Visual Access Control: A User-Friendly Approach to Policy Management
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Abstract

In modern computing environments, access control mechanisms are fundamental to ensuring security and privacy. However, managing access policies effectively is a complex task, as policy modifications can lead to unintended privilege escalations or restrictions. Traditional policy management systems often lack real-time visibility into how changes impact user permissions, leading to inefficiencies and potential security risks. We propose a user-friendly graphical interface that enables policy admins to create, edit, and manage relationship-based access control (ReBAC) policies without the need for intricate domain-specific code. By integrating with engines like OpenFGA, our solution visually represents objects, users, and their relationships, reducing errors and making policy adjustments more intuitive. This interface employs an interactive mechanisms and automated diagram generation to simplify policy configuration, fostering collaboration among security teams, developers, and project managers. With real-time previews and validation, the tool helps maintain compliance and minimizes the potential for misconfigurations. Ultimately, our approach enhances both transparency and efficiency, empowering organizations to effectively handle evolving access control needs.