XML Access Control: Models, Policies and Implementation

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Abstract. This paper presents a comprehensive overview of XML access control mechanisms, including security models, policy frameworks, and implementation approaches. We examine various access control models specifically designed for XML documents, discuss policy specification languages and analyze practical implementation strategies for securing XML data.

Keywords: XML Security · Access Control · Role-Based Access Control · XML Encryption.

1 Introduction

Here is the Introduction.

2 XML Access Control Models

2.1 Basic Concepts

Write here about XML security fundamentals and access control basics.

2.2 Fine-Grained Access Control

Write here about XML element-level and attribute-level access control.

2.3 Role-Based Access Control for XML

Write here about RBAC implementation in XML context.

3 Access Control Policy Languages

3.1 XACML

Write here about XACML framework and implementation.

3.2 Custom Policy Specifications

Write here about specialized XML security policy languages.

4 Implementation Approaches

4.1 Enforcement Mechanisms

Write here about policy enforcement points and mechanisms.

4.2 Performance Considerations

Write here about optimization techniques and performance analysis.

5 Case Studies

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Write here about practical implementations and real-world scenarios.

6 Conclusions

Write here about Conclusions.

References

- Damiani, E., et al.: A fine-grained access control system for XML documents. ACM Trans. Inf. Syst. Secur. 5(2), 169–202 (2002)
- Bertino, E., Ferrari, E.: Secure and selective dissemination of XML documents. ACM Trans. Inf. Syst. Secur. 5(3), 290–331 (2002)
- 3. OASIS: eXtensible Access Control Markup Language (XACML) Version 3.0 (2013)
- 4. Murata, M., et al.: XML access control using static analysis. ACM Trans. Inf. Syst. Secur. 9(3), 292-324 (2006)