation



### Exploring the evolution of database technologies and the immense value to be found within big data.

Raj Gill has been working with databases since the early 1990s. The president and founder of Scalability Experts, which provides data management and business intelligence services to more than 500 companies worldwide, has experienced the swift evolution of database technologies firsthand.

“Databases have come a long way,” Gill explains, “from simple back office repositories to the nerve centers they are today. Everything a company does is now stored in a database, including the data and intellectual property that define and differentiate a brand.”

Look no further than the modern business landscape to understand why databases have changed so dramatically in such a short amount of time. The fast, global, hypercompetitive nature of business has placed a greater demand on data, and

fundamentally altered the function and criticality of database technologies.

“Data is more important and valuable than ever before,” says Gill. “And companies aren’t just interested in mining their own information sources. They are increasingly hungry for external data culled from social media, mobile devices, sensors, and industry sources.”

That’s why databases can no longer be straightforward repositories, he explains, and they can no longer be tied to a single data type, system, or function. They must be able to handle the growing volume, variety, and velocity of modern data sets—sometimes called the “three Vs.” And they must not only help a company analyze the past, but make better decisions in the present and predict the future.

“The companies that are able to take advantage of the ‘three Vs’ will be able to create competitive differentiation, serve their customers better, and carve out new market niches,” Gill claims. “Data mining and predictive modeling represent huge opportunities for every business.”

#### **BIGGER ENGINES, NEWER CAPABILITIES**

To take advantage of these opportunities, bigger computing engines with more processing, storage, and I/O are needed. Gill points to the Intel® Xeon® processor-based Cisco Unified Computing System™ (Cisco UCS®) as a prime example. He’s also bullish on the latest database solutions like Microsoft SQL Server 2014, which delivers in-memory performance across all workloads.

## How databases have changed



Cisco and Intel® partnering in innovation

“Databases of the future will run almost entirely in-memory,” he says. “And the software must work in harmony with the hardware. That’s why the tightly aligned systems being developed by Microsoft, Cisco, and Intel are so compelling.”

These pre-validated solutions can accommodate many different types of data, they can handle petabytes of information, and they can deliver fast, powerful search and analysis capabilities. In other words, they are built for the “three Vs.”

But there is no single recipe for success; no database that automatically pulls value from the data sets within.

“Companies need to know what they want to accomplish with their data and build their data models and analytical capabilities accordingly,” Gill recommends. “If you don’t know the goals or define the key business outcomes, big data can become a science project instead of a business project.”

Scalability Experts can help define big data strategies and roadmaps, and works closely with leaders like Cisco and Microsoft to implement database architectures and technology infrastructures that support overarching business objectives.

“It’s a very exciting time for database designers, data scientists, and the businesses they serve,” says Gill. “It’s an opportunity to transform how they look at data, make decisions, and push their company forward.”

**SEE WHY SQL SERVER 2014  
AND CISCO UCS ARE BETTER  
TOGETHER**

Access the [Optimizing Microsoft SQL Server 2014 on Cisco UCS white paper](#) at the [UnleashingIT.com](#) [Microsoft Virtualization and Management Solutions](#) resource page.