CS 5473 Computer Security

Winter, 2011

Team Project:

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Description: This project requires to implement a secure web based remote accessible file system (WRAFS). The system is installed at a server. A client can access the file system through a web browser.

The file system is divided into 3 security layers: high (H), median (M), and low (L). A user needs to sign up to use the system. The file access are role-based. A user with higher privilege can access files with lower secure level, but not the inverse.

A user can upload or download files within the limitation of assigned privilege. The file type can be plain text, PDF, word or image.

The design of the system should consider the security seriously (user account management, role-based access control, communication security, data security, server security, etc.)

Some requirements:

- A new user can apply for an account. Usually, a new user has low access privilege. In certain conditions (you may make some), a user can change to a higher access privilege.

- Each of students of this class not in your team has median access privilege.

- Each of the team member has high privilege. (Note: members are not sharing one account, but has the same privilege).

Suggestion of softwares:

- Choose open source softwares.

- The operating system of server can be Linux which is more transparent.

- Use SSL to secure communication. Apache Tomcat is easy to use for Java programing. You can also use apache and SSL, if you want to use C.

- Database can use MySQL.

Security checks:

- Write a security requirement and design features for your system.

- Write a security check list for your system and perform the check.

- Check the security of the other team's system.

Further develope:

Use Nortel contivity 1700 VPN router and your server to set up a VPN.