

ABSTRACT

COMPARISON ANALYSIS OF LOAD BALANCE WEB SERVER USING HAPROXY WITH ROUND-ROBIN AND LEASTCONN ALGORITHM

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The internet has now become a basic need for people living in the digital era. A smooth and strong internet network is considered to provide great benefits, including during the COVID-19 pandemic that hit Indonesia and the world because it was able to help carry out government protocols for working and studying at home. As a result, internet usage has increased because it is used for various purposes. Internet user traffic is increasing the number of web service users is increasing. This causes popular websites to have a high amount of traffic, causing the web server to work heavily. Load balancing aims to provide a fair load to all existing nodes. There are several load balancing algorithms on HAProxy, in this study the algorithms used are round-robin and leastconn. The leastconn algorithm has a better ability in terms of response time in the first test scheme of 1483.41 ms. The round-robin algorithm has a better ability in terms of response time in the second and third test schemes of 3821.67 ms and 3749.17 ms. The average round-robin algorithm CPU performance when tested with 3 schemes is heavier than leastconn by 4.93%. The total error of the round-robin algorithm on average when tested with 3 schemes is less than leastconn by 62. In this study a comparison between load balancing algorithms, the performance of the leastconn algorithm is better when the number of connections and rate is 500/100 and the algorithm's performance is the round-robin algorithm. robin is better when the number of connections and rates are 1000/200 and 1500/300.

Keywords: HAProxy, Internet, Leastconn, Load Balancing, Round-robin