Wu / Zhang / Gao

Cloud-Network Convergence

This book includes five parts. The first part introduces the foundations and principles of cloud-network convergence, explaining why cloud computing and network infrastructures are evolving into a unified digital infrastructure. The second part examines cloud-centric technologies, including cloud systems, AI infrastructure, and intelligent resource management. The third part focuses on network-centric technologies such as software-defined networking, network function virtualization, data center networks, and cloud-based network control. The fourth part presents advanced directions, including cloud-network operating systems, computing power networks, AI for cloud-network systems, and cloud-network support for AI. The final part discusses standards, implementations, and representative deployment practices. Cloud-network convergence is becoming essential for applications that require low latency, high bandwidth, ubiquitous connectivity, and intelligent coordination across cloud, edge, and network domains. By combining theory, system architecture, standards, and deployment perspectives, this book helps readers understand how converged cloud-network systems are designed, optimized, and operated. This book is intended for graduate students, researchers, engineers, system architects, and technical managers in computer science, cloud computing, networking, telecommunications, and AI infrastructure. It also serves as a reference for practitioners working on distributed cloud systems, edge computing, 5G/6G networks, data center networks, and intelligent networked services.

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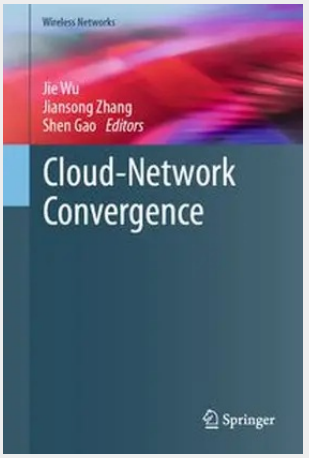

235,39 €
219,99 € (zzgl. MwSt.)

vorbestellbar, Erscheinungstermin ca. Januar 2027

Artikelnummer: 9783032369932
Medium: Buch
ISBN: 978-3-032-36993-2
Verlag: Springer
Erscheinungstermin: 10.01.2027
Sprache(n): Englisch
Auflage: Erscheinungsjahr 2027
Serie: Wireless Networks
Produktform: Gebunden
Format (B x H): 155 x 235 mm

Kundenservice Verlag Dr. Otto Schmidt KG
Neumannstraße 10, 40235 Düsseldorf | kundenservice@otto-schmidt.de | 0221-93738-997 (Inland)