Providing Deterministic Quality of Services (QoS) of Storage System

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**Abstract:** A system in accordance with an embodiment of the invention provides a guaranteed minimum disk resource time allocation to each of a set of concurrent targets. The resource time allocated to each target is defined by Quality of Service (QoS) objectives. QoS is enforced in one embodiment by keeping the disk access time allocated to a target within a specified range. This is done by controlling, during each scheduling period, the number of requests dispatched by each target to use the disk resource. In this embodiment, the system uses a compensating round-robin scheme; this is a part of the invention. The compensating round-robin scheme guarantees a minimum disk access time per scheduling period to each target. Disk resource capping also can be provided in one embodiment, making the system even more applicable for commercial purposes.