Big Data Management = Big Demands on your IT Infrastructure

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Introduction

While the concept of big data management is nothing new, the tools and technology needed to exploit "big data" for commercial and organisational gain are now coming to maturity. Businesses involved in industries such as media, hospitality, retail, leisure & entertainment, and manufacturing have long been dealing with data in large volumes and unstructured formats or data that changes in near real time.

However, extracting meaning from this data has often been prohibitive, requiring custom-built, expensive technology. Now, thanks to advancements in storage and analytics tools and technologies, all businesses and not for profit organisations can leverage big data to gain the insight needed to make their organisations more agile, innovative, and competitive.

At Wanstor, we understand there are a few important business drivers behind the growing interest in big data, which include:

+ The desire to gain a better understanding of customers
+ How to improve operational efficiency
+ The need for better risk management – Improved IT security and reduced fraud
+ The opportunity to innovate to stay ahead of the competition and/or attract/ retain customers

In summary these business drivers are primarily the same goals that companies and not for profit organisations have had for years. But with advances in storage and analytics, they can now extract the value that lies within all of their existing data quicker, easier, and more cost-effectively.

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At Wanstor we believe to turn these business goals into realities, business and not for profit organisations must think about data management in different ways. Because big data is voluminous, unstructured, and ever-changing, approaches to dealing with it differ from techniques used with traditional data. To turn big data into opportunities, organisations should take the time to find technology solutions that feature the following components:

+ A versatile, scale-out storage infrastructure that is efficient and easy to manage and enables business teams to focus on getting results from data quickly and easily

+ A unified analytics platform for structured and unstructured data with a productivity layer that enables collaboration between IT teams and the wider business

+ Capabilities to be more predictive, driving actions from actual insights

With these components in place, business and not for profit organisations can build infrastructures that deliver on the promises of big data.

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Despite the many benefits it delivers, big data is (for many organisations) putting undue demands on their IT teams, as it differs from traditional enterprise data in the following ways:

+ It's voluminous – Medium and large scale organisations generate and collect large quantities of traditional data, but big data is often orders of magnitude more.

+ It's largely unstructured – Big data includes Internet log files, scanned images, video surveillance clips, comments on a website, biometric information, and other types of digitized information. This data doesn't fit neatly into a database. But unstructured data accounts for 80%+ of all data growth in many businesses today.

+ It's changing – Big data often changes in real time or near real time - E.g. customer comments on a website. This data must be collected over significant periods of time in order to spot patterns and trends.

Furthermore, organisations are beginning to realize that to reap the full value of big data, they must be able to analyse and iterate on the entire range of available digital information. One off snapshots of data do not necessarily tell the whole story or solve a particular business challenge.

Efficiently collecting and storing that data for iterative analysis has a significant impact on an organisations storage and IT management resources. In short, IT storage professionals need to find big data solutions that fit the bill, but don't strain already tight budgets or require significant investments in dedicated personnel.

Due to these new big data demands, as well as the importance of handling information correctly, most organisations consider managing data growth, provisioning storage, and performing fast, reliable, and iterative analytics to be top priorities.

But as IT budgets have become squeezed many data storage professionals are saying to us at Wanstor that big data is placing their current IT infrastructures under extreme stress; with many looking to build scalable infrastructures within their data centres or outsource to a co-location or private cloud provider.

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As you have probably guessed from the above paragraph big data requires more capacity, scalability, and efficient accessibility without increasing resource demands. Traditionally, storage architectures were designed to scale up to accommodate growth in data. Scaling up means adding more capacity in the form of storage hardware and silos, but it doesn't address how additional data will affect performance.

If you look at traditional storage architectures, RAID controller–based systems end up with large amounts of storage sprawl and create a siloed environment. Instead, organisations need to be able to achieve consolidation within a single, highly scalable storage infrastructure. They also need automated management, provisioning, and tiering functions to accommodate the rapid growth of big data.

At Wanstor we believe organisations of all sizes need storage architectures that are built with big data in mind and offer the following features:

+ Scalability – to accommodate large and growing data stores, including the ability to easily add additional storage resources as needed

+ High performance – to keep response times and data ingest times low, and can keep pace with the business

+ High efficiency – to reduce storage and related data centre costs

+ Operational simplicity – to streamline the management of a massive data environment without additional IT staff

+ Enterprise data protection – to make sure high availability for business users and business continuance in the event of a disaster

+ Interoperability – to integrate complex environments and to provide an agile infrastructure that supports a wide range of business applications and analytics platforms

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As the amount of unstructured data in organisations grow, companies and not for profit organisations of all sizes are learning they need new approaches to managing that data. At Wanstor we believe they require an efficient and scalable storage strategy that helps them to efficiently and effectively manage extreme data growth.

Wanstor has a range of big data experts who can work with your business to put the right data storage solution that incorporates scalability, improved performance (both I/O and throughput), and improved data availability.

Scalable storage solutions, paired with powerful analytics tools that can derive valuable insight from large amounts of content can help organisations of all sizes reap the benefits of "big data". The only question you have to answer now is – Is your infrastructure ready?

For more information about Wanstor's data storage solutions, click here

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