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Descrizione fisica	1 online resource (X, 418 p. 112 illus., 87 illus. in color.)
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Nota di contenuto	Part I: Overview of Fog/Edge Computing -- 1. "Confluence of 4G LTE, 5G, fog, and cloud computing and understanding security issues" -- 2. “An overview of the Edge Computing in Modern Digital Age” -- Part II: Security in Fog/Edge Computing -- 3. "Secure Search and Storage Services in Fog/Edge Computing" -- 4. “Collaborative Intrusion Detection Schemes in Fog-to-Things Computing” -- 5. “On the Feasibility of Byzantine Agreement to Secure Fog/Edge Data Management” -- Part III: Privacy in Fog/Edge Computing.-6. “Privacy Issues in Edge Computing” -- 7. "Privacy-preserving Edge Video Analytics" -- Part IV: Architectural Design in Fog/Edge Computing -- 8. “Vulnerabilities in Fog/Edge Computing from Architectural Perspectives” -- 9. "Security and Intelligent Management for Fog/Edge Computing Resources" -- 10. “Algorithms for NFV-Enabled Multicasting in Mobile Edge Computing” -- 11. “Blockchain-based Security Services for Fog Computing”. Part V: Applications of Fog/Edge Computing -- 12. “Industrial Internet of Things (IIoT) Applications of Edge and Fog Computing: A Review and Future Directions” -- 13. “Security Problems in Edge Computing and Augmented Reality” -- 14. “Towards a Security-aware Deployment of Data Streaming Applications in Fog Computing” -- 15. “Blockchain of Finite-Lifetime Blocks for Edge-IoT Applications”. .
Sommario/riassunto	This book provides the state-of-the-art development on security and privacy for fog/edge computing, together with their system

architectural support and applications. This book is organized into five parts with a total of 15 chapters. Each area corresponds to an important snapshot. The first part of this book presents an overview of fog/edge computing, focusing on its relationship with cloud technology and the future with the use of 5G communication. Several applications of edge computing are discussed. The second part of this book considers several security issues in fog/edge computing, including the secure storage and search services, collaborative intrusion detection method on IoT-fog computing, and the feasibility of deploying Byzantine agreement protocols in untrusted environments. The third part of this book studies the privacy issues in fog/edge computing. It first investigates the unique privacy challenges in fog/edge computing, and then discusses a privacy-preserving framework for the edge-based video analysis, a popular machine learning application on fog/edge. This book also covers the security architectural design of fog/edge computing, including a comprehensive overview of vulnerabilities in fog/edge computing within multiple architectural levels, the security and intelligent management, the implementation of network-function-virtualization-enabled multicasting in part four. It explains how to use the blockchain to realize security services. The last part of this book surveys applications of fog/edge computing, including the fog/edge computing in Industrial IoT, edge-based augmented reality, data streaming in fog/edge computing, and the blockchain-based application for edge-IoT. This book is designed for academics, researchers and government officials, working in the field of fog/edge computing and cloud computing. Practitioners, and business organizations (e.g., executives, system designers, and marketing professionals), who conduct teaching, research, decision making, and designing fog/edge technology will also benefit from this book The content of this book will be particularly useful for advanced-level students studying computer science, computer technology, and information systems, but also applies to students in business, education, and economics, who would benefit from the information, models, and case studies therein.