

基于 DDS 网络中间件的持久化数据管理问题研究

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摘 要: DDS 网络中间件采用以数据为中心的实时发布/订阅通信模型, 具有无中心、数据多备份的特点, 因此, 给通信数据的管理带来了完整性和一致性的问题. 如何高效集约地管理和维护数据, 处理好负载分配问题, 使多个通信结点间保持历史数据一致, 成为 DDS 网络中间件研发设计中必须面临的挑战. 对此从 DDS 使用的通信模型入手, 研究分析了在此种模型下引发的持久化数据管理问题, 并给出了相应的解决方案.

关键词: DDS; 中间件; 发布-订阅; 持久化数据; 一致性; 负载分配

Research on Persistent Data Management Problems

Based on DDS Network Middleware

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Abstract: DDS network middleware uses data-centric real-time publish / subscribe communication model has the characteristics of non- center and multi-replica, therefore, it brings integrity and consistency challenges for communication data management. In order to efficiently manage and maintain data intensive, and handle load balancing, a plurality of communication between nodes consistent with historical data for real-time publish/subscribe network middleware research design must face the challenge. This paper starts from the communication model used by the DDS and then analyzes persistent data management problems caused by such model, given a kind of appropriate solutions. [JP]

Key words: DDS; middleware ; pub-sub; persistent data; consistency; load balancing

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