

عنوان مقاله:

Modeling QoS Based service-demand matching hyper-network in Cloud manufacturing

محل انتشار:

هجدهمین کنفرانس بین المللی مهندسی صنایع (سال: 1400)

تعداد صفحات اصل مقاله: 9

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خلاصه مقاله:

Cloud manufacturing (CMfg) is a new manufacturing paradigm which enables the manufacturing enterprises to respond to distributed demands all over the world by the use of current resources and capacities. By considering service-oriented concepts in the manufacturing environment, it integrates distributed resources, transfers them to the manufacturing services and, fulfills the requests. In CMfg, providers, demanders, and operators are three main participants which can be modeled as the main members of an integrated hyper-network. In this hyper-network, the complex demand nodes divides into the simple tasks and some relations among them. Then, in the matching process, service nodes are assigned to the tasks by considering the functional and non-functional requirements. This matching process is one of the most important topics in service-oriented manufacturing literature. Resources capacities, their performance, and customer requirement, are some main factors affecting customers' decisions regarding to the method of acquiring services, like roughness, accuracy, response time, cost, etc. This issue has been approached in the literature as quality of service (QoS) parameters. In thispaper, the architecture of a cloud manufacturing (CMfg) hyper-network-based model is analyzed by considering some QoS parameters. The practicability of the model is verified through a case study. The results represent decision scenarios for the customers to choose their manufacturing process services by the use of weighting methods.

کلمات کلیدی:

.Cloud manufacturing, hyper-network, service-demand matching, QoS

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