ABSTRACT OF THE DISCLOSURE (Fig. 1)

MULTI-PROCESSOR SYSTEM, DISK CONTROLLER USING THE SAME AND NONDISRUPTIVE MAINTENANCE METHOD THEREOF

A plurality of processors of a disk controller are divided into a plurality of clusters. In a normal operation, data is transferred between a host computer and a disk drive in a cluster non-restricted mode in which a job can be distributedly processed among processors belonging to any clusters without regard to cluster. In response to a program version-up command from an operator, the cluster mode is shifted from the cluster non-restricted mode to a cluster restricted mode in which the cluster to which processors which are permitted to distributedly process one job belong is restricted. When the shifting to the cluster restricted mode is completed, one cluster is selected as a cluster to be maintained and the programs to be executed by the processors belonging to the cluster to be maintained are versioned up by new programs. When the programs of all processors of the cluster to be maintained have been versioned up, the acceptance of a new job by the processors belonging to the cluster to be maintained is resumed and the execution of the new programs is started. The selection of the cluster, the version-up of the programs and the start of the execution of the new programs are repeated sequentially for all clusters. When the version-up of the programs of all processors is completed, the cluster mode is returned from the cluster restricted mode to the cluster non-restricted mode.

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