

# Chapter 18

## Integrating Business Intelligence With Cloud Computing

Shivani Jaswal

Chandigarh University, India

### ABSTRACT

*Cloud Computing has emerged as an expression that has described various other computing concepts that involve computers that are interconnected virtually. It is so prominent that it has modified the architecture by incorporating new design principles. Also, the present economic crisis, which is being experienced by most of the world, has oriented us towards cloud computing and its efficient services. Here, business intelligence plays a pivotal role in extraction of valuable information and identifying hidden patterns of data. Also, any organization in striving stage can also act smartly with the use of various business intelligence solutions. Various benefits are also offered by the BI solutions such as working together as a team and identifying various resolutions. The contribution of this chapter is to show how the cloud computing environment has been merged with business intelligence to fulfil the future need of uplifting of economy.*

### INTRODUCTION

To provide computing at a lower cost has been framed as a big concern for development in IT sector. Grid and Distributed computing deliver efficiency at a high rate by considering the principle of separating and allocating vast processes to various providers. The IT industry has always been looking for that computing model that could provide connectivity from anywhere to computing resources, with infinite number of resources in minimal time and cost at any time. Utility computing (Cloud Computing) uses the “pay as per the use” principle which eliminates the processing cost. This technology of virtualization represents multiple autonomous structures from one physical device to another. The resource can be given without human intervention whenever needed (Al-Shargabi et al, 2020; Aljawarneh, 2012; Aljawarneh et al, 2017; Chehbi-Gamoura et al, 2018; Esposito et al, 2018; Jaswal et al, 2019; Kalpana et al, 2018; Lizcano et al, 2020; Malhotra et al, 2019; Mohammed et al, 2019; Mouchili et al, 2018; Singh,2011).

DOI: 10.4018/978-1-6684-4503-7.ch018

Business Intelligence is a highly resource-intensive technology that involves parallel processing on a wide scale and immense data warehouse storage capabilities. At periodic intervals, the data warehouses are periodically updated by queries performed on business and transactional databases. A challenge can emerge in the future for businesses to continue adding resources to data warehouses. A fresh hope for potential business intelligence opportunities has been instigated by cloud computing. Business intelligence's mission is to enhance the timeliness and accuracy of information and to help managers to understand their company's role as opposed to competitors. Business intelligence plays an essential role in the extraction of useful data and the identification of secret trends in both internal and external data sources. Most of the organisational information, however, is in unstructured form or in the minds of its workers. At the right time and in a meticulous arrangement, Business Intelligence facilitates the necessary data. It freely provides user-friendly data to users where they can work as a team.

Cloud Computing is based on pay as per use model. It provides various resources through virtualization mode. These resources can be computing power, storage space. This paradigm has helped setting of business say large scale or middle scale or small scale in the market. Cloud Computing is so prominent in the present era such that it has modified the architecture of working by incorporating new design principles. Also, with this, present economic crisis which is being experienced by the maximum parts of the world has oriented towards cloud computing and its efficient services. Cloud computing and business intelligence has been considered as perfect match. Business intelligence is about supplying the right data at the right time to the right users and cloud computing offers a lightweight, scalable way to access BI apps. The benefit of Cloud BI apps is that on various platforms and web browsers they are available. This circumvents conventional software challenges, such as the need for on-site access to the programmes. Enterprises are switching to the cloud and are still benefiting from the advantages, such as reduced costs, faster speed of implementation and ease of usage. Cloud systems now have processing power equal to on-premise applications. They provide consumers with capabilities that were only accessible in locally installed applications up until now. However, when the concept of cloud computing has been merged with Business Intelligence, then the strategies those implemented in the marketplace helps in generating profound benefits i.e. return on investments, cost benefit analysis, easy maintenance etc. In a computer network such as the Internet, Cloud Business Intelligence (BI) applications are hosted. They are used as access to BI-related information such as control panels, KPIs and other market metrics for companies. Enterprises, such as Customer Relationship Management (CRM) apps (Salesforce), online file sharing and storage (Dropbox, Box) and support desk apps (UserVoice), are gradually moving to cloud-based tools. This pattern entails tools for market intelligence accepting the Cloud's agility and usability. As we already know that in an era, financial or economic crisis takes place. Therefore, Cloud Business Intelligence helps in setting up of strategies and helping an organization to implement those successfully in any business environment.

Cloud business intelligence is the easiest and most cost-efficient way for business intelligence software to be accessed and processed by associations. It is a way of reporting and reviewing the installed solutions to be built and consumes less cost. Cloud delivery allows quick deployment; in days or weeks, most organisations can create an initial BI environment compared to months of conventional BI solutions. Most of the organizations now recognise that traditional on-premise BI's high expenditures and overall cost of ownership makes these strategies inefficient and unattractive.

In the face of the ongoing global crisis, organisations should assume that their future will become increasingly uncertain. The essence and structure of the new competitive world is causing the crisis to

10 more pages are available in the full version of this document, which may be purchased using the "Add to Cart" button on the publisher's webpage:

[www.igi-global.com/chapter/integrating-business-intelligence-with-cloud-computing/297312](http://www.igi-global.com/chapter/integrating-business-intelligence-with-cloud-computing/297312)

## Related Content

---

### Sustaining Competing Hotels: Green HRM, Digital, Blockchain, Organisational Learning Transformation

Melissa Li Sa Liowand S. Salitha Nair D. O. M. Subramaniam (2024). *Achieving Sustainable Transformation in Tourism and Hospitality Sectors* (pp. 67-89).

[www.irma-international.org/chapter/sustaining-competing-hotels/345161](http://www.irma-international.org/chapter/sustaining-competing-hotels/345161)

### Developing Environmentally Responsible Business Strategies: A Research Perspective

Bharti Trivedi (2011). *International Journal of Green Computing* (pp. 47-57).

[www.irma-international.org/article/developing-environmentally-responsible-business-strategies/55224](http://www.irma-international.org/article/developing-environmentally-responsible-business-strategies/55224)

### MSP430 Microcontroller: A Green Technology

Mala Mitra (2011). *Green Finance and Sustainability: Environmentally-Aware Business Models and Technologies* (pp. 191-198).

[www.irma-international.org/chapter/msp430-microcontroller-green-technology/53250](http://www.irma-international.org/chapter/msp430-microcontroller-green-technology/53250)

### A Framework for Anticipatory Governance and Adaptive Management of Synthetic Biology

Michael E. Gorman (2012). *International Journal of Social Ecology and Sustainable Development* (pp. 64-68).

[www.irma-international.org/article/framework-anticipatory-governance-adaptive-management/67360](http://www.irma-international.org/article/framework-anticipatory-governance-adaptive-management/67360)

### DNA Tourism

P. Selvakumar, T. Prabhuand Shrinwantu Raha (2024). *Special Interest Trends for Sustainable Tourism* (pp. 16-36).

[www.irma-international.org/chapter/dna-tourism/352355](http://www.irma-international.org/chapter/dna-tourism/352355)