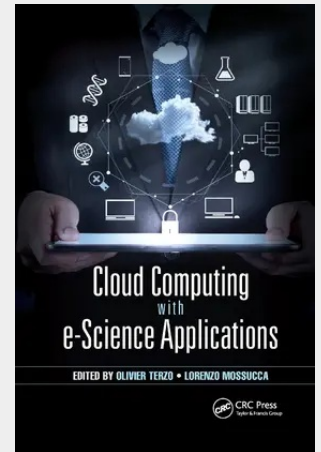


Cloud Computing with E-Science Applications

The amount of data in everyday life has been exploding. This data increase has been especially significant in scientific fields, where substantial amounts of data must be captured, communicated, aggregated, stored, and analyzed. Cloud Computing with e-Science Applications explains how cloud computing can improve data management in data-heavy fields such as bioinformatics, earth science, and computer science. The book begins with an overview of cloud models supplied by the National Institute of Standards and Technology (NIST), and then:

- Discusses the challenges imposed by big data on scientific data infrastructures, including security and trust issues
- Covers vulnerabilities such as data theft or loss, privacy concerns, infected applications, threats in virtualization, and cross-virtual machine attack
- Describes the implementation of workflows in clouds, proposing an architecture composed of two layers—platform and application
- Details infrastructure-as-a-service (IaaS), platform-as-a-service (PaaS), and software-as-a-service (SaaS) solutions based on public, private, and hybrid cloud computing models
- Demonstrates how cloud computing aids in resource control, vertical and horizontal scalability, interoperability, and adaptive scheduling

Featuring significant contributions from research centers, universities, and industries worldwide, Cloud Computing with e-Science Applications presents innovative cloud migration methodologies applicable to a variety of fields where large data sets are produced. The book provides the scientific community with an essential reference for moving applications to the cloud.



50,00 €

46,73 € (zzgl. MwSt.)

Nicht mehr lieferbar

Artikelnummer: 9780367738532

Medium: Buch

ISBN: 978-0-367-73853-2

Verlag: CRC PR INC

Erscheinungstermin: 20.12.2020

Sprache(n): Englisch

Auflage: 1. Auflage 2020

Produktform: Kartoniert

Gewicht: 376 g

Seiten: 320

Format (B x H): 155 x 231 mm

