

RAPDAC: Role Centric Attribute Based Policy Driven Access Control Model

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Abstract : Access control models aim to decide whether a user should be denied or granted access to the user's requested activity. Various access control models have been established and proposed. The most prominent of these models include role-based, attribute-based, policy based access control models as well as role-centric attribute based access control model. In this paper, a novel access control model is presented called "Role centric Attribute based Policy Driven Access Control (RAPDAC) model". RAPDAC incorporates the concept of "policy" in the "role centric attribute based access control model". It leverages the concept of "policy" by precisely combining the evaluation of conditions, attributes, permissions and roles in order to allow authorization access. This approach allows capturing the "access control policy" of a real time application in a well defined manner. RAPDAC model allows making access decision at much finer granularity as illustrated by the case study of a real time library information system.

Keywords : authorization, access control model, role based access control, attribute based access control

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