Internet Measurement. Infrastructure, Traffic and Applications

Description: Although the Internet is now a planet-wide communication medium, we have remarkably little quantitative understanding of it. This groundbreaking book provides a comprehensive overview of the important field of Internet Measurement, and includes a first detailed look at three areas:

- measurements of Internet infrastructure: routers, links, network connectivity and bandwidth,
- measurements of traffic on the Internet: packets, bytes, flows, sessions, etc.,
- measurements of various key Internet applications: DNS, Web, Peer-to-Peer, and networked games.

Each area is discussed in depth, covering the challenges faced (such as data availability, data management and statistical issues), the tools and methods that are available to address those challenges, and the state of current knowledge in the area.

In addition, the book contains extensive background material needed for Internet measurement, including overviews of Internet architecture and essential statistical methods. It also covers important emerging areas in Internet measurement: anonymization issues and methods, how measurements can be used for network security, and examples of successful tools and systems currently used for Internet measurement. It is essential reading for practitioners, researchers and analysts of Internet traffic, and students taking advanced Networking, Internet Security or other specialist courses relying on Internet Measurement.

“This book is a gem! Written by two of the leading researchers/practitioners in the field of Internet measurement this book provides readable, thorough and insightful coverage of both the principles and the practice of network measurement. It is a must read for everyone interested in the field.”
- Jim Kurose, Distinguished University Professor, University of Massachusetts

“If you want to measure the Internet, you must read this book.”
- Bruce Maggs, Vice President, Research, Akamai Technologies; Professor, Carnegie Mellon University

“This extraordinary book is a change in the way of viewing the Internet. Highly recommended!”
- Virgílio Almeida, Professor of Computer Science, Federal University of Minas Gerais, Brazil

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