Grid Computing is intended to provide resource sharing and solve huge amount of complicated problems. In Multicluster Systems, jobs may require co-allocation, that is, the simultaneous allocation of resources such as processors in multiple clusters. Such jobs may have low runtimes because they access more number of resources. In processor co-allocation, advanced processor reservation is needed. But this becomes one of the challenges in processor co-allocation. Advanced Processor Reservation Algorithm based on the priority of jobs using the usage of memory is implemented in this paper. The results indicate that the overall performance of the algorithm is increased by satisfying large number of reservation requests using the priority.

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**Index Terms**

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