

QUESTION 1

Does Mandatory Access Control (MAC) provide a partial or complete solution to the confinement problem or no solution at all? Why/Why not?

QUESTION 2

Consider an access control system based on the Chinese Wall principle. There are four conflict of interest classes, each with three members.

- i) Assume that a user has the label [2, null, null, 1]. Could the user view a document with the label [null, 2, null, 1]?
- ii) Assume that a user has the label [null, 2, null, 1]. What is the user's label after attempting to view a document with the label [3, null, 2, 1]?
- iii) Assume a user has a label which is the same as your answer to part ii). Give a document label for which that user could not view that document.

QUESTION 3

What is a CRL? How is it used? What is a delta CRL? How is it used?

QUESTION 4

Physicians prescribe medication. However, it is not a good idea to allow physicians to prescribe medication for themselves. Using RBAC, give the necessary definitions, including a role *Physicians*, that will allow users assigned to that role to prescribe medications, but not to themselves.

QUESTION 5

In a system which uses a KDC, what is the minimum necessary information that a ticket should contain?

QUESTION 6

Describe how Kerberos handles delegation.