

**Self-evaluation Platform (SEP)
on
Information Technology in Education (ITEd) for School**

Administrator Manual

28 Oct 2005

[Version 2.0]

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Table of Contents

CHAPTER 1 QUICK INSTALLATION PROCEDURES FOR SEP ON WINDOWS 2000 SERVER.....	5
1.1 PRE-INSTALLATION CHECKLIST	6
1.1.1 <i>Minimum and Recommended Hardware Requirements</i>	6
1.1.2 <i>Installation of Necessary System Patch(es) and Browser</i>	6
1.1.3 <i>Checking for Other Recommended Software</i>	6
1.1.4 <i>Network Configuration checking</i>	7
1.1.5 <i>Reference site for checking Licensing Issue on Operating System</i>	7
1.2 INSTALLATION OF SEP	8
1.2.1 <i>Installing SEP</i>	8
1.3 POST INSTALLATION CHECKLIST	18
1.3.1 <i>Logon Test</i>	18
1.3.2 <i>Logon the System Using Default User Account</i>	18
1.3.3 <i>Prepare a Simple Survey</i>	19
1.3.4 <i>Run a Simple Survey</i>	23
1.3.5 <i>Run a Simple Report</i>	25
1.4 CUSTOMIZATION	26
1.4.1 <i>Upload School Logo</i>	27
1.4.2 <i>Update School Year</i>	27
1.4.3 <i>Define System Parameters</i>	28
CHAPTER 2 SYSTEM UPGRADING PROCEDURES FOR SEP	30
2.1 <i>Upgrading SEP for Windows Platform</i>	30
2.2 <i>Upgrading SEP for Linux Platform</i>	33
CHAPTER 3 ADMINISTRATIVE PROCEDURES.....	34
3.1 GENERAL ADMINISTRATIVE TASKS	35
3.1.1 <i>Stop and Start SEP</i>	35
3.1.2 <i>Updating School Year</i>	39
3.1.3 <i>Data Archive</i>	39
3.1.4 <i>Restore archived file</i>	40
3.1.5 <i>System Upgrade Procedures</i>	40
3.2 USER GROUP AND ACCOUNT ADMINISTRATION.....	41
3.2.1 <i>Introduction to SEP Groups and User accounts</i>	41
3.2.2 <i>Group Planning Strategy</i>	43
3.2.3 <i>Account Policy Planning</i>	43

3.2.4 Add, Edit and Delete Groups and Users Accounts	44
3.2.5 Import User Accounts from WebSAMS	44
3.2.6 Privilege Setting	45
3.2.7 Best Practices	46
3.3 SURVEY ITEM BANK (SIB) ADMINISTRATION	47
3.3.1 Strategic Planning on Attributes.....	48
3.3.2 SIB Tree Management	50
3.3.3 Updating SIB from EMB.....	50
3.3.4 Check PDA Questionnaire	50
3.3.5 Best Practices	51
3.4 BACKUP AND RECOVERY.....	52
3.5 PROBLEMS AND DIAGNOSES.....	53
3.5.1 Resetting User Password.....	53
3.5.2 Windows Event Log Monitoring	53
3.5.3 SEP System Log Monitoring.....	53
3.5.4 Health Checking.....	56
3.6 USER ACCOUNT INTEGRATION (UAI) WITH OTHER SYSTEM(S)	57
3.6.1 Planning for the Integration.....	57
3.6.2. Configuring SEP for the integration	59
3.6.3 The Open Source routine	59
3.6.4 Understanding Remote ID	60
3.6.5 Managing Accounts not in Master System	61
APPENDIX A - INSTALLATION PROCEDURES FOR SEP ON REDHAT LINUX 9.0.....	62
APPENDIX B - INSTALL SEP ON OTHER WINDOWS PLATFORM.....	68
APPENDIX C – SEP FILE STRUCTURES AND SOFTWARE COMPONENTS	71
APPENDIX D – UNINSTALLED THE SEP.....	72
APPENDIX E – INSTALL THE SEP ON WINDOWS PLATFORM WITH IIS	76
APPENDIX F – PROCEDURES FOR USER ACCOUNT INTEGRATION WITH OTHER SYSTEM(S)	77
APPENDIX G – CROSS-PLATFORM MIGRATION PROCEDURES FOR SEP	79

Chapter 1 Quick Installation Procedures for SEP on Windows 2000

Server

This chapter provides the installation procedures for Self-Evaluation Platform (SEP) under Windows 2000 Server. Other than Windows 2000 Server, the SEP can be installed in the following operating systems:

- Windows NT 4.0 Server
- Windows NT 4.0 Workstation
- Windows 2000 Professional
- Windows 2003 Server
- Windows XP
- RedHat Linux 9.0

For detailed information, please refer to relevant Appendix(ices).

The following are three major steps involved in the installation procedures:

- Pre-Installation Checklist
- Installation of SEP
- Post-Installation Checklist

1.1 Pre-Installation checklist

This section describes the pre-installation tasks such as identifying hardware requirements and gathering the necessary installation information that the Administrator should perform before moving onto the installation.

1.1.1 Minimum and Recommended Hardware Requirements

To ensure adequate performance, make sure that the computer on which you install the SEP meets the following hardware requirements:

Minimum Configurations	Recommended Configurations
CPU: Intel PIII 450	CPU: Intel PIII 1G or above
Memory: 256M RAM	Memory: 512M RAM
Hard Disk: 5G disk space	Hard Disk: 5G disk space
Display Card: VGA compatible	Display Card: VGA compatible
Network Card: Intel interface 10 / 100M network card	Network Card: Intel interface 10 / 100M network card
Keyboard and mouse	Keyboard and mouse

Table 1.1: Hardware Configurations

1.1.2 Installation of Necessary System Patch(es) and Browser

Please install Windows 2000 service pack 4.0 or above. It is always recommended to install the latest service pack and update security patches. For detailed operations, please refer to Microsoft website (<http://windowsupdate.microsoft.com>).

The necessary browser for the SEP is Internet Explorer (IE) 5.5 or above.

1.1.3 Checking for Other Recommended Software

It is always recommended to install Anti-Virus software and update the latest virus signature on the computer which you install the SEP.

1.1.4 Network Configuration checking

The SEP package is using port 80 for Apache HTTP server. The Administrator is advised to disable the IIS service to make sure that port 80 is available for Apache HTTP server. If the SEP server is using the IIS service for other purposes, the Administrator is advised to modify the Apache HTTP server port to 8080. For detailed procedures, please refer to Appendix E.

A static IP address should be assigned to the computer in which you the SEP is installed. If the SEP server is designed for Internet access, it must be protected by a firewall and assigned to a routable IP address.

1.1.5 Reference site for checking Licensing Issue on Operating System

Windows 2000 server supports two licensing modes: Per Server and Per Seat. In Per Server mode, Client Access Licenses (CALs) are assigned to a server. In Per Seat mode, each computer that accesses the Windows 2000 server computer requires a separate CAL. For detailed information, please refer to Microsoft Product licensing website (<http://www.microsoftvolumelicensing.com/userights/>).

1.2 Installation of SEP

Once all the necessary components for the SEP installation have been verified, the Administrator is ready to begin the SEP installation process.

1.2.1 Installing SEP

Step 1: Download the SEP

- 1) Login to the Windows 2000 Server as an Administrator, or as a user with administration rights to the Windows 2000 Server.
- 2) Invoke Internet Explorer and enter the URL “http://www.emb.gov.hk/sep/eng” (English interface) or ”http://www.emb.gov.hk/sep/chin” (Chinese interface).
- 3) Click the “School SEP Package Download” button.
- 4) Download the full SEP installation program (i.e. setup – v1.0.0.exe) and save it to your computer desktop.

The Self-evaluation Platform (SEP) on Information Technology in Education (ITEd) for schools is a **web-based platform for individual schools to conduct self-evaluation of their performance / progress in ITeD**. Schools can **use or adapt the sample surveys disseminated through the system** or **create school-based surveys** in accordance with the evaluation goals or targets set out in their Information Technology (IT) plans.



Home | [What's New](#) | [SEP Overview](#) | [School SEP Package Download](#) | [Manuals](#) | [FAQs](#) | [ITEd Overall Study \(1998/2003\)](#) | [Reference](#)

Figure 1.0 EMB SEP website

Step 2: SEP installation

- 1) Double-click on the setup – v1.0.0.exe, a warning message then appears as shown in Figure 1.1.
- 2) In the warning message dialog box, click the “OK” button to continue. (Warning: If there is Apache or MySQL installed in the machine, please click “Cancel” button to abort SEP installation.)



Figure 1.1: Warning Message

- 3) On the License Agreement page (Figure 1.2), click 'I Agree' button if you accept all terms of SEP License Agreement.

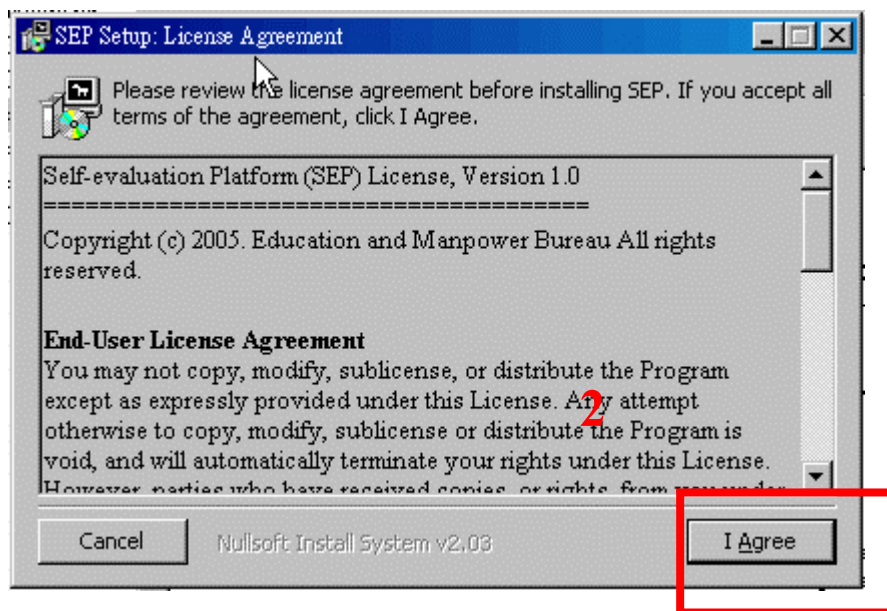


Figure 1.2: SEP License agreement

- 4) The Setup program will install SEP in a default folder, as shown in Figure 1.3. Click "Install" button.

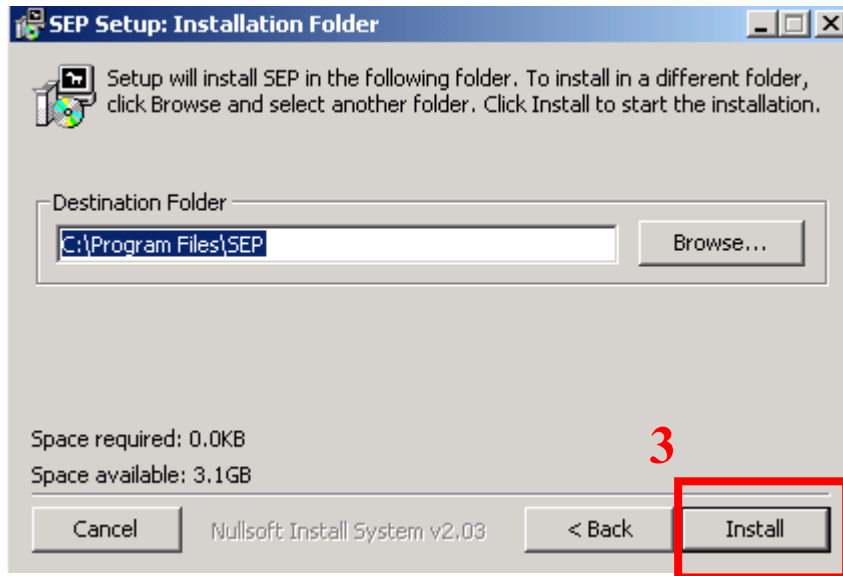


Figure 1.3: Installation folder

Note: The Administrator can change the destination folder by clicking on “Browse” button.

SEP is starting to install, as shown in Figure 1.4.

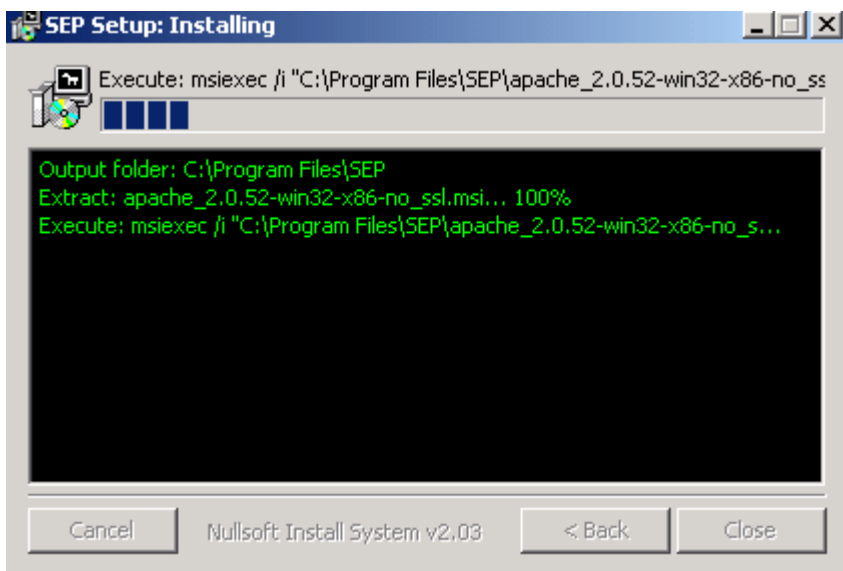


Figure 1.4: SEP is installing

- 5) On the Apache installation page (Figure 1.5), click “Next” button.

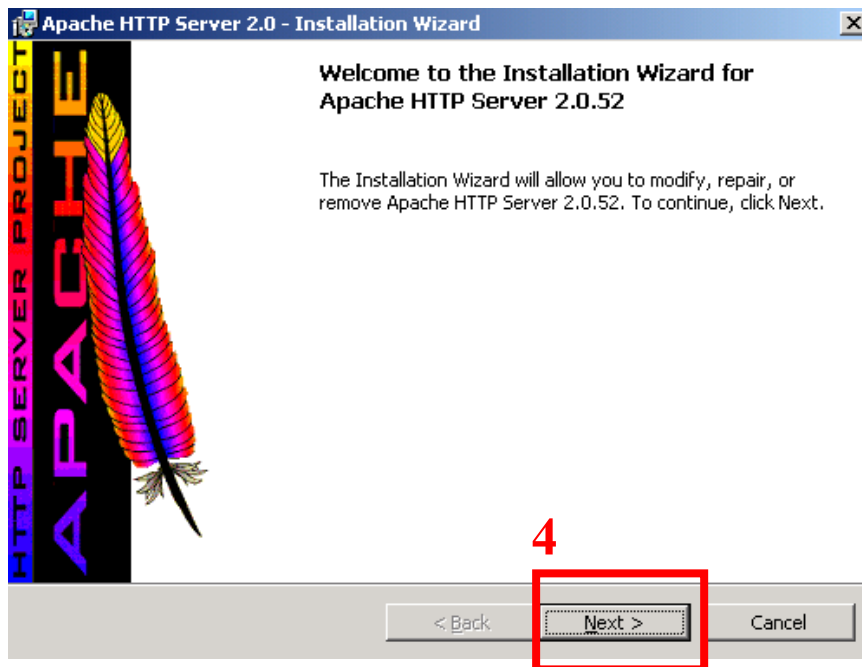


Figure 1.5: Apache HTTP server installation screen

- 6) On the Apache License page (Figure 1.6), select “I accept the terms in the license agreement” and then click the “Next >” button.

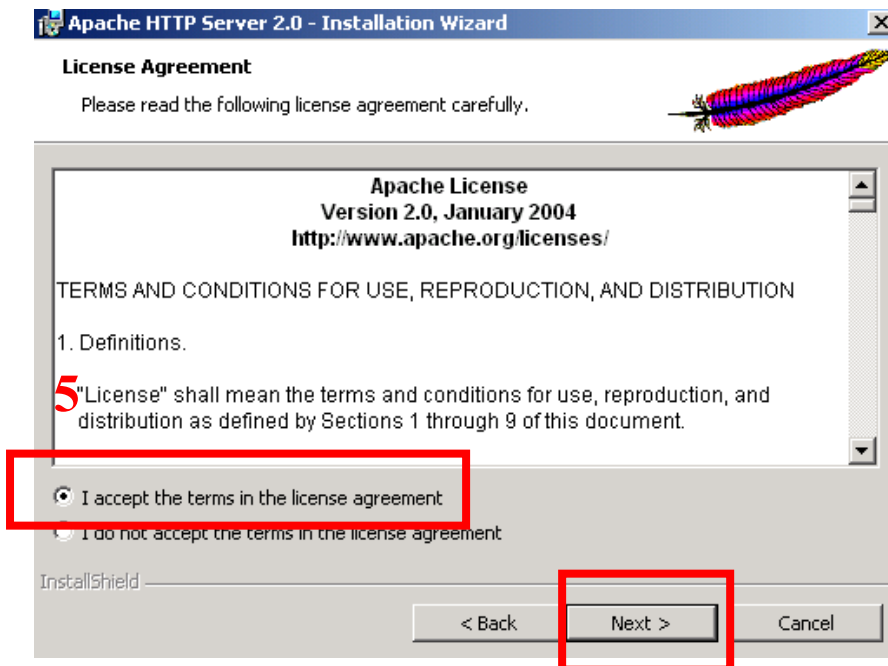


Figure 1.6: Apache HTTP server License Agreement

- 7) On the Apache information screen (Figure 1.7), click the “Next >” button.

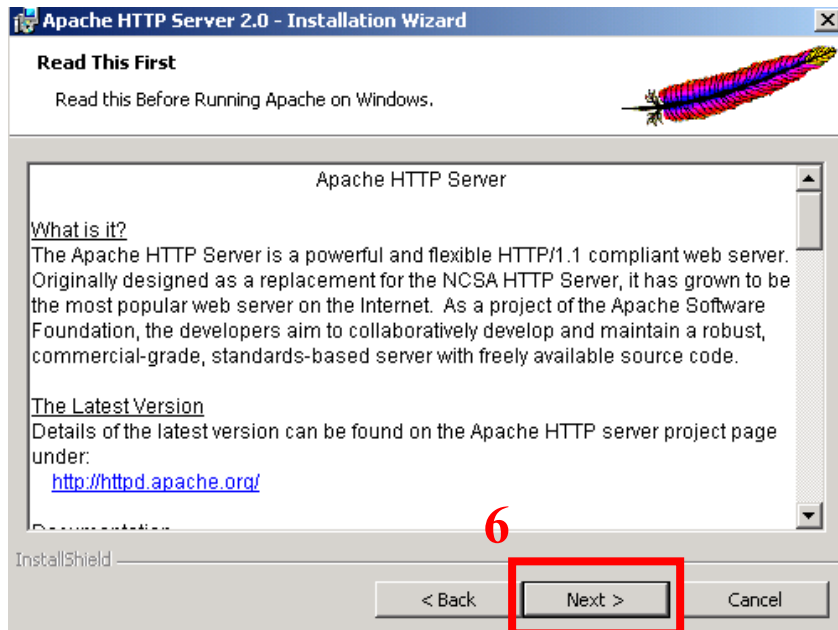


Figure 1.7: Apache HTTP server information screen

- 8) Enter the information as shown below (Figure 1.8):

<i>Network Domain:</i>	The domain name, for example <code>www.schoolABC.edu.hk</code> .
<i>Server Name:</i>	The name of the server on which the SEP is installed, for example <code>www.schoolABC.edu.hk</code> .
<i>Administrator's email address:</i>	A valid email address for the Administrator.

Select “For All Users, on Port 80, as a Service – Recommended”.

Click the “Next >” button.

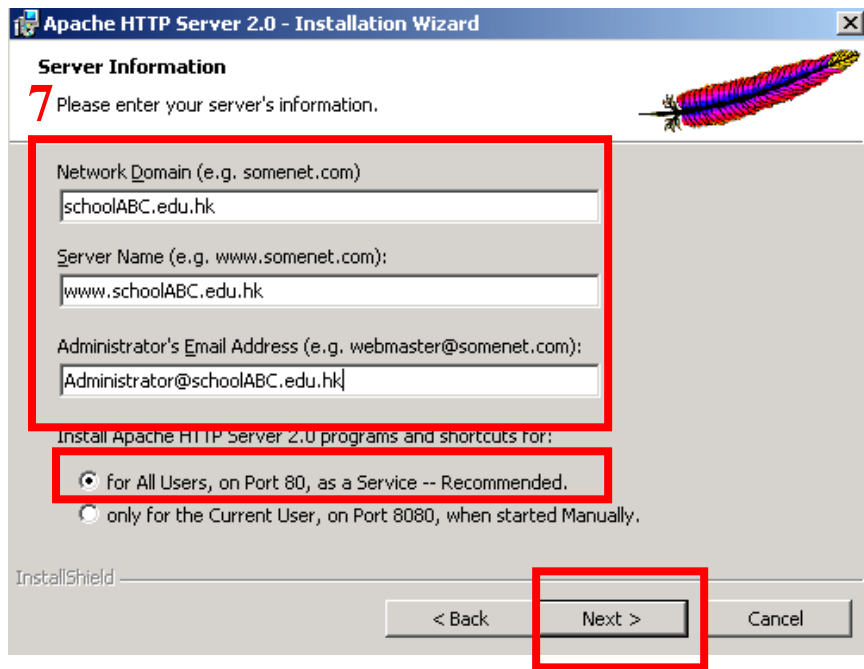


Figure 1.8: Apache HTTP Server information screen

- 9) On the Apache Setup Type page (Figure 1.9), select “Typical” and then click the “Next >” button.

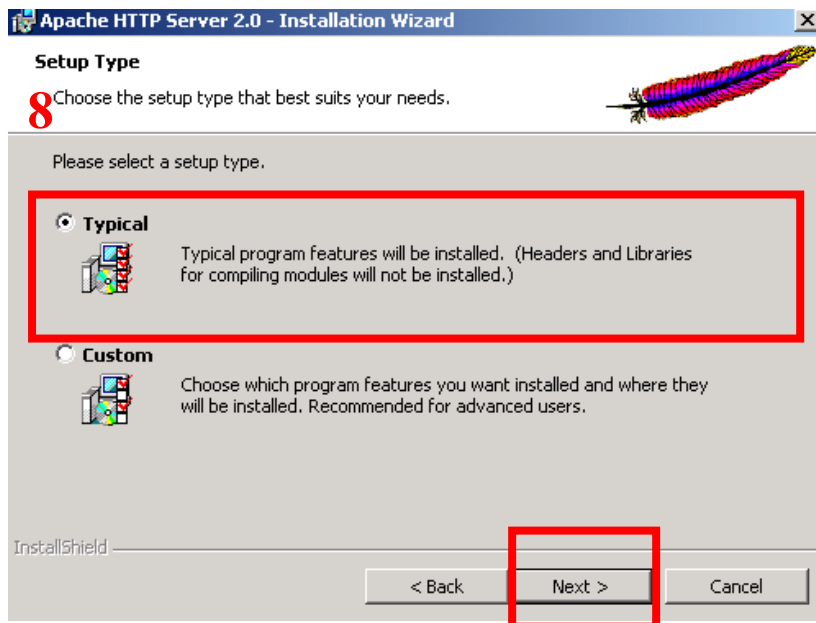


Figure 1.9: Setup Type for Apache HTTP server installation

10) On the Apache Ready to Install the Program page (Figure 1.10), click “Install” button.

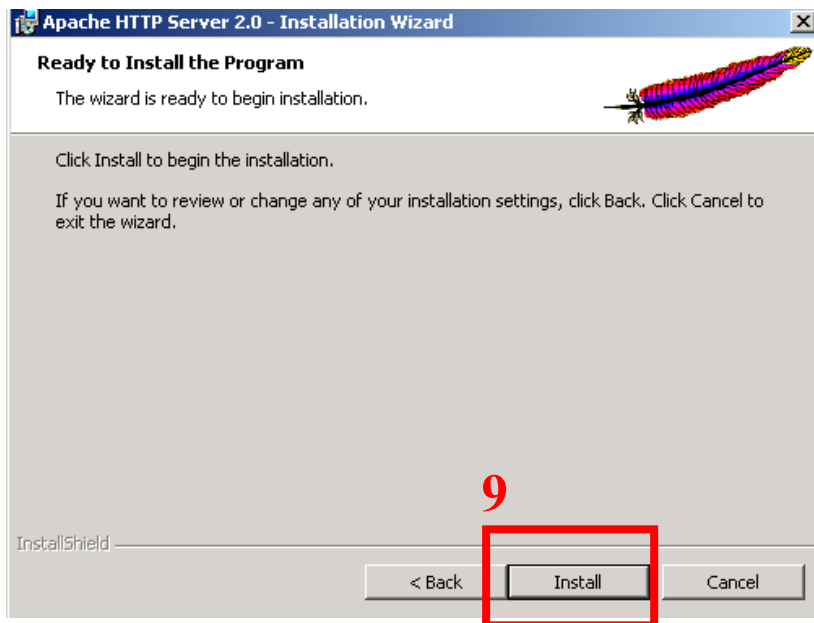


Figure 1.10: Ready to install for Apache HTTP server

The Apache HTTP server is being installed (Figure 1.11).

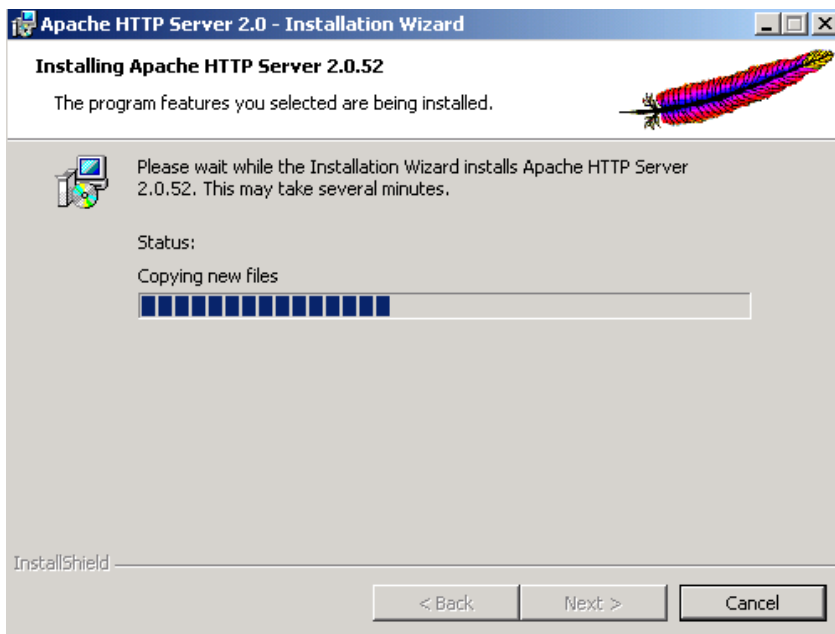


Figure 1.11: Installation for Apache HTTP server

11) On the Apache Installation Wizard page (Figure 1.12), click the “Finish” button.

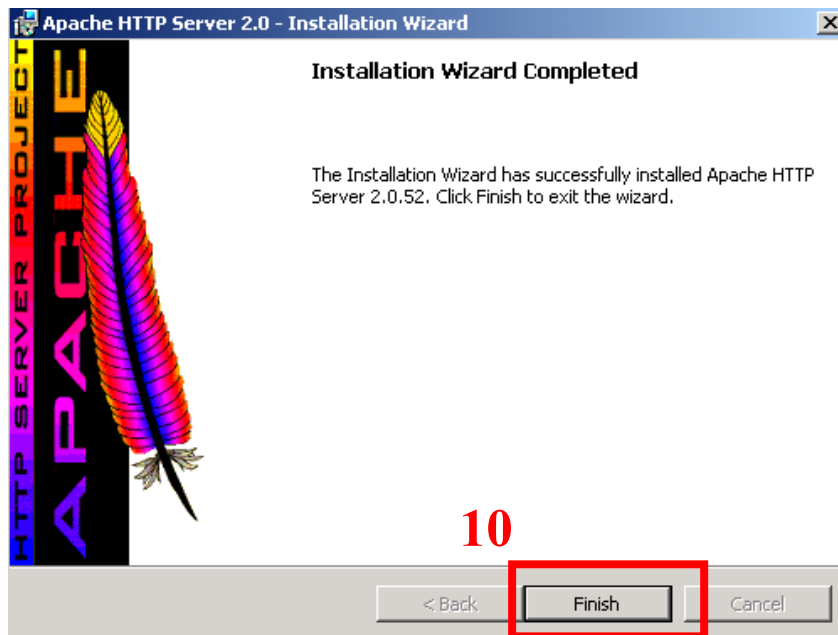


Figure 1.12: Installation for Apache HTTP server completed

12) The installation process will continue. Click the “Close” button after the installation process is completed (Figure 1.13).

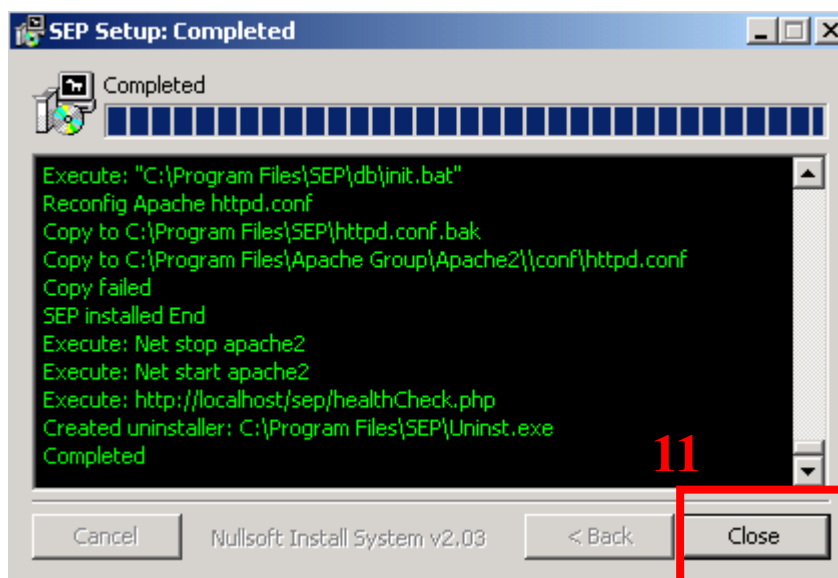


Figure 1.13: Installation of other software components

Step 3: System Health Check

For SEP health checking, the system launches a browser and requests for logon. Please enter the default username and password as follows (Figure 1.14):

- Username: sep
- Password: +-*/*

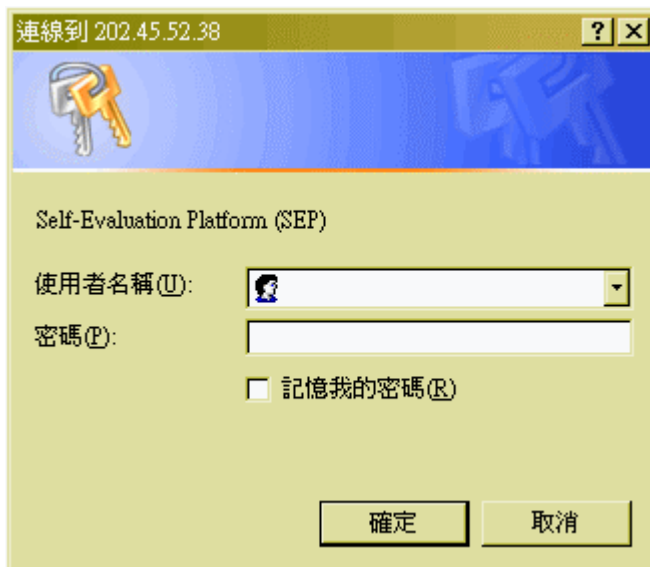


Figure 1.14: SEP Logon interface

The system shows the status of the machine and the installed components (Figure 1.15).

```
Checking disk spaces...
- Total disk space(C:): 34.23 GB
- Free disk space(C:): 26.29 GB (76.8%)

Checking read/write privileges...
$datadir:
- reading C:\Program Files\SEP\datadir... [OK]
- writing dummy to C:\Program Files\SEP\datadir... [OK]
- removing dummy from C:\Program Files\SEP\datadir... [OK]
$tempdir:
- reading C:\Program Files\SEP/temp... [OK]
- writing dummy to C:\Program Files\SEP/temp... [OK]
- removing dummy from C:\Program Files\SEP/temp... [OK]

Checking apache...
- Version: Apache/2.0.52 (Win32) PHP/4.3.9

Checking PHP...
- Version: 4.3.9
- iconv: 1.9
- MMcache: [OK]

Checking MySQL...
- connecting... [OK]
- check tables...
  attribute [OK]
  class_schoolyear [OK]
  datafile [OK]
  evaluationlist [OK]
  evaluationlistitem [OK]
  group_privilege [OK]
  groups [OK]
  logaction [OK]
  logbook [OK]
  mylogsheetheader [OK]
  mylogsheetinfo [OK]
  mylogsheetobject [OK]
  mylogsheetoptionreferencelist [OK]
  mylogsheetoptionreferencelist_item [OK]
  mylogsheetresponse [OK]
```

Figure 1.15: SEP Installation Status report

1.3 Post Installation Checklist

The following steps (from 1.3.1 to 1.3.5) are the post installation checking procedures to verify that the SEP is functional and usable.

1.3.1 Logon Test

- 1) Logon as an Administrator to the Windows 2000 server on which the SEP is installed.
- 2) Invoke Internet Explorer.
- 3) Type in `http://127.0.0.1/sep` or `http://<IP address or domain name>/sep`.
- 4) The logon interface of SEP will be displayed (Figure 1.15).



Figure 1.15: Login page for SEP

1.3.2 Logon the System Using Default User Account

The default username of an Administrator user account is **admin** and the password is also **admin**. For security reason, please change the password of the default administrator user account at once.

1.3.3 Prepare a Simple Survey

In this section, the Administrator can complete the following procedures to prepare a simple survey.

- 1) Mouse over “Survey Generator” button and click on “Create Survey” (Figure 1.16).

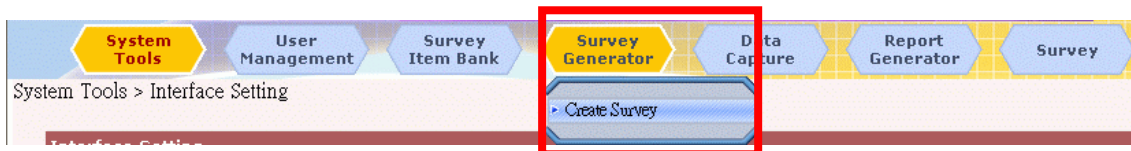


Figure 1.16: Select the “Survey Generator” and “Create Survey”

- 2) Click “Add Questionnaire” (Figure 1.17).

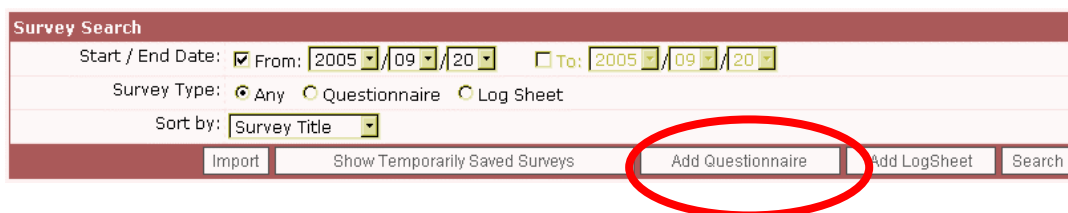


Figure 1.17: Add Questionnaire

- 3) Select “From SIB” and then click “OK” (Figure 1.18).

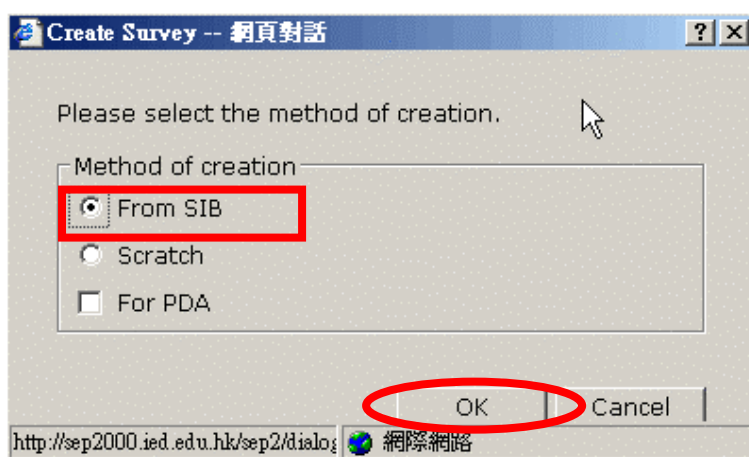


Figure 1.18: Create Survey From SIB

An interface of “Please select questionnaire...” will be displayed (Figure 1.19).



Figure 1.19: Select a Questionnaire

- Open “EMB” folder on the left side.
- Open “Primary” folder.
- Open the “ITED” folder to display its content.
- To select a questionnaire, check the checkbox of the questionnaire (e.g. “小學資訊科技組組員問卷調查 (2004)”) and then scroll down to click “Select” button (Figure 1.20).

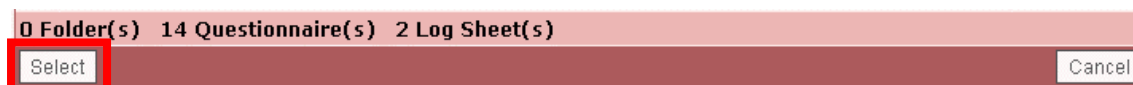


Figure 1.20: Click the “Select” button

- Click on “Select User” (Figure 1.21).

Figure 1.21: Select Survey User

5) Select “Administrator” and then click “>” button (Figure 1.22)

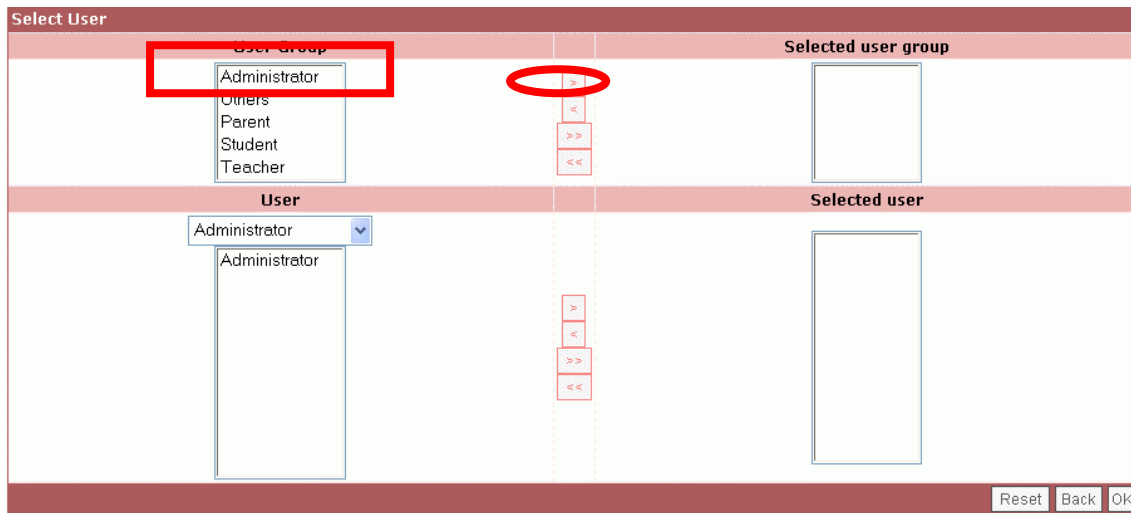


Figure 1.22: Select Administrator

6) Click “OK” button (Figure 1.23).

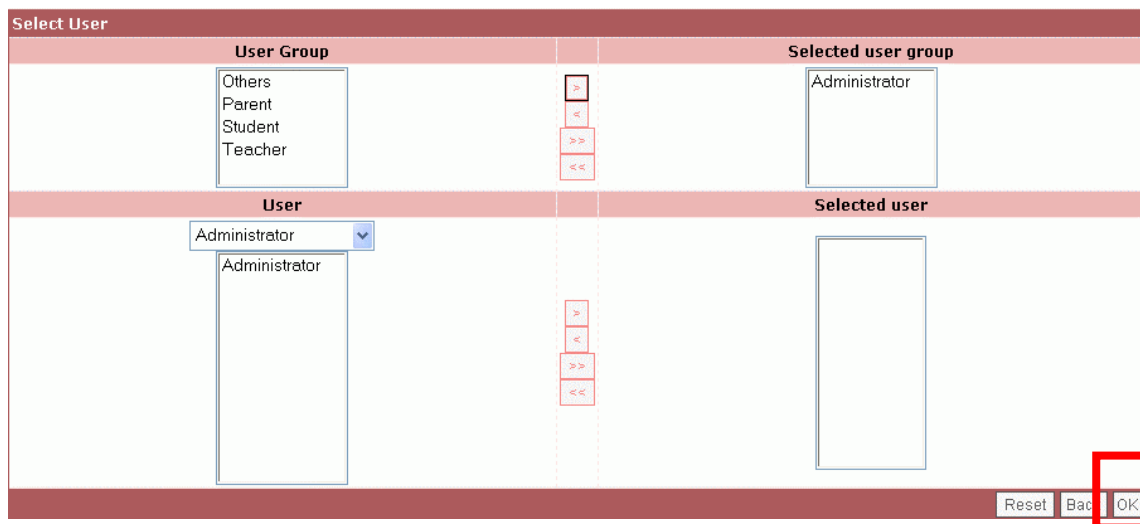


Figure 1.23: Confirm Survey User Selection

7) Click “Publish” button (Figure 1.24).

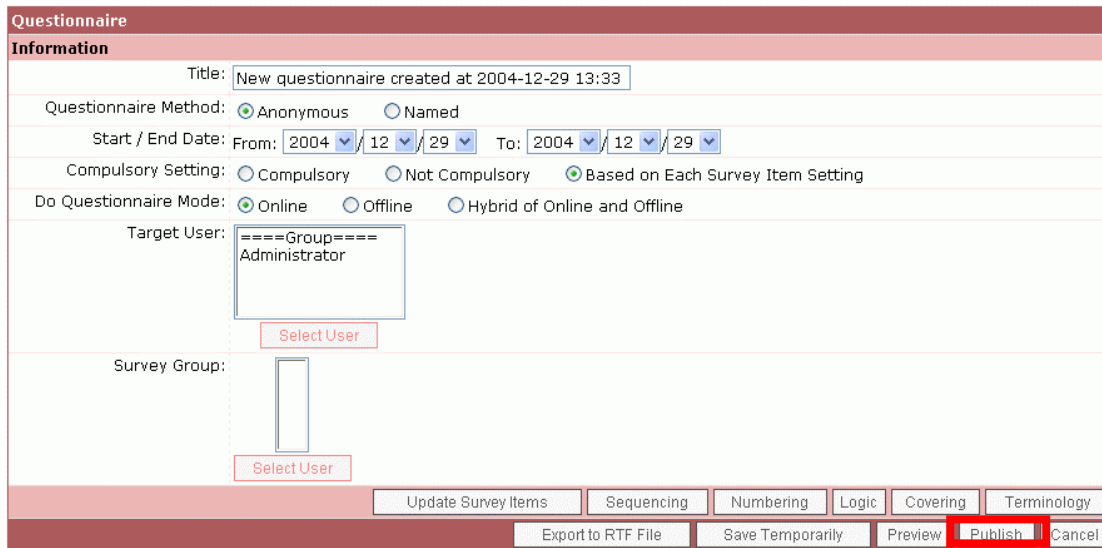


Figure 1.24: Publish the Survey

8) Select “English” and then click “OK” button (Figure 1.25).

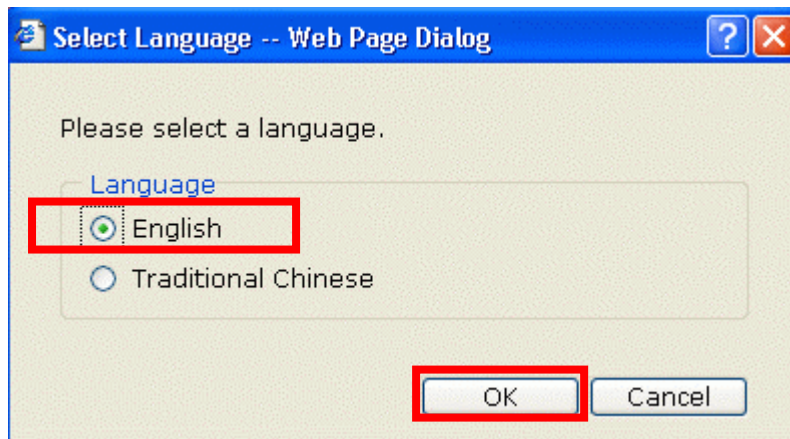


Figure 1.25: Select Language

- 9) Click “OK”/”確定” button (Figure 1.26).

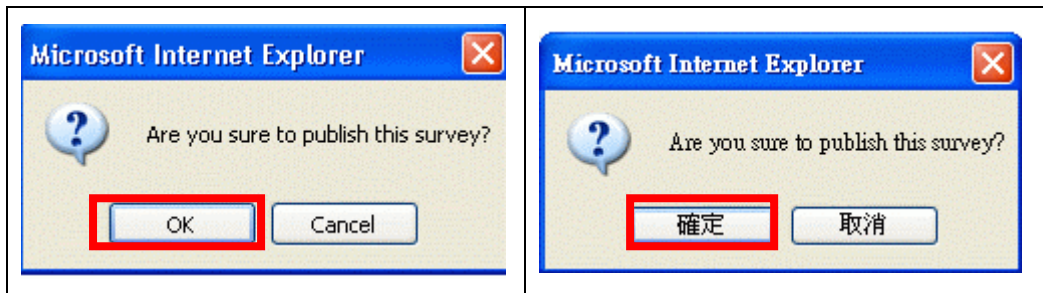


Figure 1.26: Confirm Survey Publishing

1.3.4 Run a Simple Survey

In this section, the Administrator can complete the following procedures to run a simple survey.

- 1) Mouse over “Survey” button and click on “Survey” (Figure 1.27).



Figure 1.27: Select Survey

- 2) Click “View” button (Figure 1.28).

Survey				
Survey Title	Start/End Date	Survey Creator	Submission Date	
新聞卷建立於 2005-01-07 16:48	2005/01/07 ~ 2005/01/07	Administrator		View

Figure 1.28: Select the questionnaire

3) Click “Next” button (Figure 1.29).

再者，你對這次的研究項目有任何查詢時，歡迎在辦公時間內[星期一至五上午九時至下午六時，星期六上午九時至下午一時]致電我們的熱線：3400-2757或透過電郵：mdited@inet.polyu.edu.hk與我們聯絡。

多謝合作。敬祝

教安

香港理工大學研究組謹啓

二零零三年十月二日

Next

Figure 1.29: Click the “Next” button

4) Do the questionnaire (Figure 1.30).

1. 貴校在規劃、建立和調配資訊科技資源時，曾否徵詢下列人士的意見和考慮其建議？若有的話，你怎樣評價他們的意見和建議的用處？

	曾否徵詢意見		意見和建議的評價				
	No	Yes	用處極大	用處頗大	用處一般	用處不大	沒有用處
a. 董會/學校管理委員會成員	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. 學校管理層人員(例如:校長/副校長/教務主任)	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. 資訊科技組組員	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d. 其他教師	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e. 學生	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f. 家長	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
g. 教育統籌局(前教育署)的同工	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
h. 其他(請註明): <input type="text"/>			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

2. 貴校在規劃、建立和調配資訊科技資源時，曾否考慮下列的因素？若有的話，請評價其重要性。

Figure 1.30: Do the questionnaire

5) When finished doing the questionnaire, click “Submit” button (Figure 1.31).

	非常需要	頗為需要	略為需要	不大需要	不需要
a. 把資訊科技融入學校課程	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. 以資訊科技進行/輔助教學	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. 提高學生的資訊科技技能	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d. 與其他學校教師分享經驗	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e. 與其他學校學生分享經驗	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f. 以資訊科技執行/輔助行政/管理的工作	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
g. 增加/更新電腦	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
h. 增加/更新電腦周邊設備	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
i. 增加校內網絡結點(network nodes)	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
j. 增加/更新教育軟件/資訊科技教學資源	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
k. 以資訊科技為學習有困難的學生提供輔助學習	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
l. 以資訊科技為資優學生提供增闊課程/學習	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
m. 其他(請註明): <input type="text"/>	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Submit

Covering Page

Back

Figure 1.31: Confirm to submit questionnaire

- 6) Click “OK” button to confirm (Figure 1.32).

5. 請評價貴校對下列各項需要支援的程度:

	非常需要	頗為需要	略為需要	不大需要	不需要
a. 把資訊科技融入學校課程			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
b. 以資訊科技進行/輔助教學			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
c. 提昇學生的資訊科技技能			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
d. 與其他學校教師分享經驗			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
e. 與其他學校學生分享經驗			<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
f. 以資訊科技執行/輔助行政/管理的工作	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
g. 增加/更新電腦	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
h. 增加/更新電腦周邊設備	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
i. 增加校內網絡結點(network nodes)	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
j. 增加/更新教育軟件/資訊科技教學資源	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
k. 以資訊科技為學習有困難的學生提供輔助學習	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
l. 以資訊科技為資優學生提供增潤課程/學習	<input checked="" type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
m. 其他(請註明): <input type="text"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Submit Covering Page Back

Figure 1.32: Confirm to submit questionnaire

1.3.5 Run a Simple Report

In this section, the Administrator can complete the following procedures to run a simple report.

- 1) Mouse over “Report Generator” button and click on “Report Generator” (Figure 1.33).

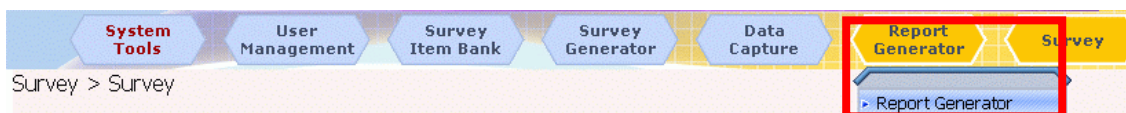


Figure 1.33: Select Report Generator

- 2) Click “Search” button (Figure 1.34).

Survey Search

Start / End Date: From: 2004 / 12 / 29 To: 2004 / 12 / 29

Survey Type: Any Questionnaire Log Sheet

Sort by:

Figure 1.34: Search the Questionnaire

- 3) Click “All-in-one” button (Figure 1.35).



Figure 1.35: Select the report mode

- 4) The report is generated (Figure 1.36).

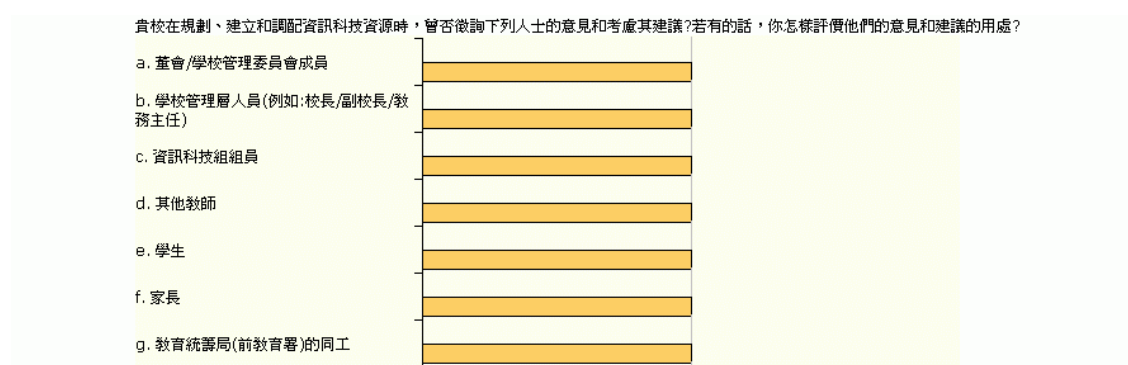


Figure 1.36: Report Generation

This is the end of Post Installation Checklist. For detailed operation procedures, please refer to the Operation Manual.

1.4 Customization

To customize the SEP, the Administrator can define the following parameters (Figure 1.37):

- 1) School badge
- 2) School year
- 3) System Parameters

1.4.1 Upload School Logo

The Administrator can update School Logo by “Interface Setting” (Figure 1.37).

- 1) Mouse over “System Tools” and then click on “Interface Setting” button.
- 2) Click “browse” button to upload a new School Badge in JPEG format.
- 3) The Administrator can change the system color and the default language.
- 4) Click “Save” button.

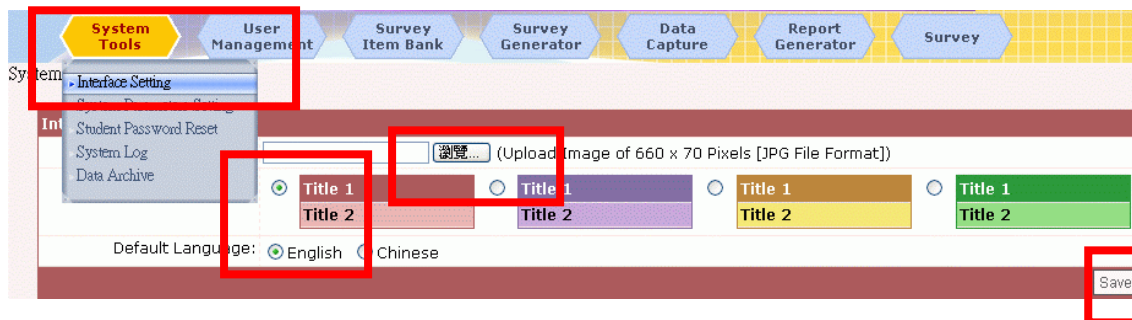


Figure 1.37: System Parameters Settings

1.4.2 Update School Year

The Administrator can update “Current School Year” if necessary (Figure 1.38 and Figure 1.39).

- 1) Mouse over on “System Tools” and then click on “System Parameters setting”.
- 2) Click on “School Year Setting”.

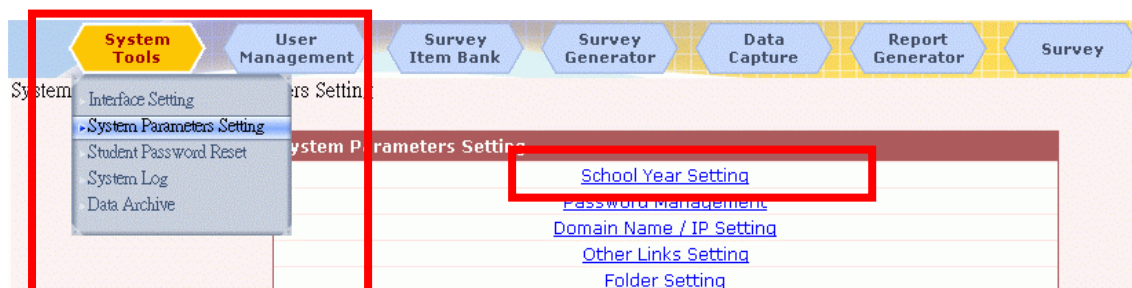


Figure 1.38: System Parameters Settings

- 3) Select “Current School Year”.
- 4) Click “Save” button.

School Year	
School Year	Current School Year
2004-05	<input checked="" type="radio"/>
2005-06	<input type="radio"/>
2006-07	<input type="radio"/>

Save Back

Figure 1.39: System Parameters

1.4.3 Define System Parameters

It has five System Parameters as shown in Figure 1.40.

System Parameters Setting
School Year Setting
Password Management
Domain Name / IP Setting
Other Links Setting
Folder Setting

Figure 1.40: System Parameters

- School Year Setting – update the current school year.
- Password Management – set the password minimum length and maximum length and set the changing password authorization to each user type (Figure 1.41).

Minium Password Length :	<input type="text" value="3"/>
Maxium Password Length :	<input type="text" value="8"/>
Can Change Password :	<input checked="" type="checkbox"/> Administrator <input checked="" type="checkbox"/> Teacher <input type="checkbox"/> Student <input type="checkbox"/> Parent <input type="checkbox"/> Others

Save Back

Figure 1.41: Set the Password Length

Domain Name /IP Setting – update the domain name or IP (Figure 1.42).

Figure 1.42: Set the Domain / IP address

Other Links Setting – add other links (Figure 1.43).

Figure 1.43: Set the Domain / IP address

Folder Setting – select the folder according to the school type (e.g. select “primary” for primary school) (Figure 1.44).

Figure 1.44: Folder Setting

For detailed operation procedures, please refer to the Operation Manual.

Chapter 2 System Upgrading Procedures for SEP

Upgrade patches are prepared for both Windows and Linux platforms. The upgrade patches include bugs fixed and enhancement items. To download the latest upgrade patch, please visit SEP website [<http://www.emb.gov.hk/sep/eng> (English interface) or <http://www.emb.gov.hk/sep/chin> (Chinese interface)]. You can find the patches under the “School SEP Package Download” page (Figure 2.0 EMB SEP website) and the patch version next to the patch download link(s). There is an amendment history for each patch with detailed description. You are recommended to download the latest patch for the system upgrade. If you are going to migrate SEP from Windows platform to Linux platform or vice versa, please refer to Appendix G for details.

2.1 Upgrading SEP for Windows Platform

Step 1: Download the SEP patch

- 1) Login to the Windows 2000 Server as an Administrator, or as a user with administration rights to the Windows 2000 Server.
- 2) Invoke Internet Explorer and enter the URL “<http://www.emb.gov.hk/sep/eng>” (English interface) or “<http://www.emb.gov.hk/sep/chin>” (Chinese interface).
- 3) Click the “School SEP Package Download” button.
- 4) Download the full SEP upgrade programme (i.e. sep_upgrade-v2.0.0.exe) and save it to your computer desktop.

The Self-evaluation Platform (SEP) on Information Technology in Education (ITEd) for schools is a **web-based platform for individual schools to conduct self-evaluation of their performance / progress in ITeD**. Schools can **use or adapt the sample surveys disseminated through the system** or **create school-based surveys** in accordance with the evaluation goals or targets set out in their Information Technology (IT) plans.



Home | [What's New](#) | [SEP Overview](#) | [School SEP Package Download](#) | [Manuals](#) | [FAQs](#) | [ITEd Overall Study \(1998/2003\)](#) | [Reference](#)

Figure 2.0 EMB SEP website

Step 2: SEP upgrade

- 1) Double-click on the sep_upgrade-v2.0.0.exe.
- 2) On the License Agreement page (Figure 2.1), click 'I Agree' button if you accept all the terms of SEP License Agreement.

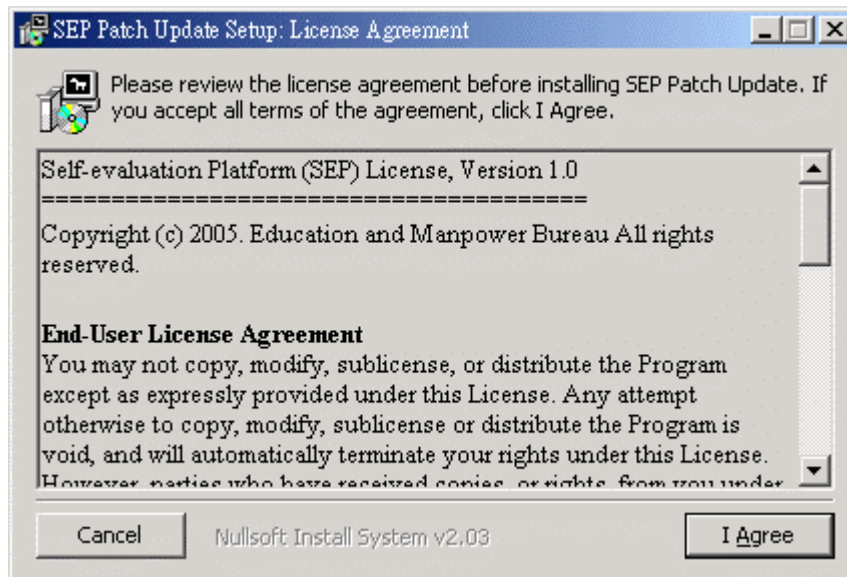


Figure 2.1 SEP License Agreement

- 3) The upgrade programme will enable the system upgrade with the SEP installation directory, as shown in Figure 2.2. Click "Install" button.

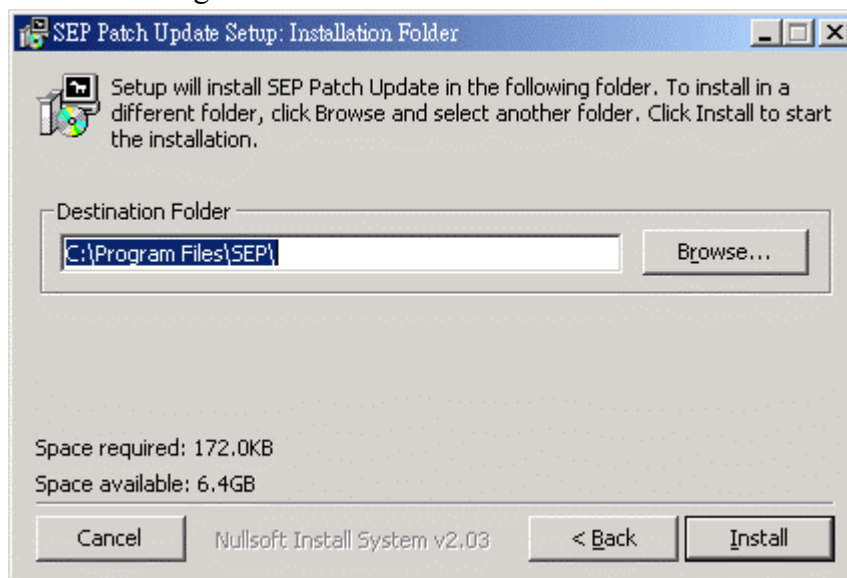


Figure 2.2: Installation folder

- 4) SEP is being upgraded as shown in Figure 2.3.

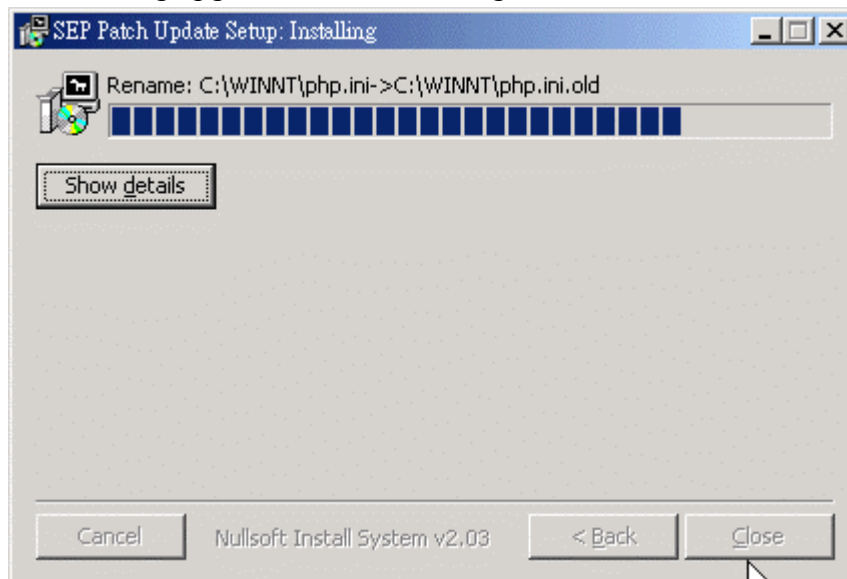


Figure 2.3 SEP is being upgraded

- 5) A browser is opened and a list of version upgrade is shown in Figure 2.4.

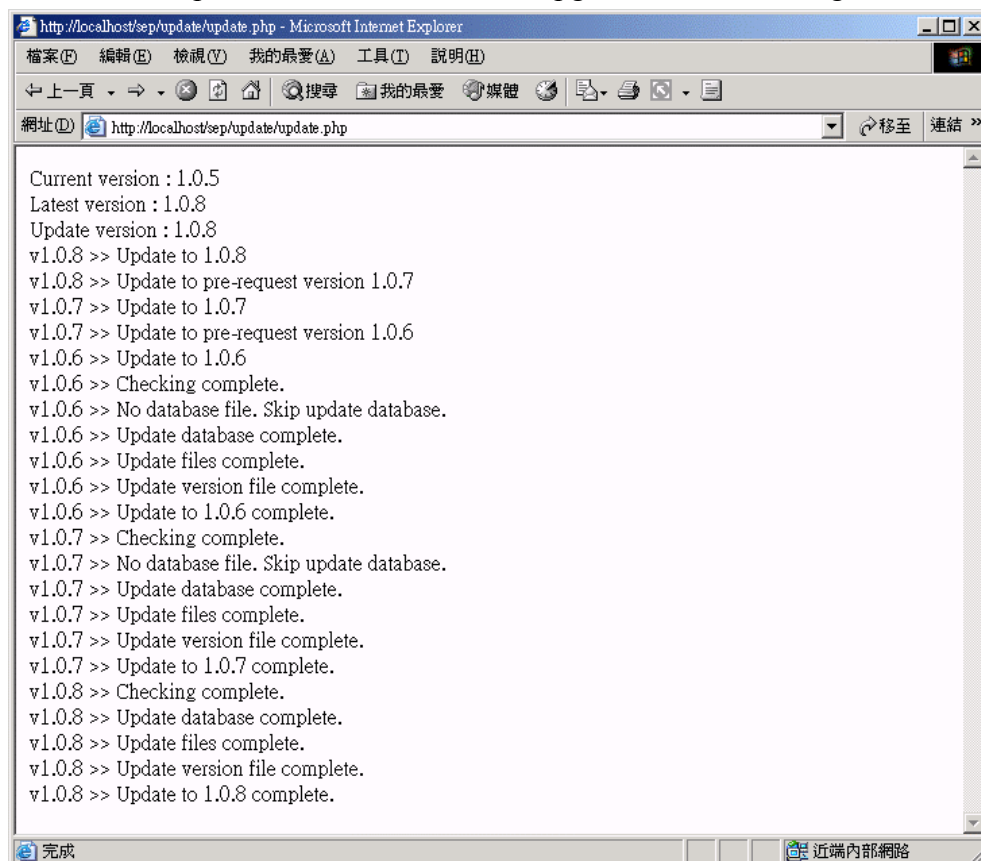


Figure 2.4 List of version upgrade

- 6) On the login page, the system shows a new version number, as shown in Figure 2.5.



Figure 2.5 SEP login page

2.2 Upgrading SEP for Linux Platform

Step 1: Download the SEP patch

- 1) Login Linux as root.
- 2) Invoke Internet Explorer and enter the URL “<http://www.emb.gov.hk/sep/eng>” (English Interface) or “<http://www.emb.gov.hk/sep/chin>” (Chinese Interface).
- 3) Click the “School SEP Package Download” button.
- 4) Download the full SEP upgrade programme (i.e. sep_upgrade-v2.0.0.tar.gz) and save it to your computer desktop.

Step 2: SEP upgrade

- 1) Unpack the upgrade patch file (e.g. `> tar -zxvf sep_upgrade-v2.0.0.tar.gz`).
- 2) Copy all files and directory within the extracted folder to the SEP installation directory (e.g. `copy -rf v2.0.0/* /usr/local/SEP/`).
- 3) Change directory to the db directory, if appropriate, and import the SQL statement file into MySQL database (e.g. `> mysql -u root sep < v2.0.0.sql`).

Chapter 3 Administrative Procedures

The administrative services can be grouped into the five categories described in the following table.

Administrative category	Specific Tasks
General administrative tasks (Section 3.1)	Stop and start SEP, updating school year, data archive and restore archived file.
User group and account administration (Section 3.2)	Create and maintain user groups and accounts to ensure that each user can login the SEP and access relevant resources.
Survey Item Bank (SIB) administration (Section 3.3)	Create and maintain SIB to ensure that the information in the SIB is complete and usable.
Backing up and recovery (Section 3.4)	Perform regular backups for restoration of the SEP data.
Problems and diagnoses (Section 3.5)	Monitor the SEP performance and detect problems.

Table 3.1: SEP Administrative Services

The SEP provides two types of tools that facilitate the Administrator to perform administrative tasks. The tools are described in the following table.

Tool	Administrative Tasks
Data Archive	Archive questionnaires and log sheets.
Health checking	Provide a SEP system status report to diagnose problems.

Table 3.2: SEP Administrative Tools

This chapter will elaborate the administrative tasks as follows:

- General administrative tasks
- User group and account administration
- SIB administration
- Backup and recovery
- Problems and diagnoses

3.1 General Administrative Tasks

To maintain the system, some administrative tasks are required to perform frequently or yearly. To stop or start the SEP system, the Administrator can stop or start the Apache and MySQL service. After stopping the Apache and MySQL service, no one can access the SEP. For checking the system status, the simplest way is Logon / Logout the system. The system should work properly if there is no problem in both Logon and Logout procedures. For each new school year, the Administrator should change the current school year before importing new user accounts.

3.1.1 Stop and Start SEP

This section describes how to stop and start the SEP

A) Stop the SEP

- 1) Click the “Start” menu, mouse over “Settings” and click the “Control Panel” (Figure 3.1).

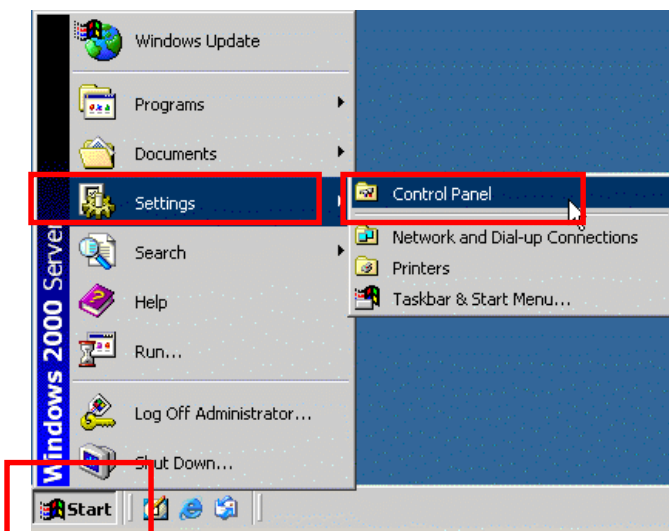


Figure 3.1: Open the Control Panel

2) Click the “Administrative Tools” icon (Figure 3.2).

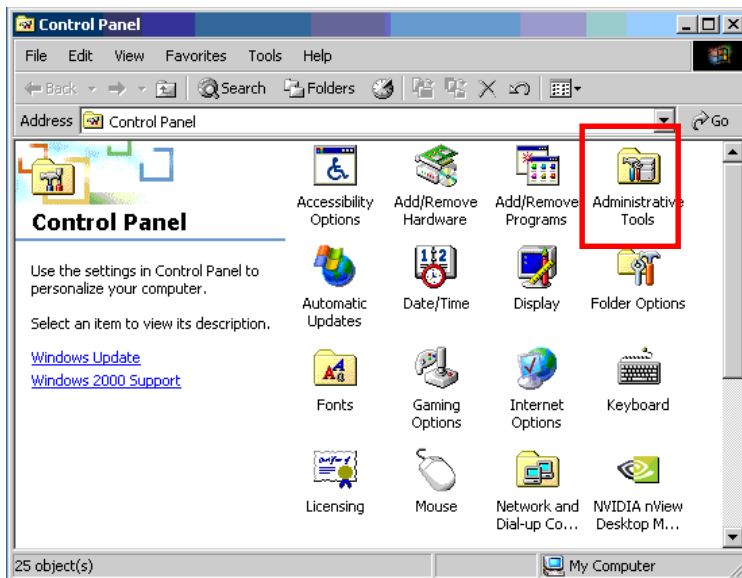


Figure 3.2: Open the Administrative Tools

3) Click the “Services” icon (Figure 3.3).

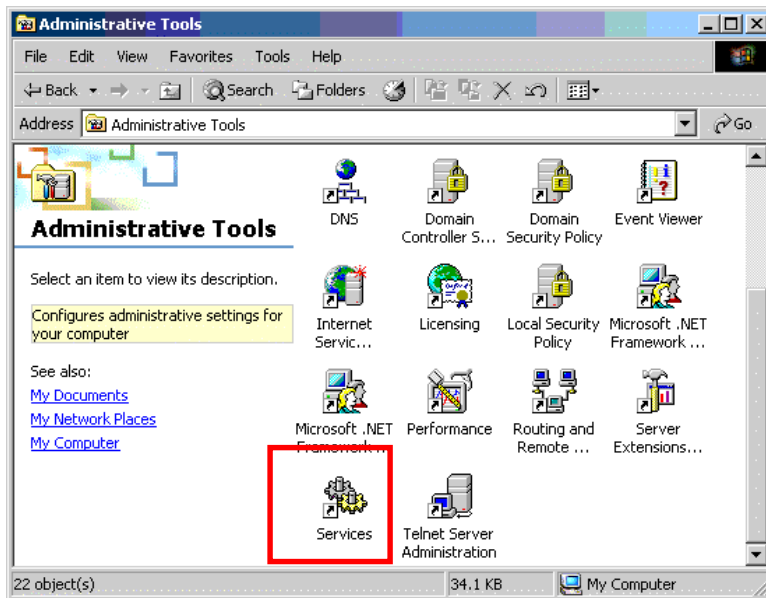


Figure 3.3: Open the “Services”

- 4) Click the “Apache2” Service and click the “Stop” icon (Figure 3.4).

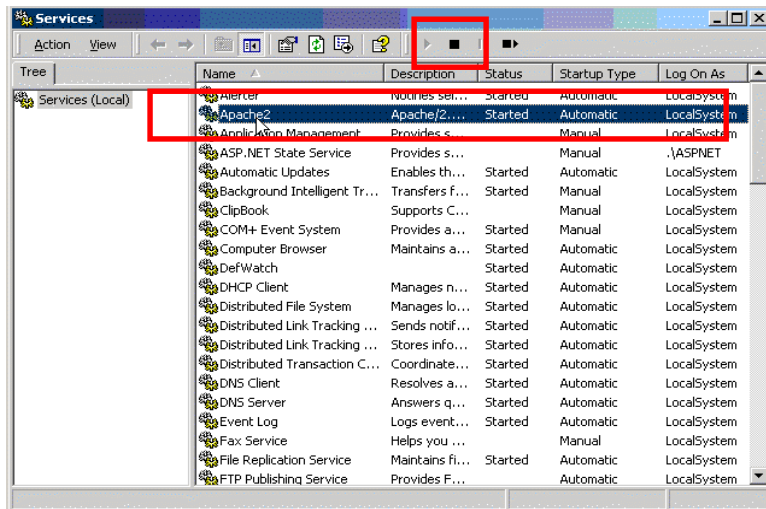


Figure 3.4: Stop the Apache service

- 5) Click the “MySQL” Service and click the “Stop” button (Figure 3.5).

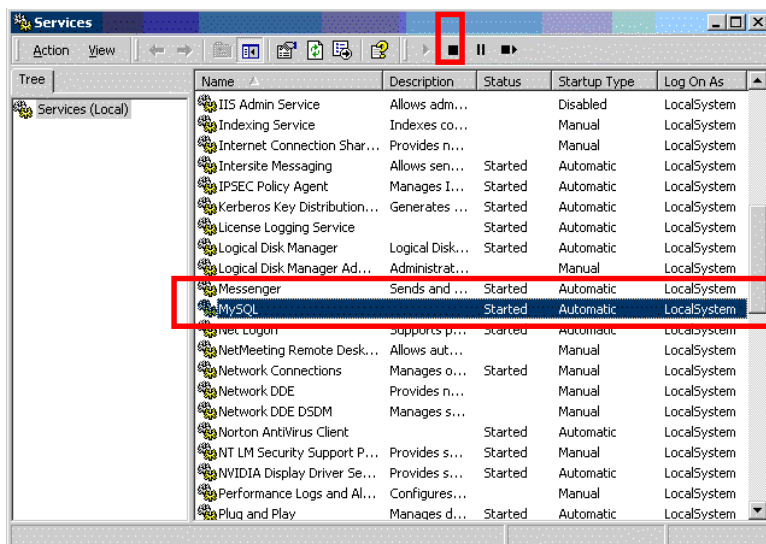


Figure 3.5 Stop the My SQL service

B) Start the SEP

Repeat Steps 1 to 3 of “Stop the SEP” above.

4) Click the “Apache2” Service and click the “Start” icon (Figure 3.6).

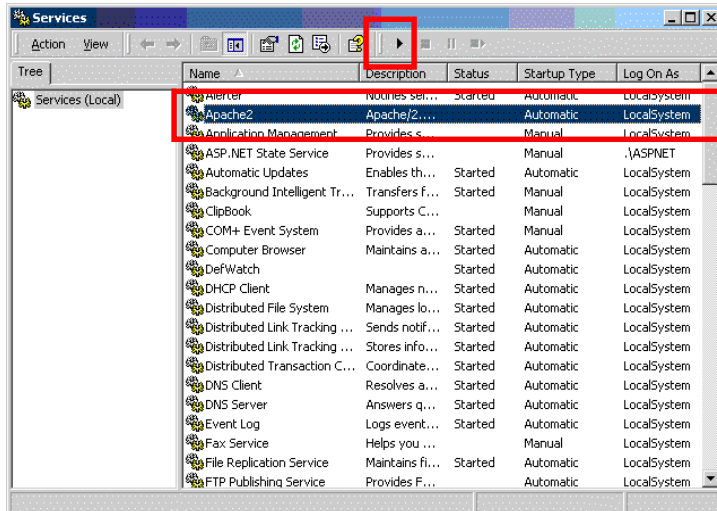


Figure 3.6 Start the Apache service

5) Click the “MySQL” Service and click the “Start” button (Figure 3.7).

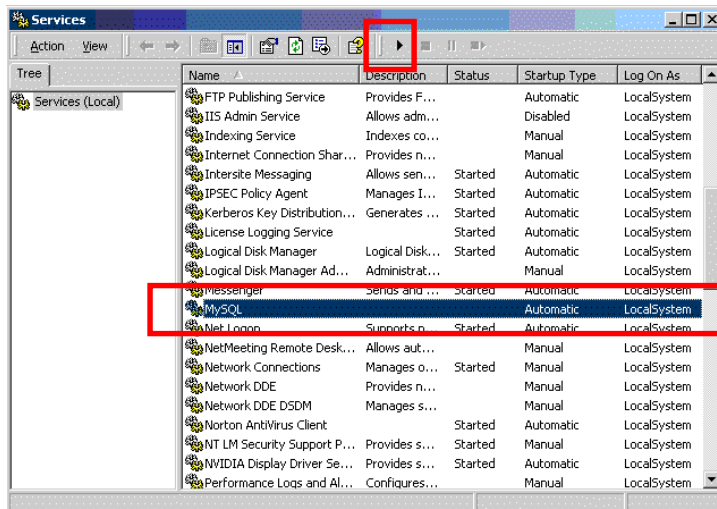


Figure 3.7 Start the MySQL service

3.1.2 Updating School Year

In general, the Administrator should update the school year before the commencement of next academic year. After updating the school year, all form(s) and class(es) are removed from the system. All student user accounts could not be under any form or class group until the Administrator updates the accounts again.

School Year	Current School Year
2004-05	<input checked="" type="radio"/>
2005-06	<input type="radio"/>
2006-07	<input type="radio"/>

Figure 3.8 Update Current School Year

To update the school year, the Administrator can select the new “Current School Year” and click “Save” (Figure 3.8). School years are created automatically after entering the first day of the school year.

For the detailed procedures, please refer to the Operation Manual.

3.1.3 Data Archive

Data archiving is to reduce the amount of data stored on the server and to improve the server performance. Questionnaire and log sheet results can be archived and restored. These archived files can be restored into the system for cross time-frame comparison. A naming convention is used to facilitate the Administrator to keep track of the archived files.

To archive the questionnaire and log sheet results, the Administrator can select the date range and scope of data of the records to be archived, and then click the “Archive” button (Figure 3.9). An archived file is generated for the Administrator to download.

Please remove the data which has been archived.

Date Range: From : 2004 / 12 / 30 To : 2004 / 12 / 30

Scope of Data: Questionnaire

Figure 3.9 Archive SEP data

3.1.4 Restore archived file

To restore an archived file, the Administrator can upload the archived file and then click the “Browse” button (Figure 3.10). The system then scans the archived file to check the content of the file and restore the content in the system if there is no problem. The Administrator is recommended to backup the SEP system before performing any restore task.



Figure 3.10 Restore Data

For detailed procedures, please refer to the Operation Manual.

3.1.5 System Upgrade Procedures

The Administrator can download the upgrade version of SEP program and data set from EMB SEP website [[“http://www.emb.gov.hk/sep/eng”](http://www.emb.gov.hk/sep/eng) (English Interface) or [“http://www.emb.gov.hk/sep/chin”](http://www.emb.gov.hk/sep/chin) (Chinese Interface)].

3.2 User Group and Account Administration

SEP has five types of pre-defined groups and three types of user accounts. For groups, they are System Group, Form Group, Class Group, Survey group, and Privilege Group. For user accounts, they are students and/or parents, teachers and administrators.

3.2.1 Introduction to SEP Groups and User accounts

The following section illustrates the details of the pre-defined groups and user accounts.

A) SEP Groups

The five types of groups are System Group, Form Group, Class Group, Survey group, and Privilege Group. All these pre-defined group types cannot be added or deleted. These five groups types are used to facilitate the Administrator to group a list of users with common properties. Each group type includes its respective Chinese and English names, as well as a list of users. Except Survey Group, they all have privileges assigned.

“System Group” type includes pre-defined user groups which cannot be added or deleted. They are: 1) Administrator, 2) Teacher, 3) Student, 4) Parent and 5) Others.

“Form Group” type is used to group students into forms. Schools can define Form Group according to the operating class levels. It includes a “CLASSLVL” code.

“Class Group” type is used to group students into classes. Schools can define Class Group according to the operating class levels. It includes a “CLASSCODE” code. The relationship between classes (e.g. 1A) and forms (e.g. P1) can be built when adding or updating the classes. Form Group and Class Group can be created through the web interface or created automatically through CSV file import. Codes (“CLASSLVL” and “CLASSCODE”) must be assigned to Form Group and Class Group of a particular school year.

“Privilege Group” type is used to assign specific access rights to a list/group of users. The Administrator can create user groups with various combination of privileges assigned.

“Survey Group” type is used to group users with common properties (e.g. students with computers at home, and student without computers at home) for group comparison in a survey analysis. The resulting privilege(s) for each account is/are the aggregated privileges of all groups that the user belongs to. There are two types of survey groups. The Global Survey

Group is created by the Administrator and can be used for respondents assigned by the Survey Manager when creating a survey. The Local Survey Group is created by the Survey Manager and can be used in a particular survey only. All the group types' properties are summarized in the following table.

Group Type	Group Type's Properties	Group Example
System Group	<ul style="list-style-type: none"> It is inherited in SEP system and cannot be created/ edited /deleted. When import batch students, parents and teachers accounts via csv file, user accounts will be automatically assigned into the respective system groups (i.e. students assigned to "Students" Group). 	<ul style="list-style-type: none"> Parent Group Student Group Administrator Group Teacher Group Other Group
Class Group	<ul style="list-style-type: none"> When batch student accounts have been imported via csv file, class group will automatically created OR The Administrator can manually create it. 	<ul style="list-style-type: none"> Example 1: Class Name: 1A Class Code: 1A
Form Group	<ul style="list-style-type: none"> When batch students accounts have been imported via csv file, form group will automatically create and OR The Administrator can manually create it. 	<ul style="list-style-type: none"> Example 2: Form Name: Primary 1 Form Code: P1
Survey Group	<ul style="list-style-type: none"> There are two types of Survey Group: Global Survey Group and Local Survey Group Global Survey Group(s) is/are created by Administrator in User Management Module, in which Global Survey Group can be assigned to all surveys. Local Survey Group(s) is/are created by the Survey editor, in which the Local Survey Group will be attached to a particular survey for result analysis purpose. It is created to facilitate standardized survey respondents retrieval and survey results analysis across years 	Global Survey Group: Pilot Students, Science Subjects Group, Arts Subjects Group
Privilege Group	<ul style="list-style-type: none"> It is manually created by the Administrator It is created to assign privileges to a group of users. 	Privilege Group: Survey Creators, Survey Item Bank Administrators,

Table 3.3: Group Types' Properties

B) SEP User Accounts

In the SEP, there are three types of user accounts. They are students and/or parents, teachers and administrators. To create student and/or parent user accounts, the Administrator

can import the Student users from WebSAMS or create them in the SEP system. To create teacher user accounts, the Administrator can import teacher user accounts from spreadsheet or create them in the SEP. To create administrator user account, the Administrator can create it in the SEP.

3.2.2 Group Planning Strategy

With a strategy for implementing groups, it will streamline administration. This chapter presents the guidelines for implementing survey and privilege groups.

A) Implementing survey group

The Administrator is advised to set up survey group for a particular survey (e.g. 1A Intranet System Usage) and add the appropriate user accounts (e.g. 1A Student User Accounts) to the survey group. This can facilitate cross group (e.g. 1A and 1B) and time (e.g. Intranet usage survey for 1A at 12-March-2005 and 12-April-2005) comparison for survey analysis.

B) Implementing privilege group

The Administrator is advised to create privilege group(s) based on resource access needs. For example, creating a privilege group with survey item bank management rights for the Survey Manager, creating a privilege group to manage school based attribute(s).

3.2.3 Account Policy Planning

The account policy determines how passwords should be used by user accounts. The account policy sets the requirements for:

- Password minimum length
- Password uniqueness
- Set the changing password authorization to each user type

To use an account policy to provide security for user accounts, the Administrator may consider the following:

- Define a minimum length for password. The longer the password, the more difficult it is to guess. In a medium security system, the recommended password length is 6-8 characters.

- Unique password for all user accounts.

Before a new school year starts, the Administrator needs to update student user accounts. For details, please refer to 2.2.5. Within a school year, the Administrator may need to update student user account (e.g. a student is transferred from 1A to 1B). For detailed operation procedures, please refer to the Operation Manual.

If school has set up school-based Intranet system, the Administrator can replace the “LOGINID” and “PASSWORD” column in the CSV file by the login name and password of the school-based Intranet. For detailed operation procedures, please refer to the Operation Manual.

3.2.4 Add, Edit and Delete Groups and Users Accounts

The Administrator can add, change and delete Groups and User Accounts. For detailed operation procedures, please refer to the Operation Manual.

3.2.5 Import User Accounts from WebSAMS

To facilitate the Administrator to create student accounts, a set of procedures is prepared for the Administrator to extract the student accounts from WebSAMS. For detailed procedures, please refer to the Operation Manual.

When importing user accounts from the CSV file, the system will perform the following tasks: 1) add new user accounts, 2) update existing user accounts, 3) delete existing user accounts, and 4) create Class Groups (forms and classes). The system uses the registration number to compare user accounts between/among existing user accounts in the database and the user information in the CSV file. Detailed descriptions of the tasks are as follows:

- 1) There is a user in the CSV file but there is no existing user account with the same registration number in the database. The system creates a new user account with the data in the CSV file. (Add a new user account)
- 2) There is a user account in the database and user in the CSV file with the same registration number. The system updates the user account in the database with the data in the CSV file. The class and form are also updated (class promotion) according the user information in

- the CSV file. (Update an existing user account)
- 3) There is a user account in the database and no user data in the CSV file with the same registration number. Then the system removes the user account from the database. (Delete an existing user account)
 - 4) The system creates Class Groups (forms and classes) if the Class Groups do not exist in the specific school year. The system creates Class Groups according to the “CLASSCODE” and “CLASSLVL” in the CSV files. It uses the “CLASSCODE” and “CLASSLVL” as the Chinese names, English names, and codes of the Class Groups. The system compares the current year and the code in the Class Group and creates new Class Groups if the codes do not exist in the database. The codes in the Class Groups are used to prevent duplicated creation of Class Groups in the same school year. For example, if the school year is “2004-05” and there is a Class Group with a code “1A”. When the Administrator imports a CSV file with “1A” in “CLASSCODE” field in school “2004-05”, the system will not create a Class Group “1A”.

3.2.6 Privilege Setting

To set privileges for user groups, the Administrator can click the “Set Privilege” button next to the target user group (Fig 3.11) and then check the privileges to be assigned to the target user group and click the “Save” button (Figure 3.12).

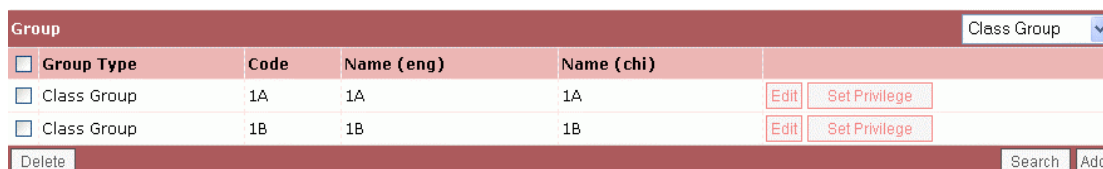


Figure 3.11 Set Privilege

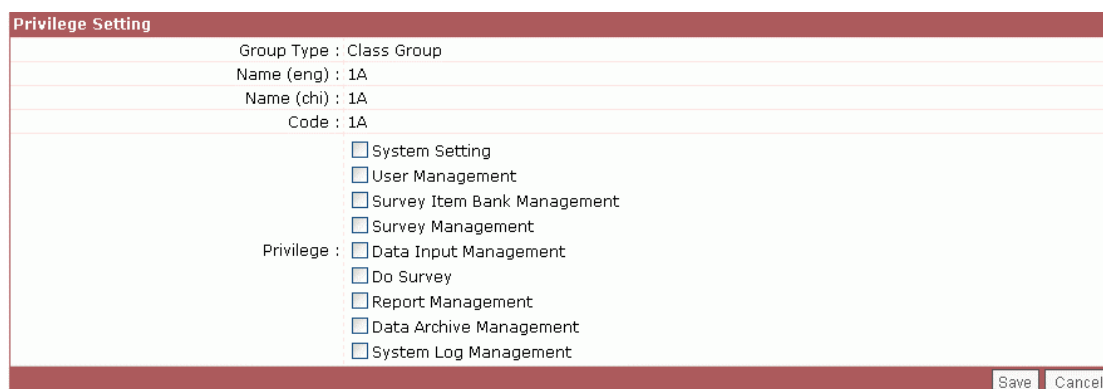


Figure 3.12 Privilege setting

3.2.7 Best Practices

To minimize the tedious jobs of SEP group(s) and user accounts creation, the Administrator is recommended to use the “batch user account creation” to create student accounts, parent accounts and all school-based-group(s) (e.g. class and form groups). For detailed procedures, please refer to the Operation Manual.

3.3 Survey Item Bank (SIB) Administration

This section provides an overview of SIB tree structure and SEP attributes. The SIB provides functions for item bank management which includes survey (folder) structuring, item attributes management and survey maintenance.

A) SIB Tree Structure

For the Survey Item Bank in schools, a folder tree structure is used for organizing surveys in the system. There are two main branches in the tree structure (Figure 3.13), an “EMB” folder and a “School” folder. The “EMB” folder consists of pre-defined sample surveys provided by EMB while the “School” folder includes school-based surveys that are created by teachers of the schools. Sub-folders under the “EMB” folder are pre-defined (according to different school sectors) after system installation. A set of sample surveys is ready for a school to use under these subfolders. Users are not allowed to update or delete either the folder structure or the pre-installed surveys within the “EMB” folder. However, such operations are not restricted in the management of the “School” folder.

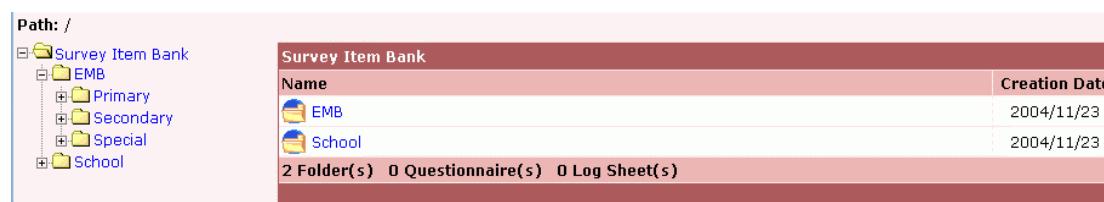


Figure 3.13 SIB Tree structure

B) SEP Attributes

An attribute system is used for survey item categorization and searching (Figure 3.14). There are two types of attributes: the first type is those pre-defined by the SEP (e.g. clustered or enhanced surveys are grouped by themes) and the second one is those created by the school (e.g. school-based surveys are grouped by subjects or classes). Users can add, update, and delete these attributes in the “School” folder. Sub-attributes can also be added under these attributes to form an attribute hierarchy.



Survey Item Search

Attribute(s)

Attribute(s): ITed Indicator: [dropdown]

ITed Survey: [dropdown]

View Attribute Tree Add Search

Figure 3.14 Attribute List

3.3.1 Strategic Planning on Attributes

Attributes are used to categorize survey items in the SIB. A set of attributes (Figure 3.15) in different dimensions (e.g. ITEd survey indicator) with values (e.g. Administration and Management under ITInEd survey indicator) is pre-installed in the school sites. These pre-installed attributes cannot be updated or deleted by schools. However, schools can add values under these pre-installed attributes or define a new dimension in the attribute list. Schools can also define sub-attributes (Fig 3.16) under attributes to form attribute hierarchy with infinite levels. These attributes will be used for searching the survey items within the SIB (Fig 3.17).

To add a new survey item, attribute(s) should be assigned to it. Then the attributed survey item(s) can be easily searched and reused.

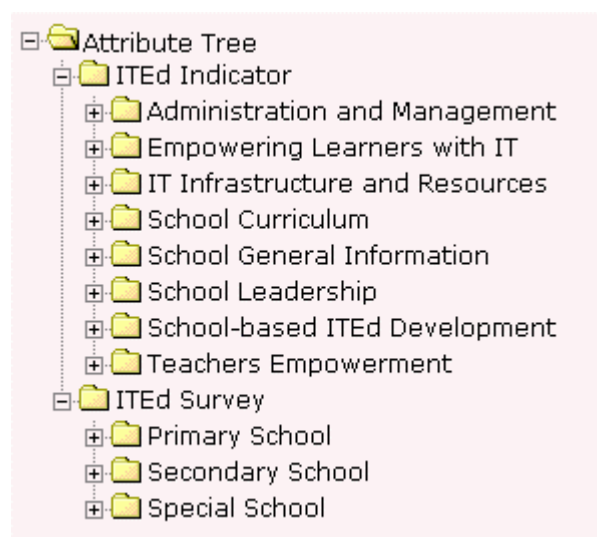


Figure 3.15 The attributes

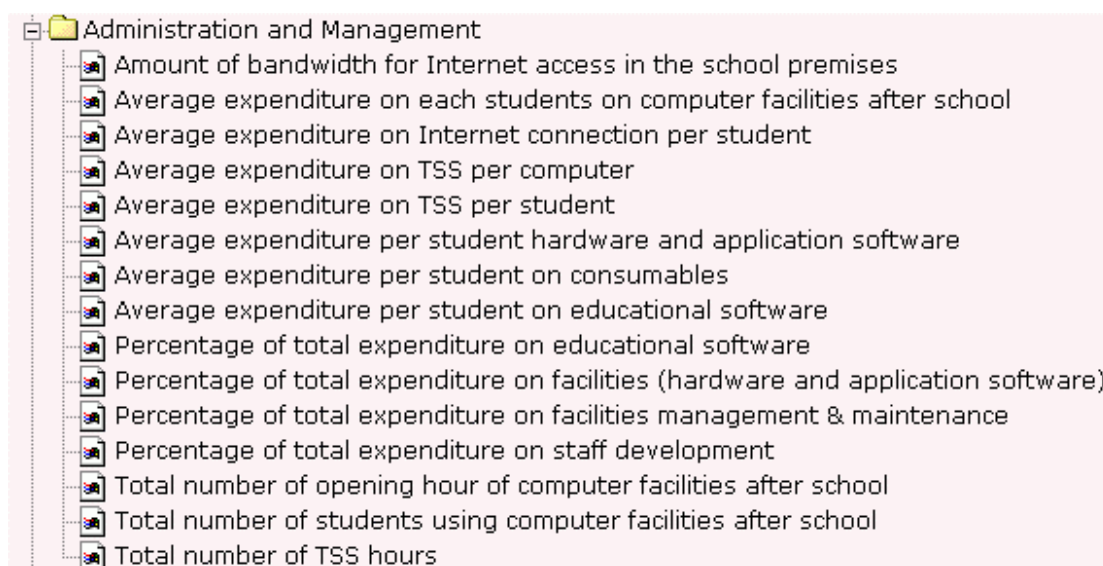


Figure 3.16 Sub-attributes

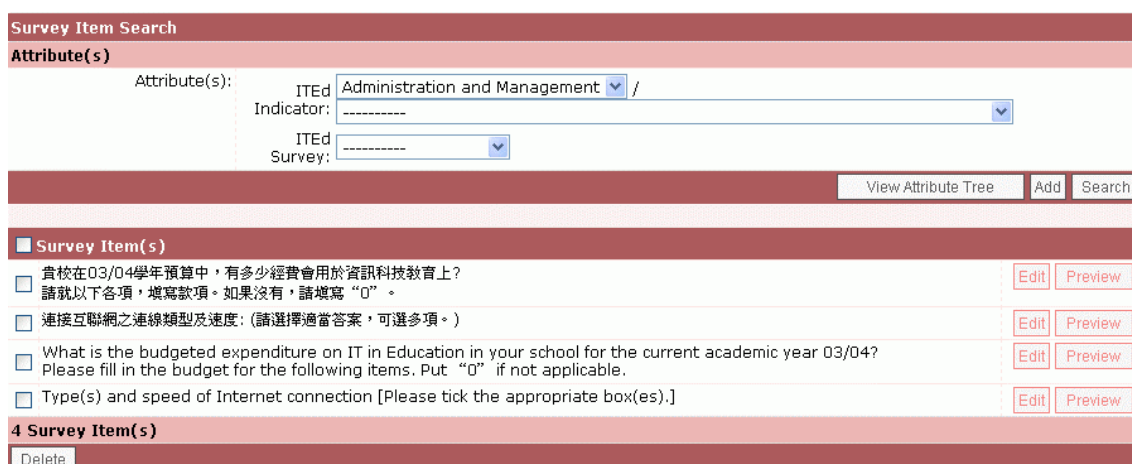


Figure 3.17 Survey Item Search

School may assign a teacher / the administrator / the IT team to manage the attributes. To add a new attribute, school is advised to plan carefully. The attribute should be clear, simple and easy to understand (e.g. add a new attribute “School New IT Facilities Usage” with the sub-attributes “Intranet System” and “Tablet PC”). The Administrator can refer to User Guide to plan on attributes.

3.3.2 SIB Tree Management

In the SEP, a folder tree structure is pre-defined according to the type of school and the categorization of sample surveys (Figure 3.13). The Item Bank folder tree has two main branches (EMB and School folder). Under the EMB folder, the Primary, Secondary, and Special sub-folders (school type level) are pre-defined for placing sample surveys (PolyU ITed Surveys) for different types of schools. Under the school type level, the Administrator can create other sub-folders (e.g. I.T.) for storing categorized surveys with different objectives. For detailed procedures to add, edit and delete folder, please refer to the Operation Manual.

School may assign a teacher / the administrator / the IT team to manage the SIB tree management. To add a new survey, it should be placed in a right folder (e.g. 1A student questionnaire in “1A student” folder). The folder name should be easy to understand (e.g. 1A Student) and search (e.g. “1A student” and “1B student” folder at the same level). For survey(s) with the same name, school is advised to include the date in the survey name (e.g. 1A Student Survey (20050102) and 1A Student Survey (20050602)).

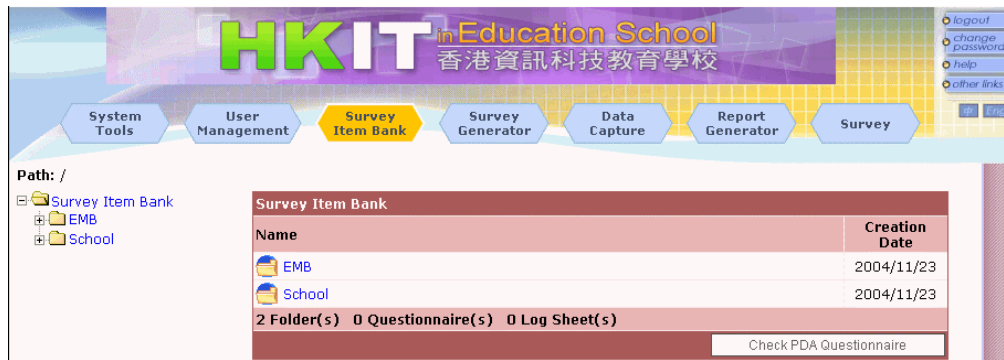
3.3.3 Updating SIB from EMB

The Administrator has no rights to update either the folder structure or the sample surveys under the EMB folder. New version or updated surveys will be posted in the EMB folder. The Administrator can update surveys from EMB folder (Figure 2.13). For detailed procedures, please refer to the Operation Manual.

3.3.4 Check PDA Questionnaire

The Survey Manager can create questionnaire(s) for PDA from SIB. However, by default, the questionnaires in SIB are not marked as “supported for PDA”. Therefore, the Administrator should update the status of questionnaire(s) in SIB in order to allow the Survey Manager to select questionnaire(s) from SIB when creating questionnaire(s) for PDA. To update the status, please follow the following steps -

1. Mouse over to [Survey Item Bank] and then click [Item Bank].
2. Select “Survey Item Bank” from the folder tree.
3. Click “Check PDA Questionnaire”.



4. Click “OK” in the [dialogue](#).

3.3.5 Best Practices

To facilitate the search of survey items/ questionnaire, schools should standardize the school-based attributes hierarchy and folder structure in the Item bank and set up a survey items guideline on updating in the Item Bank and Survey Item to its staff. In this respect, the Survey Item Bank Manager can maintain the Item Bank / Survey Item according to the school-based attributes list and the Survey Manager can locate the survey items and questionnaires easily.

3.4 Backup and Recovery

The Administrator should backup the data of SEP daily. Two directories (“c:/Program Files/SEP/datadir” and “c:/Program Files/SEP/mysql/data” – with the assumption that SEP is installed in “c:/Program Files/SEP”) should be backed up daily.

The first directory (i.e. “c:/Program Files/SEP/datadir”) is the program data directory. It contains the school uploaded files (e.g. School Logo). The second directory (i.e. “c:/Program Files/SEP/mysql/data”) is user data directory. All Surveys and Survey Items are stored in MySQL database.

School should backup the two directories in backup device (e.g. Backup Tape). The Administrator needs not to backup SEP source program. The source program can be downloaded from EMB website (URL to be confirmed).

To recover data of the SEP, please make a copy of the above mentioned two folders first. The simplest way is to rename the folders and remove them after the recovery task has been completed.

To start the recovery task, the Administrator should stop the SEP (please refer to 3.1.1), copy the backup data from backup device (e.g. Backup Tape) to the corresponding directories (e.g. “c:/Program Files/SEP/datadir” and “c:/Program Files/SEP/mysql/data”) and then start the SEP (please refer to 3.1.1).

If the SEP crashes, the Administrator is advised to un-install and re-install the SEP. Then, the Administrator is suggested to restore the last backup data. To un-install the SEP, please refer to Appendix D.

3.5 Problems and Diagnoses

This section describes the tools and procedures for problems solving.

3.5.1 Resetting User Password

The Administrator can select a class (e.g. Form 1A), select the student(s) and click “Reset Password” button. For detailed procedures, please refer to the Operation Manual.

3.5.2 Windows Event Log Monitoring

The Windows 2000 server provides a tool called “Event Viewer”. With Event Viewer, the Administrator can monitor events recorded in event logs. According to the event logs, the Administrator can understand the system workload and the corresponding effect on the system's resources. The event logs assist the Administrator to diagnose problems. According to the information from Microsoft (<http://www.microsoft.com>), the recommended procedures are:

- 1) Logon Windows 2000 as an server administrator
- 2) Click **Start**, click **Control Panel**, click **Administrative Tools**, and then double-click **Event Viewer**.
- 3) To open Event Viewer and to refresh the view, on the **Action** menu click **Refresh**.

3.5.3 SEP System Log Monitoring

In the SEP, there are six types of system log to facilitate the Administrator to review daily operations. They are Login, Invalid Login, User Management, Survey Item Bank, Survey Generator, Data Archive and Data Capturer (Figure 3.18). For each type of operation, the system logs contain different detailed information. Table 3.4 shows the details recorded in each type of operation.

Figure 3.18 System Log

To view the log records, select a date range and a log type and then click the “Search” button (Figure 3.19). The system shows a list of logs with a date, an operator and an operation fields. To view the details of the logs, click the “Details” button next to the log to be viewed and the system shows the details of the log with remarks (Figure 3.20).

Date	Operator	Operation	
2004-12-30 11:01:02	PAITE3	Survey Item Bank - Add Survey	View
2004-12-30 11:36:22	PAITE3	Survey Item Bank - Add Survey	View
2004-12-30 11:47:43	PAITE3	Survey Item Bank - Add Survey	View
2004-12-30 13:29:27	PAITE3	Survey Item Bank - Add Survey	View
2004-12-30 15:52:26	PAITE3	Survey Item Bank - Add Survey	View

Figure 3.19 Search system logs

Figure 3.20 Log details

For detailed procedures, please refer to the Operation Manual.

Category	Log Type	Remark
User Management	Add User	"loginid", "userid", "name (en)", "name (zh)"
User Management	Update User	"loginid", "userid", "name (en)", "name (zh)"
User Management	Delete User	"loginid", "userid", "name (en)", "name (zh)"
User Management	Restore Deleted User	"loginid", "userid", "name (en)", "name (zh)"
User Management	Import User	"loginid", "userid", "name (en)", "name (zh)"
Group Management	Add Group	"groupid", "name (en)", "name (zh)"
Group Management	Update Group	"groupid", "name (en)", "name (zh)"
Group Management	Delete Group	"groupid", "name (en)", "name (zh)"
Group Management	Set Privilege	"groupid", "name (en)", "name (zh)", "privilege list"
Login	User Login Record	"userid", "loginid", "accessip"
Survey Item Bank Management	Add Folder	"Full path", "Folder Names (Chinese and English)"
Survey Item Bank Management	Update Folder	"Full path", "Folder Names (Chinese and English)"
Survey Item Bank Management	Delete Folder	"Full path", "Folder Names (Chinese and English)"
Survey Management	Add Survey	"Survey Title", "Survey ID", "Full path"
Survey Management	Copy Survey	"Survey Title", "Survey ID", "Full path"
Survey Management	Update Survey	"Survey Title", "Survey ID", "Full path"
Survey Management	Delete Survey	"Survey Title", "Survey ID", "Full path"
Data Archive Management	Archive data	"Date Range", "Scope of Data", "File Name"
Data Archive Management	Restore data	"Data Range", "Scope of Data", "File Name"
Data Capture	Input data	"Survey Title", "Survey ID", "Reference Number"

Table 3.4: System Logs Information

3.5.4 Health Checking

In the SEP, there is a tool for health checking. The Administrator is recommended to complete the steps as follows:

- 1) Logon Windows 2000 server as an Administrator.
- 2) Invoke Internet Explorer.
- 3) Type in the link <http://localhost/sep/healthCheck.php>.
- 4) The system launches a browser and requests for login (The default username: sep password: +-*/) (Figure 3.21).

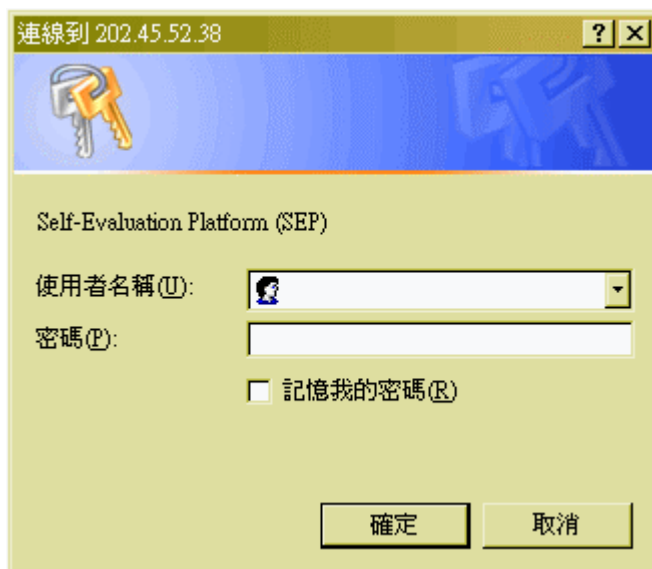


Figure 3.21 SEP Logon interface

- 5) The system shows the status of the machine and the installed components (Figure 3.22).

```
Checking disk spaces...
- Total disk space(C:): 34.23 GB
- Free disk space(C:): 26.29 GB (76.8%)

Checking read/write privileges...
$datadir:
- reading C:\Program Files\SEP\datadir... [OK]
- writing dummy to C:\Program Files\SEP\datadir... [OK]
- removing dummy from C:\Program Files\SEP\datadir... [OK]
$tempdir:
- reading C:\Program Files\SEP\temp... [OK]
- writing dummy to C:\Program Files\SEP\temp... [OK]
- removing dummy from C:\Program Files\SEP\temp... [OK]

Checking apache...
- Version: Apache/2.0.52 (Win32) PHP/4.3.9

Checking PHP...
- Version: 4.3.9
- iconv: 1.9
- MMcache: [OK]

Checking MySQL...
- connecting... [OK]
- check tables...
  attribute [OK]
  class_schoolyear [OK]
  datafile [OK]
  evaluationlist [OK]
  evaluationlistitem [OK]
  group_privilege [OK]
  groups [OK]
  logaction [OK]
  logbook [OK]
  mylogsheetheader [OK]
  mylogsheetinfo [OK]
  mylogsheetobject [OK]
  mylogsheetoptionreferencelist [OK]
  mylogsheetoptionreferencelist_item [OK]
  mylogsheetresponse [OK]
```

Figure 3.22 SEP Installation Status report

3.6 User Account Integration (UAI) with other system(s)

“User account integration (UAI) with other system(s)” at schools provides functions for optional individual user account authentication in addition to the existing user account authentication method. This optional method is an open source routine to enable schools to modify it according to their needs

3.6.1 Planning for the Integration

With the “UAI with other system(s)”, you are allowed to integrate SEP user accounts with various systems which include OpenLDAP, Active Directory, or any database systems. Basically, TCP/IP is used to make connection between systems. To achieve the integration, you should ensure that the connection between SEP and the master system(s) is ready. In addition, you should prepare a user account mapping between SEP and the master system.

You may need some special functions which are not enabled by default in PHP in order to connect the master system(s). For details, please visit <http://www.php.net>. If you follow the integration example provided in this document, you should enable the LDAP function in PHP. (You need to recompile PHP if SEP has been installed in Linux).

To enable the UAI, you need to prepare a PHP script called “SEPAuthorization.php”

located in “[SEP]/userscript/” and add a variable “\$EnableOtherAuthorization” to “[SEP]/conf/profile.php” with value “true”. For details, please refer to Appendix F.

After completing the setting, you can start to map SEP user accounts with those of the master system. To perform a simple UAI testing, you can search a user account (e.g. admin) and enter value in field “REMOTEID” (a user account with the value entered in “Remote ID” must exist in the master system). Login SEP with login ID (e.g. admin) in SEP and password in the master system. You should review the settings and user account information if you cannot login SEP. For the detailed integration procedures, please refer to Section 3.5 in Operation Manual.

Schools are expected to create and modify “[SEP]/userscript/SEPAuthorization.php” file only. If you add or modify other files, you should backup your scripts together with the “SEPAuthorization.php” file. Otherwise, SEP patch(es) provided by EMB may overwrite the scripts.

You can retrieve more information from the following websites -

- For PHP: <http://www.php.net>
- For OpenLDAP: <http://www.openldap.org>
- For Active Directory: <http://www.microsoft.com>

3.6.2. Configuring SEP for the integration

Schools can configure the authentication method in SEP configuration file. The two modes of user login authentication are “Using SEP database” and “Integrating with other system(s)”. If “Integrating with other system(s)” is selected, “Change Password” and “Student Password Reset” will be disabled. Password checking will also be ignored when importing user accounts.

To enable UAI in SEP, you should follow these steps:-

1. Include required PHP Module(s) and update the PHP Configuration File
 - i) In Windows Platform, you should copy related DLL to system directory (e.g. C:\WINNT\SYSTEM32) and uncomment the related library in php.ini file (e.g. C:\WINNT\php.ini).
 - ii) In Linux Platform, you need to install related package(s) and then recompile PHP with appropriate option(s).
2. Update the SEP Configuration File
 - i) Create an authorization script (SEPAuthorization.php) and put it under [SEP]/userscript/.
 - ii) Add a variable “\$EnableOtherAuthorization” with value “true” in [SEP]/config/profile.php.

3.6.3 The Open Source routine

Schools can configure the authentication method in SEP configuration file. The two modes of user login authentication are “Using SEP database” and “Integrating with other system(s)”. If “Integrating with other system(s)” is selected, “Change Password” and “Student Password Reset” will be disabled. Password checking will also be ignored when importing user accounts. An OpenLDAP (Linux) sample routine is provided for this function. For the detailed procedures of UAI, please refer to Appendix F.

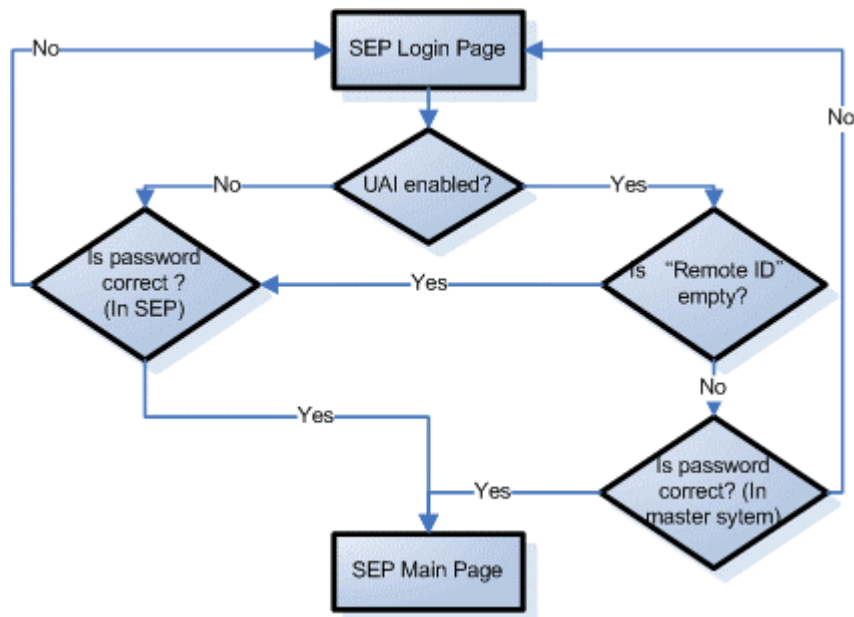


Figure 2.23 Logical Flow of SEP authorization

The following script will be called if “UAI” is enabled and “Remote ID” is not empty

```
<?php
class SEPAuthorization {
    function authorize($loginid, $password){

        // Write your code here to validate the user account with the master system
        // Return true if the authentication is ok; otherwise, return false.

    } // end function
} // end class
?>
```

3.6.4 Understanding Remote ID

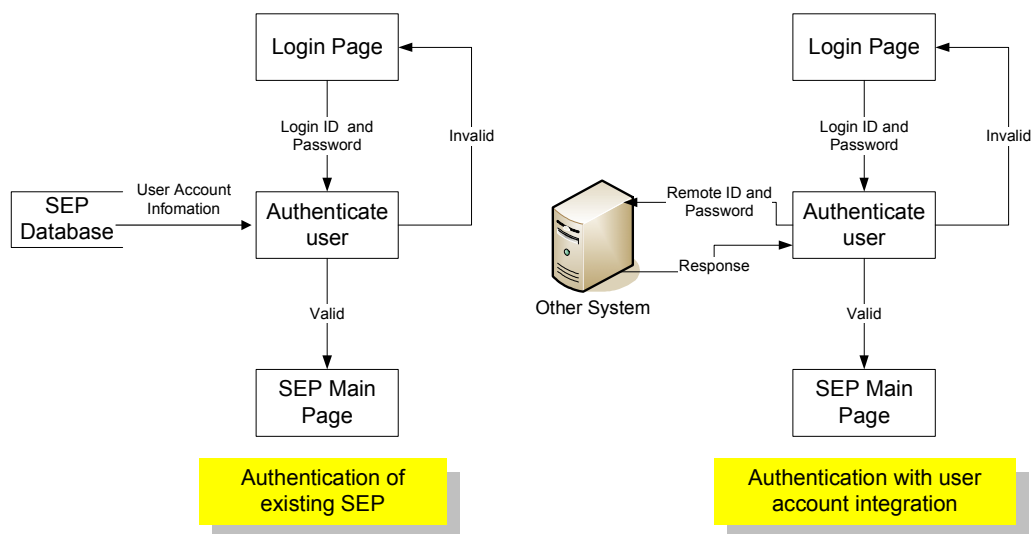


Figure 2.24 Comparison between existing authentication and authentication with User Account Integration.

Each user should have a corresponding account in the master system. For mapping user accounts between SEP and the master system, a new user property field, “REMOTEID”, will be provided. For teacher and other user account import, there is a “REMOTEID” field added. For student user account import, “REMOTEID” and “PARENTREMOTEID” fields are added.

An updated SQL statement for extracting student user accounts from WebSAMS into CSV file will be provided. The CSV file contains “REMOTEID” and “PARENTREMOTEID” fields with the value of “LOGINID” as the default value of “REMOTEID” and “p” plus “LOGINID” as the default value of “PARENTREMOTEID”.

You can extract student accounts with respective remote IDs by the following SQL statement.

```
SELECT b.SCHYEAR, '#' || a.REGNO as REGNO, a.CLASSLVL, a.CLASSCODE, a.CLASSNO, a.ENNAME,
a.CHNAME as CHNAME , a.SEX, 's' || a.REGNO as LOGINID, 's' || a.REGNO as PASSWORD, substr(DOB, 0, 10) as
DOB, 's' || a.REGNO as REMOTEID, 'ps' || a.REGNO as PARENTREMOTEID FROM TB_STU_STUDENT as a,
TB_STU_STUSCHREC as b where a.stuid = b.stuid AND a.CLASSLVL != " and a.CLASSNO != 0 AND b.schyear =
2005
```

3.6.5 Managing Accounts not in Master System

In order to handle some SEP accounts, e.g. “parents” or “others” accounts which may not exist in the master system, the respective remote IDs will be checked. If the remote ID is empty for a SEP account, the account integration will not function and the current password authorization procedure will handle this, even if the “Integrating with other system(s)” is enabled.

In addition to using the empty remote ID mechanism mentioned above, a user account in master system can be created and shared by different user accounts in SEP even if there is **no** one-to-one user account mapping between SEP and the master system. It means that users login SEP with different loginid but the same password. This can reduce the burden of administrator to maintain one-to-one user account mapping.

Appendix A - Installation Procedures for SEP on RedHat Linux 9.0

Before installation of the SEP on RedHat Linux 9.0, software in the following table must be installed. Schools are recommended to use the suggested version as shown in the table. Software packages can be downloaded from the website of the reference URL. Sections A1 to A4 are some tips on how to set up these packages.

Note:

- Apache, PHP, and MySQL should not be installed when installing Linux.
- Use the recommended versions instead of the default one.
- C compiler (e.g. gcc-xxxxxxx.rpm) should be installed for compiling Apache and PHP.
- Other modules, such as libiconv, zlib, flex, automake, autoconf, libtool, are needed.

Software	Version	Reference URL	Remark
Linux	Redhat 9.0	http://www.redhat.com	- Other Linux Platforms are not verified.
Apache	2.0.x	http://www.apache.org	
MySQL	4.1.x	http://www.mysql.com	- Version 5.0 is not verified.
PHP	4.3.9	http://www.php.net	- Installed as an Apache module. - Iconv enabled. - Zlib enabled - MySQL enabled.
mmcache	2.4.6	http://turck-mmcache.sourceforge.net	

After the successful installation of the Linux server and the required software packages,

Administrator is advised to follow Steps 1 to 11 for SEP installation.

- 1) Download the SEP package for Linux from EMB SEP website:
 - English page: <http://www.emb.gov.hk/sep/eng>;
 - Chinese page: <http://www.emb.gov.hk/sep/chin>;
 - Package for Linux: `sep-xxxx.tar.gz` (e.g. `sep-v1.0.0.tar.gz`).
- 2) Extract the tarball to `/usr/local` directory:
 - Assume that the SEP will be installed in `/usr/local` directory.
 - `tar -zxvf sep-v1.0.0.tar.gz -C /usr/local`.
- 3) Change owner of the sep and Apache directory:
 - Make sure that the owner of the sep directory and sub-directories are nobody and the Apache runs as user “nobody”.
- 4) Set the installation path:
 - Verify the configuration file under `/usr/local/sep/conf/profile.php`;
 - Check if the installation path is correct;
 - Modify the `$phydir`, if necessary (e.g. `$phydir = “/usr/local/sep”`).
- 5) Import Database:
 - Change to `/usr/local/sep/db` directory;
 - Import the sql file (e.g. `mysql -u root -p < SEP.sql`).
- 6) Create a database user “sep”:
 - Login MySQL as root (e.g. `mysql -u root -p`);
 - Run a command to add a new user (e.g. `grant all privileges on sep.* to ‘sep’@’localhost’;`).
- 7) Add the SEP alias to the Apache configuration file - `httpd.conf`:
 - Edit `[Apache]/conf/httpd.conf`, where `[Apache]` is the installed directory of Apache.
 - Add the sep alias (e.g. `Alias /sep /usr/local/sep/www`).
- 8) Update the php configuration file - `php.ini`:
 - Set the variable “`register_globals`” with value “on”.
- 9) Restart the Apache server:
 - e.g. `[Apache]/bin/apachectl restart`.
- 10) Open a browser on this machine to check the system:
 - e.g. <http://localhost/sep/index.php>.
- 11) Please follow the procedures in sections 1.3 to 1.4 to verify and customize the SEP on Linux platform.

A1. Apache Installation Tips

- 1) Download a Linux Version from Apache website:
 - e.g. httpd-2.xxxxxx.tar.gz.
 - To make sure that the file is clean, please do a MD5 checking
- 2) Extract the file:
 - e.g. tar -zxvf http-2.xxxxxx.tar.gz
- 3) Configure the Apache:
 - e.g. ./configure "--with-layout=Apache" "--prefix=/usr/local/apache" "--enable-module=so".
- 4) Compile the Apache:
 - e.g. make
- 5) Install the Apache:
 - e.g. make install.
- 6) Make sure that the Apache service starts automatically after reboot:
 - e.g. add this line “/usr/local/apache/bin/apachectl start” to file “/etc/rc.d/rc.local”.

Note:

- If you cannot access the homepage of this installed machine from other workstations, please check the firewall configuration of this machine.

A2. MySQL Installation Tips

- 1) Download the RPM files
 - MySQL-server-4.1.xxxxxx.rpm; and
 - MySQL-client-4.1.xxxxxx.rpm
- 2) Install the RPM files
 - e.g. rpm -Uvh MySQL-server.4.1.xxxxxx.rpm
- 3) Make sure that the MySQL service starts automatically after reboot
 - e.g. add this line “service mysql start” to file “/etc/rc.d/rc.local”

Note:

- Please install libiconv, if necessary.
- The package can be downloaded from <http://www.gnu.org/software/libiconv/>.

A3. PHP Installation Tips

- 1) Download the PHP.
- 2) Extract the file (e.g. `tar -zxvf php-4.3.9.tar.gz`).
- 3) Configure PHP (e.g. `./configure' '--with-apxs2=/usr/local/apache/bin/apxs' '--with-mysql' '--with-zlib' '--enable-tracks-vars' '--with-iconv'`).
- 4) Compile PHP (make).
- 5) Install PHP (make install).
- 6) Copy the `php.ini.dist` file (e.g. `php-4.3.9/php.ini-dist`) to `"/usr/local/lib/php.ini"`.
- 7) Edit the Apache configuration file (e.g. `/usr/local/apache/conf/httpd.conf`) and add `"index.php"` to the `DirectoryIndex` and the following lines:

```
AddType application/x-httpd-php .php .phtml .php3 .php4
AddType application/x-httpd-php-source .phps
```

Note:

- Please install libiconv, if necessary.
The libiconv can be downloaded from <http://www.gnu.org/software/libiconv/>.
- Please make sure that "zlib" and "flex" are installed.

A4. MMCache installation Tips

What is MMCache?

MMCache is a free open source PHP accelerator, optimizer, encoder and dynamic content

cache for PHP. It increases performance of PHP scripts by caching them in compiled state, so that the overhead of compiling is almost completely eliminated. Also it uses some optimizations to speed up execution of PHP scripts. MMCache typically reduces server load and increases the speed of PHP code by 1 to 10 times.

- 1) Download the MMCache from <http://turck-mmcache.sourceforge.net/>.
- 2) Extract the file (e.g. `tar -zxvf turck-mmcache-2.4.6.tar.gz`).
- 3) Configure MMCache
 - i) `export PHP_PREFIX="/usr"` (or `export PHP_PREFIX="/usr/local"`);
 - ii) `$PHP_PREFIX/bin/phpize`;
 - iii) `./configure --enable-mmcache=shared`
`--with-php-config=$PHP_PREFIX/bin/php-config`.
- 4) Compile MMCache (`make`).
- 5) Install MMCache (`make install`).
- 6) Install as PHP extension and add the following line to `php.ini`.

```
extension="mmcache.so"
mmcache.shm_size="16"
mmcache.cache_dir="/tmp/mmcache"
mmcache.enable="1"
mmcache.optimizer="1"
mmcache.check_mtime="1"
mmcache.debug="0"
mmcache.filter=""
mmcache.shm_max="0"
mmcache.shm_ttl="0"
mmcache.shm_prune_period="0"
mmcache.shm_only="0"
mmcache.compress="1"
```

- 7) Set the values of the variable `extension_dir` to `"/usr/local/lib/php/extensions"` in `"php.ini"`.
- 8) Creating cache directory.

```
mkdir /tmp/mmcache
chmod 0777 /tmp/mmcache
```

- 9) Copy mmcache.so from ‘/usr/local/lib/php/extensions/no-debug-non-zts-20030429’ to ‘/usr/local/lib/php/extensions’.
- 10) Set the values of the variable extension_dir to ‘/usr/local/lib/php/extensions’ in php.ini.
- 11) Restart Apache.

Note:

- Please make sure that “automake”, “autoconf”, and “libtool” are installed.

Appendix B - Install SEP on other Windows Platform

The Administrator can follow the same procedures as mentioned in 1.2 – 1.4 to install, verify and customize the SEP on Windows Platform other than Windows 2000 Server.

B1. License Issues on installation of SEP to Windows Workstation

(Including Windows NT Workstation, Windows 2000 Professional, Windows XP)

According to the information from Microsoft, schools are reminded the maximum number of concurrent access to the workstation computer for Internet Information Services as follows:

Microsoft Windows Platform	Maximum number of concurrent access to Internet Information Services
Windows XP Professional	10
Windows XP Home	5
Windows 2000 Professional	10
Windows NT Workstation	10

Table B1.1 Maximum number of concurrent access to Internet Information Services

For details, please kindly refer to the End User License Agreement (EULA) which comes with the product accordingly.

B2. Minimum and recommended hardware requirement for different Windows platform

1) Windows NT workstation / 2000 professional / XP (Table B1.2)

Minimum Configurations	Recommended Configurations
CPU: Intel PIII 450	CPU: Intel PIII 1G or above
Memory: 128M RAM	Memory: 512M RAM
Hard Disk: 5G disk space	Hard Disk: 5G disk space
Display Card: VGA compatible	Display Card: VGA compatible
Network Card: Intel interface 10 / 100M network card	Network Card: Intel interface 10 / 100M network card
Keyboard and mouse	Keyboard and mouse

Table B1.2 Minimum and recommended hardware requirement for Windows workstations

2) Windows NT / 2003 server (Table B1.3)

Minimum Configurations	Recommended Configurations
CPU: Intel PIII 450	CPU: Intel PIII 1G or above
Memory: 256M RAM	Memory: 512M RAM
Hard Disk: 5G disk space	Hard Disk: 5G disk space
Display Card: VGA compatible	Display Card: VGA compatible
Network Card: Intel interface 10 / 100M network card	Network Card: Intel interface 10 / 100M network card
Keyboard and mouse	Keyboard and mouse

Table B1.3 Minimum and recommended hardware requirement for Windows NT/2003 server

B3. Special notes to Windows NT workstation and server installation

For Windows NT Workstation and Server, please note the information as follows:

- SEP must be installed on Chinese Windows NT and Workstation.
- The Administrator must install Windows Installer and Windows NT Server / Workstation Service Pack 6 first. Please note the reference URL: <http://www.microsoft.com/downloads/details.aspx?displaylang=en&FamilyID=4B6140F9-2D36-4977-8FA1-6F8A0F5DCA8F>
- The Administrator does not need to re-boot the computer after the Apache HTTP server is installed.

Appendix C – SEP File Structures and Software Components

The SEP includes the components as follows:

- Apache 2.0.52 - Installation Directory [default - C:\Program Files\Apache]
- SEP - Installation Directory (sep dir) [default - C:\Program Files\SEP]
- PHP 4.3.9 - (sep dir) / php-4.3.9
- MySQL 4.1 - (sep dir) / mysql
- MySQL Data - (sep dir) / mysql / data / sep
- Turck-mmcache 2.4.6 - (sep dir) / turck-mmcache
- Script - (sep dir) / www and (sep dir) / lib
- Data File - (sep dir) / datadir

Appendix D – Uninstalled the SEP

According to the steps as follows, the Administrator can un-install the SEP.

- 1) Open Control Panel and Click “Add/Remove Programs” (Figure D.1).

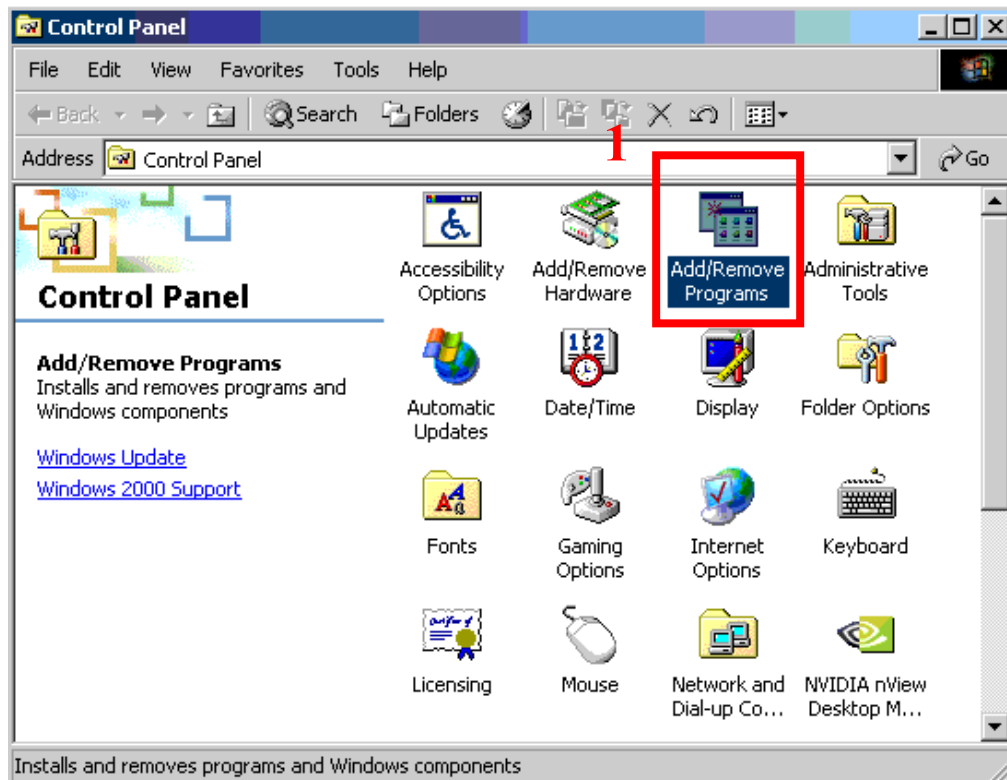


Figure D.1 Add/Remove Programs

2) Click the “Remove” button next to “Apache HTTP Server 2.0.52” (Figure D.2).

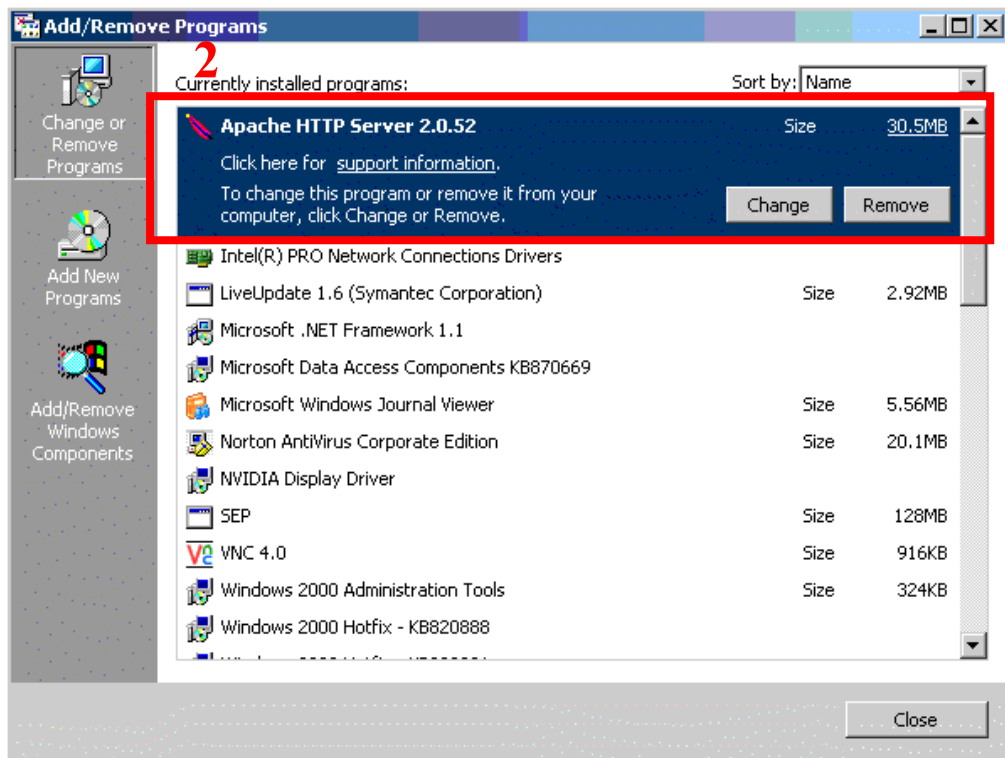


Figure D.2 Un-install Apache HTTP Server

3) Click the “Yes” button to confirm (Figure D.3).

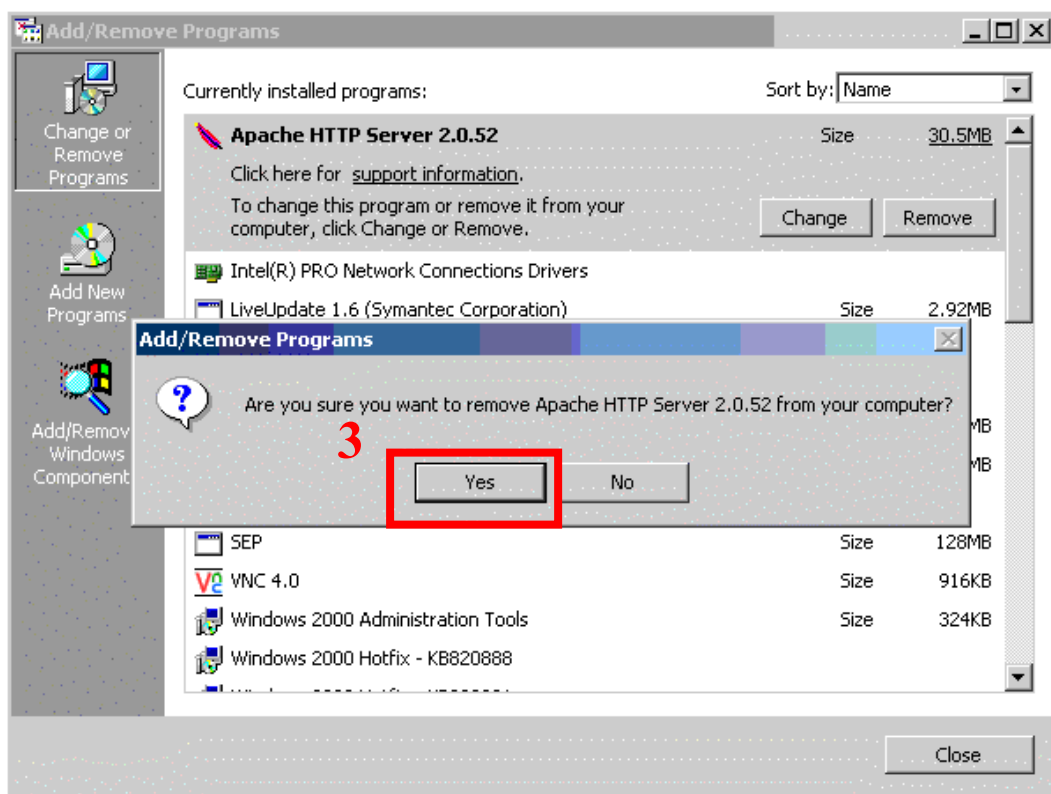


Figure D.3 Confirm un-install Apache HTTP Server

- Click the “Change/Remove” button next to “SEP” (Figure D.4).

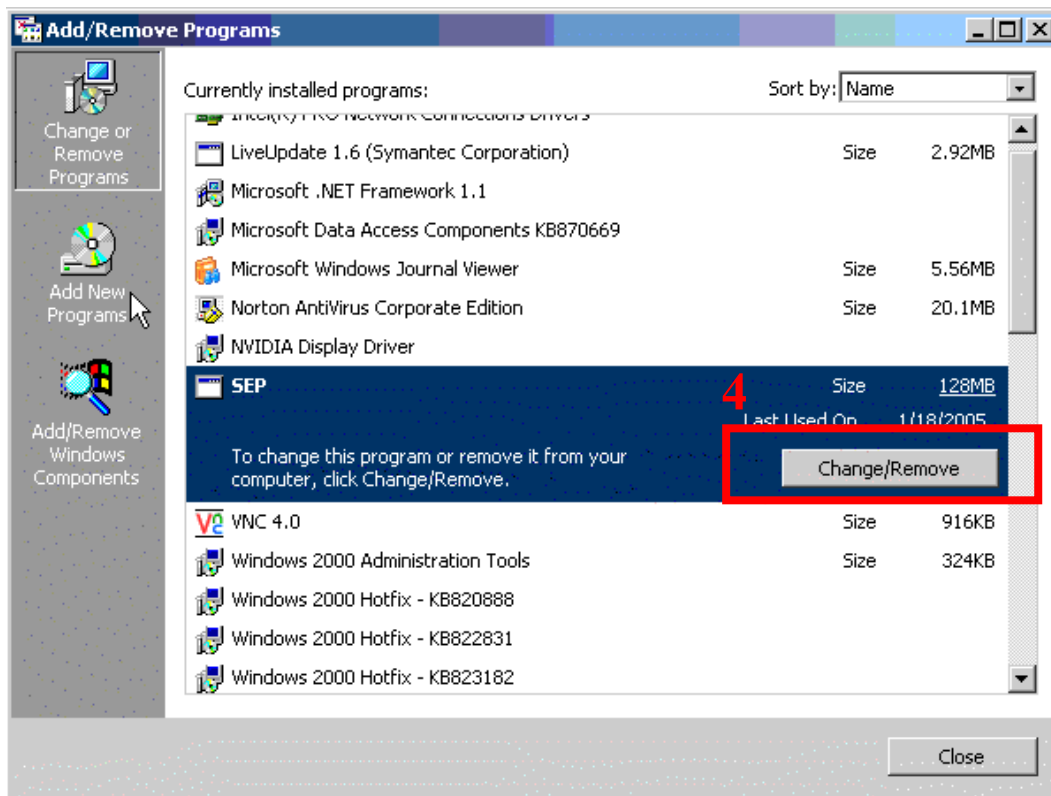


Figure D.4 Un-install the SEP

- Click the “Uninstall” button to confirm (Figure D.5).

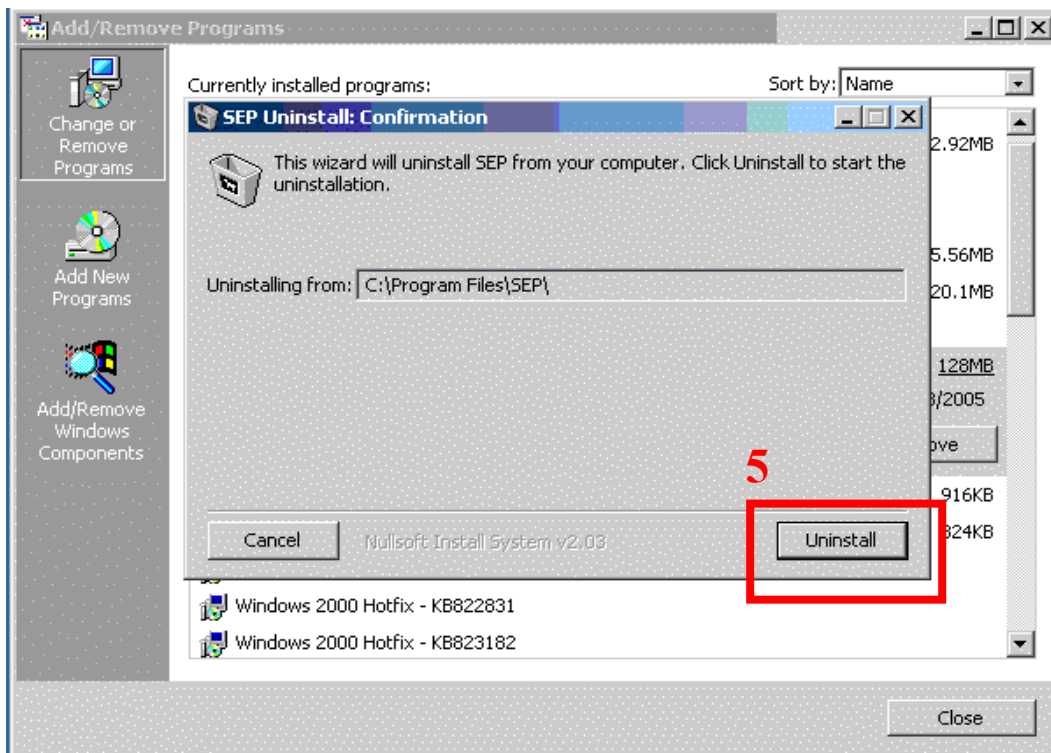


Figure D.5 Confirm un-install SEP

6) Click the “Close” button to complete (Figure D.6).

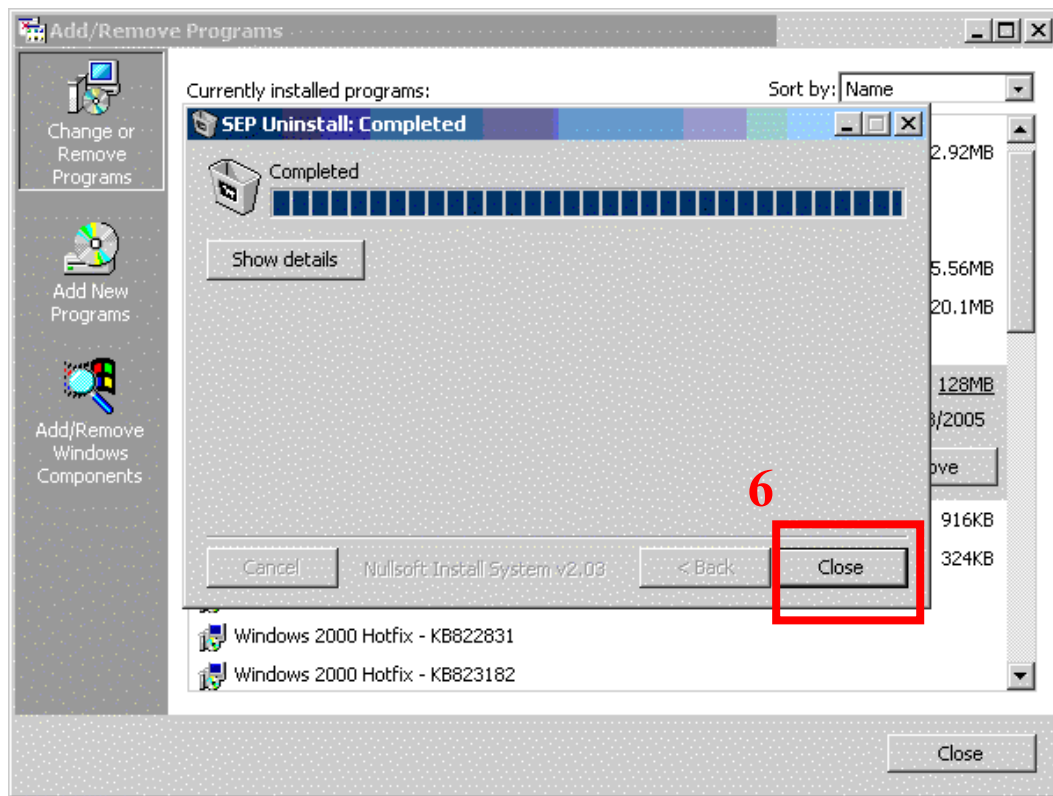


Figure D.6 Un-install SEP completed

7) Select the Apache2 folder, and delete the “Apache2” directory (Figure D.7).

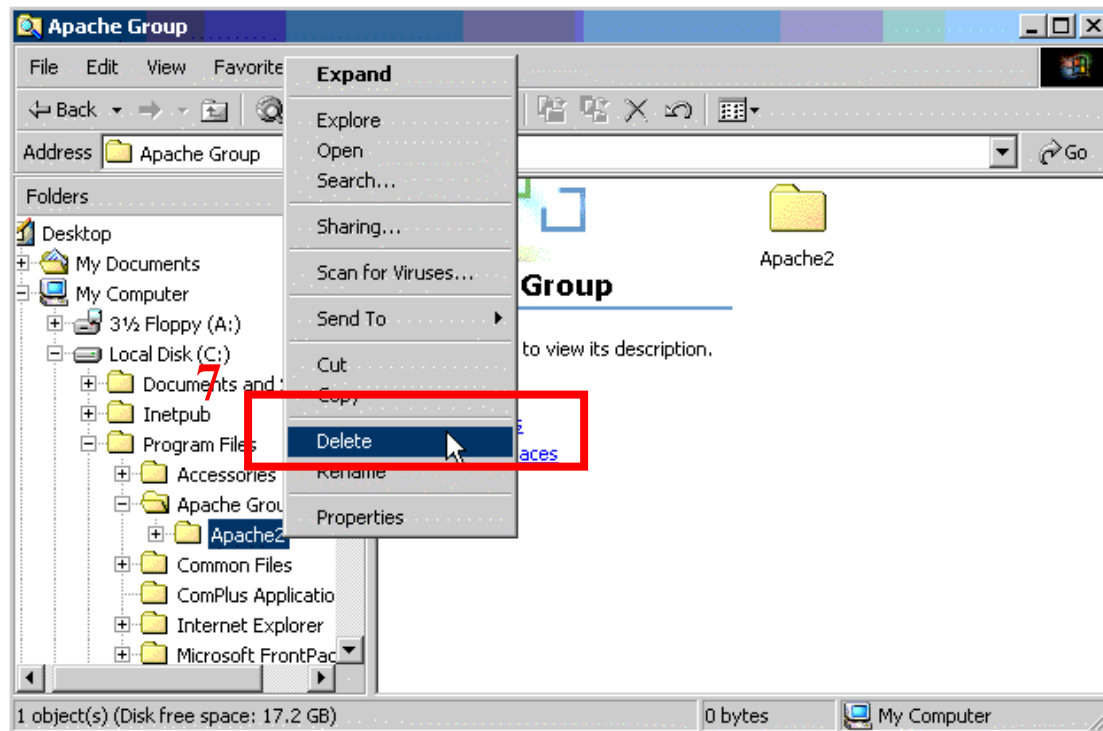


Figure D.7 Remove Apache2 directory

Appendix E – Install the SEP on Windows Platform with IIS

- Follow the steps in 1.2.1 to complete the installation procedure.
- Edit the Apache configuration file (e.g. C:\Program Files\Apache Group\Apache2\conf\httpd.conf).
 - Change the listening port from 80 to another port number (e.g. Listen 80 => Listen 8080).
- Restart the Apache2 Service (please refer to 3.1.1).
- Testing the system with the new port.
 - e.g. http://127.0.0.1:8080/sep/

Note: Please be reminded to update the domain name or IP in system settings. For information, please refer to 1.4.3

Appendix F – Procedures for User Account Integration with Other System(s)

To integration SEP user account authorization with other system, please follow these steps.

1. Add the following line to [SEP]/conf/profile.php file

```
$EnableOtherAuthorization = true; // true for enable User account integration with other system(s)
```

2. To customize the mechanism of user account integration, create a file [SEP]/userscript/SEPAuthorization.php and customize this script to fit your need. The following is a LDAP server integration example.

```
<?php
// File : /userscript/SEPAuthorization.php
// Create Date : 2005/8/12
// Objective : sample routine for user account integration

// class
// The class name MUST NOT be changed.
class SEPAuthorization {

    // class method
    // The function name and function definition MUST NOT be changed.
    // loginid -> login id for login to remote system, which is remoteid for each user
    // password -> password key-in in login page
    // return boolean, true for valid otherwise return false
    function authorize($loginid, $password){

        #####
        // This is a sample for LDAP.
        // ldap_connect(), ldap_set_option(), ldap_bind(), ldap_search()
        // and ldap_get_entries() are functions in PHP LDAP library.
        // For more information, please refer to PHP manual:
        //      http://hk.php.net/manual/en/ref.ldap.php
        // The follow code segment can be customized for other system.

        if ($loginid != ""){
            // While IP address LDAP server is 192.168.1.100.
            $ds=ldap_connect("192.168.1.100"); // must be a valid LDAP server!
            if ($ds) {
                ldap_set_option($ds, LDAP_OPT_PROTOCOL_VERSION, 3); // set ldap connection
                $r=ldap_bind($ds); // this is an "anonymous" bind, typically
                // read-only access
                if ($r){
                    $sr=ldap_search($ds,"dc=campusmart,dc=net", "cn=".$loginid); // search
                    $info = ldap_get_entries($ds, $sr);
                    for ($i=0; $i<$info["count"]; $i++) { // if node found
                        if (!$rnt){ // stop compare after authorize
                            if (isset($info[$i]["userpassword"])) {
                                $rnt = trim($info[$i]["userpassword"][0]) ==
                                trim($password); // authorize password
                            }
                        }
                    } // end loop
                } // end binding
            } // end connection
        } // end login id is not empty
    }
}
```

```
        //#####  
        return $rnt;  
    } // end function  
  
} // end class  
  
?>
```

Appendix G – Cross-Platform Migration Procedures for SEP

Step 1. Dump the database from MySQL in the source machine.

```
> mysqldump -u sep sep > sep.sql
```

Step 2. Pack the data files in the source machine.

```
zip or tar the data file directory – sep/datadir
```

Step 3. Copy the database file and data files from the source machine to the target machine.

(Before processing Steps 4 to 6, school must ensure that the same version of the SEP has been installed in both the target machine and the source machine.)

Step 4. Remove the default database and create an empty database in MySQL in the target machine.

```
> mysql -u sep
mysql> drop database sep;
mysql> create database sep;
mysql> exit
```

Step 5. Import the database file into MySQL in target machine.

```
> mysql -u sep sep < sep.sql
```

Step 6. Copy the data files to the corresponding directory in the target machine.

```
unzip or untar the data file directory – sep/datadir
```