



#### **ELEGANCE: ELECTRONIC LAB NOTEBOOK ON CLOUD**-DIGITIZE YOUR EXPERIMENTAL DESIGNS AND RESULTS INTO WISDOM FROM DISCOVERY TO PUBLICATION

## 電子實驗記錄本之運用與維護



#### 黄智偉 2016/10/27



LAB OF System Biology & Network Biology 中央研究院資訊科學研究所 @iis, Academia Sinica, TAIWAN

系統生物學與網路生物學實驗室

## OUTLINE

- ✓ Motivations
- ✓ Introduction
- ✓ Interface

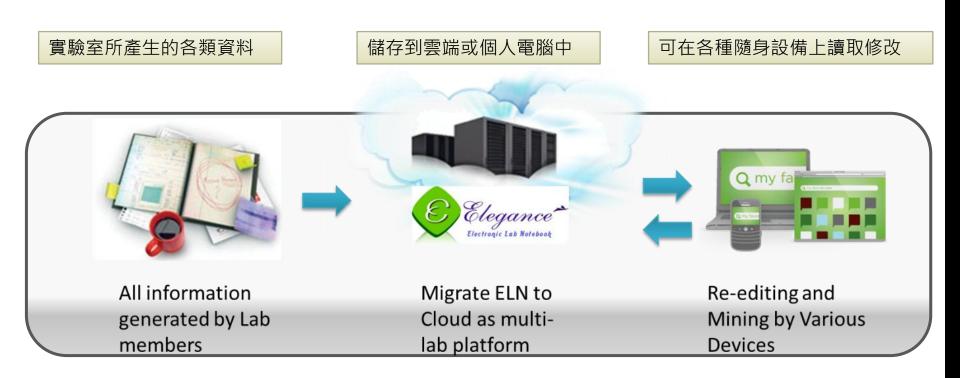
### ✓ Use ELN

- ✓Lab member
- ✓Project leader
- ✓ Site manager
- ✓ How to install?
- ✓ ELN service control
- ✓Future Work





## **MOTIVATIONS (1/2)**





## **MOTIVATIONS (2/2)**

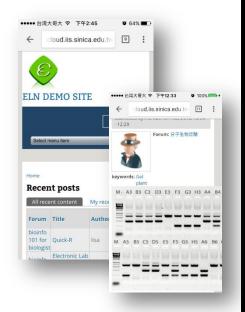
From Charles Darwin's "B" Notebook, 1837.

- Easy to install with smooth learning curves
- > Open Source
- Digitalize
- Searching completely, Sharing for multiuser
- > Audit trials and change logs with CFR21 part 11
- User friendly, easy control
- Security, Password administration
- Knowledge reconstruction
- Repository for ideas and knowledge
- All contents in one Portal









#### For reference only

## SIMPLIFIES ACHIEVING 21 CFR PART 11 COMPLIANCY

Title 21 CFR Part 11 is the part of Title 21 of the Code of Federal Regulations that establishes the United States Food and Drug Administration (FDA) regulations on electronic records and electronic signatures (ERES). Part 11, as it is commonly called, defines the criteria under which electronic records and electronic signatures are considered trustworthy, reliable, and equivalent to paper records (Title 21 CFR Part 11 Section 11.1 (a))





#### For reference only

## Typical Auditor Checklist – 21 CFR Part 11

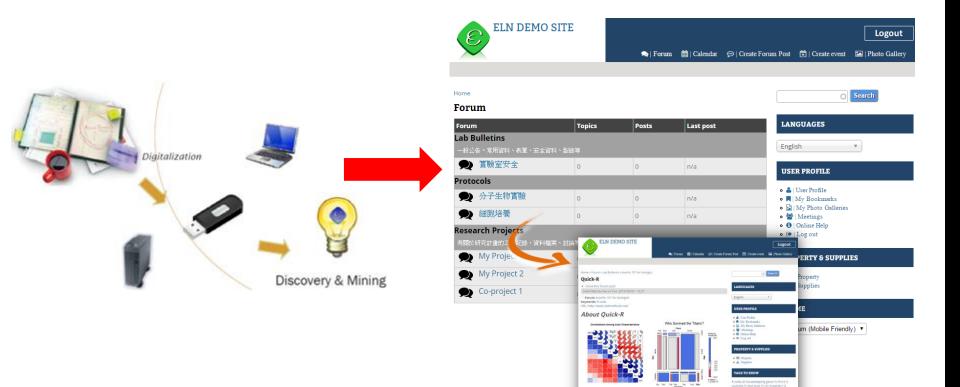
- Adequate Quality System 11.10
- Adequate SDLC and System Maintenance SOPs including:
  - Software Development Lifecycle 11.10 (k)
  - Computer System Validation 11.10 (a)
  - Change Control 11.10 (k)
  - Configuration Control 11.10 (k)
  - Data Backup and Restoration 11.10 (b), (c)
  - Logical & Physical Security 11.10 (d),(g),(h)
  - System Administration & Maintenance (k)
  - Disaster Recovery and Business Continuity (b)
  - Defect Management 11.10 (k)



# INTRODUCTION

## **INTRODUCTION (1/4)**

### Using web page to digitalize and show your thoughts & data



## **INTRODUCTION (2/4)**

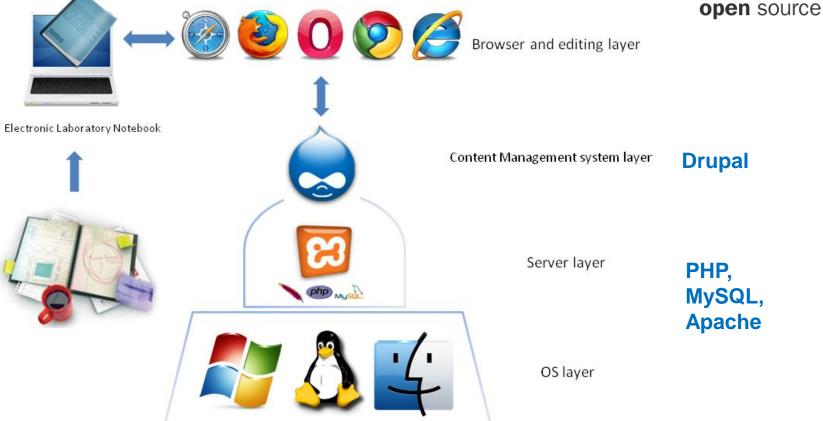
## PLN vs. ELN

	Paper Lab notebook (PLN	) ELN <u>Elegance</u>
Use	Easy	User-friendly interface
Read	Handwriting can be problemation	😵 Easy 🔮
Annotation	Possible but space limitations	😵 Easy 🚺
Modify	Difficult	😵 Easy 🚺
Links within the pages	Unavailable	😵 Just inserting hyperlinks 🛛 🚺
Search	Reading page by page	😵 Easy 🚺
Sort	Unavailable	😵 Sort by date, title, author 🧕
Share	Need photocopying or scanning	😵 Easy 🚺
Safety	Low control	😵 Specific user permission 🥂 🚺
Accessibility	Specific place	😂 Everywhere through internet 🚺
Long-term storage	Difficult	😵 No problem 🛛 🕜
Pages numbered	Yes	With Digital Fingerprint

## **INTRODUCTION (3/4)**

## **Basic Structure of ELN**





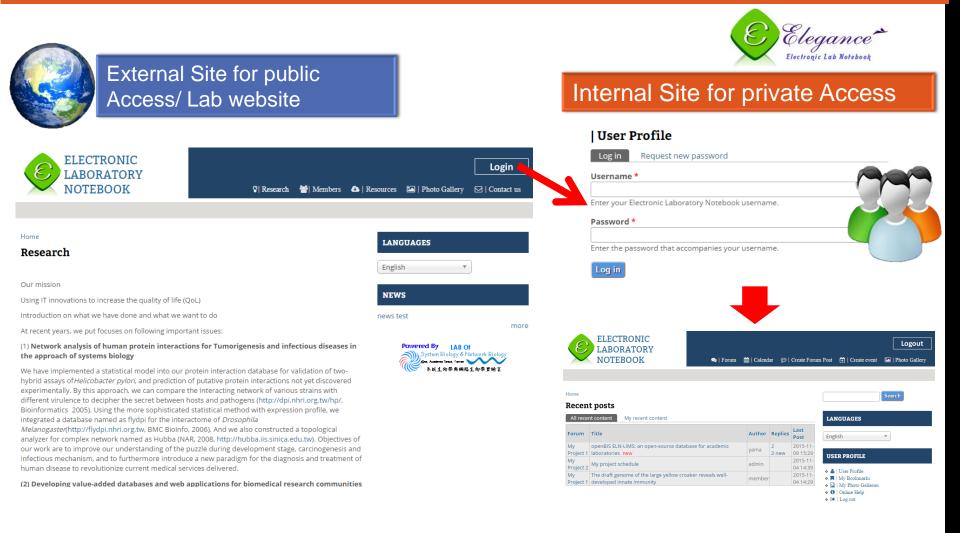
## **INTRODUCTION (4/4)** Essential Functions in ELN



# INTERFACE

## ELN INTERFACE (1/4)

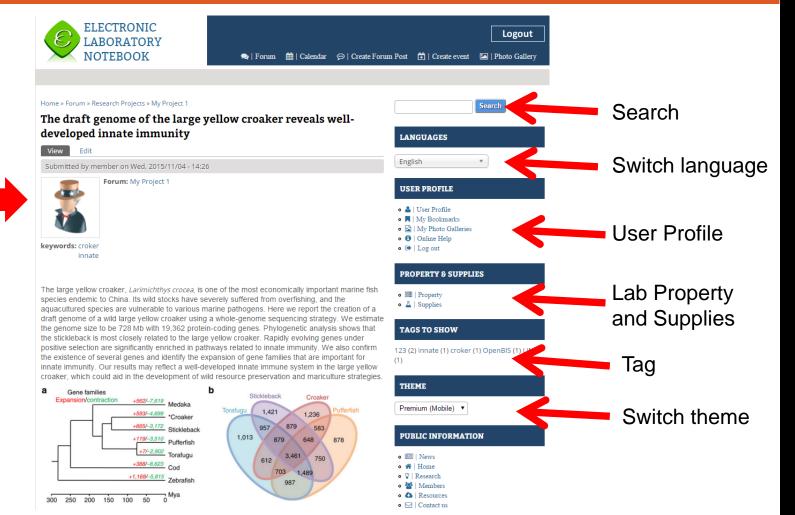
### One Installation, Two Sites for Public and Private



## ELN INTERFACE (2/4)

### **Typical Interface**

Record

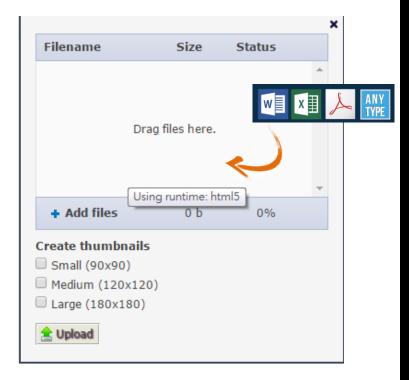


## ELN INTERFACE (3/4)

### Easy to editing content and appending table, image, file, YouTube video...

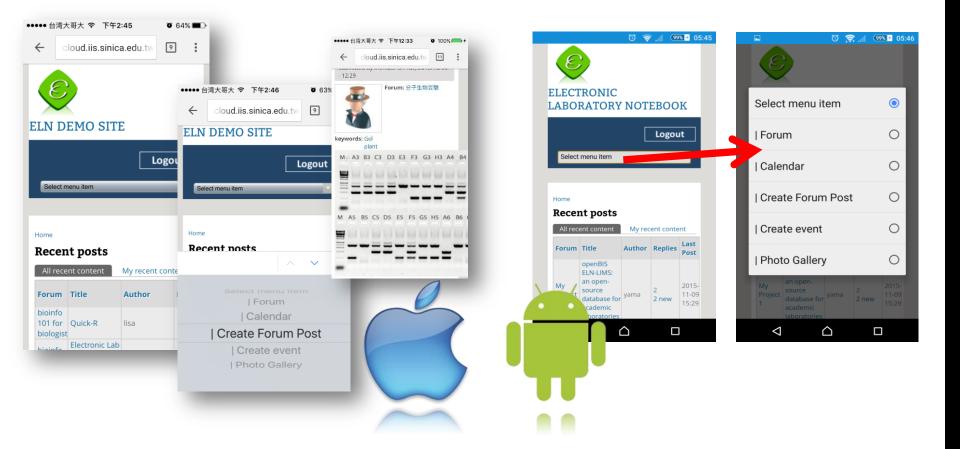
Home	Search
Create Forum Post	
Title *	LANGUAGES
	English
Language	Eligiisti
Language neutral	USER PROFILE
Forum *	
Lab Bulletins	• 🚔   User Profile • 📕   My Bookmarks
keywords *	• 📓   My Photo Galleries
A comma-separated list of terms describing this content. Example: funny, bungee jumping, "Company, Inc.".	• 🚯   Online Help • 🕒   Log out
Body (Edit summary)	PROPERTY & SUPPLIES
◎ 原始碼 X □ 圖 圖 ◎ ♥- < > Q \$ ↓ ■	PROPERTY & SUPPLIES
B I U S X₂ X² IX 등 篇 巻 99 ਲ 話~ 主 主 ☰ ▶¶ ¶<	
	TAGS TO SHOW
	123 (2) innate (1) croker (1) OpenBIS (1) LI
	(1)
	тнеме
	Premium (Mobile) 🔻
	PUBLIC INFORMATION
	• 💷   News
	•   Home • ♀ Research
	• V   Research
	• 🔕   Resources
	• 🖂   Contact us
	Powered By LAB Of System Biology & Network Biology

#### Drag and drop your images or files



## ELN INTERFACE (4/4)

### More simple and clear layout on mobile device



# **USE ELN**

## **ROLE INTRODUCTION**

### Guest

Only can view public content

### Lab member

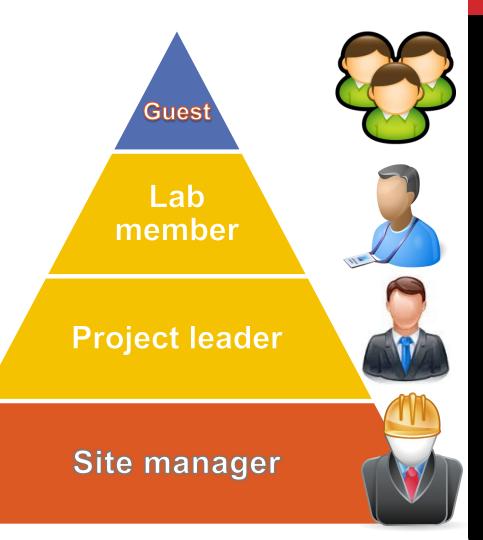
- View public content
- View and post private content

### **Project leader**

- Functions of Lab member
- Content permission management

### Site manager

 User, content and theme management



## LAB MEMBER CAN DO..

- Search
- Personalization
- Post and reply forum topics
- Share content
  - Convert to printer-friendly version or PDF file
  - Email (hyperlink or full content)
- See all reversions of content
- Calendar
- File management
- Bookmark management
- Photo galleries management
- Make meeting invitation to other members
- View properties and supplies in lab



## **THE FUNCTIONS FOR LAB MEMBER** - POST FORUM

- 1. Click Forum, you can see the forums topics
- 2. Click Create Forum Post, you can add new content
- 3. Input Title, Forum name, Keywords and Body

ELN DEMO	SITE	🔊   For	um 🛗   Calendar 🔛   C	Logout	Create Forum Post
ome <b>'orum</b>				O Search	Forum * -My Project 1 •
Forum	Topics	Posts	Last post	LANGUAGES	keywords *
.ab Bulletins 一般公告,常用資料、表單、安全資				English	A comma-separated list of terms describing this content. Example: funny, bungee jumping, "Company, l Body (Edit summary)
<b>● </b>	0	0	n/a	USER PROFILE	◎ 厨師爾 X 6 值 值 値 ◎ 啰· < > Q % 算
Protocols				• 🎍 User Profile	
分子生物實驗	0	0	n/a	• My Bookmarks	
🗩 細胞培養	0	0	n/a	<ul> <li>I My Photo Galleries</li> <li>I Meetings</li> </ul>	B I U S X₂ X² IX ≟ ≔ ₩ ₩ 99 ₩ 話· È Ξ Ξ ■ M
<b>Lesearch Projects</b> 有關於研究計畫的工作紀錄、資料檔	<b>謠家、討論等</b>			• ❸   Online Help • ☞   Log out	
My Project 1	0	0	n/a	PROPERTY & SUPPLIES	
My Project 2	0	0	n/a	• 🗮   Property	
Co-project 1	0	0	n/a	• 👗   Supplies	

Premium (Mobile Friendly) •



≣ )¶ ¶∢

## THE FUNCTIONS FOR LAB MEMBER - SEARCH & PERSONALIZATION

- 1. Search content, support auto-complete
- 2. Personalization, you can change theme here

Premium (Mobile Friendly) •

Bartik Dark Elegant Garland Impact (Mobile Friendly) LiteJazz Marinelli News Flash Premium (Mobile Friendly) Splendio Tapestry



ELN DEMO S	ITE	🗪   Forur	n ∰ Calendar ⊝	Create Forum Post  🗎	Logout
tome Forum					O Search
Forum	Topics	Posts	Last post	LANGUAGES	
Lab Bulletins 一般公告,常用資料、表單、安全資料	、型錄等			English	¥
🗩 實驗室安全	0	0	n/a	USER PROFILE	
Protocols				• 👗   User Profile	
🗩 分子生物實驗	0	0	n/a	• 📕 My Bookmarks	
🗩 細胞培養	0	0	n/a	• 🗟   My Photo Galleri • 🚰   Meetings	es
Research Projects 有關於研究計畫的工作紀錄、資料檔案	、討論等			• €   Online Help • ⊕   Log out	
My Project 1	0	0	n/a	PROPERTY & SUPP	TIES
My Project 2	0	0	n/a	• =   Pro	
Deproject 1	0	0	n/a	• 🛓   Sup	
				TUPLE	

#### **ELN Demo Site**

orum				0 9
orum				
orum	Topics	Posts	Last post	LANGUAGES
ab Bulletins				English •
<b>夏</b> 實驗室安全	0	0	n/a	USER PROFILE
rotocols				• 🚢   User Profile
分子生物實驗	0	0	n/a	<ul> <li>My Bookmarks</li> <li>My Photo Galleries</li> </ul>
2 細胞培養	0	0	n/a	<ul> <li>         Meetings      </li> <li>         Online Help      </li> <li>         Log out     </li> </ul>
esearch Projects				- 0 1205 out
有關於研究計畫的工作紀錄				PROPERTY & SUPPLIES
My Project 1	0	0	n/a	
My Project 2	0	0	n/a	<ul> <li>■  Property</li> <li>▲   Supplies</li> </ul>
Co-project 1	0	0	n/a	

## THE FUNCTIONS FOR LAB MEMBER - PROFILE EDIT

- 1. Click User Profile, you can see the user information
- 2. Click Edit, edit your account information

Home member	O Search	Wiew     Edit     My Bookmarks     Draft     Scheduled     Track     File browser
View Edit My Bookmarks Draft Scheduled Track File browser		Current password
First, Last Name: member Affiliation: iis History		E-mail address * member@iis.sinica.edu.tw A valid e-mail address. All e-mails from the system will be sent to this address. The e-mail address is not made public and will only be used if you wish to receive a new password or wish to receive certain news or notifications
Member for 1 day 23 hours Send email to this user	<ul> <li></li></ul>	by e-mail. Password Password strength:
	PROPERTY & SUPPLIES       • ■ Property       • ▲   Supplies	Confirm password To change the current user password, enter the new password in both fields.

— ►T	heme	configu	ration -

0

User Information		
First, Last Name *		
member		
Affiliation *		
iis		
Tel		

### **THE FUNCTIONS FOR LAB MEMBER** - FILE MANAGEMENT

- 1. Click File browser, management your files
- 2. Click Upload, show the upload window
- 3. Click Add files or just Drag the files



×

......

🚖 Upload

2				1			
	Bookmarks Dra	aft Schedu	led Track Fi	le browser	Filenam	e Size	S
🚖 Upload 🧮 Thumbna	ils 🗙 Delete ؋ R	esize 🛛 🔗 Direc	tory	0			
Navigation	File name	Size	Width Height	Date			
🗆 🚞 <root></root>	xia_zaijpg	2.46 KB	120 144	2016-07-15 03:28			
🖸 🚞 all 🖻 🪞 users	install_01.png	50.14 KB	862 713	2016-07-15 05:01		Drag files here.	I.
🖸 🧰 member	install_02.png	54.83 KB	852 766	2016-07-15 05:01			
	install_03.png	91.02 KB	1040 823	2016-07-15 05:01			
	:						
					+ Add	files 0 b	
					Create th	umbnails	
					🗆 Small (9	90x90)	
	4 files using 198		mited quota		🗆 Medium	(120×120)	
		•••			🗆 Large (1		

## THE FUNCTIONS FOR LAB MEMBER - INSERT IMAGE (1/2)

- 1. Click this icon, you can insert image file
- 2. Go to your file browser
- 3. Upload the image file
- 4. Insert the image file

	921家團 注	
	影像資訊 連結 進階	
Create Forum Post		
Title *	URL [ 』」 』「」	
	<b>智</b> 代文字	
Forum *		
-My Project 1 🔹	寶度 預覧	
keywords *	高度 C Lorem ipsum dolor sit amet, consectetuer adipiscing ▲ elit. Maecenas feugiat consequat diam. Maecenas metus. Vvamus diam purus, cursus a, commodo	
	non, facilisis vitae, nulla. Aenean dictum lacinia tortor. Nunc laculis, nibh non iaculis aliguam, orci	
A comparent constrained list of terms describing this content. Example: funny, bungee jumping, "Company, Inc.".	框線 felis euismod neque, sed ornare massa mauris sed velit. Nulla pretium mi et risus. Fusce mi pede,	
Body y)	tempor id, cursus ac, ullamcorper nec, enim. Sed tortor. Curabitur molestie. Duis velit augue,	
	condimentum at, ultrices a, luctus ut, orci. Donec pellentesque egestas eros. Integer cursus, augue in	
	VSpace cursus faucibus, eros pede bibendum sem, in tempus tellus justo quis ligula. Etiam eget tortor. ↓	
	封齊方式	
B I U S X₂ X² Ix I I I I I I I I I I I I I I I I I I	<未設定> ▼	
		4
	🚖 Upload 📳 Thumbnails 🙁 Delete 🐵 Resize 🗃 Directory 🖌 In	cort file
	🔄 Opioau 🔛 mumbraiis 👗 Delete 👾 Resize 🔤 Directory 🗸 In	sert file
	Navigation File	e name
	🖃 🛅 <root></root>	
	🖸 🚞 all	
	🗆 🧰 users	
	🗉 🧰 member	
	_	

## THE FUNCTIONS FOR LAB MEMBER - INSERT IMAGE (2/2)

5. Adjust the width and height of the image

影像屬性		×
影像資訊 連結	進階	
u		
URL		
/eIndemo/sites/de	fault/files/users/member/xia_zaij 瀏覽伺服器	
替代文字		
	5	
實度	預覽	
400		<b>.</b>
144		
11±30R		
HSpace		
	Lorem ipsum dolor sit amet,	
VSpace	consectetuer adipiscing elit. Maecenas feugiat conseguat diam. Maecenas metus, Vivamus diam	
	purus cursus a commodo non facilisis vitae nulla	•
對齊方式		
ALCOKAL.		

6. Insert image Success

#### **Create Forum Post**

orun		
-My I	Project 1 V	
eywo	vords *	
	0	
com	nma-separated list of terms describing this content. Example: funny, bungee jumping, "Compar	ıy, Inc.".
ody	۲ (Edit summary)	
Ø )	原始碼 🔏 🔓 💼 🐨 🔦 🔶 📮	
	🖬 🔚 🕼 📕 Ø 🎟 = 🗮 🙂 Ω 🔇	
В	3 I U S X₂ X² IX 這 := := ** ** ** ?? 別 話- ) 〓 主 三 〓	<b>▶</b> ¶ ¶∢
	• 🙊 📕 🔤	
標準		

## **THE FUNCTIONS FOR LAB MEMBER** - INSERT FILE/VIDEO OR HYPERLINK

- 1. Click this icon, you can make text or any file to hyperlink
- 2. Make text to hyperlink, input URL of the text
- 3. Make text to hyperlink for download the file, go to your file browser
- 4. Upload the file
- 5. Insert the file to hyperlink

	連結 ×	νου
Create Forum Post	連結資訊 目標 進階	You
Title *	連結類型	Tuhe
		IUNC
Forum *	URL	
-My Project 1	3	111110000
keywords *	▲●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●●	vimeo
A comma-separated list of terms describing this content. Example: funny, bungee jumping, "Company, Inc.".		
Body (Edit summary)		
◎ 原始碼 X D @ @ @ ♥- ◆ ◇ Q \$3 算		
B J ×₂ ײ   I <sub>x</sub> [書 :≡   ≇ ≇ 99 15 話→ 트 = = ■ M ¶+	確定 取消 ∡	
標準 • 字型 • 大小 • 様式 • ▲• △• 🔀 🗐		5
link	🚖 Upload 📳 Thumbnails 🗰 Delete 🐵 Resize 🗃 Directo	ory ✔ Insert file
	Navigation	File name
	⊟ 🛅 <root></root>	
	🖸 🧰 all	
	⊟ 🧰 users ⊞ 🧰 member	



## THE FUNCTIONS FOR LAB MEMBER - CLONE POST & ADD COMMENT

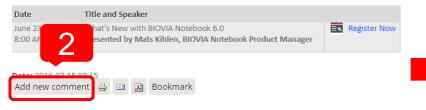
- 1. Clone all the content of this forum post
- 2. Add comment about this forum post
- 3. Input Subject and Comment for discussion with other members



With an ELN you can cut documentation time in half, reduce cycle times by 50%, and lower costs by 25%. Accelrys has a range of ELNs to meet the full spectrum of needs of scientific organizations. Learn more about improving lab-to-market operations by moving from paper to electronic workflow and process documentation.

Webinars will continue to be added to this series, please check back often.

#### **Upcoming Webinars**





Subject

#### Comment \*





### **THE FUNCTIONS FOR LAB MEMBER** - SHARE & BOOKMARK CONTENT

- 1. Print, Email, or Convert this post to pdf
- 2. Add this post to your bookmark

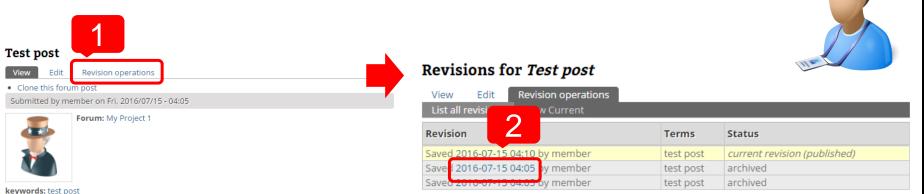
- 3. Go to your bookmark management page
- 4. Re-order or create folder for you bookmarks



Test post	
View Edit Revision operations	
Clone this forum post	
Submitted by member on Fri, 2016/07/15 - 04:05	English
Forum: My Project 1	USER PR 3 My Bookmarks
	My Bookmarks ++ Test post
keywords: test post Electronic Lab Notebook Webinar Series	
The Electronic Lab Notebook (ELN) is the scientific community's fastest growing investment and application of choice to facilitate knowledge management, streamline processes and improve collaboration.	PROPERTY & SUPPLIES
With an ELN you can cut documentation time in half, reduce cycle times by 50%, and lower costs by 25%. Accelyps has a range of ELNs to meet the full spectrum of needs of scientific organizations. Learn more about improving lab-to-market operations by moving from paper to electronic workflow and process documentation.	Eliptoperty     A   Supplies  TAGS TO SHOW
Webinars will continue to be added to this series, please check back often.	
Upcoming Webinars	test post (1)
Date Title and Speaker June 23 8:00 AM - 9:00 P 1 Aat 2 Kotebook Product Manager Register Now	THEME       Premium (Mobile Friendly)
Date: 2016-07-15 (3:15 Add new comme It 😄 🖃 🔀 Bookmark	PUBLIC INFORMATION  • @] News • # Home
Good member - Fri, 2016/07/15 - 04:25 This article is very good.	<ul> <li>♥   Research</li> <li>♥   Research</li> <li>● Members</li> <li>● Members</li> <li>● S   Contact us</li> </ul>
reply	Powered By LAB Of System Biology & Network Biology Construction from the State 2
	₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩₩

## THE FUNCTIONS FOR LAB MEMBER - REVISIONS

- 1. Click Revision operations, you can see all the versions of this content
- 2. Click any time you want to see



#### **Electronic Lab Notebook Webinar Series**

The Electronic Lab Notebook (ELN) is the scientific community's fastest growing investment and application of choice to facilitate knowledge management, streamline processes and improve collaboration.

With an ELN you can cut documentation time in half, reduce cycle times by 50%, and lower costs by 25%. Accelrys has a range of ELNs to meet the full spectrum of needs of scientific organizations. Learn more about improving lab-to-market operations by moving from paper to electronic workflow and process documentation.

Webinars will continue to be added to this series, please check back often.

#### **Upcoming Webinars**

Date	Title and Speaker		
June 23 8:00 AM - 9:00 PT	What's New with BIOVIA Notebook 6.0 Presented by Mats Kihlen, BIOVIA Notebook Product Manager	Ξ×	Register Now



View Edit Revision operations		
List all revision w Current		
Revision	Terms	Status
Saved 2016-07-15 04:10 by member	test post	current revision (published)
Save 2016-07-15 04:05 by member	test post	archived
Saved 2010-07-15 04.05 by member	test post	archived



#### Revision of Test post from Fri, 2016/07/15 - 04:05

View	Edit	Revision	operations
List all I	revisions	View	
Submitt	ed by me	mber on F	ri, 2016/07/15 - 04:05

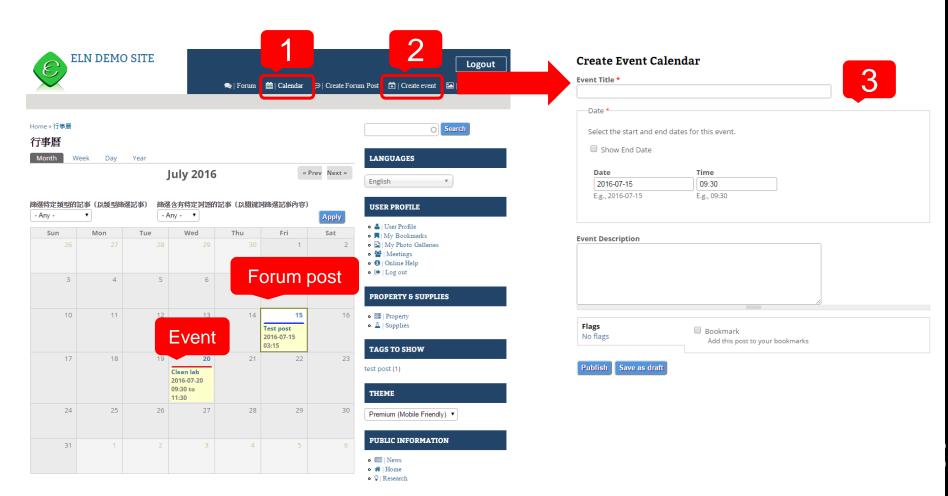


#### Forum: My Project 1

keywords: test post This is test post.

## THE FUNCTIONS FOR LAB MEMBER - CALENDAR

- 1. Click Calendar, you can see Forum Post and Event
- 2. Click Create event, add event by your self
- 3. Input Event Title, Time and Description



## **THE FUNCTIONS FOR LAB MEMBER** - PHOTO GALLERIES



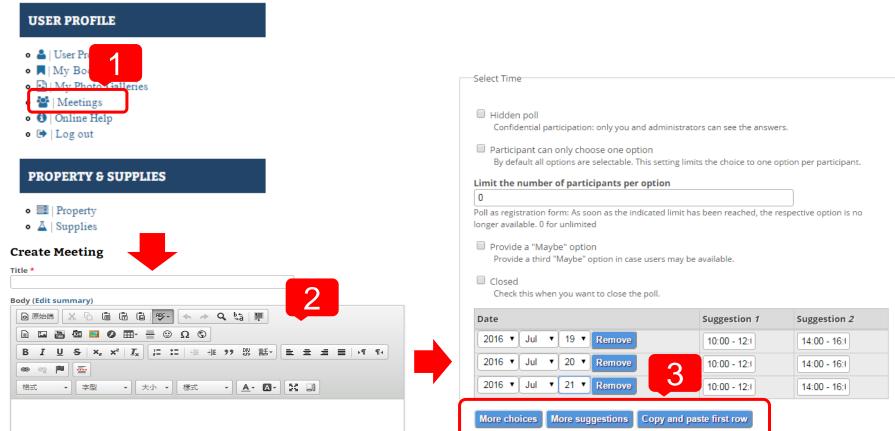
- 1. Click My Photo Galleries, manage your Album
- 2. Input Album Title, upload photos
- 3. Set Album Privacy, share to Everyone, Lab member or Only yourself

	Create Album
	Title *
	Description
	Photos
My Bookmarks	Add a new file Select one or more files to upload Filename Size Status
<ul> <li>Online Help</li> <li>I Log out</li> </ul> PROPERTY & SUPPLIES	Drag files here.
<ul> <li>■   Property</li> <li>▲   Supplies</li> </ul>	+ Add files 0 b 0% Start upload Files must b Allowed file B. gjpeg.
	Privacy * Everyone Lab Member Only me Bookmark Add this post to your bookmarks Publish Save as draft Preview

## THE FUNCTIONS FOR LAB MEMBER - MAKE MEETING (1/4) WITH COLLEAGUES

- 1. Click Meeting, make meeting invitation to other members
- 2. Input title and body
- 3. Input Date and Suggestion time for poll





## THE FUNCTIONS FOR LAB MEMBER - MAKE MEETING (2/4)



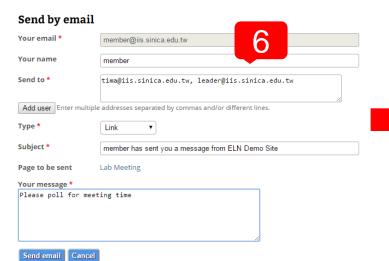
#### 4. Check the time you are available

#### Lab Meeting

lone this meeting		-00		_		
bmitted by member on F	-ri, 2016/07/15 - 21	:29				
ime to meeting.					Λ	
<ul> <li>Meeting Time</li> </ul>						
0						
elect Time:						
	July 2016					
	Tue	e. 19	Wee	d. 20	Thu	J. 21
0 participants	10:00	14:00 -	10:00	14:00 -	10:00	14:00 -
o participants	-12:00	16:00	-12:00	16:00	-12:00	16:00
member						
member			0	0	0	0

Add new comment \ominus 🖃 🔊 Bookmark

#### 6. Input the email of members



#### 5. Invite other members by email

Lab Me	eeting

Clone this mee	ting					
Submitted by m		2016/07/15 - 2	1:29			
It's time to meetin	g.					
Meeting Tin Select Time:	0					
	July 2016					
	Tue	2. 19	We	d. 20	Thu	J. 21
1 participant	10:00 -12:00	14:00 - 16:00	10:00 -12:00	14:00 - 16:00	10:00 -12:00	14:00 - 16:00
member		<u> </u>	$\checkmark$	×	$\checkmark$	×
Totals	1		1	0	1	0

#### 7. Another member check the time he is available

#### Lab Meeting

Select Time: July 2016 July 2016	
Meeting Time Select Time: July 2016	
Select Time: July 2016	
Select Time: July 2016	
July 2016	
July 2016	
Tue. 19 Wed. 20 Thu. 21	
2 participants 10:00 - 12:00 14:00 - 16:00 10:00 - 12:00 14:00 - 16:00 10:00 - 12:00 14:00 - 1	6:00
member 🖌 🗙 🖌 🗶 🗶	
admin 🖌 🖌 🖌 🖌 🗙	
Totals 2 1 2 1 1 0	

## THE FUNCTIONS FOR LAB MEMBER - MAKE MEETING (3/4)

8. Click Meetings to decide the final meeting time 9. Click the meeting name

USER PROFILE	Meetings Add Meeting	9		
• 🛓   User Profile	Title	Author	Last Post	Meeting Time
• 📕   My Bookmarks	Lab Meeting	member	2016-07-15 21:29	
My Photo Galleries				
• 🚰   Meetings				
• 🚯   Online Help				
• 🕩   Log out				
PROPERTY & SUPPLIES				
rkor LKII O SOFF LLES				
• 🔜   Property				
A Shopker				
• 🕹   Supplies				
	11 Da	acida th	na final maa	ting time
	11. De	ecide th	ne final mee	ting time
0. Click Edit	11. De	ecide th	ne final mee	ting time
0. Click Edit		ecide th	ne final mee	ting time
0. Click Edit		ecide th	ne final mee	ting time
0. Click Edit	Final Decision		ne final mee	ting time
0. Click Edit 10 Idit Manage display Track	Final Decision Show End Date	Time	ne final mee	ting time
D. Click Edit Leeting Edit Manage display Track	Final Decision		11	ting time
D. Click Edit Leeting Edit Manage display Track tons meeting ted by member on Fri, 2016/07/15 - 21:29	Final Decision Show End Date Date 2016-07-20 E.g., 2016-07-15	<b>Time</b>	11	ting time
D. Click Edit 10 Leeting Edit Manage display Track Uns meeting ted by member on Fri, 2016/07/15 - 21:29 to meeting.	Final Decision Show End Date Date 2016-07-20	Time 10:00 E.g., 22:0	11	ting time
D. Click Edit Leeting Manage display Track	Final Decision Show End Date Date 2016-07-20 E.g., 2016-07-15 to: Date	Time 10:00 E.g., 22:0 Time	11	ting time
D. Click Edit Leeting Manage display Track to meeting. Let by member on Fri, 2016/07/15 - 21:29 to meeting. Let meeting.	Final Decision Show End Date Date 2016-07-20 E.g., 2016-07-15 to: Date 2016-07-20	Time 10:00 E.g., 22:0 Time 12:00	D	ting time
D. Click Edit Manage display Track trasmeeting ted by member on Fri, 2016/07/15 - 21:29 to meeting. teting Time t Time: July 2016	Final Decision Show End Date Date 2016-07-20 E.g., 2016-07-15 to: Date	Time 10:00 E.g., 22:0 Time	D	ting time
D. Click Edit Anage display Track to meeting ted by member on Fri, 2016/07/15 - 21:29 to meeting. teting Time t Time: July 2016 Tue. 19 Wed. 20 Thu. 21	Final Decision Show End Date Date 2016-07-20 E.g., 2016-07-15 to: Date 2016-07-20	Time 10:00 E.g., 22:0 Time 12:00	D	ting time
D. Click Edit 10 Teeting Manage display Track Tack	Final Decision Show End Date Date 2016-07-20 E.g., 2016-07-15 to: Date 2016-07-20	Time 10:00 E.g., 22:0 Time 12:00	D	ting time
D. Click Edit 100 Leting 100 Leting Manage display Track Edit Manage di	Final Decision	Time 10:00 E.g., 22:0 Time 12:00 E.g., 22:0	D	ting time
D. Click Edit 100 Letit 100 Letit Manage display Track Edit Manage display Track Edit Manage display Track Edit Manage display Track tet by member on Fri, 2016/07/15 - 21:29 to meeting. teeting Time tet Time: July 2016 Tue. 19 Wed. 20 Thu. 21 rticipants 10:00 - 12:00 14:00 - 16:00	Final Decision Show End Date Date 2016-07-20 E.g., 2016-07-15 to: Date 2016-07-20	Time 10:00 E.g., 22:0 Time 12:00 E.g., 22:0 Bookr	D	ting time

Unpublish

Save

## THE FUNCTIONS FOR LAB MEMBER - MAKE MEETING (4/4)



#### 12. Final time will show there

#### Lab Meeting

View Edit					
Clone this meet	ting				
Submitted by me	mber on Fri, 2016/07/15	- 21:29			
t's time to meeting	5.				
	e				
Select Time:					
	July 2016				
	Tue. 19	We	d. 20	Thu	J. 21
2 participants	10:00 -12:00 14:00 - 16:	:00 10:00 -12:00	14:00 - 16:00	10:00 -12:00	14:00 - 16:00
member		$\checkmark$	X	✓	X
admin		✓	$\checkmark$	X	×
Totals	2	2	1	1	0
Final Decision:	: 2016-07-20 10:00 to 12:00				

Add new comment 😅 🖃 🔉 Bookmark

#### 13. You also can see it in the calendar

Month	Veek Day	Year							
			July 2016	5	««	Prev Next »			
<ul> <li>篩選特定類型的記事(以類型篩選記事)     <li>篩選合有特定詞語的記事(以關鍵詞篩選記事內容)     <li>Any - ▼     <li>Any - ▼</li> </li></li></li></ul>									
Sun	Mon	Tue	Wed	Thu	Fri	Sat			
26	27	28	29		1	2			
3	4	5	б	7	8	9			
10	11	12	13	14	15 Test post 2016-07-15 03:15 ELN 2016-07-15 09:45	16			
17	18	19	22 Clean lab 2016-07-20 09:30 to 11:30 Lab Meeting 2016-07-20 10:00 to 12:00	13	22	23			
24	25	26	27	28	29	30			
31	1	2	3	4	5	6			

## THE FUNCTIONS FOR LAB MEMBER - PROPERTY & SUPPLIES (1/3)



2

E.g., 2016-07-17

- 1. Click Property or Supplies, you can see Property or Supplies page
- 2. Input condition for search
- 3. Click Property or Supplies Name, see details

Files:

Specification Book

SER PROFILE	Property								
	List	QR Cod	e View	Impo	rt & Export				FILTER
User Profile	Displaying 3								
Bookmarks	Name	erial	Keeper	User	Location	Status	Purchase Date	Age limit	Name
Galleries	DELL Latitude E5570	1234567	tima	tima	N401	operating	2014-07-01	3	
	HP DL580	7654321	cylin	cylin	N633	operating	2015-07-06	5	Serial
	Mac Pro 3.5GHz	333333333	tima	tima	N401	operating	2016-04-01	3	
									Keeper
UPPLIES	HP DL580 Serial: 7654321								User
_	Keeper: cylin User: cylin								Location
	Location: N633								
	Status: operating Purchase Date: 2015-07-	06							Status
	Age Limit: 5								- Any - 🔻
	Photos:								Purchase Date
									Chant data
									Start date A



## THE FUNCTIONS FOR LAB MEMBER - PROPERTY & SUPPLIES (2/3)

- 4. Click Photo View, see pictures of Property or supplies
- 5. Click QR Code View, you can print QR Code and stick on Property or Supplies
- 6. Click Import & Export, go to Export to CSV file page



## THE FUNCTIONS FOR LAB MEMBER - PROPERTY & SUPPLIES (3/3)



- 7. Stick QR Code on your property
- 8. If you want see the detail of your property, just scan the QR Code
- 9. Go to page of this property







## **THE FUNCTIONS FOR PROJECT LEADER (1/4)**

### Forum management

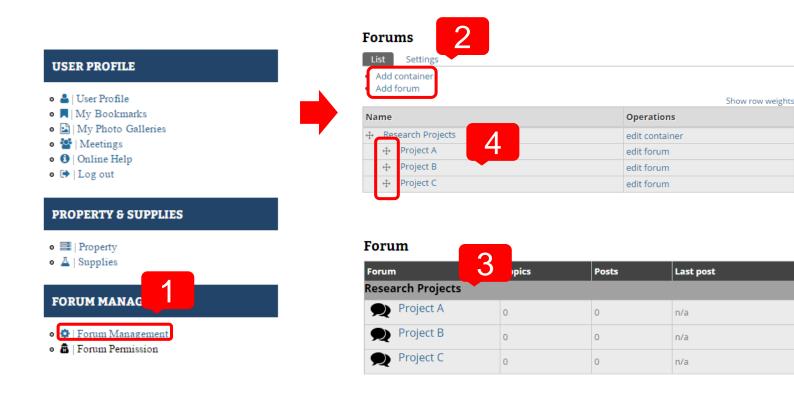
- Create, edit and delete forum topics
- Assign forums to privileged users
- Assign users to respective forums



### **THE FUNCTIONS FOR PROJECT LEADER (2/4)**

### **Forum Management**

- 1. Click Forum Management
- 2. You can add forum and container (As the picture shows, Research Projects is a container and Project A, B C are forums)
- 3. Use containers to group related forums
- 4. Drag and drop the cross to re-order the forums



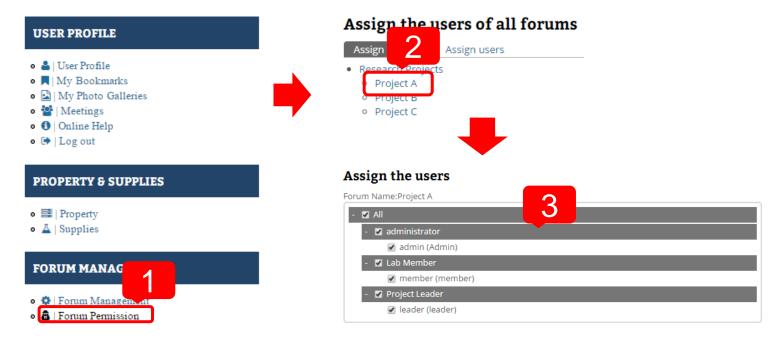


## **THE FUNCTIONS FOR PROJECT LEADER (3/4)**

### Forum Permission – Assign by forums

- 1. Click Forum Permission
- 2. Click the forum which you want to adjust permission
- 3. Check the account name then the user can access this forum

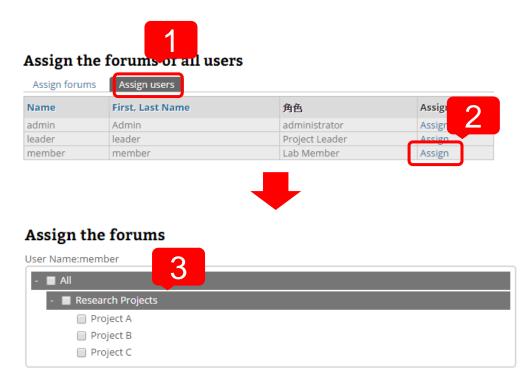




## **THE FUNCTIONS FOR PROJECT LEADER (4/4)**

### Forum Permission – Assign by users

- 1. Click Assign users
- 2. Click the Assign link which you want to adjust permission
- 3. Check the forum name then the user can access this forum





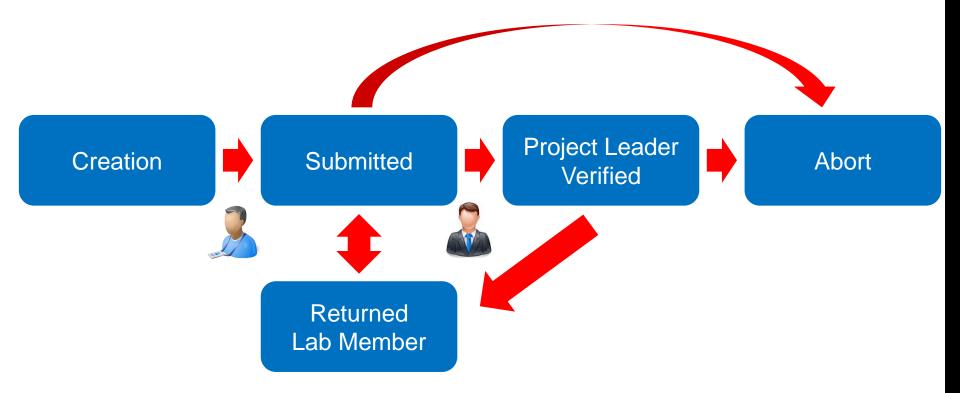
# AUDIT TRAILS AND CHANGE LOGS



# **WORKFLOW FOR FORUM (1/2)**

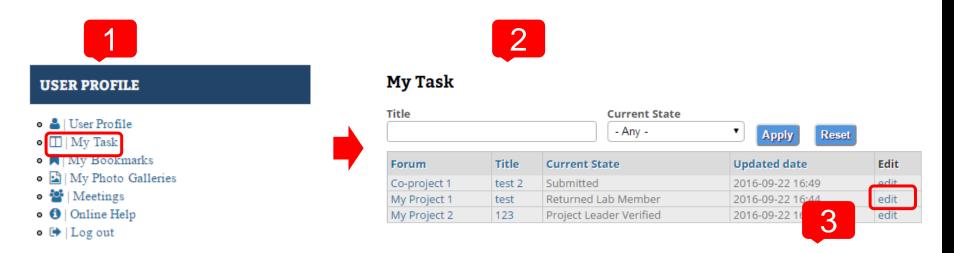
- 1. Every forum post need to verify by Project Leader
- 2. Site Manager can ON/OFF this function
- 3. Workflow State:

Submitted, Project Leader Verified, Return Lab Member, Abort



# **WORKFLOW FOR FORUM (2/2)**

- 1. Click My Task
- 2. See all the tasks which you can access
- 3. Click edit to change the state and content of this forum post



Change	Content	Verifiy	state
--------	---------	---------	-------

Returned Lab Member 🔻	
Submitted	
Returned Lab Member	
Abort	
	1

# THE FUNCTIONS FOR SITE MANAGER (1/2)

### **Public information update**

- News
- Home page, research topics, members information, resources
- Contact us (Show results, email list setting)

### Site configuration

- Theme setting
- Upload setting
- Site information (Site name, footer message, ...)
- Maintenance mode
- Backup and restore



## THE FUNCTIONS FOR SITE MANAGER (2/2)

### User management

- · Create, edit and delete user
- Set role

### **Content management**

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

### **Property and Supplies management**

- Import from CSV file
- Export to CSV file
- Make QR code for property and supplies



### THE FUNCTIONS FOR SITE MANAGER - NEWS MANAGEMENT

- 1. Click News Management
- 2. Add, edit or delete News in this site



site manag	
- I=   Public Information	
<ul> <li>News Management</li> </ul>	
<ul> <li>Edit Menu</li> </ul>	
<ul> <li>Edit Home</li> </ul>	
<ul> <li>Edit Research</li> </ul>	
<ul> <li>Edit Members</li> </ul>	
<ul> <li>Edit Resources</li> </ul>	
<ul> <li>Contact us Result</li> </ul>	
<ul> <li>Contact us Email to</li> </ul>	
🕨 🎤   Site Configuration	

- 🕨 🖁 | People
- 🕨 🖉 | Content Managemant

Home »   Public Information	
最新消息	
Croate Neur	



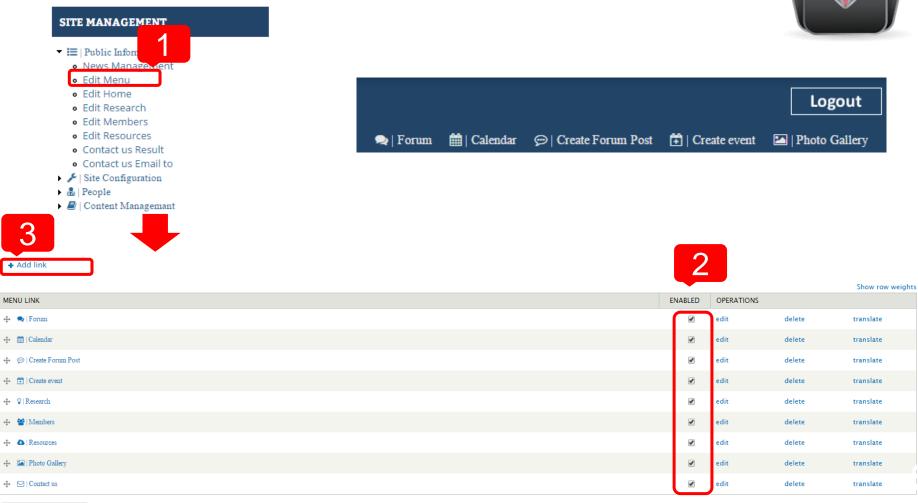
Create News

Displaying 1 - 1 of 1

Title	名稱	Updated/commented date	Edit	Delete link
news test	admin	2016-07-13 04:58	edit	delete

## THE FUNCTIONS FOR SITE MANAGER - EDIT MENU

- 1. Click Edit Menu, see all main menus in the site, you can edit or delete
- 2. Enable or disable this menu
- 3. Add new menu



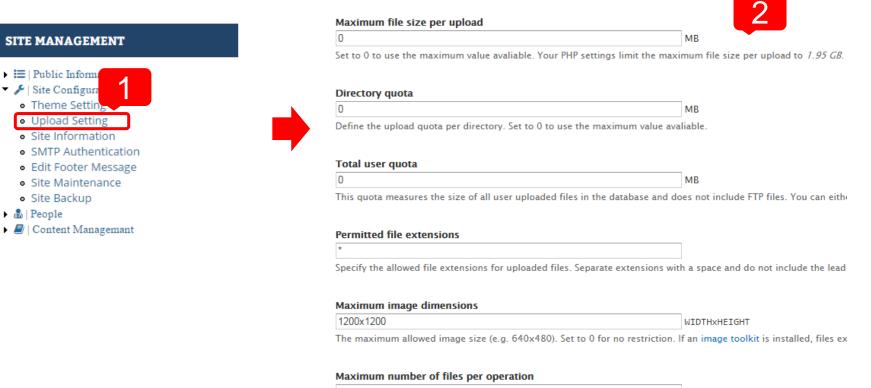
### THE FUNCTIONS FOR SITE MANAGER - PUBLIC INFORMATION

- 1. Edit static pages (Home, Research, Members, Resources)
- 2. See Contact us Result / edit Contact us email list

	Title *
SITE MANAGEMENT	Home
<ul> <li>Edit Information</li> <li>News Manage</li> <li>Edit Menu</li> <li>Edit Home</li> <li>Edit Research</li> <li>Edit Resources</li> <li>Edit Resources</li> <li>Contact us Result</li> <li>Contact us Email to</li> <li>Site Configuration</li> <li>People</li> <li>Contex 2 mant</li> </ul>	Body (Edit summary) ◎ 原始碼 ※ ⑤ @ @ ◎ ☞ ● ◆ ♀ \$3 ■ @ @ @ @ B I U S ×₂ ײ Ix

## THE FUNCTIONS FOR SITE MANAGER - UPLOAD SETTING

- 1. Click Upload Setting
- 2. Adjust upload quota of single user or total users and other settings about upload

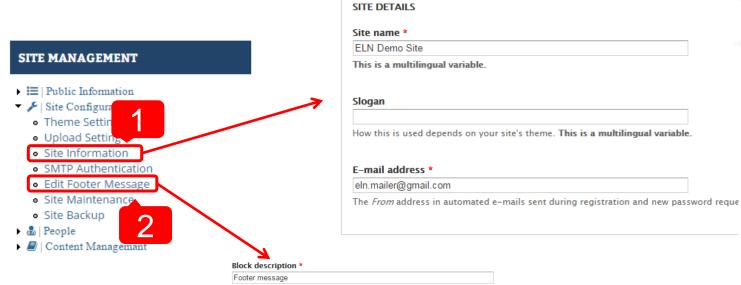


0

You can allow users to select multiple files for operations such as delete, resize, etc. Entire batch file operation is exceeding the limits of your server, which is really bad. For unlimited number of file handling, set this to 0.

### THE FUNCTIONS FOR SITE MANAGER - SITE INFORMATION & FOOTER MESSAGE

- 1. Edit Site name, Slogan and Email
- 2. Edit Footer Message



A brief description of your block. Used on the Blocks administration page

#### Block body \*

● 原始碼		• •	Q ¢3   ₽	e 🖬 🚟 🖉	b 🖻 🥥 🎞	- Ξ 😳 Ω 🕲
BI	<u>U</u> <del>S</del> × <sub>2</sub> × <sup>2</sup>		≞ 99 财 話-	1 2 2	≣   →¶ ¶•	• •
格式	<ul> <li>▼</li> <li>字型</li> </ul>	大小 🔹 様式	• <u>A</u> • <u>A</u> •	23 80		

 
 由央研究院 資訊科學研究所 系統生物學暨網路生物學實驗室 台北市南港區研究院路二段128號
 電話: 02-27883799 #1452 傳真:02-27824814, 02-26518660

### THE FUNCTIONS FOR SITE MANAGER - SMTP AUTHENTICATION & SITE MAINTENANCE

- 1. Edit Gmail account for sending email
- 2. Change to Maintenance mode, only Site Manager can access your site



### SMTP AUTHENTICATION

Leave blank if your SMTP server does not require authentication.

### Username

eln.mailer@gmail.com

SMTP Username.

### Password

SMTP password. If you have already entered your password before, you should leave t

If you are upgrading to a newer version of Drupal or upgrading contributed modules or themes, you may need to run the update script.

Put site into maintenance mode

When enabled, only users with the "Use the site in maintenance mode" permission are able to access your site to perform maintenance;

#### Maintenance mode message

ELN is close for maintenance. We should return soon. Thank you for your patience.

Message to show visitors when the site is in maintenance mode.

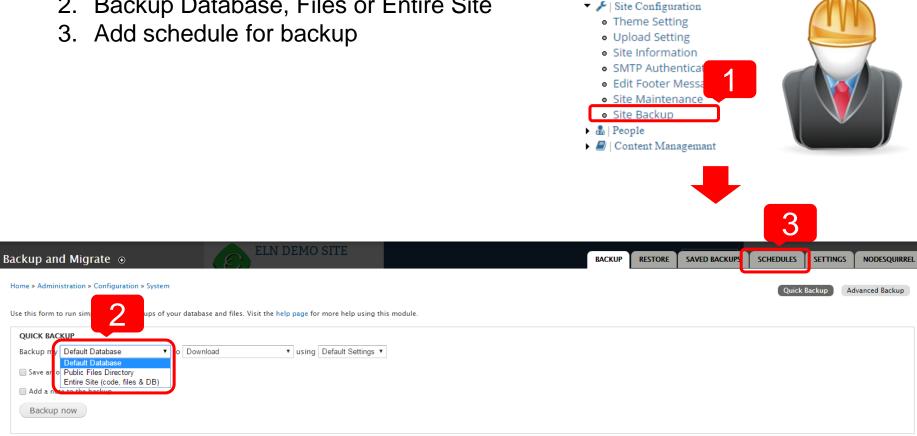
Save configuration

### **THE FUNCTIONS FOR SITE MANAGER** - SITE BACKUP

- 1. Click Site Backup
- 2. Backup Database, Files or Entire Site



Image: Public Information



### THE FUNCTIONS FOR SITE MANAGER - USER MANAGEMENT

- 1. Click User Management, see all users list, you can search and edit users
- 2. Click Add user, add new user account
- 3. Input user name, email, password and belong role

SITE MANAGEMENT	2		
<ul> <li>▶ Image: Public Information</li> <li>▶ ▶   Site Configuration</li> <li>▼ ■ People</li> </ul>	+ Add user		
Roles Management	SHOW ONLY USERS	WHERE	
User Management	role	any 🔻	Filter
🖉   Content Managemant	per ion	any 🔻	
	sta	any 🔻	
Username * Spaces are allowed; punctuation is not allowed except for periods, hyphens, apostrophe E-mail address * A valid e-mail address. All e-mails from the system will be sent to this address. The e-mail address is not made	Unblock the selecte	d users Vpdate	
Password * Password strength:	USERNAME	STATUS	ROLES
Confirm password *	leader	active	• Project Leader
Provide a password for the new account in both fields.	admin	active	administrator
Status © Blocked ® Active	member	active	• Lab Member
Roles			
✓ authenticated user			
administrator			
Project Leader			
Property_Supplies			

### THE FUNCTIONS FOR SITE MANAGER - CONTENT MANAGEMENT

- 1. Click Post Management, see all articles in the site, you can search, edit and delete them
- 2. Click Comments Management, see all the comments in the site

ITE MANAGEMENT	UPDATE OPTIONS						
≔   Public Int	Bookmark   Update						
>   Site Conf	TITLE     HP Q2612A Toner Cartridge (Black)	TYPE supplies	AUTHOR	STATUS	UPDATED 2016-07-17 10:51	LANGUAGE English	OPERATIONS edit delete
People	Mac Pro 3.5GHz	property	admin	published	2016-07-17 10:49	English	edit delete
Content Management Post Management	DELL Latitude E5570	property	admin	published	2016-07-17 10:47	English	edit delete
Comments Management	HP DL580	property	admin	published	2016-07-17 10:44	English	edit delete
	Lab Meeting updated	Meeting	member	published	2016-07-15 22:01	English	edit delete clo
	ELN ELN	Forum Post	member	published	2016-07-15 09:49	English	edit delete clo
2	Clean lab new	Event Calendar	member	published	2016-07-15 09:25	English	edit delete cl
	Test post	Forum Post	member	published	2016-07-15 04:10	English	edit delete cl
	Download and Install	Basic page	admin	published	2016-07-14 23:42	Language neutral	edit delete
	Get Started with ELN	Basic page	admin	published	2016-07-14 22:45	Language neutral	edit delete
	Photo Gallary new	Basic page	admin	published	2016-07-13 04:58	Language neutral	edit delete
↓	Demo Photos new	Album	admin	published	2016-07-13 04:58	English	edit delete

SUBJECT	AUTHOR	POSTED IN	UPDATED 🗸	OPERATIONS
Good	member	Test post	2016-07-15 04:25	edit

## THE FUNCTIONS FOR SITE MANAGER - PROPERTY & SUPPLIES MANAGEMENT (1/3)

 If you need one Lab Member or Project Leader have ability to manage property & supplies, go to User Management editing this user, check Property\_Supplies.
 If you are administrator(Site Manager), you had this ability and don't need to do anything.

	Username *
	member
SITE MANAGEMENT	Spaces are allowed; punctuation is not allowed except for periods, hyphens, apostro
<ul> <li>▶ Image: Public Information</li> <li>▶ Image: Public Information</li> <li>▶ Image: Public Information</li> </ul>	E-mail address * member@iis.sinica.edu.tw
<ul> <li>Roles Management</li> <li>User Management</li> </ul>	A valid e-mail address. All e-mails from the system will be sent to this address. The
Content Managemant	Password Password strength:
	Confirm password
	To change the current user password, enter the new password in both fields.
	Status
	Blocked
	Active     Act

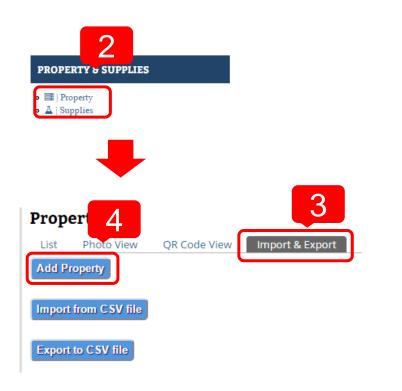
#### Roles

- authenticated user
- administrator
- 🕑 Lab Member
  - Project Leader
- Property\_Supplies

## THE FUNCTIONS FOR SITE MANAGER - PROPERTY & SUPPLIES MANAGEMENT (2/3)

3

- 2. Click Property or Supplies, go to Property or Supplies page
- 3. Import & Export Property
- 4. Click Add Property, go to create property page
- 5. Input Property Name, Serial ... etc



Name *	
Serial	
Keeper	
User	
Location	
Status * operating	
PURCHASE DATE *	
Date	
2016-07-18	
2016-07-18 E.g., 2016-07-18	

## THE FUNCTIONS FOR SITE MANAGER - PROPERTY & SUPPLIES MANAGEMENT (3/3)

- 6. Click Import from CSV file, go to import page
- 7. Download a template and enter all the content you want to import
- 8. Select the file you just complete
- 9. Import the CSV file
- 10. Export all property to CSV file





# HARDWARE

# **SYSTEM REQUIREMENT**

### CPU

• At least 1.6 GHz

### Memory

At least 4~8 GB

### Hard disk

- A minimum installation requires 300 MB
- Suggest remaining 100 GB ~ 1TB free space for your files and images.



# INSTALLATION

# **HOW TO INSTALL?**

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

### Download ELN

### Windows version:

ELN-2.1.1 (2016-07-12)

- Hierarchy bookmarks, function for make meeting, content clone, reversions, solved bugs

ELN-2.0.1 dev (2015-11-16)

- Upgrade to drupal 7.
- Mobile device support, drag and drop files, Property and Supplies management.

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: Isbnb / Admin password: Isbnbiis ] (2013-09-12)

- DVD iso file

### **HOW TO INSTALL – WINDOWS VERSION**



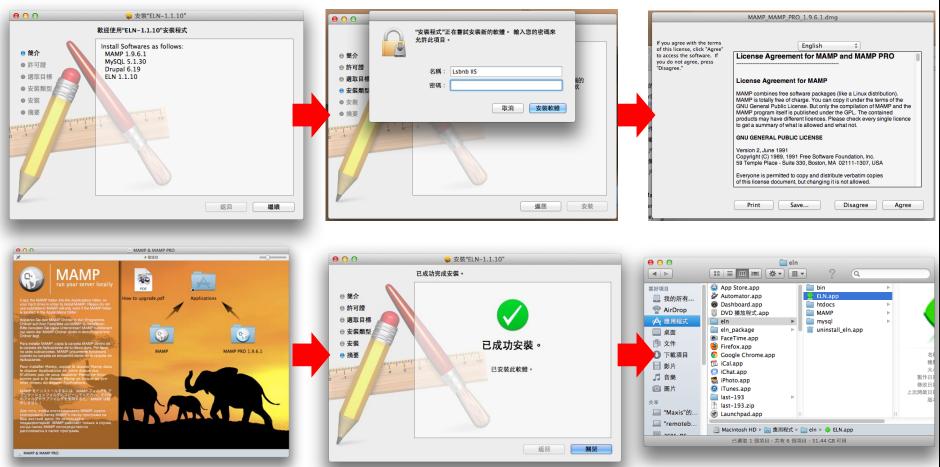
### Download the installation file and run it

📀 Setup - ELN		👲 Setup - ELN		📀 Setup - ELN	- • 🔀
Select Language		Lab Information		Site Manager Information You can use this account to manage the site.	
Please specify what language you prefer to use in ELN web site, then click Nex                Chinese, Traditional                 English            Japanese	t.	Please specify your Lab Name and Contact Email, then click N *Lab Name: Test Site *Gmail Account (Some essential functions in eln are developp function, eg. reset user password, forward a content to frie you to get a free, dedicated email account from google[gmail test @Ggmail.com *Password for Gmail: *****	ed based on a "mailing" nds,etc. We suggest	Please specify Site Manager Account, then click Next. *Account for Site Manager:(Please input [A-Z, a-z, 0-9]) user1 *Password for Site Manager:(Please input [A-Z, a-z, 0-9]) ***** *Password confirmed: ***** *Email for Site Manager: user1@iis.sinica.edu.tw	
About ELN Website <back next=""></back>	Cancel	About ELN Website	Next > Cancel	About ELN Website <back next=""></back>	Cancel

## **HOW TO INSTALL – MAC VERSION**



### Download the installation file and run it



**Drog 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
  - <u>http://environmentalomics.org/bio-linux-software-list/</u>

### Live DVD or install directly

Download the ISO file and burn it to DVD

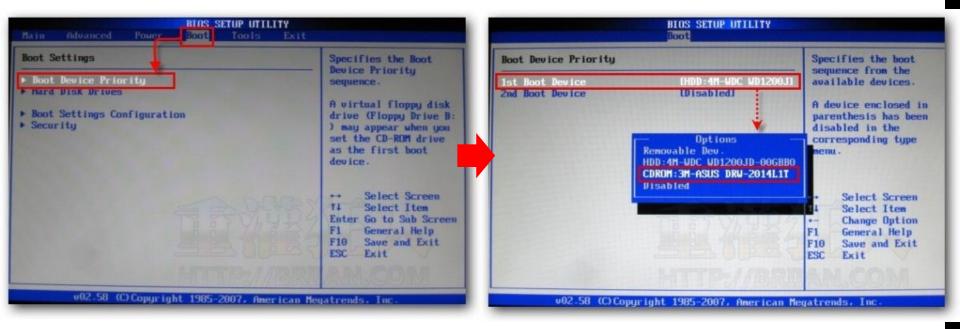


### **Bio-Linux**

ELN

## HOW TO INSTALL – LINUX VERSION (2/8) BIOS SETUP

### Set first boot device is **CDROM**



## **HOW TO INSTALL – LINUX VERSION (3/8)**

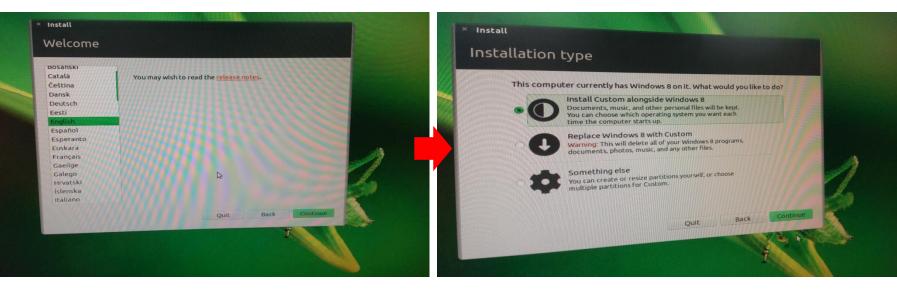
Insert the DVD into the DVD drive and restart your computer You can boot from live CD or install directly

	weeeu <b>yntendi</b> d
Custom Live CD live - boot the Live System xforcevesa - boot Live in safe graphics mode install - start the installer directly memtest - Run memtest	
hd - boot the first hard disk	
Press [Tab] to edit options	

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

### Select your language

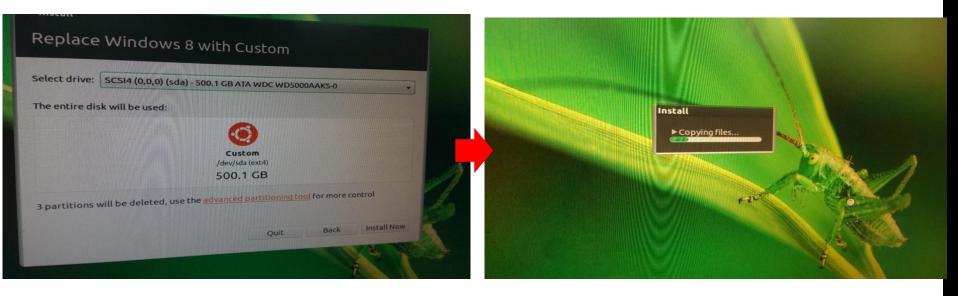
### Double system or only one



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

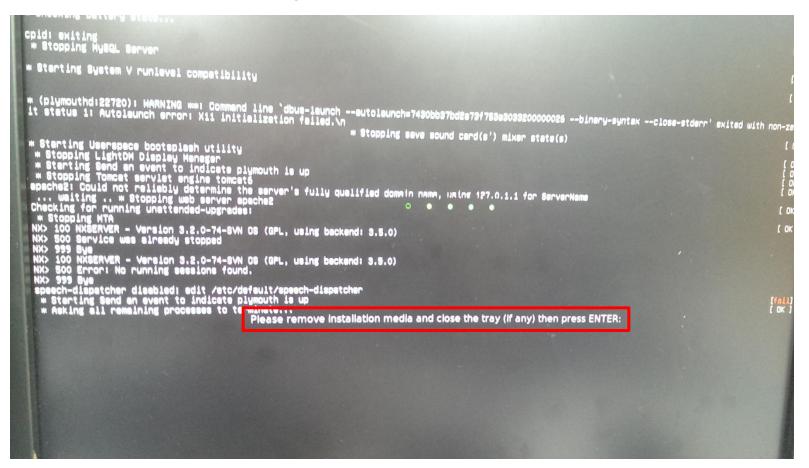
### Select hard disk you want to install

### Wait for copying files



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

### After installing, remove DVD and press Enter

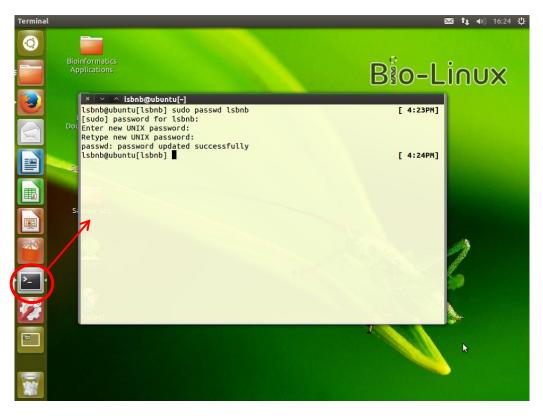


## **HOW TO INSTALL – LINUX VERSION (7/8)**

The screen capture after installing



## HOW TO INSTALL – LINUX VERSION (8/8) CHANGE ADMIN PASSWORD



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

### AFTER INSTALLATION, YOU WILL GET ELN SERVICE CONTROL PANEL

- 0 >

Stop service

Eln Home

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

Elegance\*

Apache Web Server

V.5.1.33

V2.2.11

MySQL Community Server

3 Setting X **Apache Port** 180  $(1 \sim 65536)$ **Mysql Port** 3309 (1~65536) Revert to defaults view ports Changing ports will require restarting ELN. OK Cancel Message 4 Help ELN Version: 2.1.1 (2016/07/12) © 2009-2016 All rights reserved.Reproduction, adaptation, or translation without permission is prohibited. Powered by Lab of System Biology & Network Biology, Institute of Information Science, Academia Sinica, Taiwan

**Check New Version** 

# **COMPARE WITH OTHER ELN SYSTEM**

	IARC ELN	openBIS ELN	Our ELN	
Development Team	International Agency for Research on Cancer, France	Swiss Institute of Bioinformatics, Switzerland	Institute of Information Science, Academia Sinica, Taiwan	
Methods	WordPress, PHP, MySQL	openBIS	Drupal, PHP, MySQL	
Operating System	Linux	openBIS	Windows, Linux, Mac OS	
Installation Steps	<ol> <li>Install Linux, apache, MySQL, PHP</li> <li>Customize WordPress</li> </ol>	<ol> <li>Download VirtualBox image</li> <li>Install VirtualBox program to your OS</li> <li>Import VirtualBox image</li> </ol>	<ol> <li>Download installation file</li> <li>Enter your information step by step with clicks</li> </ol>	
Images and Files Management	Insert to single post	Insert to single post	Personalize folder, reuse	
Editor(What You See Is What You Get)	Yes 🕜	No	Yes 🙆	
Import data from file	No 😣	Yes 🚺	No/ as attachment	
Forum permission setting	No 🛞	No	Yes	
			a s	

Easy To Install





# **FUTURE WORK**

# Audit trails

- ON/OFF Function
- Visualization



# **ELN online version**



# **ELN NAS version**





# **RELATED LINKS**

### ELN demo site

http://elncloud.iis.sinica.edu.tw/elndemo

Account for Lab Member (ID / Password = member / member)

**ELN web site** 

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

### Installation program download

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

