



Role Based Access Control Models for Medical Organizaiton

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Abstract

This paper describes about providing security to a medical organization by generalized temporal role based access control method. Role-based access control (RBAC) models have created a great interest in the security community as a powerful and generalized approach to security management. In some situation, users may be restricted to assume roles only a predefined period only. Furthermore, roles may only be invoked on a prespecified interval of time depending upon when certain actions are permitted. To do such dynamic aspects of a role, a temporal RBAC (TRBAC) is in existence which addresses the role enabling constraints only. So ,a Generalized Temporal Role Based Access Control (GTRBAC) method is proposed in this project to provide an effective security to an organization(hospital). It expresses a wider range of temporal constraints like expressing periodic as well as duration constraints on roles, user-role assignment, and role-permission assignments. In an interval, activation of a role can further be restricted as a result of numerous activation constraints including cardinality constraints and maximum active duration constraints. Moreover, GTRBAC allows expressing role hierarchies and separation of duty (SoD) constraints for specifying fine-grained temporal semantics.

Index Terms—Access control, role-based, temporal constraints, role hierarchy, separation of duty.