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Techniques the Same?; 2.1.4 Triggers of Adaptive and Reflective Behavior; 2.2 Implementation Techniques; 2.2.1 Meta-Level Programming
2.2.2 Software Components and Frameworks2.2.3 Generative Programming; 2.3 Overview of Current Research; 2.3.1 Reflective and Adaptive Middleware Workshops; 2.3.2 Nonfunctional Properties; 2.3.3 Distribution Mechanism; 2.4 Future Research Directions; 2.4.1 Advances in Programming Techniques; 2.4.2 Open Research Issues; 2.4.3 Autonomic Computing; 2.5 Summary; Bibliography; 3 Transaction Middleware; 3.1 Introduction; 3.2 Transaction Processing Fundamentals; 3.2.1 ACID Transactions; 3.2.2 Distributed Transactions; 3.2.3 Common Extensions; 3.2.4 Programming Models for Transactions 3.3 Distributed Object Transactions3.3.1 Transaction Model; 3.3.2 Transaction APIs; 3.3.3 Container-Managed Transactions; 3.4 Messaging Transactions; 3.4.1 Messaging Models; 3.4.2 Programming Models; 3.4.3 Queued Transaction Processing; 3.5 Web Transactions; 3.5.1 Web Services Coordination and Transactions; 3.5.2 Programming model; 3.5.3 Web Services Messaging; 3.6 Advanced Transactions; 3.6.1 Long Running Unit of Work (LRUOW); 3.6.2 Conditional Messaging and D-Spheres; 3.6.3 Transactional Attitudes (TxA); 3.7 Conclusion; Bibliography; 4 Peer-to-Peer Middleware; 4.1 Introduction
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Sommario/riassunto

A state-of-the-art guide to middleware technologies, and their pivotal role in communications networks. Middleware is about integration and interoperability of applications and services running on heterogeneous computing and communications devices. The services it provides - including identification, authentication, authorization, soft-switching, certification and security - are used in a vast range of global appliances and systems, from smart cards and wireless devices to mobile services and e-Commerce. Qusay H. Mahmoud has created an invaluable reference tool that explores the ori
