ABSTRACT

IPFS (InterPlanetary File System) is a File system that uses peer-to-peer methods of communication and sharing hypermedia in a distributed File system. In its implementation IPFS will be placed on a virtualization resource model, using an operating system in which there is a system mechanism using NFS (Network File System). NFS will connect IPFS storage to the operating system on other virtualization resources by mounting between the two operating systems. This research has a reference in the form of testing of a program of the cytoem process involving IPFS and NFS in the process will be seen if data integrity is maintained as well as how the value of Quality of Service based on the mechanisms executed . Testing on the system has a varied file size to be used in the implementation of the Add file and get files connected to a peers over the Internet. Testing was conducted to obtain the system properties on the Quality of Service aspects, such as time, throughput, delay, processor and memory as long as the system runs. The load of files to be used varies to get the performance data of the system process used. Testing is conducted in the form of experiments on the obtained data and made the average value of each load so that it gets the correct center value to know the nature of the virtualization system to the load that has been given. The result of testing the scenario states that in the IPFS add function will give the identity of the same hash information when performing uploads on different nodes with the same file and the Get IPFS function will return the same hash value as well According to the files taken. For the result of QoS testing the value of throughput, delay, packet loss based on 15 types of load files are generating fluctuating value but based on standard TIPHON The resulting value has a very good range to bad.

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