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Identification

The segment "process_info"
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Purpose

Certain information maintained by modules in the hardcore ring must be available to users in all rings. This section describes the mechanism by which this information is made available.

Discussion

In general, protection considerations require that data bases maintained by hardcore ring procedures not be available to the user. However, there are certain items in such data bases which the user must be able to access. For this reason, the process directory of every process contains segment process_info. This data segment is writable in the hardcore ring only but is readable in all rings. It is created at the time of the creation of the process and is suitably initialized at that time. Hardcore ring procedures have the obligation to see that this segment is kept up to date. The remainder of this section describes the items which appear in this segment. At the end of this section are the PL/I declarations for these items.

1. Processid. This item is the unique identifier which identifies the current process in Multics. It is guaranteed that no other process in any Multics ever will have the same processid. The format of a processid is described in BJ.7.03. This item will be identical to the information stored at pds\$processid, as described in BJ.1.04.
2. Process group id. This character string is used to identify the current process group. It is set at process creation time and is the same as the item used by the file system in connection with access control lists and by others. See Section BQ.0 for more information. This item will be the same as the item at pdf\$process_group_id, as described in BJ.1.07.

3. Current ring number. This is the number of the protection ring in which the process is currently executing. It is the same as pds\$cur_ring, as described in BJ.1.04.

Declarations

Following are suitable PL/I declarations for the items in process_info.

```
dc1 process_info$processid bit(36) ext;  
dc1 1 process_info$process_group_id ext,  
    2 name char(24),  
    2 project char(24),  
    2 instance_tag char(2);  
dc1 process_info$cur_ring fixed ext;
```