

BENEFITS OF IMPLEMENTING CLOUD TECHNOLOGIES IN LOGISTICS INDUSTRY

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Abstract : Logistics management across various industries are getting complicated due to globalization and demand for reduction of lead times in all operations is a major concern for many manufacturing firms. These firms are facing many challenges in planning and control of logistics operations across the supply chain. Therefore, they are now looking at new technologies which will enable them to cope up with the challenges and cloud based solutions are definitely technologies which are on the forefront among them. Cloud based solutions are one such technologies which help the manufacturing firms to integrate, customize and communicate across the value chain and ultimately results in better planning and execution of various operations. In this paper we discuss about various benefits cloud technologies offer to the logistics sector.

Key words: Cloud computing, Logistics Management, Manufacturing firms, Supply Chain

INTRODUCTION

Logistics plays a very important role in any country's economy. Successful logistics provide a system or process by which customer needs can be fulfilled in a more efficient manner which led to a competitive edge against other organizations.

Many logistics management teams are still using age-old traditional methods to manage their fleet and delivery routes across the entire supply chain of their companies. They are using normal excel sheets for planning and executing various operations of logistics management. With lot of complexities arising out of globalization and demand for reduction of lead times in all the operations, many companies are looking at new technologies which will enable them to face the cut throat competition in logistics.

Cloud computing addresses these challenges by delegating process control and robustness in the system will increase considerably. Cloud computing is a term used to describe both a platform and type of application. A cloud computing platform dynamically configures, reconfigures different servers as needed. They can be physical or virtual machines. Cloud computing is also described as applications that are extended to be accessible through the internet. These cloud applications use large data centers and powerful servers that host web applications and web servers.

Cloud computing allows scaling logistics applications flexibly based on the dynamically arising logistics demand. This is in contrast to other software solutions for logistics which will execute the processes sequentially. Therefore network-based cloud computing is rapidly expanding as an alternative to conventional office-based stand alone computing. Since the cloud service model works on high speed network, it provides reliable connection between the end user and the service provider's infrastructure. Cloud technologies benefit the organization through improved utilization of resources, reduced wastage, better administration and faster deployment cycles. Thus, Cloud computing will help the logistics sector to improve its efficiency, ensure more reliable logistics networks. This technology provides the required infrastructure to develop a logistics network which is flexible under various uncertainties.

NEED FOR THE STUDY

Cloud technologies which can host highly interactive applications are need of the time for not only stand alone logistics companies but also other manufacturing and service organizations. These technologies allow these companies to achieve more efficient use of their hardware and software technologies to develop a robust logistic setup which in turn enhances the profitability of the companies. There is an urgent need to implement these technologies which are offering huge benefits and will make the companies capable to compete with others in fast moving scenarios across the world.

Benefits of Implementing Cloud Based Technologies

Many companies are deriving a lot of benefits by implementing cloud based solutions as it is improving efficiency and productivity among the entire chain of operations. Some of the benefits of implementing cloud based technologies are as follows.

Improving Efficiency

Cloud technology enables management team to take intelligent decisions without increasing workforce's budget or time. Companies can automate many repeatable tasks, routing guides that exist in the cloud. With all services going online, enterprises can automate repeatable tasks like routing, customizing workflow etc, using cloud computing. It analyzes efficiently based on the inputs given by the functional and technical experts of the enterprise. These steps will automatically enhance the logistical performance across the value chain.

Increased Growth and Improved Scalability

Cloud based technologies help organizations to improve scalability of their operations than before and enables the organization to grow rapidly. This is done by re-configuring the organization's capabilities and evolving needs. Businesses need not spend extra expenditure on any permanent infrastructure during temporary peaks or sudden changes. This facilitates good return on investment which makes the organizations profitable.

Efficient Integration of Different Systems

The most common problem among all the enterprises is integration of various systems to get satisfactory outcome. Cloud computing enables an organization to integrate the existing systems in a better manner. Many organizations are using legacy systems as well as modern systems for different processes across different functions. Integrating these processes is a very big challenge for all the enterprises. Organizations are using different technologies like RFID for identifying and tracking purposes, 'Radio Data Terminal Technology' which connects wireless sets and also various operational control software and business control software like CTMS, WMS etc. Some of them are legacy systems and some are modern. Integrating all these software gives overall control of the entire logistics systems, which the cloud technology provides. It also enables managers to operate from single system even though different systems are used at different locations.

Reduction in Operating Expenses

By moving their logistics operations to the cloud, companies can substantially reduce the need for advanced capital investment. This is because of the reason that deployment of cloud technology can be done with minimal hardware and IT infrastructure. There will be no or very few upfront costs. Organizations can reduce costs as their service capabilities increase.

Accuracy of Merging in Transit Model

Big and large global enterprises will always face problems in bringing together various components required for assembling. This process is a complex one if an enterprise possesses multiple vendors located at various locations which are far away. Through cloud integrated logistics technologies, we can have real-time monitoring which makes accurate models of merge in transit. All the complexities can be removed and an accurate estimate can be forecasted and monitored.

Eliminates Data Redundancy

Data redundancy which increases the size of the database unnecessarily is one of the important reasons for data inconsistency and data corruption. It also decreases the efficiency of database. Duplication of data leads to unnecessary storage and also costs the company in purchasing expensive databases. With the implementation of cloud technologies in logistics sector; companies need not purchase a database with high redundant system. The cloud technologies copies each and every file associated with physical components which can be retrieved any time.

Greater Visibility

When an organization has implemented cloud technologies, all files are stored centrally and everyone sees one version of the truth. Greater visibility improves collaboration among different stakeholders, which ultimately results in quality work and a healthier bottom line. Organizations which rely on the old ways will take more time streamline their activities. In traditional organizations which have not implemented the cloud technologies, workers had to send files back and forth as email attachments to be worked on by one user at a time end up with a mess of conflicting file content, formats and titles. This problem aggravates when the companies become more global as the scope for complication rises. This is because of the reason there will be frequent collaboration among people in different time zones and regions.

Environmental friendly

With the implementation of cloud computing, there will be a positive impact on environment. This is possible since there will be fewer data centers and more efficient operations across the supply chain. All the stake holders can share resources instead of creating them individually. Fewer machines are required to get maximum output because of the low service utilization rates. Data centers that use cloud technologies often require very few equipment to monitor systems and manage work flows which reduces the total physical server footprint. This leads to the reduction in energy use and carbon emissions substantially.

CONCLUSION

With ever increasing competition in the logistics industry, it has become a prerequisite and inevitable for all logistic service providers to innovate and upgrade their technologies. Cloud technology is one such technology which enables them to effectively integrate the logistics resources and also serve as a platform for users to access the services as needed. Cloud technologies virtualize all the logistics resources through which information sharing and combination of different service resources are possible. Successful implementation and utilization of cloud technologies in logistics sector makes enterprises having a competitive edge over others.

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