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(54) Title: MEMORY DATA MIGRATION METHOD AND RELATED DEVICE

(54) 发明名称: 内存数据迁移方法和相关设备

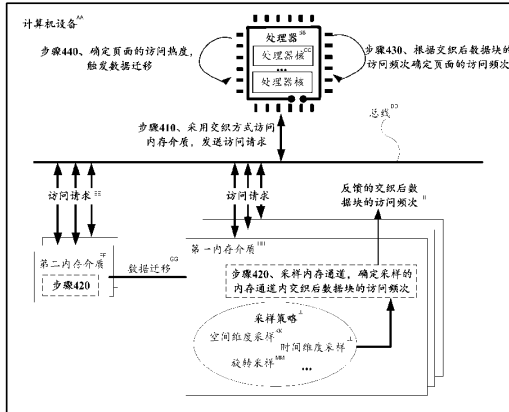


图 4

410 Access a memory medium in an interleaving mode, and send an access request
420 Sample memory channels to determine access frequency of an interleaved data block within the sampled memory channels
430 Determine the access frequency of a page on the basis of the access frequency of an interleaved data block
440 Determine access popularity of the page, and trigger data migration
AA Computer device
BB Processor
CC Processor core
DD Bus
EE Access request
FF Second memory medium
GG Data migration
HH First memory medium
II Feedback access frequency of the interleaved data block
JJ Sampling strategy
KK Spatial dimension sampling
LL Temporal dimension sampling
MM Rotating sampling

(57) Abstract: Disclosed are a memory data migration method and a related device, relating to the field of computers. The method comprises: in a scenario where a processor of a computer device accesses a memory medium in an interleaving mode, multiple memory channels are sampled according to a sampling strategy, and access frequency of a page where an interleaved data block is located in the memory medium is determined according to the access frequency of the interleaved data block in the sampled memory channel, so that access popularity of the page is determined according to the access frequency of the page, and data migration is triggered according to the access popularity. Total access frequency of the page is determined on the basis of partial access frequency of the page, the accuracy of the access frequency of the page where the interleaved data block is located is improved, and statistical data volume of the access frequency of the page is reduced, so that the processor can obtain the access frequency of the page as soon as possible, and when the data migration is triggered according to the access popularity of the page, data processing rate by the system is improved, and time

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本国际公布:
— 包括国际检索报告(条约第21条(3))。
delay of data processing is reduced.

(57) 摘要: 公开了内存数据迁移方法和相关设备, 涉及计算机领域。方法包括在计算机设备中处理器采用交织方式访问内存介质场景下, 根据采样策略对多个内存通道进行采样, 根据采样的内存通道内交织后数据块的访问频次确定内存介质中交织后数据块所在页面的访问频次, 以便于根据页面的访问频次确定页面的访问热度, 根据访问热度触发数据迁移。基于页面的部分访问频次确定页面的全部访问频次, 提升了交织后数据块所在页面的访问频次的准确性, 又减少了页面的访问频次的统计数据量, 使得处理器能够尽可能快地获取到页面的访问频次, 依据页面的访问热度触发数据迁移时, 提高系统的数据处理速度, 以及降低数据处理时延。