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TITLE

Streamlining Access Control: An Attribute-Based Auto-Provisioning Study

ABSTRACT

Balancing access with transparent, well-governed control is a persistent challenge for organizations that manage sensitive data such as FERPA-, HIPAA-, or PCI-protected information. This thesis explores an attribute-based auto-provisioning model designed to enhance access control workflows while minimizing administrative overhead. Using Texas A&M University–Corpus Christi as a case study, the research demonstrates how organizations can utilize stable, role-relevant attributes within their own context to automate common access assignments—reducing reliance on repetitive form-based requests without compromising oversight. In our case, combinations of position ID and administrative location were found to be reliable indicators for pre-approval, but the model itself is intentionally adaptable. The proposed framework empowers data owners to define rules for automatic access provisioning, while retaining manual workflows for exceptions and generating routine reports to ensure accountability. By alleviating bottlenecks in the approval process, this approach reduces friction for users and approvers alike—ultimately supporting more sustainable, policy-aligned access practices. This thesis offers a generalized strategy that can scale across institutions and industries seeking to modernize provisioning in a way that is both secure and operationally efficient.