

4.3.7 Performance

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About

Performance is the ability of a system to accomplish the required functionality at or under the required specification limits. The limits are generally provided relative to time (i.e., so-many transactions per second, so-many updates per millisecond, so-many recorded entries per second, etc.) The specifications can also include accuracy, precision, precision or even efficiency of other dependent systems as requirements. The following are some examples of [performance specifications](#):

- Time for a data-entry window to appear
- Number of units produced in a given amount of time
- Time to react to a given event
- Amount of energy required to perform an activity
- The amount of computing resources required (i.e., [Central Processing Unit \(CPU\)](#), [Random Access Memory \(RAM\)](#), [Read-Only Memory \(ROM\)](#), [Storage Device](#), [Bandwidth](#), etc)
- Time to process a computational task such as compression-decompression, [encryption](#)-decryption, generate a [Unique ID \(UID\)](#), serialize-deserialize, calculate an area, calculate a new trajectory, etc.
- Time to process a storage task such as store records, index the records, retrieve records, etc.
- Time to access memory or cache such as direct memory access(DMA), the hit ratio
- Time to transfer data between components of a computer such as from memory to [Central Processing Unit \(CPU\)](#), from CPU to graphics card, etc

Performance can also be viewed from the following perspectives:

- [4.3.7.1 Platform Performance](#)
- [4.3.7.2 Application Performance](#)
- [4.3.7.3 Network Performance](#)

DIDO Specifics

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- TBD - to be added/expanded in future revisions of the DIDO RA*

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