

(12) 按照专利合作条约所公布的国际申请

(19) 世界知识产权组织
国际局

(43) 国际公布日
2024 年 10 月 3 日 (03.10.2024)



(10) 国际公布号
WO 2024/199240 A1

(51) 国际专利分类号:
G06F 3/06 (2006.01)

(21) 国际申请号: PCT/CN2024/083897

(22) 国际申请日: 2024 年 3 月 26 日 (26.03.2024)

(25) 申请语言: 中文

(26) 公布语言: 中文

(30) 优先权:
202310379809.9 2023年3月31日 (31.03.2023) CN

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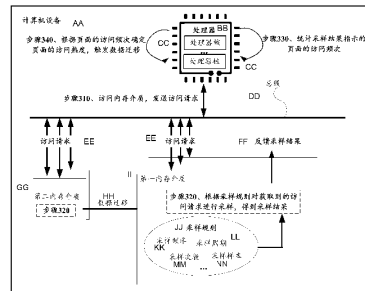
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(54) Title: MEMORY DATA MIGRATION METHOD, RELATED APPARATUS, AND COMPUTER DEVICE

(54) 发明名称: 内存数据迁移方法、相关装置及计算机设备

(57) Abstract: Disclosed are a memory data migration method, a related device, and a computer device, relating to the field of computers. The method comprises: sampling multiple access requests according to a periodic sampling mode indicated by a sampling rule, and counting access frequency of a page indicated by a sampling result, so as to determine access popularity of the page according to the access frequency of the page and trigger data migration according to the access popularity. Due to the fact that the access requests are sampled periodically on the basis of the sampling rule to guarantee statistical accuracy of the access frequency of the page and reduce statistical data volume of the access frequency of the page, a processor can obtain the access frequency of the page as quickly as possible, and when the data migration is triggered according to the access popularity of the page, hot data can migrate to a near-end memory, and cold data can migrate to a far-end memory, so that the processor can obtain frequently accessed data from the near-end memory as quickly as possible, data processing speed of the system can be increased, and time delay of the data processing can be reduced.

(57) 摘要: 公开了内存数据迁移方法、相关装置及计算机设备, 涉及计算机领域。方法包括根据采样规则指示的周期性采样方式对多个访问请求进行采样, 统计采样结果指示的页面的访问频次, 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。由于基于采样规则对访问请求进行周期性多种方式采样, 确保页面的访问频次的统计准确性, 又减少页面的访问频次的统计数据量, 使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, 可以将热数据迁移到近端内存, 将冷数据迁移到远端内存, 使处理器可以尽可能快地从近端内存获取频繁访问的数据, 提高系统的数据处理速度, 以及降低数据处理时延。



310 Access a memory medium and send access request
320 Sample the acquired access requests according to a sampling rule to obtain a sampling result
330 Count access frequency of a page indicated by the statistical sampling result
340 Determine access popularity of the page according to the access frequency of the page, and trigger data migration

AA Computer device
BB Processor
CC Processor core
DD Bus
EE Access request
FF Feedback sampling result
GG Second memory medium
HH First memory medium
II Sampling rule
JJ Sampling frequency
KK Sampling period
MM Sampling times
NN Samples

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(81) 指定国(除另有指明, 要求每一种可提供的国家保护): AE, AG, AL, AM, AO, AT, AU, AZ, BA, BB, BG, BH, BN, BR, BW, BY, BZ, CA, CH, CL, CN, CO, CR, CU, CV, CZ, DE, DJ, DK, DM, DO, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, GT, HN, HR, HU, ID, IL, IN, IQ, IR, IS, IT, JM, JO, JP, KE, KG, KH, KN, KP, KR, KW, KZ, LA, LC, LK, LR, LS, LU, LY, MA, MD, MG, MK, MN, MU, MW, MX, MY, MZ, NA, NG, NI, NO, NZ, OM, PA, PE, PG, PH, PL, PT, QA, RO, RS, RU, RW, SA, SC, SD, SE, SG, SK, SL, ST, SV, SY, TH, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, WS, ZA, ZM, ZW。

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本国际公布:

— 包括国际检索报告(条约第21条(3))。