

Homework 9

PROBLEM #1:

Which do you think is harder to understand: DAC or RBAC? Explain.

SOLUTION:

I feel that the more difficult concept to grasp is RBAC because it is more complicated than DAC. In DAC a user decides the permission of a file they own. In RBAC the system determines access based on if the user belongs to a group that has access to that file. RBAC gets more complicated with the different levels ($RBAC_0$, $RBAC_1$, $RBAC_2$, $RBAC_3$). I am a little confused on the $RBAC_1$ and $RBAC_2$.

PROBLEM #2:

Prepare a one-paragraph objective summary of the main ideas in this chapter (Chapter 4).

SOLUTION:

Access control is the main concern of computer security because if an attacker cannot gain access to the system the attack surface is severely limited. Methods of access control are Discretionary Access Control (DAC) where users manage their own access privileges, Mandatory Access Control (MAC) where the system determines who has access based on the security clearance of the user, Role-based Access Control (RBAC) where control is managed in groups, files can be access by multiple groups and users can be part of multiple groups, or Attribute-base Access Control (ABAC) where access is based on attributes of the user, the resource, and the environment.