

2000 Paper 3 Question 4

Introduction to Security

Consider the following two separation-of-duty policies:

- (a) A transaction needs approval from two people, one in group A and one in group B.
- (b) A transaction needs approval from two distinct users of the system.

Which of these is harder to implement using the standard Unix access control mechanisms, and why? [10 marks]

Sketch an implementation of the easier policy using Unix mechanisms. [5 marks]

Describe at least *two* alternative mechanisms that might be used to implement the other policy. [5 marks]