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The Load Balancing Algorithm for the Star Interconnection Network

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Abstract : The star network is one of the promising interconnection networks for future high speed parallel computers, it is expected to be one of the future-generation networks. The star network is both edge and vertex symmetry, it was shown to have many gorgeous topological proprieties also it is owns hierarchical structure framework. Although much of the research work has been done on this promising network in literature, it still suffers from having enough algorithms for load balancing problem. In this paper we try to work on this issue by investigating and proposing an efficient algorithm for load balancing problem for the star network. The proposed algorithm is called Star Clustered Dimension Exchange Method SCDEM to be implemented on the star network. The proposed algorithm is based on the Clustered Dimension Exchange Method (CDEM). The SCDEM algorithm is shown to be efficient in redistributing the load balancing as evenly as possible among all nodes of different factor networks.

Keywords : load balancing, star network, interconnection networks, algorithm
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