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   Titolo   Edge Computing Resilience : Overcoming Resource Constraints in
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   Nota di bibliografia   Includes bibliographical references.

   Nota di contenuto Chapter 1. Edge Computing -- Chapter 2. Scalability and Fault
                      Tolerance for Real-Time Edge Applications -- Chapter 3. Resource-
                      constrained Offloading in Edge Computing -- Chapter 4. Privacy
                      Preserving Offloading -- Chapter 5. SDN-Based and Energy Aware
                      Offloading -- Chapter 6. Optimization for Edge -- Chapter 7.
                      FutureWork.

   Sommario/riassunto Edge computing has emerged as a powerful technology for efficiently
                      executing tasks by pushing cloud computing capabilities to the edge of
                      the network. This approach significantly improves the quality of
                      services of IoT applications and greatly enhances the performance of
                      resource-constraint edge devices. However, with the explosive growth
                      in users and data generation, low-computing-capability devices often
                      struggle to meet computation demands in time, posing a significant
                      challenge to the success of edge computing. These challenges include
                      latency requirements, low computational power, system heterogeneity,

energy constraints and privacy issues. To address these challenges, it is critical to design robust edge computing systems. This book provides a systematic and comprehensive analysis of edge computing challenges and presents resilient designs and frameworks suitable for real-time edge computing applications. The discussion primarily focuses on overcoming resource constraints in unstable edge computing environments, which is achieved through various concepts and technologies, such as fault handling, optimization and computation offloading. The book is significant to researchers in the field of edge computing, especially in the context of the resource-constrained paradigm, IoT application execution in the edge and fog computing. The book features innovative models and frameworks for processing time-critical, energy-aware and privacy-aware applications. By reading this book, researchers and professionals will gain a deeper understanding of different technologies and frameworks for edge computing and develop an appreciation for edge computing resilience. This resilience makes the edge system robust against frequent system failures for real-time IoT applications. The book provides a foundation for future research in this field and is an essential read for those seeking to advance their knowledge and expertise in edge computing.