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Sommario/riassunto

This clearly-written text/reference provides a practical guide to flow-aware networking (FAN), one of the most promising new quality-of-service architectures for the Future Internet. The latest concepts are examined in detail, including coverage of approximate flow-aware networking. The scope and evolution of the debate on network neutrality is also discussed. Topics and features: Provides a broad survey of flow-oriented approaches and solutions based on the concept of flows Presents a range of mechanisms for improving transmission performance of streaming flows under congestion Illustrates how problems caused by congestion may be solved in a multilayer environment, proposing new methods for enhancing transmission in wired-wireless FAN Analyzes aspects of fair transmission in FAN, reviewing algorithms that improve transmission of streaming flows during network failures, and investigating the capabilities of FAN in relation to service differentiation Describes the implementation aspects of the cross-protect router, presenting the implementation suite and the first tests results of the developed prototype Concludes each chapter with review questions, with answers provided at the end of the book Offering valuable information for anyone wanting to better understand the basic principles underlying modern networking technology, the Guide to Flow-Aware Networking is essential reading for network engineers and operators interested in the development of the Internet. The work is also eminently suitable as a supplementary textbook for graduate students of computer science and electrical engineering involved in data communications and networking.