IT-USU: Administrasi dan Desain Jaringan T.A. 2014/2015

[Exercise 4: Web and Database Server]

1. First, make sure that your Linux box has been connected successfully to Internet. Then execute this following command to update your Linux apps repository:

   ```
   $ sudo apt-get update
   ```

2. Now execute this following command to install secure shell (ssh) server app so that you can access that Linux box remotely using ssh client app (e.g. Putty) and secure copy (scp) client app (e.g. WinSCP).

   ```
   $ sudo apt-get install openssh-server
   ```

3. This next step is to install web server app. Here, we are using Apache v2.

   ```
   $ sudo apt-get install apache2
   ```

4. Are web service and ssh service have been running well by check their ports respectively, i.e. port number 80 and 22:

   ```
   $ netstat –tulpn
   ```

5. Install app named lynx and then try to open your Apache default homepage by using it.

   ```
   $ sudo apt-get install lynx
   ```

   ```
   $ lynx http://localhost
   ```

6. Install MySQL database server and PHP connector to MySQL. During this installation you are asked to give one new password for account root at database server.

   ```
   $ sudo apt-get install mysql-server
   ```

   ```
   $ sudo apt-get install php5-mysql
   ```

7. We need to tell MySQL to create its database directory structure where it will store its information:

   ```
   $ sudo mysql_install_db
   ```

8. Afterwards, we want to run a simple security script that will remove some dangerous defaults and lock down access to our database system a little bit:

   ```
   $ sudo mysql_secure_installation
   ```

   You will be asked to enter the password you set for the MySQL root account. For the rest of the questions, you should simply hit the ENTER key through each prompt to accept the default values. This will remove some sample users and databases, and disable remote root logins.

9. Install PHP:

   ```
   $ sudo apt-get install php5
   $ sudo apt-get install libapache2-mod-php5
   $ sudo apt-get install php5-mcrypt
   ```

   PHP is the component of our setup that will process code to display dynamic content. It can run scripts, connect to our MySQL databases to get information, and hand the processed content over to our web server to display.

   In most cases, we'll want to modify the way that Apache serves files when a directory is requested. Currently, if a user requests a directory from the server, Apache will first look for a file called `index.html`. We want to tell our web server to prefer PHP files, so we'll make Apache look for an `index.php` file first.

   To do this, type this following command:

   ```
   $ sudo nano /etc/apache2/mods-enabled/dir.conf
   ```

   Then edit the file content so it will look like this:

   ```
   <IfModule mod_dir.c>

   DirectoryIndex index.php index.html index.cgi index.pl index.xhtml index.htm

   </IfModule>
   ```

After this, we need to restart the Apache web server in order for our changes to be recognized by typing this command:

```
$ sudo service apache2 restart
```

10. Test PHP processing on your web server:

```
$ sudo nano /var/www/html/info.php

<?php
Phpinfo ();
?>
```

11. Install phpMyAdmin

```
$ sudo apt-get install phpmyadmin

$ sudo apt-get install apache2-utils
```

After the installation has completed, add phpmyadmin to the Apache configuration:

```
$ sudo echo “Include /etc/phpmyadmin/apache.conf” >> /etc/apache2/apache2.conf
```

12. And then restart Apache web server one more time:

```
$ sudo service apache2 restart
```

And then try to open phpMyAdmin web login via web browser remotely, e.g. http://your_linux_box_ip_address/phpmyadmin

13. *To be continued …*