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Abstract
We built a cluster network file system based on parallel virtual file system and Linux virtual server. We do the experiment with different number of nodes, varying number of requirements and altering size of files. We analyze the factors that influence the performance of system and prove with the experimental results. The results of the research pointed out that the cluster network file system based on parallel virtual file system and Linux virtual server is really suitable for many people to read the file of the same size at the same time.

We conclude that there are three methods to promote the performance of the parallel virtual file system: (1) Increase the reading speed of hard disk (2) Increase the transmission speed of the network (3) Increase the power of CPU. For the Linux virtual server with the parallel virtual file system, there are five methods to enhance the system performance. (1) Increase the reading speed of hard disk (2) Increase the transmission speed of the network (3) Increase the ability of CPU (4) Avoid both the compute node and the I/O node on the same node (5) Increase the power of compute node. But the system has the bottleneck when the transmission rate of network or disk access rate reaches his saturation state.
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