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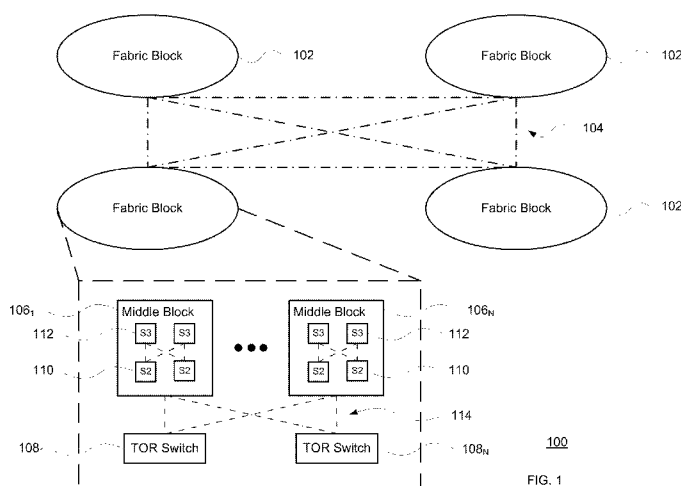
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(57) Abstract: The present disclosure provides for the determination of bandwidth allocation of inter-block traffic in a data center network (100). It employs a number of optimization objectives and a heuristic water-filling strategy to avoid producing unnecessary paths and to avoid determining paths that would be unavailable when actually needed. Allocation may be adjusted incrementally upon node and link failure, for instance to perform only the minimal allocation changes necessary. If demand between a source and a destination cannot be satisfied, a decomposition process may be used to allocate remaining demand. One aspect constructs a graph (700) for route computation based on inter-block topology. Here, the graph (700) initially starts with a highest level of abstraction with each node representing a middle block (106), and gradually reduces the abstraction level to identify paths of mixed abstraction level to satisfy additional demand.