

## ABSTRACT

Nowadays, modern approaches to access control on Web servers do not appropriately scale to enterprise-wide systems, since they are mostly based on individual users. The intricacy of security administration is one of the most challenging problems in large networked systems. This problem is especially serious in the Web environment, which consists of synthesis of technologies and composition of various constituents. Role-Based Access Control (RBAC) can reduce the complexity and cost of security administration in last networked applications. Using RBAC itself to manage RBAC provides additional administrative convenience. Therefore, we were motivated by the need to manage and enforce the strong access control technology of RBAC in large-scale Web environments. RBAC is a successful technology that will be a central component of emerging enterprise security infrastructures. There are many interesting works supporting RBAC by extending appropriate methods such as Decentralized User-Role Assignment for Web-based Intranet [31], RBAC on the Web by Secure Cookies [8], RBAC on the Web by Smart Certificate [7], Injecting RBAC to Secure a Web-base workflow system [32], and etc.

Even though someone concentrated to add some efficient factors for supporting RBAC, none of them can get rid of all solutions. Because of this challenge, we select the high superiority as mentioned above; coming in plain format like “RBAC on the Web by Secure Cookies”, to describe and illustrate another point of view to solve the problems. Although we implement similar way we stress to keep the most of its advantage. We spot and describe suitable ways, which the system should appropriately perform and manage when any users change their passwords or roles. In addition, for speeding, we replace using Pretty Good Privacy (PGP) servicing Public Key Infrastructure (PKI) to Message Digest-5 (MD5) helping fingerprint to

secure our cookies. After enhancing our work into the existing works, we are confident that the Web servers can trust the user's role information receiving from the Filtering server than as usual in past. This approach is transparent to users and applicable to existing Web servers and browsers.

