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Morris Sloman  Jorge Lobo
Emil C. Lupu (Eds.)

# Policies for Distributed Systems and Networks

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# Preface

Policy based systems are the subject of a wide range of activities in universities, standardisation bodies, and within industry. They have a wide spectrum of applications ranging from quality of service management within networks to security and enterprise modelling. This Lecture Notes volume collects the papers presented at the workshop on Policies for Distributed Systems and Networks held at the Hewlett-Packard Laboratories in Bristol, UK in January 2001. After a rigorous review process 16 papers were selected from 43 submissions.

Within the Internet community there is considerable interest in policy based networking. A number of companies have announced tools to support the specification and deployment of policies. Much of this work is focused on policies for quality of service management within networks and the Internet Engineering and Distributed Management Task Force (IETF/DMTF) is actively working on standards related to this area.

The security community has focused on the specification and analysis of access control policy which has evolved into the work on Role-Based Access Control (RBAC). There has been work over a number of years in the academic community on specification and analysis of policies for distributed systems mostly concentrating on authorisation policies. Although there are strong similarities in the concepts and techniques used by the different communities there is no commonly accepted terminology or notation for specifying policies.

Several research groups are looking at high-level aspects of policy related to enterprise modelling. An ISO Open Distributed Processing working group is defining policy and role concepts from the enterprise viewpoint. Enterprise goals or service level agreements can be considered as high-level abstract policies which must be progressively refined into implementable policies. The work on the specification and analysis of business rules is also relevant.

The common concept of policy, within all of the above communities, is that policies define a set of rules governing choices in the behaviour of the system. The motivation is to be able to modify a policy in order to change system behaviour without having to re-implement the system, or restructure the requirements specification.

The papers in this volume discuss topics from abstractions and notations for policy specifications to security, access control, implementations, applications, and management. They cover both practical experience and novel research concepts.

We are grateful for the financial and organisational support provided by Hewlett-Packard Laboratories in hosting the workshop.

January 2001

Morris Sloman
Jorge Lobo and Emil Lupu

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