ABSTRACT

Shortest path search algorithm or better known as shortest-path is used to determine the route in a graff. The shortest path search algorithm is often implemented on a network. SDN (Software-Defined Networking) is a computer network approach concept where the control system of the data stream is separated from the hardware. This makes the network easier to manage and more flexible, it is because the SDN a programmable controller system. Routing algorithms to be discussed and used on SDN networks are Dijkstra, Bellman-Ford and Johnson algorithms. The author will perform an algorithmic analysis to determine the complexity of the three algorithms.

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The result of testing each algorithm is, the larger the network the greater the value of convergence and memory required. And also if a good algorithm on a certain topology, does not indicate that the algorithm will be good also on other topologies.

Keywords: SDN, Dijkstra algorithm, Bellman-ford algorithm, Johnson algorithm, algorithm complexity