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A Dirty Page Migration Method in Process of Memory Migration Based on Pre-copy Technology

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Abstract : This article investigates the challenges in memory migration during the live migration of virtual machines. We found three challenges probably existing in pre-copy technology. One of the main challenges is the challenge of downtime migration. Decrease the downtime could promise the normal work for a virtual machine. Although pre-copy technology is greatly decreasing the downtime, we still need to shut down the machine in order to finish the last round of data transfer. This paper provides an optimization scheme for the problems existing in pro-copy technology, mainly the optimization of the dirty page migration mechanism. The typical pre-copy technology copy n-1th's dirty pages in nth turn. However, our idea is to create a double iteration method to solve this problem.

Keywords : virtual machine, pre-copy technology, memory migration process, downtime, dirty pages migration method
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