Attributes Enhanced Role-Based Access Control Model

Attribute-based access control (ABAC) and role-based access control (RBAC) are currently the two most popular access control models. Yet, they both have known limitations and offer features complementary to each other. Due to this fact, integration of RBAC and ABAC has recently emerged as an important area of research. In this paper, we propose an access control model that combines the two models in a novel way in order to unify their benefits. Our approach provides a fine-grained access control mechanism that not only takes contextual information into account while making the access control decisions but is also suitable for applications where access to resources is controlled by exploiting contents of the resources in the policy.