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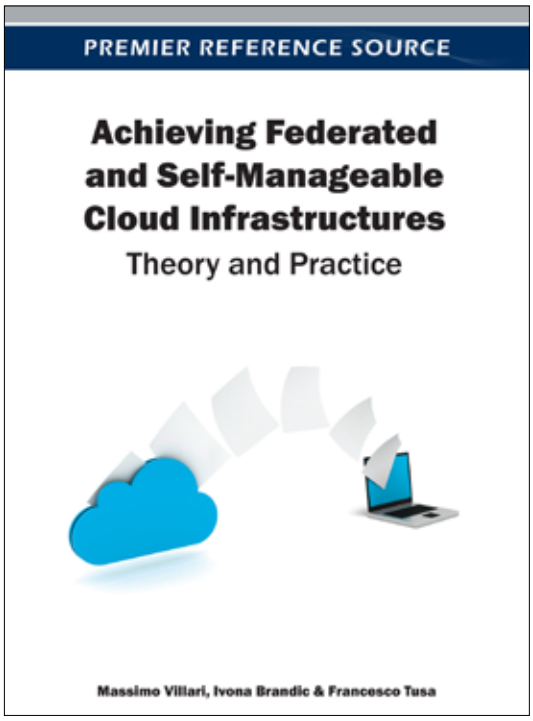
Achieving Federated and Self-Manageable Cloud Infrastructures: Theory and Practice



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Massimo Villari (Università degli Studi di Messina, Italy),
Ivona Brandic (Vienna University of Technology, Austria)
and Francesco Tusa (Università degli Studi di Messina, Italy)

Cloud computing presents a promising approach for implementing scalable information and communications technology systems for private and public, individual, community, and business use.

Achieving Federated and Self-Manageable Cloud Infrastructures: Theory and Practice overviews current developments in cloud computing concepts, architectures, infrastructures and methods, focusing on the needs of small to medium enterprises. The topic of cloud computing is addressed on two levels: the fundamentals of cloud computing and its impact on the IT world; and an analysis of the main issues regarding the cloud federation, autonomic resource management, and efficient market mechanisms, while supplying an overview of the existing solutions able to solve them. This publication is aimed at both enterprise business managers and research and academic audiences alike.

Topics Covered:

- Autonomic Resource Management
- Cloud Computing
- Cloud Federation
- Computing Concepts
- IT Analysis
- Knowledge Management in Clouds
- Market Mechanisms in Clouds
- Remote Applications
- Virtual Environments

Market: This premier publication is essential for all academic and research library reference collections. It is a crucial tool for academicians, researchers, and practitioners and is ideal forclassroom use.

Massimo Villari is an Aggregate Professor in Computer Engineering at the University of Messina, Italy. In 2003 he received his PhD in Computer Science School of Engineering. Since 2006 he is an Aggregate Professor at University of Messina. He is actively working as IT Security and Distributed Systems Analyst in cloud computing, virtualization and Storage for the European Union Projects "RESERVOIR" and "VISION-CLOUD". Previously, he was an academic advisor of STMicroelectronics, help an internship in Cisco Systems, in Sophia Antipolis, and worked on the MPEG4IP and IPv6-NEMO projects. He investigated issues related with user mobility and security, in wireless and ad hoc and sensor networks. He is IEEE member. Currently he is strongly involved on EU Future Internet initiatives, specifically Cloud Computing and Security in Distributed Systems. His main research interests include virtualization, migration, security, federation, and autonomic systems. In UniME is also the Cloud Architect of CLEVER; a cloud middleware aimed at federated clouds.

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Casola Valentina (University of Naples "Federico II", Italy)
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Rak Massimiliano (Second University of Naples, Italy)

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