ERP Systems

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**Introduction**

ERP is referred as enterprise resource planning. ERP is an important software that is used by various organizations to manage their routine business activities in an effective manner. ERP is a modular software system that unified various areas functional areas of an organization at a single platform to process each process efficiently. It is notable to mention that an ERP system is entitled to focus on different business areas such as customer relationship management, production, and materials management, HR, and finance and accounting. Various business activities are performed with the help of ERP systems such as project management, procurement, supply chain operations, and risk management and compliance (Al-Mashari, Al-Mudimigh, & Zairi, 2003). ERP system defines a plethora of various processes of a business to assist data flow below them in an effective manner.

**Server-side hardware requirements**

 Server-side hardware deals with the interconnection of various users in order to route them to different networks. There are various components of the server-side hardware such as multiplexors, hubs, communication links, disk drives, gateways, and bridges. Amazon deals with cloud computing, e-commerce, artificial intelligence, and digital streaming. It is one of the biggest multinational companies along with Apple, Facebook, and Google. Amazon works in major regions of the world and uses various hardware and software to connect customers with the server. It is notable to mention that Amazon uses a number of servers for various regions of the world. According to an estimation, Amazon has more than 1 million servers all around the world due to its vast business. In the past, Amazon used HP budget servers to run its network. However, with the passage of time, Amazon began to directly connect itself with Intel and other Asian companies such as Foxconn and Quanta. For an extensive network of server, it is important for an organization or company to run their data centers with overcoming the problem of overheating. As mentioned above, Amazon has one than one million servers, so the burden of data centers is significantly higher. Every single server uses almost 200 kilowatts per hour, which generates a major amount of heat. To cater to such critical condition, server-side hardware needs a huge amount of refrigeration to cool their data servers (Umble, Haft, & Umble, 2003). Therefore, mighty companies like Amazon use large condenser units to maintain an appropriate temperature outside their data centers. There is also an immense need to keep the data servers connected. For this purpose, companies use software to interconnect all hardware with each other.

**Server-side software requirements**

 It is notable to mention that managing various business processes is difficult due to extensive complications. In the considered case of Amazon, it is essential to mention that there is a number of software that is used to manage server farms of Amazon. There is an immense need for Amazon to provide valuable software necessity to its potential clients due to the huge amount of web services. Amazon provides its potential consumers with multiple applications ranging from simple cloud storage up to leasing a major portion of server for several purposes. Various operating systems are provided by Amazon such as Amazon EC2, which provides a dependable environment and fast speeding to use the Microsoft Web Platform. Amazon web services are effective to provide a cloud computing platform to run any compatible window-based solution with reliability and high performance (Sultan, 2010). It is necessary to mention that hardware can only work in a proper manner if they are connected with other hardware through a potential link. An information system is beneficial for any organization to work in an effective manner, but there is a need to provide a proper communication channel for the hardware of that information system. Incorporation of software between hardware enabled an information system to work properly. Server-side software is beneficial to upload or transfer various useful files on the internet server. Server-side software puts these files on a web page so that they can easily accessible by customer or consumer. Despite various software for this purpose, File Transfer Protocol (FTP) is an effective software to share files between server and client on a computer network. Different organizations can easily share valuable data with their potential customers with the help of the File Transfer Protocol. It is noteworthy to mention that File Transfer Protocol provides a client-server model which use dispersed networks for both the server and the client. Furthermore, the need for database server software is also important along with File Transfer Protocol. One of the most effective used database software in Amazon is Oracle. Majority of the Amazon systems contain windows operating system, hence the use of Oracle software is essential to make create a database and maintain records. Amazon is using the Oracle database server in order to solve the problems of information management as it stores and retrieves related information (O'Leary, 2000).

**Client-side hardware requirements**

 It is important to meet the client-side hardware requirements to ensure the loyalty of customers. Companies are well aware of the fact that the majority of client-side hardware requirements should be met with their database. It is often observed that the client-side hardware requirement does not require major complications. Customers or consumers only need to have the latest version of a specific web browser that allows them to utilize the services of a particular company. In the considered case of Amazon, it is necessary for clients or consumers to have internet access on any specific device. Laptops, computers, and smartphones are usually required by a client to access the services of Amazon. Recommended hardware requirements from Amazon required a client to have a 3GHZ minimum quad-core processors along with minimum 2 GB compatible video card or DirectX 11. System of a client also should have a minimum of 10 GB free disk space along with 8 GB RAM. The Internet connection speed of more than 1000Kbits/sec is usually required to stream media on Amazon. If these hardware requirements are fulfilled, then a client can easily access Amazon from his/her particular device.

**Client-side software requirements**

 It is notable to mention that client-side software requirements are easily accessible as compared to client-side hardware requirements. Official website of Amazon can be accessed from any web browser which supports HTML5. Keeping in mind the requirement of HTML5, it is obvious that the client can access the official site of Amazon from Opera, Internet Explorer, Mozilla Firefox, or Google Chrome. Media streaming can be accessed with the help of Mac OS 10.7 or newer operating system. Such requirements are very basic for clients and it proved that one can easily access Amazon without paying a lot for a more compatible system.

**Analysis of competitive advantage**

 Technology is a critical strength of major organizations in the world. Amazon is one of these major organizations that managed a higher degree of customer convenience with its advancement of technology. In the ear online retailer, Amazon enabled itself to control a major portion of the market due to its efficient web-based system. Effective use of information system through advanced technical software and hardware helped Amazon to attain a better position in the entire world. Wal-Mart is one of the major competitors of Amazon in the field of an online retailer. Fortunately, Amazon managed to maintain loyal customers with appealing products and reasonable prices. It is highly important for a retail company to manage its relationship with suppliers in an effective manner to fulfill the requirements of clients. The efficient staff helped Amazon to keep influence over suppliers, hence it enabled Amazon to keep prices moderate than its competitors. Comprehensive web-based information system allows its customers to manage and receive their order through online shipping. Cloud computing allows the customers of Amazon to access and manage various products through any potential device such as computer, laptops, or smartphone (Aljabre, 2012). Cloud computing by Amazon web-based information system enhances the services provides to the consumers along with their efficiency. Cloud computing provides a valuable competitive advantage to Amazon as compared to other online retailers as one can place their order via a single touch. Web-based information system of Amazon also provides the importance of data centralization. Data centralization is a plus point for Amazon as it saves a major portion of time and energy that can be utilized in other potential job processes. Amazon is also getting a significant advantage in terms of free clouding storage for their systems.

**Recommendations for Improvement**

 Improvement in the information system is highly important for an organization. In the considered case of Amazon, it is essential to improve the bandwidth limit to utilize the cloud computing process completely. Amazon is widely used among various nations of the world, which can reduce the quality of cloud computing connection. Therefore, it is recommended to made different adjacent platforms for customers to limit the complications of affected quality of cloud computing connection.

**Conclusion**

 In a nutshell, Amazon has an efficient web-based information system to deliver information and services with its potential clients. The use of Amazon EC2 is highly profitable for Amazon as it offers a dependable environment with fast speed to access the Microsoft Web Platform in an effective manner. Using databases such as Oracles provide a competitive advantage to Amazon to create a database and maintain records.

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