

Number of stage implication towards multistage interconnection network reliability

ABSTRACT

The reliable operation of interconnection networks is main concern in system performance. Reliable operation in multistage interconnection networks depend on their topology, network configuration and number of stages in the system. Performance improvement and reliability increasing are two major attributes in multistage interconnection network topology. As the number of stage and system complexity increase the reliability performance becomes an important issues. In this paper we observe two topological of multistage interconnection network called the shuffle exchange network and gamma network to investigate the effect on number of stage in multistage interconnection network reliability. Three types of stages namely as basic stage, lesser stage and extra stage have been compared and the results shows that lesser stage provide highest reliability performance among all topological measured in this paper.

Keyword: Gamma; Multistage interconnection network; Number of stage; Reliability; Shuffle exchange network