



Cloud computing open source systems: A comparative analysis Study



It uses the term cloud initially to point to the Internet, networks, where custom schemes that a prototype of a cloud is used to represent the transfer of data from data centers to the final location on the other side of the cloud. The idea of programs as services came when "John McCarthy, Stanford University Professor" express on the idea by saying " computing may be managed to become a public service sometimes", where that technology of sharing time may lead to future of selling computational energy and even applications as a service through a business model, So this idea actually have great popularity in the late 1960s, but faded away in the mid-1970s when it became apparent that the modern technology on information technology is capable of maintaining This form of future computing. But this idea recently returned to become a term common in technological departments and institutions in the present.

Cloud computing has emerged recently again as one of the methods of computing, where providing computer resources as services, and allow users to access them via the Internet (cloud), without the need to acquire knowledge, or expertise, or even control of infrastructure that supports these services. Cloud Computing can also be seen as a general concept including software as a service, and other modern technical trends in the world involved in the idea of relying on the Internet for the computational needs of users.

In order to recognize researchers and scientists on the Cloud computing infrastructure and services provided by them -we must learn open source Cloud computing systems, so this study concentrate on the definitions of cloud computing, its history and development, and the definition of open source, history and development, and the relationship between cloud computing and open source, then analysis of the latest information about four open source cloud computing systems: Eucalyptus, opennebula, Nimbus, and Open Stack and compared them in terms of their definitions, possibilities and services and all related technology.

Keywords: Cloud Computing , Open Source , Infrastructure As A Service= (IAAS) , Eucalyptus , Opennebula , Nimbus , Open Stack.