WEB SERVICE AGGREGATION OF CLOUD COMPUTING

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ABSTRACT. Web Service aggregation of Cloud Computing is a communication service in which an Web Service aggregation of Cloud Computing message agent finds the nearest Web Service aggregation of Cloud Computing server in a group of recipients. The nearest server is not always the best member of the group. However, no standard routing protocol for Web Service aggregation of Cloud Computing systems exists. This paper presents a sub-optimal scalable Web Service aggregation of Cloud Computing system scheme based on the OSPF (Open shortest path first). The proposed scheme manages the Web Service aggregation of Cloud Computing system members and the Internet routes, respectively. This proposed scheme applies the median problem to provide a scalable system base on OSPF (Open shortest path first) system.

Keywords: Cloud computing, OSPF, Web service aggregation


To implement Web Service of Cloud Computing as a scalable system, the OSPF (Open shortest path first) system is selected. Being recognized as a de facto standard, OSPF is probably the most widely used routing protocol. OSPF is a hierarchical, link-state IGP routing protocol [1,2]. A router running OSPF reports the status information regarding its attached interfaces to all other routers in the same AS. As a result, every router in the same AS will possess the same topology information. The Dijkstra algorithm is then applied to find out shortest paths among routers, based on which routing tables can be updated to reflect the changes in link status and the change in topology [3].

An important feature of OSPF is its ability in dealing with the scalability problem in large size ASs. The operational cost of OSPF, the number of control messages and the execution time of the Dijkstra algorithm, is proportional to the number of participated routers in an AS [4]. To limit the operational cost to a reasonable level and for administrative purposes, OSPF incorporates the concept of hierarchical routing into large-scale ASs to resolve the scalability problem [5].

2. Problem Statement and Preliminaries. How the web service agent can fine the best Web server from cloud computing group? This study focuses on the link-state sub-optimal routing problem for the hierarchical network to minimize the error in OSPF shortest-path computations due to the location of different ABRs. To our best knowledge, in most systems in operation, the appointment of ABR is done manually. This implies that it will be less flexible, less responsive and less robust when facing with possible device failure and topological change [6].