TP 5 Assignment

GNU/Linux System Administration
Info et Réseaux en Apprentissage, Sup Galilée, Paris Nord

October 15th, 2014

Work in a group of two or three people. Use the Debian GNU/Linux installation you configured in the first TPs to implement the following requirements. Some requirements are quite technical and easy to understand, some others need you some design of the solution. Document your work with the followings documents.

- Administration change log – a simple text file stored in `/root/` describing the operations you performed on the machine. Follow the GNU guidelines for source change logging at: `https://www.gnu.org/prep/standards/html_node/Change-Logs.html`
- Report – a PDF with answers to questions.

Send documents to `marco.solieri@lipn.univ-paris13.fr` by 12:00 pm.

1 Debian packages

Installation from testing branch of Debian repository.

1. Install aptitude.
2. Add the "testing" repository to your `/etc/apt/sources.list`.
3. Configure APT to explicitly prefer the "stable" branch over the "testing" one.
4. Update your local repository cache.
5. Using aptitude install the "testing" version of `syslog` (should be 1.3.16) and all its recommended packages.
6. Have fun using the `moo'` command of both apt-get and aptitude.

2 Syslog and Cron

Setup an automated `logcheck` service.

- Configure logcheck at paranoid filtering level and set the mail alert recipient to be the alias `logchecker`.

- Manually test the configuration running.
- Are there unimportant lines you want to suppress? Then add one or more filter rules importing from stricter levels e.g., "server"; or writing them from scratch.
- Schedule with cron a run of logcheck every two hours.

3 Backup

Design a backup plan for the following scenarios. Assume that each computer has a 400GB disk and that users' home directories are stored locally. Choose a backup device and a timing policy that balances cost vs. support needs and explain your reasoning. List any assumptions you make.

1. A research facility has 50 machines. Each machine holds a lot of important data that changes often.
2. A small office has two laptops on site, connected with a DSL line, and a remote hosted server with 1 TB space, with Gigabit connection. Cost is the most important consideration, and the users are not system administrators.
3. A small software company has 10 machines. Source code is stored on a central server that has 4TB of disk space. The source code changes throughout the day. Individual users' home directories do not change very often. Cost is of little concern and security is of utmost importance.

4 Password

1. Install "John the ripper".
2. Set up a user with a password that is a dictionary word.
3. Give john to test such user's entry in /etc/shadow. How long does john take to find it?

5 PAM

Configure PAM to meet the following requirements..

- System passwords have to be at least 10-characters long.
- Common users can run up to 64 processes.
- Common users can use up to 5 simultaneous logins.