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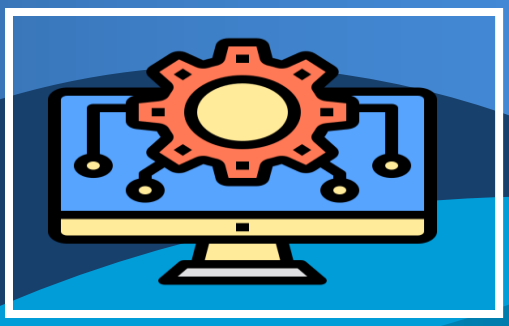
S_LINUX_03: Page Replacement Policies



Page replacement policies are algorithms used by operating systems to decide which page to evict from physical memory (RAM) when the memory is full and a new page needs to be brought in from the virtual memory (disk). This is an important aspect of virtual memory management and is necessary when the physical memory is limited.

Some common page replacement policies are:

Least Recently Used (LRU): This policy evicts the page that has not been accessed for the longest time.

First-In, First-Out (FIFO): This policy evicts the page that was brought into memory first.

Clock or Second-Chance: This policy maintains a circular list of pages and evicts the first page that has not been recently accessed.

Least-Frequently Used (LFU): This policy evicts the page that has been accessed the least number of times.

Most-Frequently Used (MFU): This policy evicts the page that has been accessed the most number of times.

Random: This policy selects a random page to evict.

Each page replacement policy has its own advantages and disadvantages. The choice of page replacement policy depends on the specific needs of the system and the workload it is expected to handle. Operating systems may use different policies in different situations or allow the user to choose the policy they prefer.