System Administration HW5

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1 Reference

1. Rolling Release Vs. Fixed Release Distros —Which Linux Distributions Are Better?

2. (a) What is the REAL (life) benefit of a rolling release distro?
   (b) Linux distributions: Rolling releases vs point releases, which should you choose?
   (c) Rolling release vs. fixed release Linux
   (d) Rolling release vs. fixed release Linux

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4. (a) https://www.archlinux.org/pacman/pacman.8.html
   (b) https://wiki.archlinux.org/index.php/pacman
   (c) https://wiki.archlinux.org/index.php/System_maintenance#Partial_upgrades_are_unsupported

5. https://wiki.archlinux.org/index.php/pacman

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9. (a) https://delightlylinux.wordpress.com/2015/07/01/is-gpg-hanging-when-generating-
   (b) https://hashrocket.com/blog/posts/encryption-with-gpg-a-story-really-a-tutorial

10. (a) https://wiki.archlinux.org/index.php/GnuPG#Encrypt_and_decrypt
    (b) https://wiki.archlinux.org/index.php/DeveloperWiki:Package_signing

2   Problem

1. (a) Rolling release: The updates are pushed as soon as possible.

   (b) Fixed release: The updates are tested thoroughly and pushed at once.

2. **Pros**:

   (a) Painless upgrade process: Don't need to reinstall whole image every 6-12 months.

   (b) Can always get the latest development, hardware support and new features.

   Cons:

   (a) Unstability: Bugs may appear in new updates.

   (b) Disturbance from update installation: You have to update things all the time.

   Which is more suitable?: I think rolling-release is more suitable because small updates once for a while can be more painless compared to fixed-release updates for this big Linux workstation. Also, bugs can usually be fixed more quickly for rolling-release.

3. "-S" flag would synchronize the repository database, "-y" would download a fresh copy of the master package database from the server defined in "pacman.conf" and "-u" would upgrade all packages that are out-of-date.
   Why the latter is not recommended?: If you use "pacman -Sy", it would install package **without** upgrading. Therefore, it might lead to dependency issues.

4. (a) Search in installed packages:

   ```
   pacman -Qs '^vim$'
   ```

   (b) Search in package databases:

   ```
   pacman -Ss '^vim$'
   ```

5. List dependencies of 'firefox':

   ```
   pacman -Qi '^firefox$' | grep 'Depends On'
   ```

6. Find which package a file belongs to:

   ```
   pacman -Qo /etc/resolv.conf
   ```

7. Remove a package and its dependencies which are not required by any other installed package:

   ```
   pacman -Rs emacs
   ```

8. Orphan: packages were installed as dependencies but are no longer required by any installed package.

```
pacman -Qdt
```

9. Generate a gpg key:

```
gpg --gen-key
```

If it takes too long times, you can install rng-tools first.

```
pacman -S rng-tools
sudo rngd -r /dev/urandom
```

After gpg key generation, you can sign package:

```
makepkg --sign
```

And you can verify like this:

```
gpg --verify SIGNATURE_FILE SIGNED_FILE
```