Cloud Computing [Principles, Systems and Applications /

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Monografía

This practically-focused text/reference presents a comprehensive overview of the present state of the art in Cloud Computing, and examines the potential for future Cloud and Cloud-related technologies to address specific industrial and research challenges. Compiled as a series of selected papers from leading Cloud researchers, this new edition recognizes the relative maturity of Cloud, as offers contrast to the first edition, and explores both established and emergent principles, techniques, protocols and algorithms involved with the design, development, and management of Cloud-based systems. The text reviews a range of applications and methods for linking Clouds, undertaking data management and scientific data analysis, and addressing requirements both of data analysis and also of management of large scale and complex systems. This new edition also extends into the emergent next generation of mobile telecommunications, relating network function virtualization and mobile edge Cloud Computing, as supports emergence of, for example, Smart Grids and Smart Cities. As with the first edition, emphasis continues to be placed on the four quality-of-service cornerstones of efficiency, scalability, robustness, and security. Topics and features: Introduces the essential technical characteristics and concepts behind the new developments in Cloud Computing, including architectural principles, performance evaluation, and quality of service Provides in-depth coverage of how Clouds can be designed to produce scientific insights and analysis, addressing agility, reproducibility, consistency and scalability, and proposing novel techniques and systems Offers an overview of novel approaches in producing scalable, high performance and decentralized Cloud systems, including P2P and graphs systems, to enable fault tolerant, scalable and high performance data intensive Clouds Presents ideas for federation and interoperability across Clouds, and the use of autonomic computing and other intelligent approaches to self-manage the federated Clouds Includes a Foreword by Dr. Omer F. Rana, Professor of Performance Engineering at Cardiff University, UK This authoritative volume will be especially appealing to researchers and students interested in aspects of Cloud Computing research, implementation and deployment. Professional system architects and developers, as well as technical managers and IT consultants, will also find the work to serve as an invaluable reference

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