SNIA Analytics and Big Data Committee

www.snia-europe.org

By Gilda Foss, Chair,
SNIA Analytics & Big Data Committee, NetApp.

# Big clouds **full of data**

CLOUD COMPUTING and big data analytics go hand-in-hand and are on the forefront of the minds of IT professionals today. As a delivery model for IT services, cloud computing has the impending ability to enhance business nimbleness and productivity while enabling larger efficiencies and reducing costs. Big data analytics offers the assurance of delivering valued insight that can create a competitive advantage, inspire new innovations, and drive more revenue. With this particular model, all the information goes through the cloud and the analytics deliver all the value and relevance. In fact, many Web 2.0 companies base their entire business model on the results of the analytics.

There is a momentous workload shift from what we traditionally thought of compute and storage when it comes to cloud computing. Local computers no longer have to do all the heavy lifting when it comes to running applications because the network of computers that make up the cloud handles the brunt of all of that instead. Hardware and software demands on the user's side also decrease and the only part the user needs is the interface software, which brings us to the beauty of it all -- the cloud's network takes care of the rest. Sweet and simple, yet adding in big data to the mix can make it all come together when analytics are involved.

Big data refers to huge data sets that are orders of magnitude larger than what we have all been traditionally accustomed to… and it's all arriving faster than ever before. The data sets are so big that it is hard to collect, analyze, visualize, and process using regular software such are relational database management systems. Moreover, this data is typically unstructured. A recent study indicates that unstructured data account for at least 80% of the world's data. This means that many companies today are making mission critical decisions with only 20% of the data they have which is essentially just the 20% of data that is structured and stored in relational databases. That itself is a very big reality to process! Furthermore, everyday there is an extremely large flood of data being generated by connected devices - from PCs and smart phones to sensors such as RFID readers and traffic cameras.

But, Big Data is just that -- data. The real value of collecting it comes to light in the insights that it produces when analyzed. Patterns are discovered, meanings are derived, decisions are made based on indicators, and ultimately we gain the ability to respond to the world with greater intelligence. We use analytics to drill into what the data means to us, and how we can use it to our benefit. This set of advanced technologies is designed to work with large volumes of mixed data and drill deep. "As companies acquire and analyze vast amounts of structured and un-structured data, they increasingly re-engineer their data centers for new applications, which in turn fuels their need for a new cloud network. We witness an increasing trend towards Big Data for storing and efficiently processing petabytes to exabytes of unstructured data," said Jayshree Ullal, President & CEO of Arista Networks.Cloud Computing and Big Data analytics continue to advance and change. Organizations are moving beyond questions of what and how to store big data to concentrating how to derive meaningful analytics that respond to real business needs. As cloud computing continues to develop and mature, a growing number of enterprises are building proficient and nimble cloud environments, all the while cloud providers are continuing to expand their service offerings.

Therefore, it ties in appropriately that IT organizations should look to cloud computing as the model and structure to support their big data undertakings. Big data environments require clusters of servers to support the tools that process the huge volumes, fast pace, and various formats of all of that big data. Clouds are already deployed on pools of servers, storage, and networking resources and can scale up or down as required.

Cloud and Big Data analytics have harmony with one another. With the advancements in cloud computing, IT consumerism, and the increase in data, analytics is not only imperative, it's absolutely necessary for businesses to get ahead and achieve that inside edge. The data analysis world in which we live in is utterly ground-breaking. Businesses tackle huge amounts and collections of data on one hand, and fast and efficient requirements for analysis on the other. The vendor community is in turn responding by offering highly distributed architectures and innovative levels of memory and processing power. All in all, cloud computing offers an economical way to sustain big data technologies and the progressive analytics applications that can drive business value.