

## LAB :: Package Management

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- In this LAB we will see the various types of package management tools used in Ubuntu system.
- OS Ubuntu 14.04

## Login to your server

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- Windows: use puTTY
- Mac and Linux: use your terminal
- Username `apnic` and password `training`
- Login to your server using the above username and password.

## Package management tools in Ubuntu

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Below are some package management tools available in Ubuntu system.

1. `apt-get`
2. `apt-cache`
3. `dpkg`
4. `tasksel`

## Command reference

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### Update and upgrade local cache:

```
sudo apt-get update  
sudo apt-get upgrade
```

### Package searching:

This procedure does not require `sudo` privileges.

```
apt-cache search packagename
```

### Perform a dry run:

Dry run will not install the package but will show you the effects of the system if you install the package. This command can also run without `sudo` privileges.

```
apt-get install -s packagename
```

### **Install package from the repositories with all of the necessary dependencies:**

Type the following command to install a package.

```
sudo apt-get install packagename
```

You can install multiple packages all at once

```
sudo apt-get install packagename1 packagename2
```

Install from .deb file

```
sudo dpkg --install debfilename.deb
```

Install using tasksel:

```
sudo tasksel
```

It will open up a window with a list of software or package. Select the package you want to install by pressing the `space` key and press `enter`. Multiple package can be selected.

### **Reconfigure package:**

Many packages require some post installation configuration script, these often prompts for the administrator to make configuration choices.

```
sudo dpkg-reconfigure packagename
```

## Uninstall a package:

Type the following to uninstall the package:

```
sudo apt-get remove packagename
```

## Start the LAB:

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So far we have seen how to search, install, reconfigure, dry run and uninstall a package. Let's do it in our LAB. We will install the `mysql-server` using `apt-get`.

## Searching:

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Let's search the `mysql-server` package, remember this does not require any `sudo` privileges:

```
apt-cache search mysql-server
```

We will install the `mysql-server-5.6` package from the list.

## Dry run:

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Let's make a dry run before installing the actual package. Type the following command for dry run. Be sure to supply the `-s` as a parameter.

```
sudo apt-get install -s mysql-server-5.6
```

## Installation:

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Type the following command to install the `mysql-server-5.6`

```
sudo apt-get install mysql-server-5.6
```

It will ask you for the password of the current user if you are not root. Provide the password. It will then show you the dependencies that will be installed with the `mysql-server`. Press `Y` to install the packages.

After sometimes it will ask you the root password for `mysql-server`. Provide the password and confirm it and press enter to continue the installation. The shell will be available without any error after a clean installation.

## **Check your installation**

Check your installation by accessing the `mysql-server`. Type the below command to access the `mysql-server`.

```
sudo mysql -u root -p
```

Provide the `root` password you gave during the installation of `mysql-server`. You will see a screen like below.

```
Welcome to the MySQL monitor.  Commands end with ; or \g.
```

```
Your MySQL connection id is 45
```

```
Server version: 5.6.33-0ubuntu0.14.04.1 (Ubuntu)
```

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```
Type 'help;' or '\h' for help. Type '\c' to clear the current input statement.
```

```
mysql>
```

Type `exit` to exit from `mysql-server`.

After installing `mysql-server` it's best to run the following command.

```
sudo mysql_secure_installation
```

Follow the interactive prompt and choose as your requirements.

## **Uninstall or remove:**

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Let's see how we can remove `mysql-server` package from our system. Type the below command to remove the `mysql-server` package from our system.

```
sudo apt-get remove mysql-server-5.6
```

```
*****END of LAB*****
```