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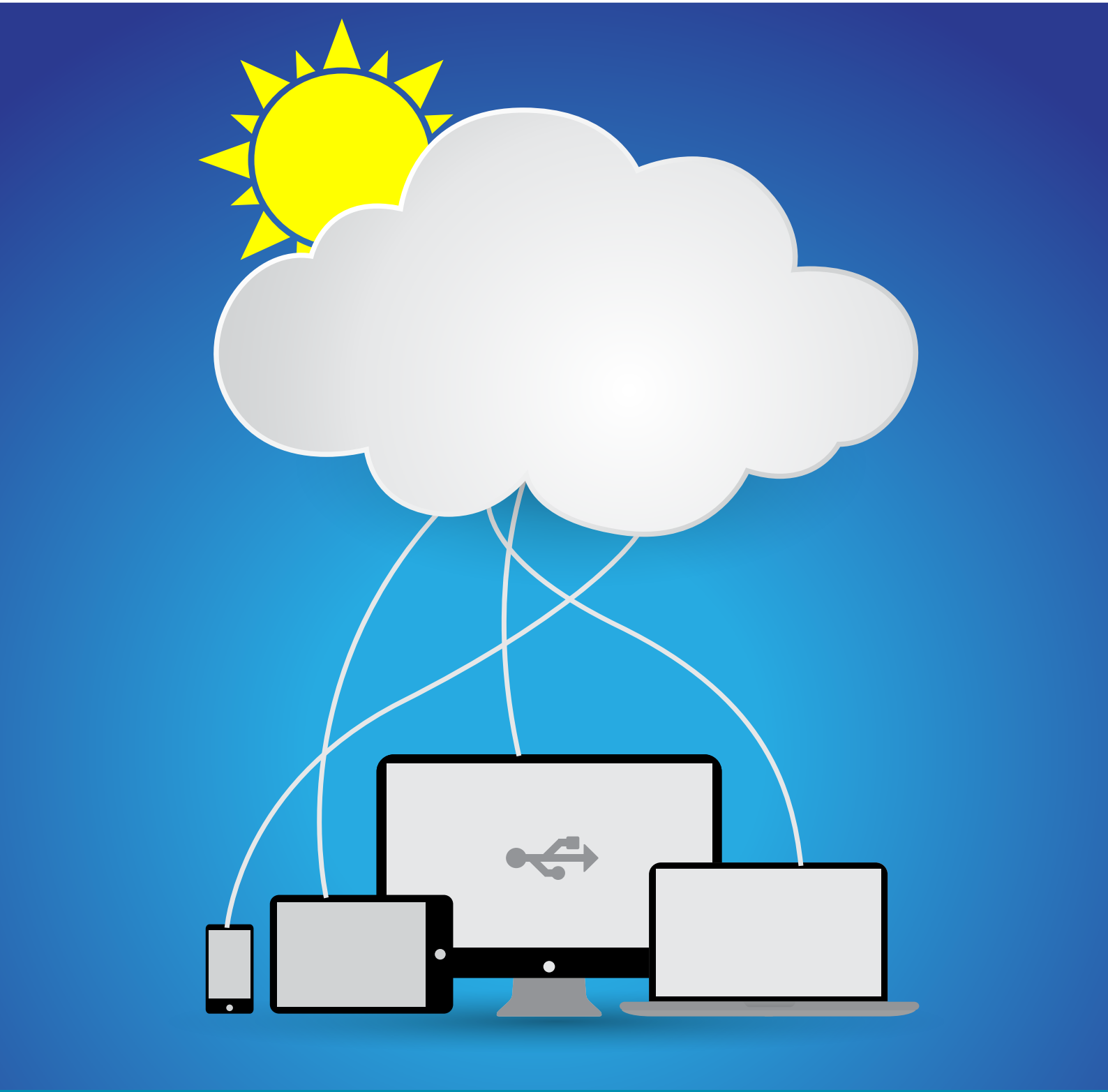

THE FORECAST FOR CLOUD IS SUNNY

Sudeshna Bhadury

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The Forecast for Cloud is Sunny

When you begin to see advertising for a technology everywhere, you know it is mainstreaming. Today, you can find ads for Cloud computing at technology shows and events, at the major airports of the world, in subway stations and on expressways. Businesses are using Cloud infrastructure and traditional barriers in Cloud usage have come crashing down.

Cloud infrastructure is penetrating fast, and the forecast for the industry looks really sunny. In fact, industries known for stricter regulations on data confidentiality have embraced Cloud for a variety of processes. These include Health and Life Sciences (HLS) and Banking, Financial Services and Insurance (BFSI). Also, what hasn't received wide press coverage is the fact that even Government agencies – who presumably want to keep their information away from public gaze – have moved to Cloud.

Cloud providers are making it easy for businesses of every size to leverage Cloud infrastructure. Some providers let businesses use their Cloud data warehouse for as little as 25 cents an hour, going up to US$1,000 per terabyte per year, helping businesses reduce costs and work without having to build expensive internal IT skills or foot exorbitant AMC bills. Modern businesses, low on asset acquisition, go to Cloud providers, spin out a cluster of servers within minutes, use it, shut it, pay for it and forget it. This means Cloud infra can be conveniently used when businesses expect spikes in usage (festival time, periods of peak collaboration over projects or product releases, short-term requirement to analyze massive quantities of data, annual tax filing, etc.)

Clearly, the misconceptions around Cloud are starting to wear away. Some years ago, the very mention of Cloud computing conjured images of security and privacy breaches, loss of control over data, latency and governances / regulatory challenges related to the location of the Cloud infra and the data.

Data Security

Looked at logically, it can be assumed that vendors of Cloud technology are among the very best in the security business. All big to mid-sized vendors have highly skilled and dedicated teams working around data security. These vendors manage thousands of servers and data security is the very core of their business.

Of the more famous and recent data security breaches (barring one), all of the cases are involved on premise enterprise systems.

Data Privacy

A typical Cloud infrastructure delivers cost effectiveness from the fact that different businesses share the same infrastructure. Steps are taken by vendors to ensure data privacy is intact in a multi-tenant model. Authorization access is set and controlled for each user within the virtual server environment.

However, there are industries with special needs such as the HLS industry that mandates HIPAA (Health Insurance Portability and Accountability Act) compliant infrastructure to ensure confidentiality and security of healthcare information. There are a number of HIPAA compliant vendors that these industries can leverage, putting to rest their anxieties around data privacy.

Loss of Control

IT teams are often heard complaining that Cloud services imply loss of control over hardware. But Cloud essentially means a fully managed service – and in such a service you do hand over management to the vendor.

The truth is that a managed cloud data warehouse service releases precious IT resources from the mundane task of provisioning and maintaining hardware and instead allows them to spend more time with business users and focus more on understanding the business requirements, designing of systems and their ability to address business concerns.

Latency

Cloud technology has made considerable progress in the last two to three years. Thanks to Massively Parallel Processing Technology (MPP), Cloud infrastructure can crunch petabytes of data in seconds. The response times of Cloud systems have been brought down to microseconds, which cover most enterprise requirements.

However, there are businesses that require nanosecond responses. These would include organizations such as stock exchanges. In these cases, it is recommended that servers be located close to the business location (or on premise).

Location

The geographical location of Cloud infrastructure does have an impact on some businesses. Regulatory and legal norms of certain countries may dictate that data not be sent or stored outside the physical boundaries of the nation. This could have special implications especially on certain types of hybrid cloud environments.

Enterprises should simply look for a Cloud provider with a global footprint so that legal and compliance issues related to geography don't place limitations on infrastructure decisions.

When to think of Cloud

Thanks to the Internet of Things (IoT), data storage and data management, analytical needs of enterprises are bound to grow – often unpredictably. When data volumes grow, the most natural tendency is to enhance current Data Warehouses. However, this

may also be the right time to stop a moment and consider migrating to Cloud (for more Cloud adoption triggers, see Table1: On Cloud vs. On Premise)

On Premise	On Cloud
Existing application with considerable investment in infrastructure requiring no capacity changes in the near future	Suitable for Small & Mid Size Companies due to low H/W costs
Data with *high* compliance and security requirements	Businesses requiring seasonal analysis can better utilize elastic storage on cloud
Low Latency needs requiring micro seconds of response time	Predictive Analysis is suitable for cloud due to zero set up time and flexibility to scale up and down to run analytical models
	Modernization of existing DW to leverage on wide range of data sources
	New DW can range from pure play cloud to a hybrid model; in hybrid models development and testing environments are on cloud.

Table 1: On Cloud vs. On Premise

Think of the days without email and mobile phones. Businesses managed to function without these tools. But technology is improving our connections with customers and partners. Those who adopted the new tools found themselves becoming more agile and flexible. It is the same with Cloud Data Warehouses. Some businesses have not adapted to the cloud yet, but it is only a matter of time before everyone begins to use it to gain agility and flexibility.

About the Author

Sudeshna Bhadury is a Senior Manager for Data Warehousing & Appliance Practice at Wipro Analytics. Sudeshna has more than 17 years of experience across various industries, of which 15 years of experience is in Data Warehousing, BI and Analytics. She possesses a wide range of experience across Data Modeling/Data Warehouse Design, Delivery, Presales and Practice Management. Sudeshna is currently responsible for building capability on Data Warehouse on Cloud.

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