1. Record Nr. UNINA9911019503303321

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Titolo	Resource Management on Distributed Systems : Principles and Techniques
Pubbl/distr/stampa	Newark : , : John Wiley & Sons, Incorporated, , 2024 ©2025
ISBN	9781119912958 1119912954 9781119912965 1119912962 9781119912941 1119912946
Edizione	[1st ed.]
Descrizione fisica	1 online resource (323 pages)
Disciplina	004.36
Soggetti	Resource allocation Parallel processing (Electronic computers)
Lingua di pubblicazione	Inglese
Formato	Materiale a stampa
Livello bibliografico	Monografia
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Sommario/riassunto

This book focuses on resource management techniques for distributed systems, which are essential for efficiently utilizing computational resources ranging from clusters to clouds. It explores principles and algorithms necessary for managing resources in parallel and distributed systems, addressing key topics such as process and thread management, grid and cloud computing, and innovative approaches like edge computing. The volume is structured into two parts, with the first discussing the evolution of distributed systems and the second highlighting specific resource management challenges such as allocation, scheduling, auto-scaling, and handling uncertainties in workload. Targeted at students, researchers, and industry professionals, the book aims to provide a comprehensive understanding of resource management to optimize performance and energy consumption in distributed computing environments.