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Access Control in Data Management Systems

Elena Ferrari

SYNTHESIS LECTURES ON DATA MANAGEMENT

M. Tamer Özsu, *Series Editor*

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Contents

Acknowledgments	xi
Preface	xiii
Access Control: Basic Concepts	1
1.1 Introduction	1
1.2 Historical Prospective	1
1.3 Data Protection	2
1.4 Basic Components	3
1.5 Access Control Policies	4
1.6 Access Authorizations	6
1.6.1 Authorization Subjects	6
1.6.2 Authorization Objects	7
1.6.3 Authorization Privileges	7
1.6.4 Authorizations: Further Components	7
1.7 Administration Policies	9
1.8 Access Control Models	10
Discretionary Access Control for Relational Data Management Systems	11
2.1 The Access Matrix Model	11
2.2 The System R Access Control Model	13
2.2.1 GRANT Command	14
2.2.2 REVOKE Command	16
2.2.3 Authorization Storage	17
2.2.4 Authorization Management and Enforcement	18
2.2.5 Recursive Revocation	19
2.2.6 Authorizations on Views	22

2.3	DAC Support in SQL	25
2.4	Extensions to the System R Access Control Model	26
2.4.1	Positive and Negative Authorizations	27
2.4.2	Temporal Authorizations	29
2.5	Oracle Virtual Private Database	30
3	Discretionary Access Control for Advanced Data Models	37
3.1	Access Control for Object DMSs	37
3.2	Access Control for XML Data	39
3.2.1	Access Control Requirements	40
3.2.2	Access Control Models	41
3.2.3	Efficiency of Access Control	46
4	Mandatory Access Control	49
4.1	Bell and LaPadula Model	50
4.2	Multilevel Relational Data Model	54
4.3	Mandatory Access Control for Object DMSs	56
4.4	MAC vs DAC	57
4.5	Information-flow Control Models	59
5	Role-based Access Control	61
5.1	The ANSI/INCITS RBAC Standard	62
5.1.1	Core RBAC	62
5.1.2	Hierarchical RBAC	64
5.1.3	Constrained RBAC	65
5.2	RBAC Support in SQL	67
5.3	Role Administration	70
5.4	RBAC Extensions	74
6	Emerging Trends in Access Control	77
6.1	Access Control under the Database as a Service Model	77
6.2	Access Control for Data Stream Management Systems	80

6.3 Access Control in the Web 2.0 Era 82

 6.3.1 OSN Access Control Requirements 82

 6.3.2 Proposed Solutions 83

6.4 Further Research Directions in Access Control 85

Bibliography 89

Author’s Biography 103

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Access Control in Data Management Systems

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Access control is one of the fundamental services that any Data Management System should provide. Its main goal is to protect data from unauthorized read and write operations. This is particularly crucial in today's open and interconnected world, where each kind of information can be easily made available to a huge user population, and where a damage or misuse of data may have unpredictable consequences that go beyond the boundaries where data reside or have been generated.

This book provides an overview of the various developments in access control for data management systems. Discretionary, mandatory, and role-based access control will be discussed, by surveying the most relevant proposals and analyzing the benefits and drawbacks of each paradigm in view of the requirements of different application domains. Access control mechanisms provided by commercial Data Management Systems are presented and discussed. Finally, the last part of the book is devoted to discussion of some of the most challenging and innovative research trends in the area of access control, such as those related to the Web 2.0 revolution or to the Database as a Service paradigm.

This book is a valuable reference for an heterogeneous audience. It can be used as either an extended survey for people who are interested in access control or as a reference book for senior undergraduate or graduate courses in data security with a special focus on access control. It is also useful for technologists, researchers, managers, and developers who want to know more about access control and related emerging trends.

ABOUT SYNTHESIS

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