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(54) **Title:** OPTIMIZING COMMUNICATION IN DISTRIBUTED COMPUTING NETWORK

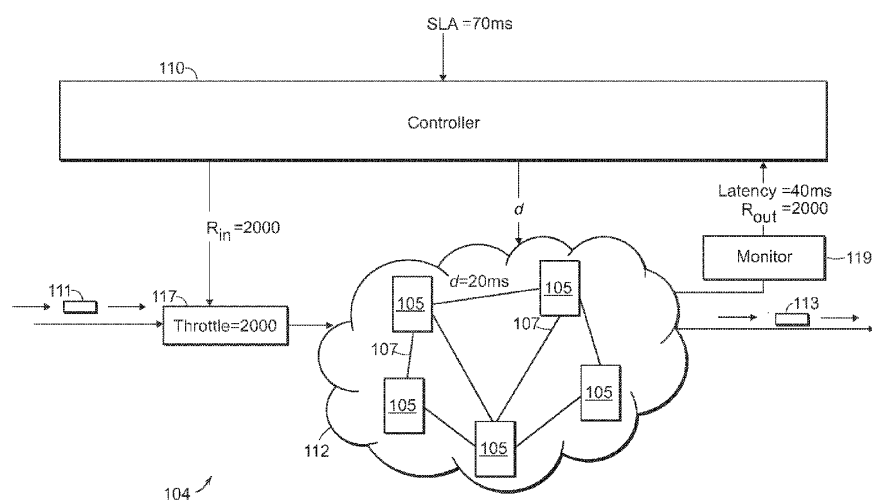


FIG. 4

(57) **Abstract:** A computing system includes a distributed computing cluster including a plurality of computing nodes interconnected by an interconnect network over which the computing nodes of the plurality of computing nodes communicate with each other by passing messages. The computing nodes are configured with a first parameter governing transmissions of messages by the computing nodes over the interconnect network. The computing nodes are configured to accumulate messages for transmission as a group of messages according to the first parameter, and the computing system is configured to limit injections of computing requests into the distributed computing cluster according to a second parameter. A controller is configured to receive at least one predetermined service level requirement and to control a value of the second parameter and a value of the first parameter to control a computational throughput of the distributed computing cluster while complying with the at least one service level requirement.

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