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Autore	Kulkarni Santosh
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Nota di contenuto	Introduction -- The Transmission Control Protocol -- Modeling Incast and its Empirical Validation -- Addressing TCP Incast -- Conclusions and Future Work.
Sommario/riassunto	This book addresses the need to improve TCP's performance inside data centers by providing solutions that are both practical and backward compatible with standard TCP versions. The authors approach this challenge first by deriving an analytical model for TCP's performance under typical data center workload traffic. They then discuss some solutions that are designed to improve TCP performance by either proactively detecting network congestion through probabilistic retransmission or by avoiding timeout penalty through dynamic resizing of TCP segments. Experimental results show that each of techniques discussed outperforms standard TCP inside a data center. · Analyz the reasons behind TCP performance slump inside data centers when operating under synchronized workload traffic; · Introduces solutions to TCP performance slump inside data centers that are both practical and backward compatible; · Describes mechanisms that

are responsible for TCP’s reliable data transfer flow control and congestion control.