The Service Rate Region Polytope

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In distributed data storage, information is stored across servers with redundancy, in such a way that it can be accessed by various users simultaneously. The set of access requests that a distributed data storage system can support are described by a polytope, that is called the service rate region of the system. The service rate region is a concept established as a measure of the efficiency of a distributed coded system and as a metric to design erasure coded distributed systems. In this talk we give an introduction to the service rate problem for coded distributed storage, focusing on the geometric properties of the service rate region polytope and on their meaning. We conclude by listing possible open problems.

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