Secure File System (SFS)

Demo Marking Gide

This document describes the marking scheme for the Security project. Note that this marking schema does not include the design part that has 40% of the project grade. The guide will be used by TA to evaluate your demo.

Demo Steps:

Here are the steps that each group needs to demonstrate during the demo session:

1. You will be asked to create two groups, say "team1" and "team2" on your Secure File System (SFS). Then you will be asked to create 3 users; User1 and User2 belongs to "team1" and User3 belongs to group "team2". Each user should have a home directory like what we have in Linux OS.
2. Then User1 logs in; here the SFS should authenticate the user.
3. User1 creates 2 text files within his home directory containing some random meaningful English sentences. Then User1 logs out.
4. User2 logs in; User2 changes the directory to User1 home directory. User2 lists (ie, ls) the current directory; then reads (successfully) a file belongs to User1; User2 tries to modify file that should be prevented by SFS. User2 goes back to his own home directory and creates a text file containing some random meaningful text. User 2 logs out.
5. User3 logs in; User3 should be able to list all files and directories belong to User1 and User2 but not allowed to read or modify them. User3 logs out.
6. Now we consider an external user in the OS who is not a member of the SFS; let us refer to this user as "*Ext-user*". Using conventional OS tools, Ext-user should be able to see files and folders of SFS's members but names and contents should be encrypted so that *confidentiality* of names and content are maintained. Ext-user may modify one of the User1's files.
7. User1 logs in to SFS. User1 should be immediately notified that his file has been modified. In other words, your SFS should check the *integrity* of files and folders of the user immediately after the user logged in.

Grading:

Out of 20 points for the project, 8 points goes to your design document and the rest, ie 12 points, will go to correct operation of your SFS, breaking down as follows.

Step	Grade
1	3
2	2
3	1
4	2
5	2
6	1
7	1
Sum	12