

System Administration Homework Two

yzlin <yzlin@sysadm.cs.nctu.edu.tw>

Introduction

FTP is a common service on internet. It's often used for file sharing. In this homework, you are expected to build a simple FTP server on your machine, using a well-known FTP server application "Pure-FTPd" or "ProFTPD".

Scenario

Before starting, let's give you some scenarios.

If you're a FTP server manager, in this FTP server, you need to provide space for public sharing, such as documents, slides, softwares, etc. But in such kind of space, you don't want some bad guys or crackers to upload something might harm the client systems, for example "Virus". Besides, for convenient management, creating a system user "sysadm" would be helpful. Such kind of user has its own space for personal files and allowed to access "Public Space" mentioned before.

Sometimes, you would need a temporal account for sharing files to somebody. But you don't want them to modify or even delete files. In such situation, "Virtual User" is a good choice.

Requirement

- Install Pure-FTPd (/usr/ports/ftp/pure-ftpd/) or ProFTPD (/usr/ports/ftp/proftpd/).
- Support Anonymous FTP (assume the FTP root path is /home/anonyftp/).
- Make anonymous clients could DOWNLOAD files inside /home/anonyftp. There is a special property applying to /home/anonyftp/upload. In this directory, clients could UPLOAD but NOT DOWNLOAD files. Anonymous clients are NOT allowed to do DELETE operation.
- Create a system user "sysadm" with password of your school ID such as "9655XXX" to access your FTP server. (this user could login by SSH)
- Make user "sysadm" CHROOTED in its HOME path ~sysadm. (default is /home/sysadm/)
- Create a virtual user "vsysadm" allowed to only download files in ~sysadm/, including subdirectories and files included.
- Create a directory ~sysadm/hidden, which could access by listing. Those sub-dirs inside it will hide from FTP listing, but could be access if directly enter the directory path.
- Make ONLY user "sysadm" could access anonymous directory /home/anonyftp/ by accessing ~sysadm/anony/.
- Put your FTP server configuration file and log file to ~sysadm/etc/ with file names "conf" & "log" relatively. (these files should be real-time updated)

Advanced Requirement

- UTF-8 → Big5. Keep names of local files or dirs in UTF-8, but allow FTP clients to access in Big5.
- Build statistics web, containing log parsing, access history or other details of FTP server. You could use any tools, and just make sure it could satisfy our requirement.

Grading Policy

- Anonymous FTP with required restriction: 30%
- Support system user with basic DOWNLOAD/UPLOAD operations: 15%
- Chrooted environment: 10%
- Virtual User: 10%
- Hidden Directory: 15%
- Access restrictions of the anonymous space for “sysadm” & “vsysadm”: 15%
- FTP server configuration file & log file: 5%
- UTF-8 → Big5 translation: 5%
- Statistics web: 0-5%

Due Date

2008 10/21 (Tue.) 23:59:59. Please make sure your ftp service would be accessible during 2008 10/22 00:00:00 and 2008 10/23 23:59:59.

How to Hand In

Send an email to “hw2@sysadm.cs.nctu.edu.tw” containing the following info:

- FTP Server IP or Domain Name: 140.113.XXX.XXX
- FTP Server Port: 21
- *Optional* Statistics Web IP or Domain Name: static.sysadm.cs.nctu.edu.tw
- *Optional* Statistics Web Port: 80

Mail subject should be {Your_id}_sahw2 (example: 9655630_sahw2).

Questions

TAs, I need heeeeeeeeeeeelp!

- Email ta@sysadm.cs.nctu.edu.tw
- Newsgroup cs.course.sysadmin
- BBS bs2.to board CS-SysAdmin
- Goto CSCC to ask professional 3F!