Systematic Review of Distributed File System

S.L. Abdul-Haleem

Department of Mathematical Sciences, Faculty of Applied Sciences, South Eastern University of Sri Lanka
Corresponding Author: ahaleemsl@gmail.com

Recently, with the rapid development of cloud and distributed systems (DS); the demand of supporting file system was in physically distributed environment. A user may wish to make his actions contingent upon information from a remote site, or may wish to update remote information. Normally Universal Naming Convention used to share the server based resources that have syntax like \\serversname\sharedname' Most frequently such resources are spread among the organization. Sometimes the physical movement of a user may require his data to be accessible elsewhere may result the denial of file access. Omitting this problem we should update everywhere. But this is an operational nightmare. The power of distributed computing can clearly be seen in some of the most ubiquitous of modern applications: the Internet search engines. These use massive amounts of distributed computing to discover and index as much of the Web as possible There have been many projects focused on network computing that have designed and implemented distributed file systems(DFS) with different architectures and functionalities. The DFS is one of the most important and widely used forms of shared permanent storage. It is to allow users of physically distributed computers to share data and storage resources by using a common file system but it's to run as a single system. In this paper, This systematic literature review were carried out to develop a comprehensive nomenclature for describing distributed file system architectures and use this nomenclature to review existing distributed file system implementations in very large-scale network computing systems such as Grids, Search Engines, etc. Based on the above nomenclature the features, its advantages and disadvantages of each DFS are outlined which enables to select an appropriate one according to their needs. Regardless of the specific technical direction taken by distributed file systems in the next decade, there is little doubt that it will be an area of considerable ferment in industry and academics.

Keywords: Distributed File System, Issues in DFS, DFS architecture & nomenclature.