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(54) **Title:** TRANSACTION PROCESSING METHOD AND APPARATUS FOR DATABASE SYSTEM, AND ELECTRONIC DEVICE, COMPUTER READABLE STORAGE MEDIUM, AND COMPUTER PROGRAM PRODUCT

(54) **发明名称:** 一种数据库系统的事务处理方法、装置、电子设备、计算机可读存储介质及计算机程序产品

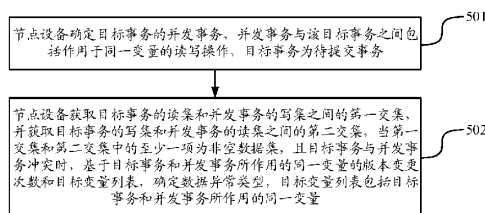


图 5

- 501 A node device determines a concurrent transaction of a target transaction, the concurrent transaction and the target transaction comprising read and write operations acting on a same variable, and the target transaction being a transaction to be submitted
- 502 The node device obtains a first intersection of a read set of the target transaction and a write set of the concurrent transaction, and obtains a second intersection of a write set of the target transaction and a read set of the concurrent transaction; and when at least one of the first intersection and the second intersection is a non-empty data set and the target transaction conflicts with the concurrent transaction, a data exception type is determined on the basis of the number of version changes of the same variable on which the target transaction and the concurrent transaction act and a target variable list, the target variable list comprising the same variable on which the target transaction and the concurrent transaction act

(57) **Abstract:** A transaction processing method and apparatus for a database system, and an electronic device, a computer readable storage medium, and a computer program product. The transaction processing method comprises: determining a concurrent transaction of a target transaction, the concurrent transaction and the target transaction comprising read and write operations acting on a same variable, and the target transaction being a transaction to be submitted (S501); obtaining a first intersection of a read set of the target transaction and a write set of the concurrent transaction, and obtaining a second intersection of a write set of the target transaction and a read set of the concurrent transaction; and when at least one of the first intersection and the second intersection is a non-empty data set and the target transaction conflicts with the concurrent transaction, determining a data exception type on the basis of the number of version changes of the same variable on which the target transaction and the concurrent transaction act and a target variable list, the target variable list comprising the same variable on which the target transaction and the concurrent transaction act (S502).

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本国际公布：

— 包括国际检索报告(条约第21条(3))。

(57) 摘要：一种数据库系统的事务处理方法、装置、电子设备、计算机可读存储介质及计算机程序产品。事务处理方法包括：确定目标事务的并发事务，并发事务与目标事务之间包括作用于同一变量的读写操作，目标事务为待提交事务（S501）；获取目标事务的读集和并发事务的写集之间的第一交集，并获取目标事务的写集和并发事务的读集之间的第二交集；当第一交集和第二交集中的至少一项为非空数据集、且目标事务与并发事务冲突时，基于目标事务和并发事务所作用的同一变量的版本变更次数和目标变量列表，确定数据异常类型，目标变量列表包括目标事务和并发事务所作用的同一变量（S502）。