DESCRIPTION

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 origins and current uses of middleware (highlighting the importance of such technologies as CORBA, J2EE and JMS) and has thus compiled the roadmap to future research in this area.

Middleware for Communications:

• discusses the emerging fields of Peer-to-Peer (P2P) and grid middleware detailing middleware platforms such as JXTA and the Globus middleware toolkit.

• shows how Middleware will play a significant role in mobile computing.

• presents a Platform Supporting Mobile Applications (PLASMA) - a middleware platform that consists of components for location, event, and profile handling of Location-Based Services.

• introduces middleware security focusing on the appropriate aspects of CORBA, J2EE, and .NET and demonstrates how to realize complex security capabilities such as role-based access control (RBAC) and mandatory access control (MAC).
discusses how Quality of Service (QoS) component middleware can be combined with Model Driven Architecture (MDA) technologies to rapidly develop, generate, assemble and deploy flexible communications applications.

This incomparable overview of middleware for communications is suitable for graduate students and researchers in communications and computing departments. It is also an authoritative guide for engineers and developers working on distributed systems, mobile computing and networked appliances.

ABOUT THE AUTHOR

Qusay H. Mahmoud is an independent contractor for Sun Microsystems. He has written several articles for the Java Developer Connection that cover J2ME, including the MIDP and the CLDC APIs. He has also presented tutorials on developing wireless applications at a number of international conferences worldwide.

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