A STUDY ON IMPLEMENTATION OF IDLE NETWORK MEMORY VIRTUALIZATION FOR CLOUD

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Abstract

The general trends now in computing environment is that the merging of cluster and networking technologies combining the resources in an integrated hierarchical fashion as thus offering dramatic performance improvement with the emergence cloud computing. Many tools are being developed to make use of these resources. The ever-evolving cloud environment has a very rich pool of resources with one of the significant yet to be used is the memory in idle workstations. This paper, provide the reasons why the idle network memory should be utilized. Some comparative studies were done on other applications that have successfully utilized the idle network memory. Then we provide a design methodology that proves the significant of utilizing this memory. The following questions were answered. First, how would an idle workstation been chosen from the list maintained by a server? Second, how many types of clients are supported by the tool? Third, what happen when the clients suddenly turn busy again when they are hosting guest data? Fourth, in which time interval that most of the machines in the network are expected to be idle? Finally, we justify the objectives by using our collected data. The main aim is to indicate the best time the network memory can be recruited for hosting guest data and establish the usage of idle network memory is worth the effort. Finally, we tested the decision making part of the server using different scenarios and the server seems to respond accordingly in monitoring the network memory.

Keywords: Idle network memory, Remote memory, Memory virtualization, Cloud computing