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What is difference between Cache and Buffer?

Both Buffer and Cache are temporary storage areas which differs in many different ways. It differs in ways like how they are used, where they are used, delivering different speed and different purpose.

Buffer

In layman term, A buffer is a type of storage which has to be written on disk. Buffers are disk block representation of the data that is stored under page caches using paging algorithm.[2] So, when an process is executing it stores data in buffer and then frees resources to perform other tasks while process execution reads data from buffer and perform whole operation. For an example, We are printing the documents. We send document to printer and perform printing operation. While executing this process, document metadata is stored in buffer which in addition is stored in page cache. So, it will free the resources of storage which can be used in other processes while when printing is executing, it takes data from buffer and executes it.[2]

Cache

In layman term, A cache is a type of storage which is something that has already been stored on disk and stored for later use for high performance. A cache is a part of memory which transparently stores data so that future requests for that data can be served faster.[2] To get high speed, cache is made of static ram rather than dynamic ram since dynamic ram is used in other parts which is slower. The data that is stored within a cache might be values that have been computed earlier or duplicates of original values that are stored elsewhere in the disk. [2]

Difference

1. Cache is a high-speed storage area while a buffer is a normal storage area on ram for temporary storage. [1]

2. Cache is made from static ram which is faster than the slower dynamic ram used for a buffer.[1]

3. The buffer is mostly used for input/output processes while the cache is used during reading and writing processes from the disk.[1]

4. Cache can also be a section of the disk while a buffer is only a section of the ram.[1]

5. A buffer can be used in keyboards to edit typing mistakes while the cache cannot.[1]

References

[1] Zablon. "Difference Between." Difference Between Similar Terms and Objects, July 5, 2011. http://www.differencebetween.net/technology/hardware-technology/difference-between-cache-and-buffer/.

[2] James.XuJames.Xu. "What Is the Difference between Buffer vs Cache Memory?" Stack Overflow, April 1, 1961. https://stackoverflow.com/questions/6345020/what-is-the-difference-between-buffer-vs-cache-memory.