File System Evolution

Name

School or Institution Name (University at Place or Town, State)

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In the world of information technology, the words "data" and "information" are used interchangeably, but there is a difference between their actual meanings. Data can be anything such as a string of random characters or real-world figures that may mean nothing to a human being unless organized (Coronel & Morris, 2016). Whereas, the information is regarded as an assembled form of data that is meaningful and understandable by human beings. Most straightforwardly, a computer can be considered as a machine that operates on data and transforms it into useful information.

With the advancement in science and technology along with manipulating data computers were required to store the data as well in their memory. Storing data in computer memory for later retrieval was achieved by the system known as a file system because the data chunks in computer systems are known as files. Earlier file systems were based on sequential file storage techniques such as storing files on a magnetic disk in ordered chunks (Saur, Dumitraş, & Hicks, 2016). Those file systems were successful at that time because computers were designed to run only a specific application only. When computer systems were able to run multiple applications, then complex file systems such as file allocation table techniques were devised to store data on metallic disks.

Eventually, with the evolution of the computer networks, the file systems were not only limited to a single computer, but it was required to be shared on a network of computers. To accomplish the task modern file systems such as NTFS were designed and implemented. To overcome the challenges of file systems databases systems were designed (Varakin, Gal, & Katz, 2016). Database systems removed the deficiencies of typical file systems by providing relational capabilities with different attributes of files. Since then relational database systems played a vital role in file management systems. They made the relational retrieval of information from an extensive database faster and more efficient.

References

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