



# ELECTRONIC LAB NOTEBOOK –

*DIGITIZE YOUR EXPERIMENTAL DESIGNS AND RESULTS INTO  
WISDOM FROM DISCOVERY TO PUBLICATION*

## 電子實驗室記錄本之運用與維護

黃智偉 2015/06/09

# OUTLINE

**Motivations**

**Introduction**

**How to install?**

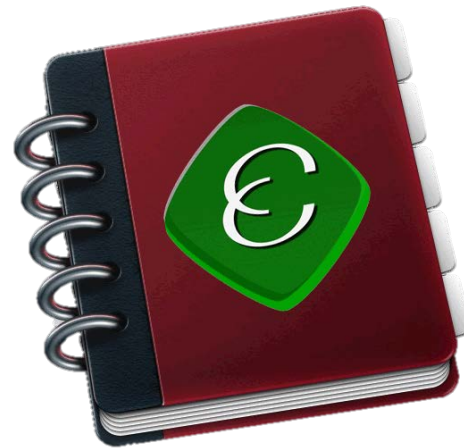
**ELN service control**

**How to use?**

- Lab member
- Site manager

**Demo**

**Future work**



# MOTIVATIONS

**CMS : Content Management System**

**OpenSource**

**Sharing for multiuser**

**User friendly, easy control**

**Security, digitalized, pwd control**

**Knowledge reconstruction**


**Repository for ideas and knowledge**

**Remember anything in lab**



# INTRODUCTION (1/5)



 **Lab of Systems Biology & Network Biology**

研究領域 實驗室成員 資源分享 照片集錦 聯絡我們

《十月 2010》

| 日  | 一  | 二  | 三  | 四  | 五  | 六  |
|----|----|----|----|----|----|----|
|    |    |    |    |    | 1  | 2  |
| 3  | 4  | 5  | 6  | 7  | 8  | 9  |
| 10 | 11 | 12 | 13 | 14 | 15 | 16 |
| 17 | 18 | 19 | 20 | 21 | 22 | 23 |
| 24 | 25 | 26 | 27 | 28 | 29 | 30 |
| 31 |    |    |    |    |    |    |

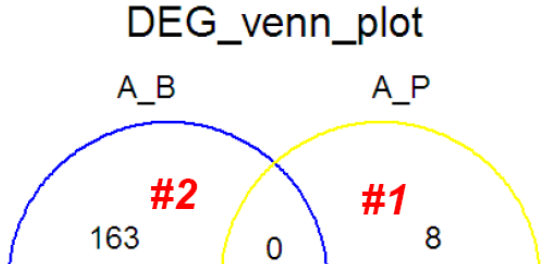
首頁 > Forum subject > 專案列表 > MicroArray

[檢視](#) [編輯](#) [手冊大綱](#) [追蹤](#)

### Human Stem Cell\_440\_venn\_table20080911

由 vyubin 在 四, 09/11/2008 - 23:30 發表 MicroArray microarray human\_stem\_cell

DEGs\_venn\_table  
DEGs\_venn\_cluster\_table  
上面是郭老師要的venn圖中那四組的gene table  
包含GroupAc.所屬的group如下



DEG\_venn\_plot

A\_B A\_P

#2 #1

163 0 8

最新消息

- 2009中央研究院 生命科學圖書館 生物資訊教育推廣
- 今天有沙盤
- 實驗室開會改為 3/14 (二) 中午 12 點於圖書館會議室
- 實驗室會議於四月二十五日舉行
- 實驗室會議於五月八日 星期四 舉行

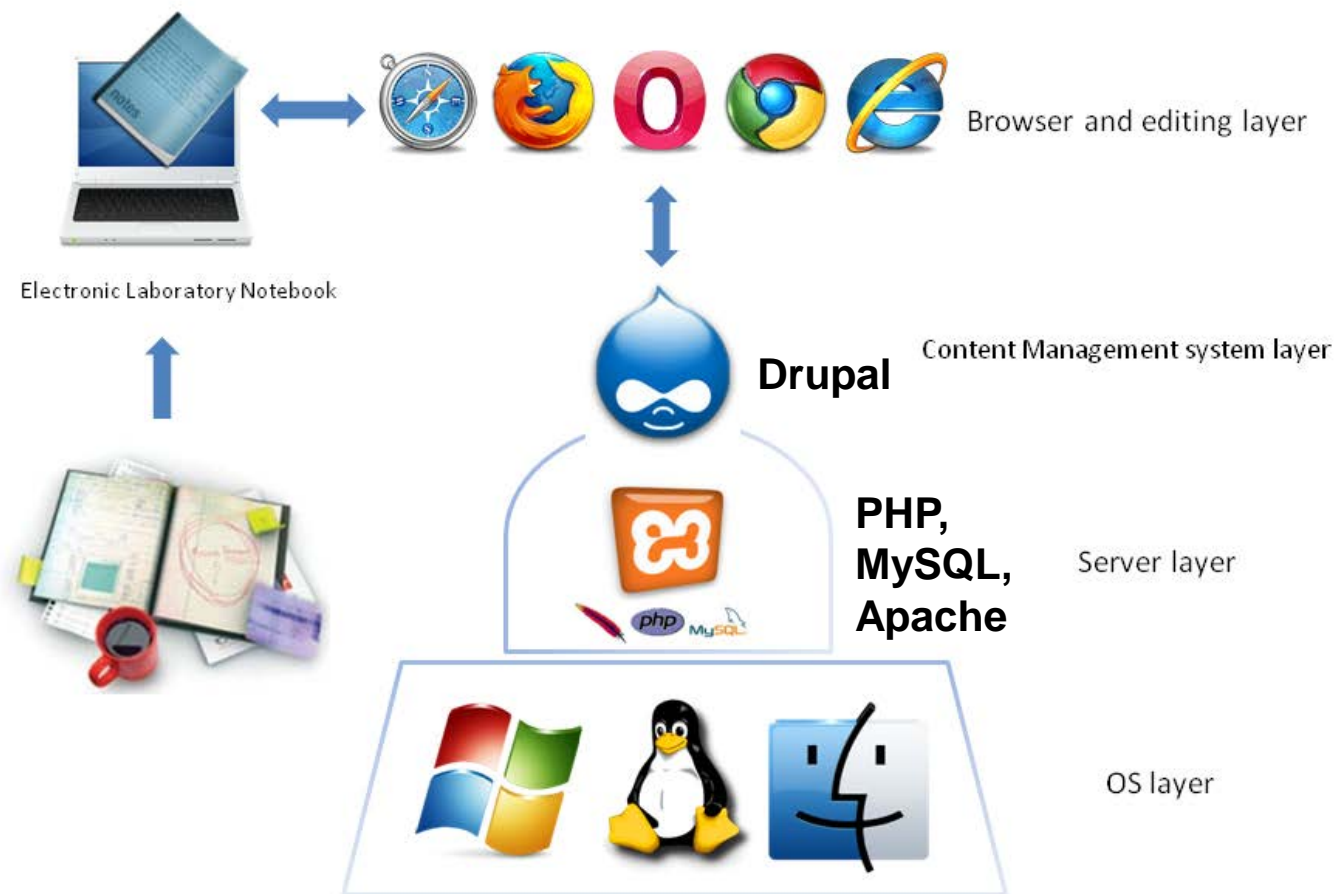
1 2 3 4 下一頁, 最後一頁 »

more

個人檔案

# INTRODUCTION (2/5)

## Basic Structure of ELN



# INTRODUCTION (3/5)

## Essential Functions in ELN



Friendly  
Installation/ non  
installation



Content generator



PDF printout



User management



Search



Web Access worldwide



Calendar/ Event



Webpage clip



Web share



Succinct control  
panel



Image gallery



Backup /restore



Personalization



Digital signature



Security



Print



Data Exchange

# INTRODUCTION (4/5)

## One Installation, Two Sites



External Site for public  
Access/ Lab website



Internal Site for private  
Access

**Lab of Systems and Network Biology**

News Research Members Download Contact us

Home

| Post  | Last Post             |
|---|-----------------------|
| 2013 workshop@Life Sci Library: Intelligent Environments of Future Lab for biomedical Research/ 2013 實驗室智慧數位化與次世代生物序列分析平台推廣 | 09/09/2013<br>- 16:45 |
| Our Research about metagenome in marked as "Highly accessed" by BMC Genomics  | 03/21/2013<br>- 20:52 |
| 2012 中央研究院 生命科學圖書館 生物資訊教育推廣   | 11/16/2012<br>- 08:14 |
| Flyer for 2012 OpenHouse/ 院區開放活動簡介摺頁  | 10/26/2012<br>- 17:44 |
| 2012, Our works for research community  | 10/26/2012<br>- 17:27 |
| 本實驗室兩計畫榮獲微軟雲端合作研究獎助 (We got the World Cloud Research Collaboration Projects hosted by Microsoft Research)                   | 06/20/2012<br>- 23:09 |
| 國立台灣大學暑期課程:2009年縱橫錄體學(Transcriptome/Transcriptomics)分析技術  | 06/20/2012<br>- 23:07 |
| 2011 中央研究院 生命科學圖書館 生物資訊教育推廣   | 04/26/2011<br>- 15:29 |
| ELN website is online/ ELN網站上線  | 11/19/2010<br>- 16:01 |
| Open House 2010   | 11/19/2010<br>- 15:59 |

User login

Username: \*

Password: \*

**Log in**

Request new password

English Version

- 中文版
- 日本語

News

2013 workshop@Life Sci Library: Intelligent Environments of Future Lab for biomedical Research/ 2013 實驗室智

**User login**

Username: \*

Password: \*

**Log in**

Request new password



Lab of Systems and Network Biology

Messages Calendar Forums Albums Online Help Logout

Search this site:

Recent posts

| Type  | Title  | Author  | Replies | Updated/created date |
|-------|--|---------|---------|----------------------|
| Forum | non data normalization updated   | borries | 0       | 09/12/2013 - 17:40   |
| Forum | change DNS certificate for life-science domain per v's 2 credit result new   | vench   | 0       | 09/12/2013 - 16:05   |
| Forum | Reconsidering 論壇 new   | vench   | 2       | 09/12/2013 - 03:48   |
| Forum | Cytosaurus 網路拓撲圖 new   | manmar  | 0       | 09/05/2013 - 16:27   |
| Forum | Possible structure for the Omics database new                                | cylin   | 0       | 09/05/2013 - 16:09   |
| Forum | preliminary results base on three libraries, ligo, imactact, lupto new       | cylin   | 0       | 09/05/2013 - 15:44   |
| Forum | Bioinformatics Workshop @Life Science Library, Sinfia, Sep. 17, 2013 updated | cylin   | 1       | 09/05/2013 - 11:50   |
| Forum | check on MEMO database website new   | siyhsa  | 0       | 09/05/2013 - 17:27   |
| Forum | RFI Meeting with NCSL new  | vench   | 0       | 09/04/2013 - 14:45   |
| Forum | merge updated  | adnan   | 1       | 09/04/2013 - 14:32   |
| Forum | three suggested directions for structural project new                        | cylin   | 1       | 09/04/2013 - 10:51   |
| Forum | 雜誌訂閱Overview - 2013雜誌訂閱資訊(09-09)新稿 - RLI(Workshop-Work2) new                 | vench   | 0       | 09/04/2013 - 10:45   |
| Forum | 修改說明: 2013-09-04修改說明: RLI(Workshop-Work2)修改說明: RLI(Workshop-Work2) new       | vench   | 3       | 09/04/2013 - 10:17   |

Create Content:

- Create a forum post
- Create an event/notice



# INTRODUCTION (5/5)

## Typical Interface for ELN

The screenshot shows the ELN interface for the '系統生物學暨網路生物學實驗室' (System Biology and Network Biology Laboratory). The interface includes a search bar, a calendar for October 2008, a sidebar with navigation links, and a main content area with event listings. Annotations with arrows point to specific features: 'Search' points to the search bar, 'Calendar/Coming event' points to the calendar, 'Tag' points to the 'meeting ELN Bugs' tag, and 'Record' points to the 'Poster for UPS, Hubba, Slides for PALM and ELN' event listing.

Search

Calendar/  
Coming  
event

Tag

Record

系統生物學暨網路生物學實驗室

10月 2008

| 一  | 二  | 三  | 四  | 五  | 六  | 日  |
|----|----|----|----|----|----|----|
|    |    | 1  | 2  | 3  | 4  | 5  |
| 6  | 7  | 8  | 9  | 10 | 11 | 12 |
| 13 | 14 | 15 | 16 | 17 | 18 | 19 |
| 20 | 21 | 22 | 23 | 24 | 25 | 26 |
| 27 | 28 | 29 | 30 | 31 |    |    |

建立內容

- 分享這篇文章
- 最新文章
- 發表事件
- 發表討論文章
- 上傳檔案
- 建立專案

管理選單

- 修改網站圖示,資訊
- 修改網站標題
- 使用者列表

標籤集

metagenomics lab  
meeting ELN Bugs

ELN

Poster for UPS, Hubba, Slides for PALM and ELN

Start: 10/20/2008 - 00:00

End: 10/20/2008 - 23:59

Timezone: Etc/GMT

- UPS Poster
- Hubba Poster
- PALM Slides
- Eln Slides

Electronic Notepad for iMac, iPhone

Start: 10/02/2008 - 00:00

End: 10/02/2008 - 23:59

Timezone: Etc/GMT

<http://www.evernote.com/>

All the media can be put into Evernote and searchable.

Evernote 2.2 Download

Evernote 2.2 is a free download with all features enabled. After 60 days, users wishing to access advanced features such as image and text recognition must purchase the product by clicking on the "Purchase EverNote" menu item. Or, click



# SYSTEM REQUIREMENT

## CPU

- At least 1.6 GHz

## Memory

- At least 4~8 GB

## Hard disk

- A minimum installation requires 550 MB
- Suggest remaining 100 GB ~ 1TB free space for your files and images.



# HOW TO INSTALL?

- Please go to this page to download the installation file
  - [http://eln.iis.sinica.edu.tw/eln/?q=download\\_eln](http://eln.iis.sinica.edu.tw/eln/?q=download_eln)
- During installation, input site information step by step
  - See the online help video <http://eln.iis.sinica.edu.tw/eln/?q=help>
- Now we provide Windows, Mac and Linux version



## Download ELN

### Windows version:

**ELN-1.2.1** (2013-08-14)

- Performance editing.

**ELN-1.1.10** (2012-01-10)

- Fix bug for editing roles.

**ELN-1.1.9** (2011-10-19)

- Change Editor module.

**ELN-1.1.8** (2011-04-20)

- Upgrade drupal version from 6.14 to 6.19.

- Fix IE layout problem.

**ELN-1.1.7** (2010-10-21)

### Mac version:

**ELN-1.1.10** (2012-06-07)

### Linux version:

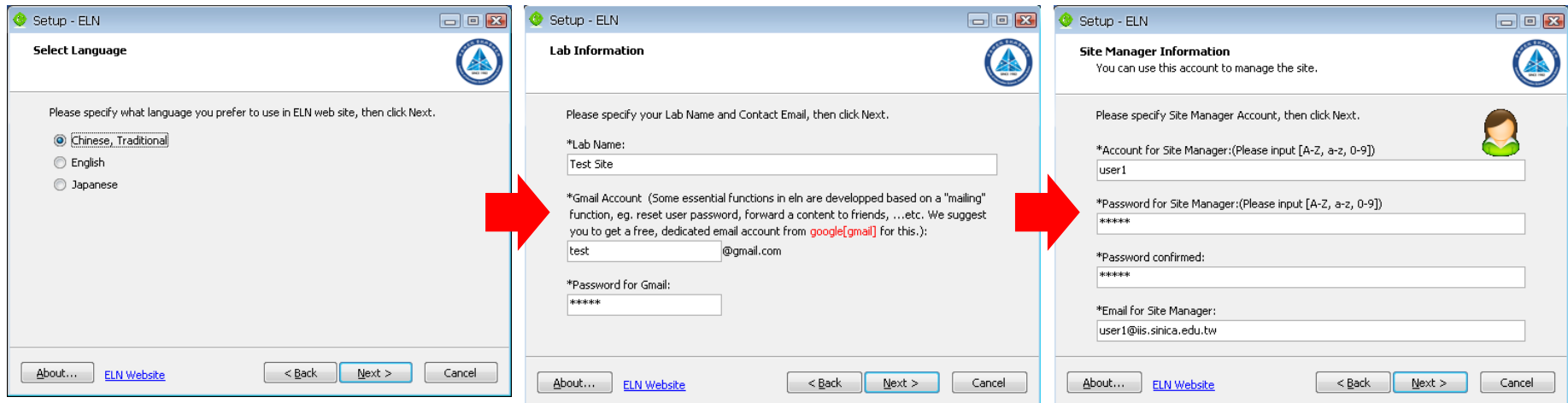
**ELN-1.2.1 & BioLinux 7** [Admin account :lsbnb / Admin password:lsnbiiis ] (2013-09-12)

- DVD iso file

# HOW TO INSTALL – WINDOWS VERSION



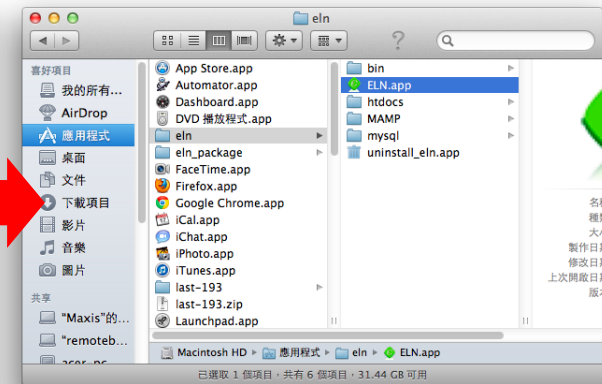
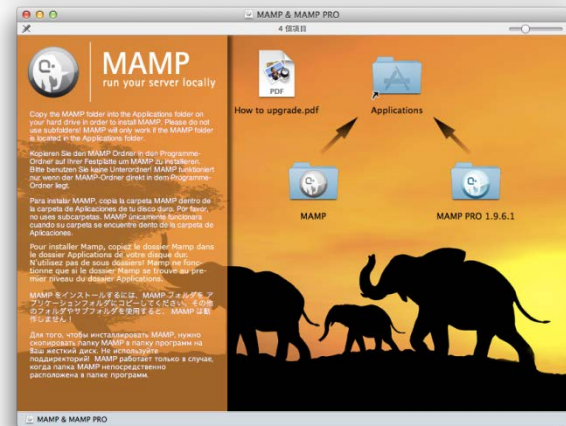
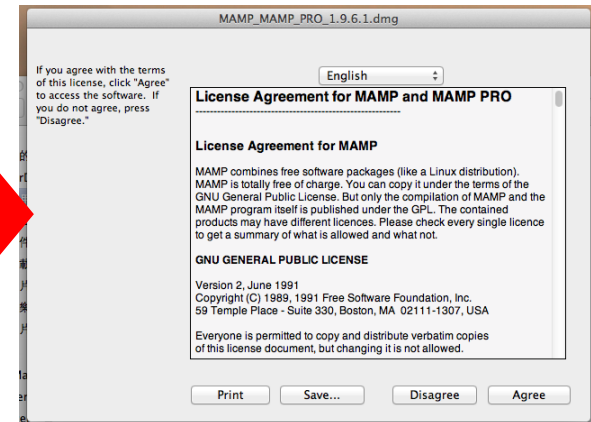
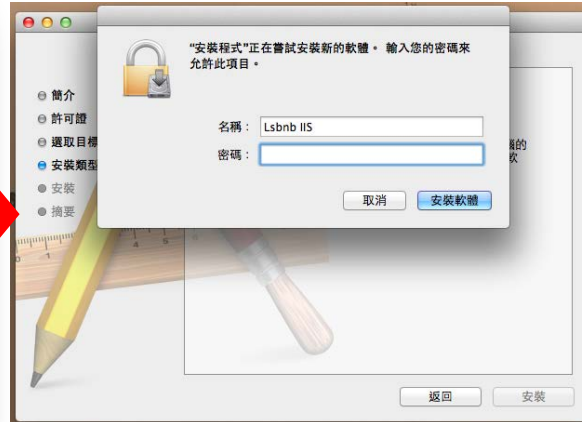
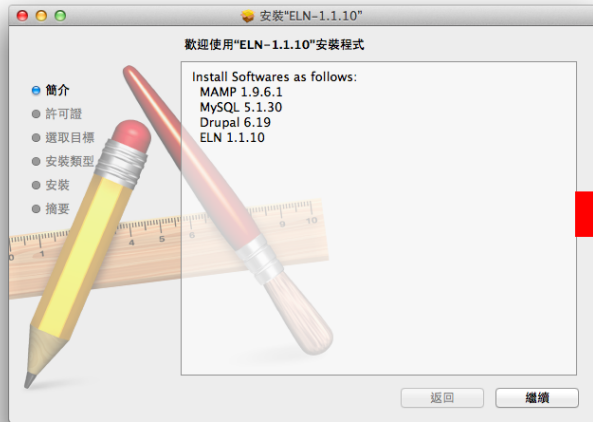
## Download the installation file and run it



# HOW TO INSTALL – MAC VERSION



## Download the installation file and run it



Drag MAMP folder to Applications

Run /Applications/eln/ELN.app

# HOW TO INSTALL – LINUX VERSION (1/8)

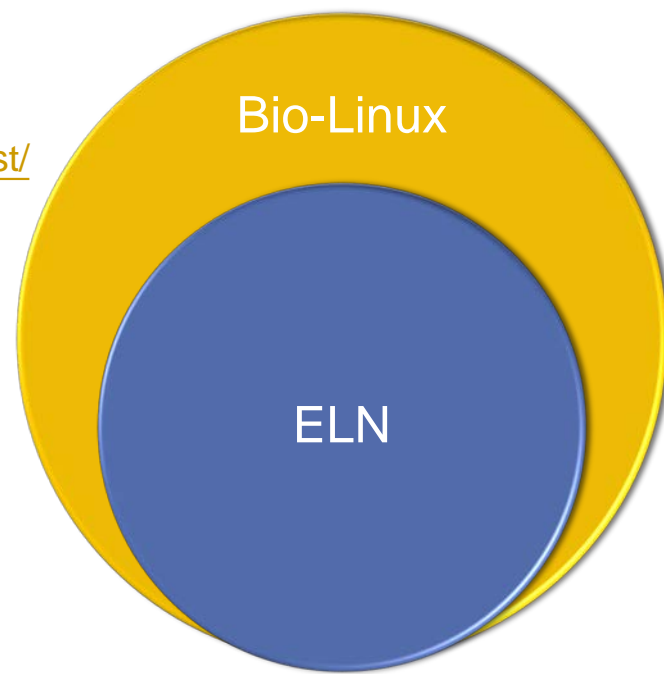


## Bio-Linux

- Provides more than 500 bioinformatics programs on an Ubuntu Linux 12.04 LTS base
- Develop by NERC Environmental Bioinformatics Centre
- Software included on Bio-linux
  - <http://environmentalomics.org/bio-linux-software-list/>

**Live DVD or install directly**

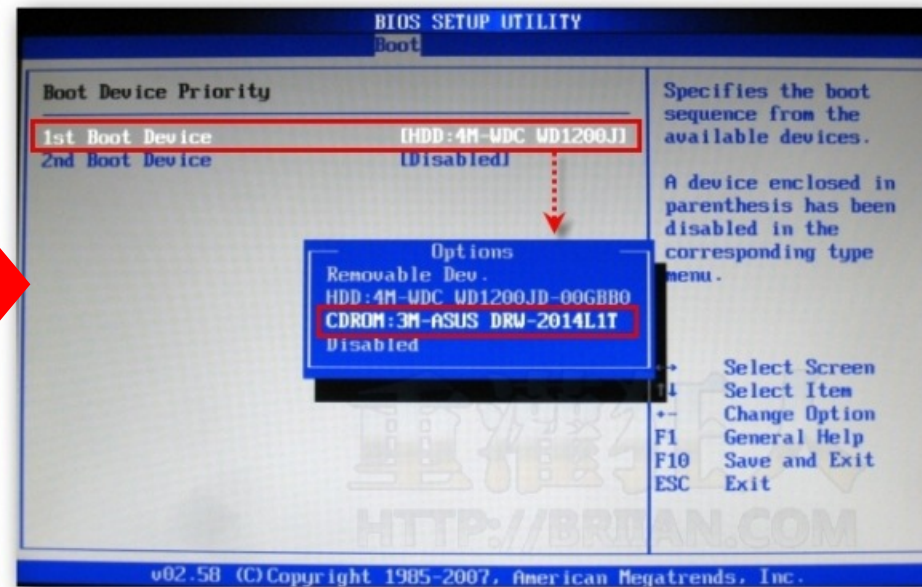
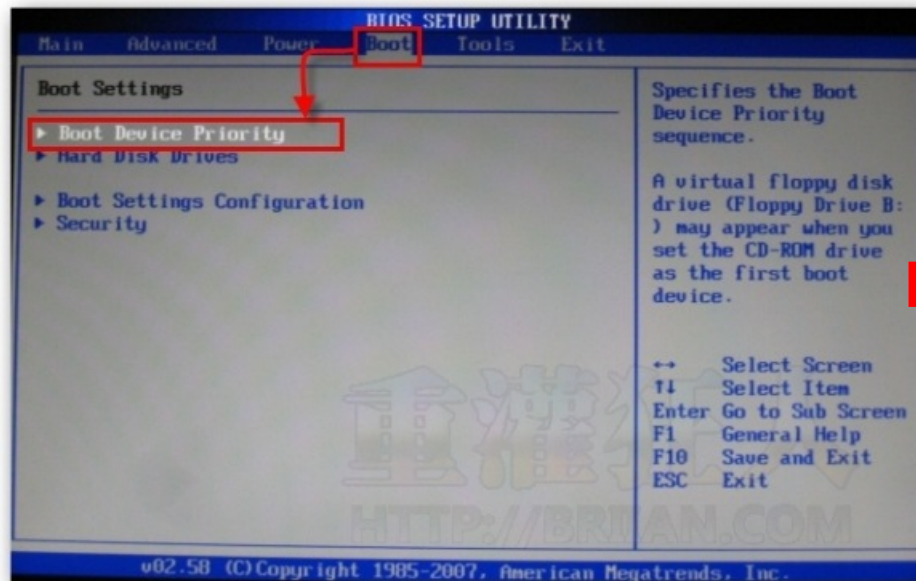
**Download the iso file and burn it to DVD**



# HOW TO INSTALL - LINUX VERSION (2/8)

## BIOS SETUP

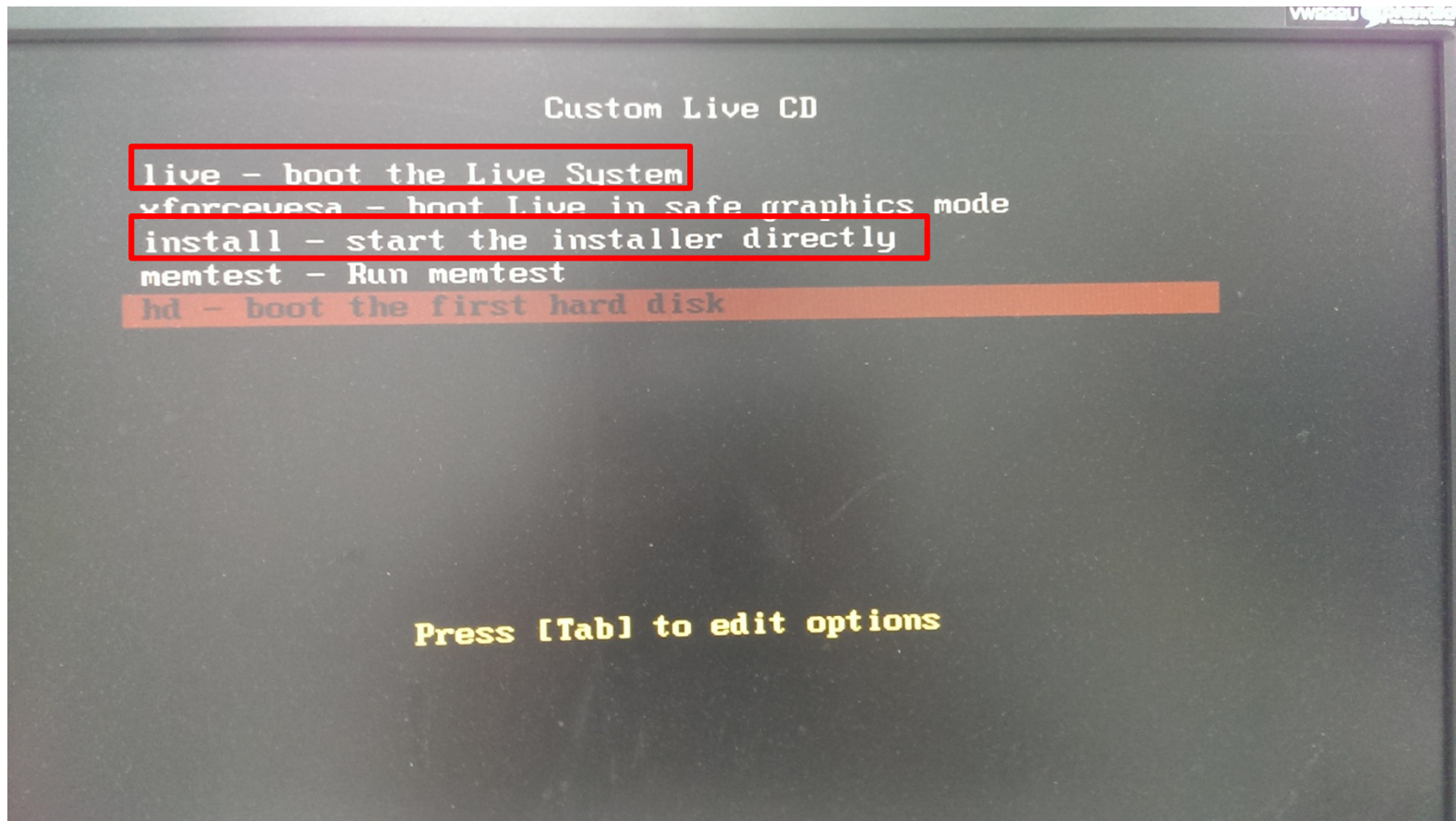
Set first boot device is **CDROM**





# HOW TO INSTALL - LINUX VERSION (3/8)

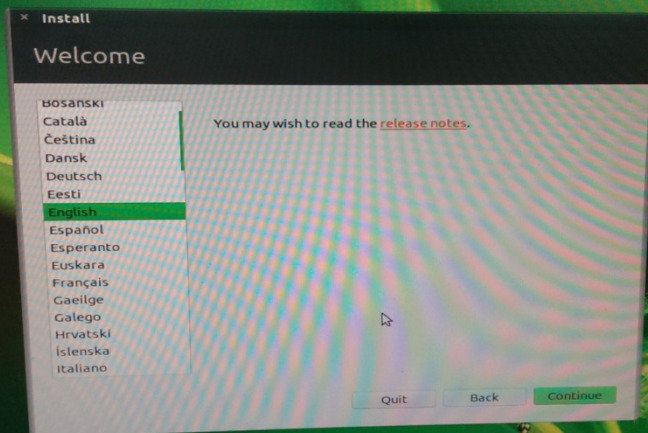
Insert the DVD into the DVD drive and restart your computer  
You can boot from **live CD** or **install directly**



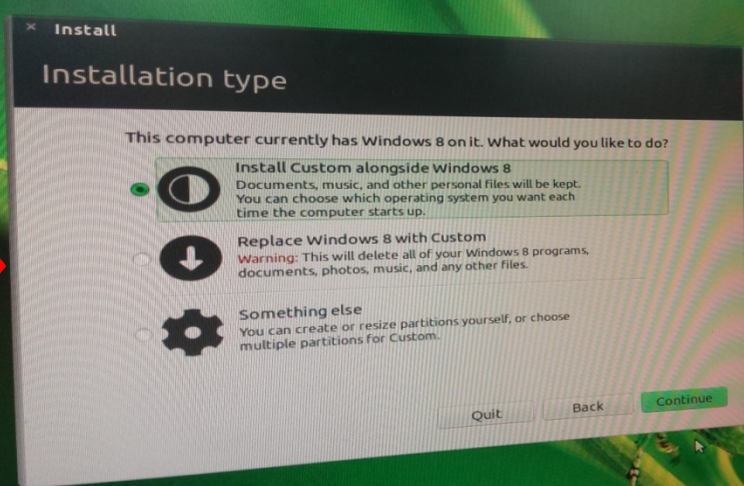


# HOW TO INSTALL – LINUX VERSION (4/8)

Select your language



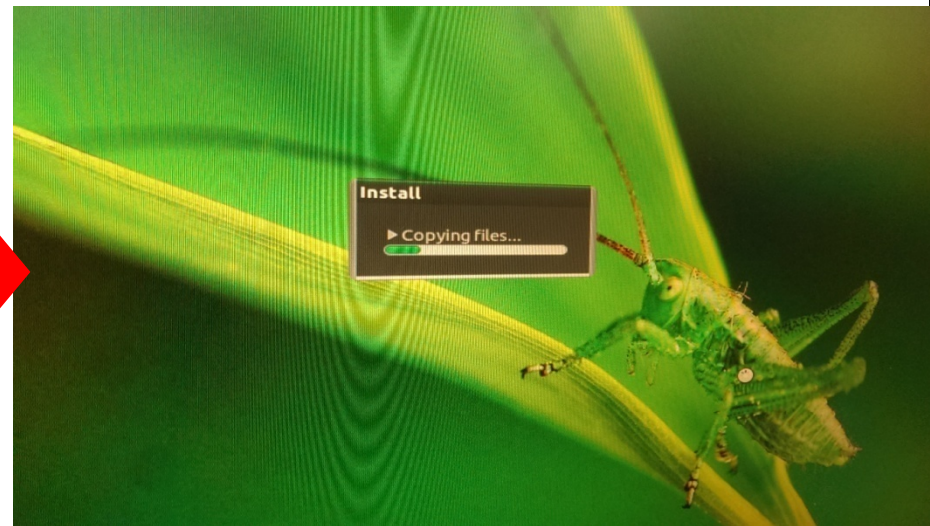
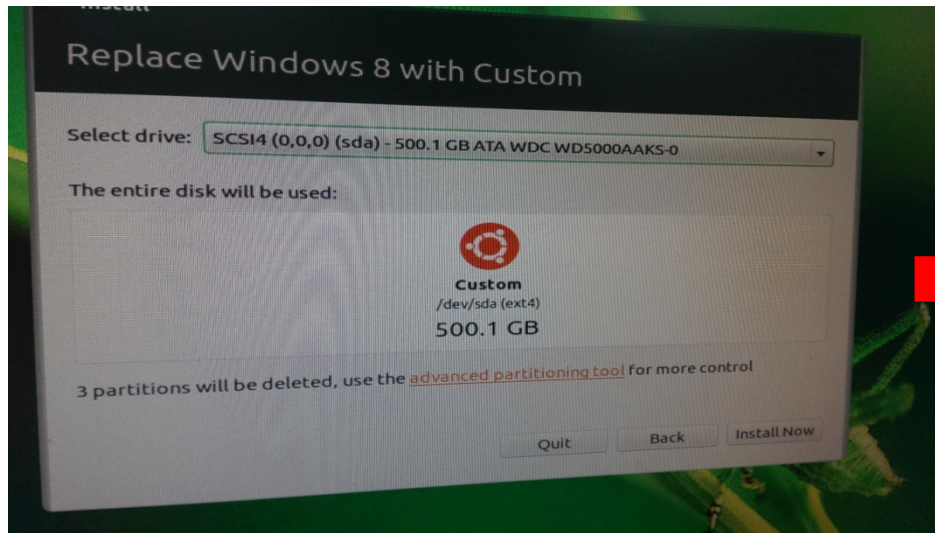
Double system or only one



# HOW TO INSTALL – LINUX VERSION (5/8)

Select hard disk you want to install

Wait for copying files



# HOW TO INSTALL – LINUX VERSION (6/8)

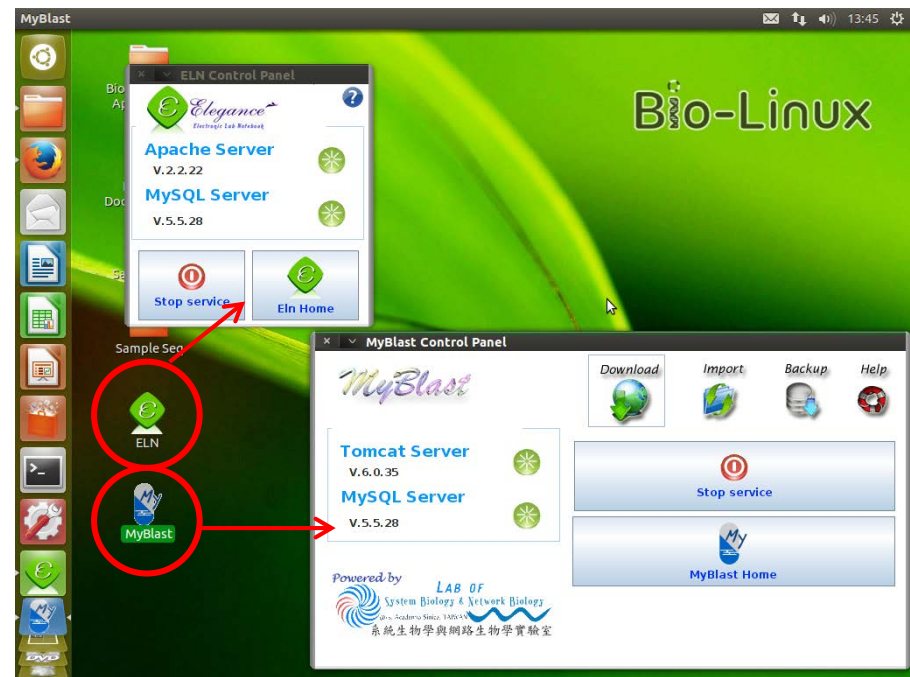
After installing, remove DVD and press Enter

```
Checking battery state...
cpid: exiting
* Stopping MySQL Server
* Starting System V runlevel compatibility
* (plymouthd:22720): WARNING ***: Command line 'dbus-launch --autolaunch=7490bb37bd2e73f783e303200000026 --binary-syntax --close-stderr' exited with non-zero status 1: Autolaunch error: X11 initialization failed.\n
* Stopping save sound card(s) mixer state(s)
* Starting Userspace bootplash utility
* Stopping LightDM Display Manager
* Starting Send an event to indicate plymouth is up
* Stopping Tomcat service: engine tomcat6
apache2: Could not reliably determine the server's fully qualified domain name, using 127.0.1.1 for ServerName
... waiting .. * Stopping web server apache2
Checking for running unattended-upgrades:
* Stopping MTA
NX> 100 NXSERVER - Version 3.2.0-74-SVN OS (GPL, using backend: 3.5.0)
NX> 500 Service was already stopped
NX> 999 Bye
NX> 100 NXSERVER - Version 3.2.0-74-SVN OS (GPL, using backend: 3.5.0)
NX> 500 Error: No running sessions found.
NX> 999 Bye
speech-dispatcher disabled; edit /etc/default/speech-dispatcher
* Starting Send an event to indicate plymouth is up
* Asking all remaining processes to terminate...
Please remove installation media and close the tray (if any) then press ENTER:
```



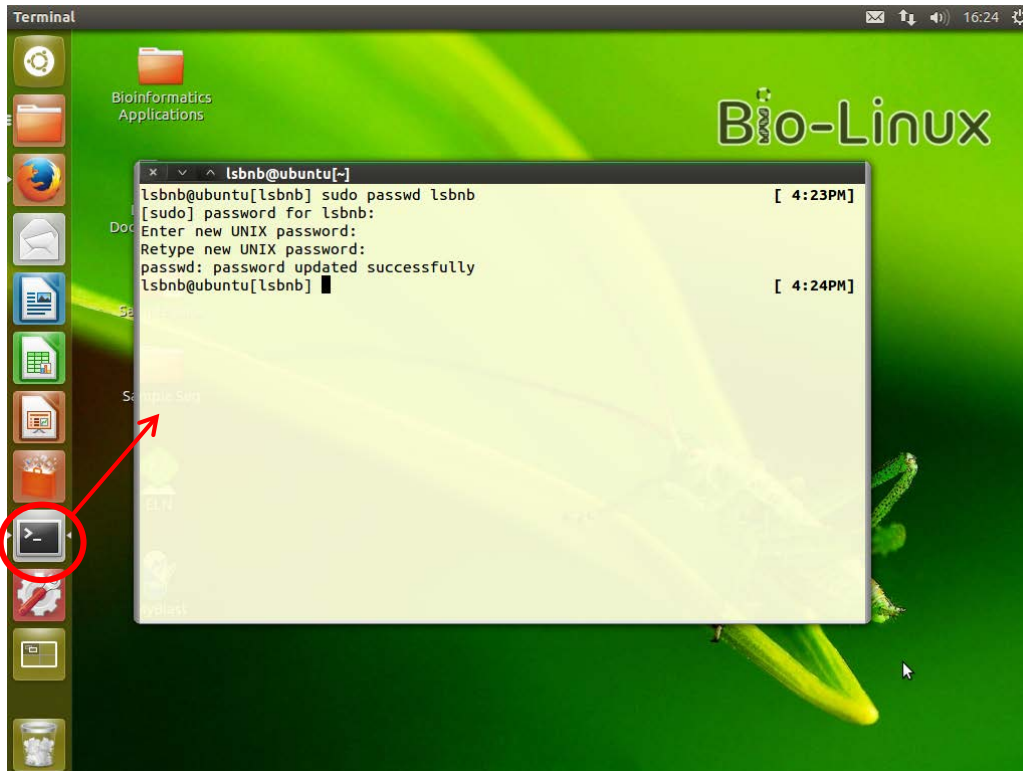
# HOW TO INSTALL - LINUX VERSION (7/8)

The screen capture after installing



# HOW TO INSTALL - LINUX VERSION (8/8)

## CHANGE ADMIN PASSWORD

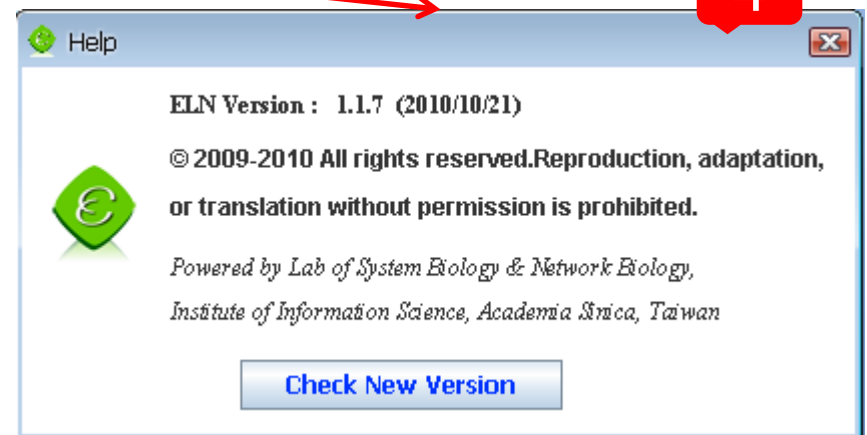
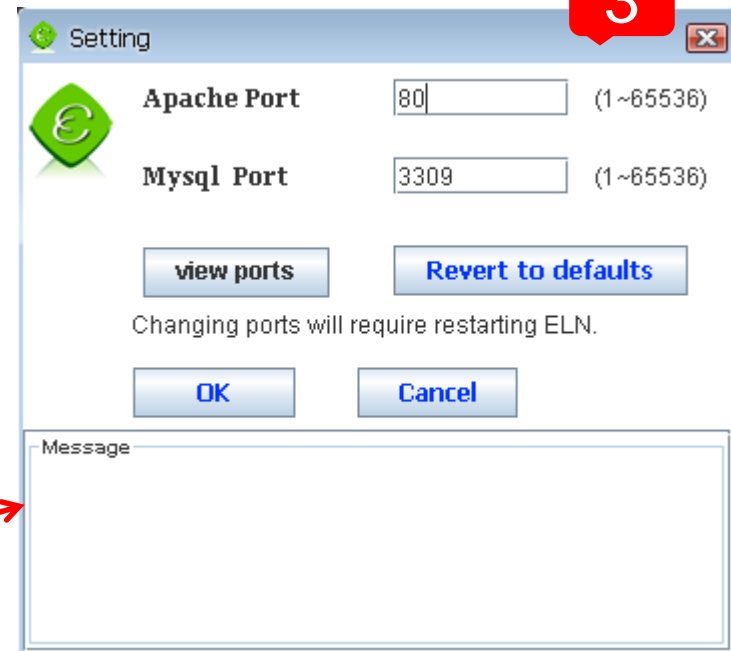


```
lsbnb@ubuntu[lsbnb] sudo passwd lsbnb [ 4:23PM]
[sudo] password for lsbnb:
Enter new UNIX password:
Retype new UNIX password:
passwd: password updated successfully
lsbnb@ubuntu[lsbnb] [ 4:24PM]
```

1. Open terminal
2. Enter “sudo passwd lsbnb”
3. Password for lsbnb is “lsbnbiis”
4. Enter new password

# ELN SERVICE CONTROL

1. Apache & MySQL server start/stop
2. Go to ELN home page
3. Change Apache & MySQL port
4. Check new version



# ROLE INTRODUCTION

## Guest

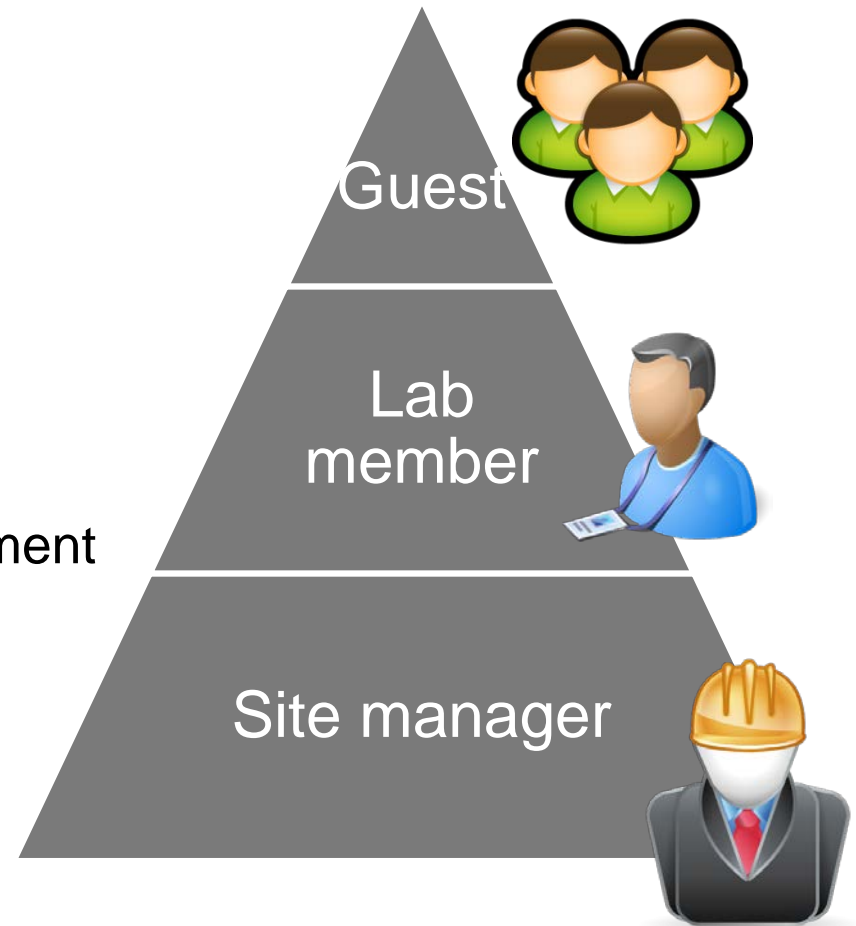
- Only can view public content

## Lab member

- View public content
- View and post private content

## Site manager

- User, content and theme management





# THE FUNCTIONS OF LAB MEMBER

## **Messages**

- Contact with other lab members

## **Calendar**

## **Post and reply forum topics**

## **File management**

## **Search**

## **Personalization**

## **Share content**

- Convert to printer-friendly version or PDF file
- Email (hyperlink or full content)
- Copy to another ELN server



# THE FUNCTIONS OF SITE MANAGER (1/2)

## Public information update

- News
- Front page, research topics, members information, resources, contact information
- Photo gallery



## Site configuration

- Theme setting
- Language setting (Traditional Chinese, English and Japanese)
- Site information (Site name, footer message, ...)
- Backup and restore

# THE FUNCTIONS OF SITE MANAGER (2/2)

## User management

- Create, edit and delete user
- Set role
- Assign users to respective forums

## Content management

- Post and comment management
- Forum management
  - Create, edit and delete forum topics
  - Assign forums to privileged users



DEMO



# FUTURE WORK

## **Upgrade to Drupal 7**

- Safer and more efficient

## **Edit content related**

- Use template to add your content
- Drag and drop image upload
- Multiple files upload

## **Adjust the layout for mobile device**

## **Property and consumables management**

## **ELN NAS version**

## **ELN online version**

# RELATED LINKS

## **ELN web site**

<http://eln.iis.sinica.edu.tw/eln/>

## **Installation program download**

[http://eln.iis.sinica.edu.tw/eln/?q=download\\_eln](http://eln.iis.sinica.edu.tw/eln/?q=download_eln)

## **Online help video**

<http://eln.iis.sinica.edu.tw/eln/?q=help>

## **Contact as**

<http://eln.iis.sinica.edu.tw/eln/?q=contact>

*Thank You*

The image features the text "Thank You" written in a pink, cursive script font. The text is centered and integrated into a decorative green vine graphic. The vine starts on the left, loops upwards to hold a pink flower bud, then curves downwards and to the right, ending in a small leaf. A pink daisy-like flower with a yellow center is positioned at the end of the vine on the right side. The entire graphic is set against a plain white background.