

**E-platform for School Development & Accountability
(ESDA)**

Administrator Manual

Nov 2005

[Version 1.0]

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Chapter 1 Quick Installation Procedures for ESDA on Windows

2000 Server

ESDA is a web-based application built on the Self Evaluation Platform (SEP) on Information Technology in Education (ITEd) for Schools which is a tool provided by EMB in 2005 for schools to conduct ITEd-related and school-based questionnaire surveys.

This chapter provides the installation procedures for E-platform for School Development & Accountability (ESDA) under Windows 2000 Server. Other than Windows 2000 Server, ESDA 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 Appendices A to E.

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

- Pre-Installation Checklist
- Installation of ESDA
- Post-Installation Checklist

The installation procedures described in this chapter apply to schools that have not installed the Self-evaluation Platform for Information Technology in Education (SEP). For schools that have already installed SEP, please refer to Chapter 2 for upgrade installation of ESDA.

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 ESDA meets the following hardware requirements listed in Table 1.1:

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 that schools should install the latest service pack and update security patches. For detailed operations, please refer to Microsoft website (<http://windowsupdate.microsoft.com>).

Internet Explorer (IE) 6.0 SP2 or above is required to run ESDA.

1.1.3 Checking for Other Recommended Software

It is always recommended that schools should install Anti-Virus software and update the latest virus signature on the computer which you install ESDA.

1.1.4 Network Configuration Checking

The ESDA 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 ESDA 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 ESDA is installed. If the ESDA server is also used 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 ESDA

Once all the necessary components for the ESDA installation have been verified, the Administrator is ready to begin the ESDA installation process. The following installation procedures apply to schools that have not installed the Self-evaluation Platform for Information Technology in Education (SEP). For schools that already have SEP installed in their system, they should refer to Chapter 2 for upgrade installation of ESDA on SEP.

1.2.1 Installing ESDA

Step 1: Downloading ESDA

- 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://svais.emb.gov.hk/kpmweb/esda/eng/index.htm> (English interface) or <http://svais.emb.gov.hk/kpmweb/esda/chi/index.htm> (Chinese interface).
- 3) Click the downloading link to the ESDA package.
- 4) Download the full ESDA installation program (i.e. setup – v1.0.0.exe) and save it to your computer desktop.

Step 2: ESDA 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 “Y” button to continue. (Warning: If there is Apache or MySQL installed in the machine, please click “N” button to abort ESDA installation. ESDA must be installed into a system with no prior installation of Apache and MySQL, otherwise compatibility issues may arise.)

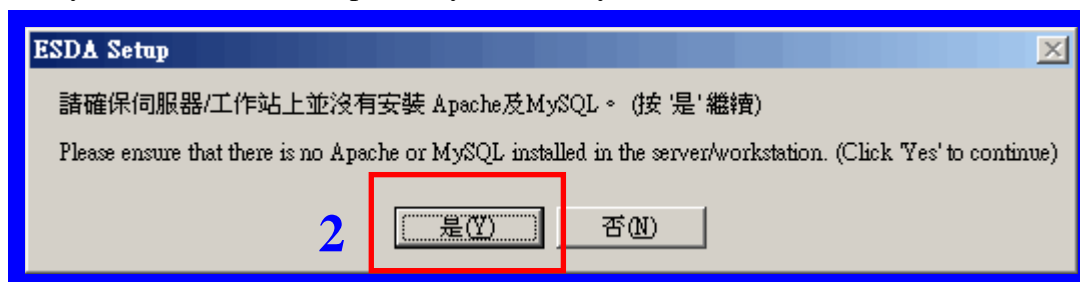


Figure 1.1 Warning Message

- 3) On the License Agreement page (Figure 1.2), click ‘I Agree’ button if you accept all the

terms of ESDA License Agreement.

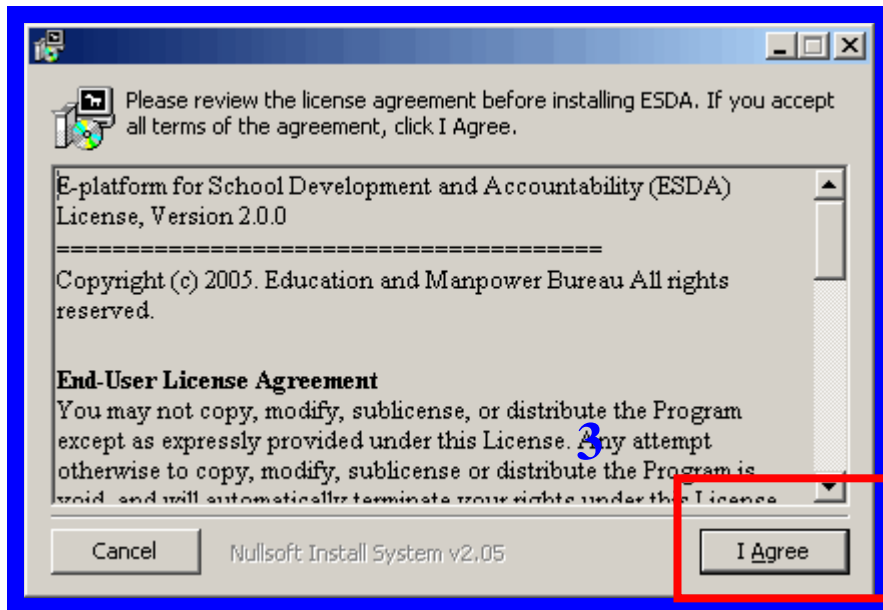


Figure 1.2 ESDA License Agreement

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

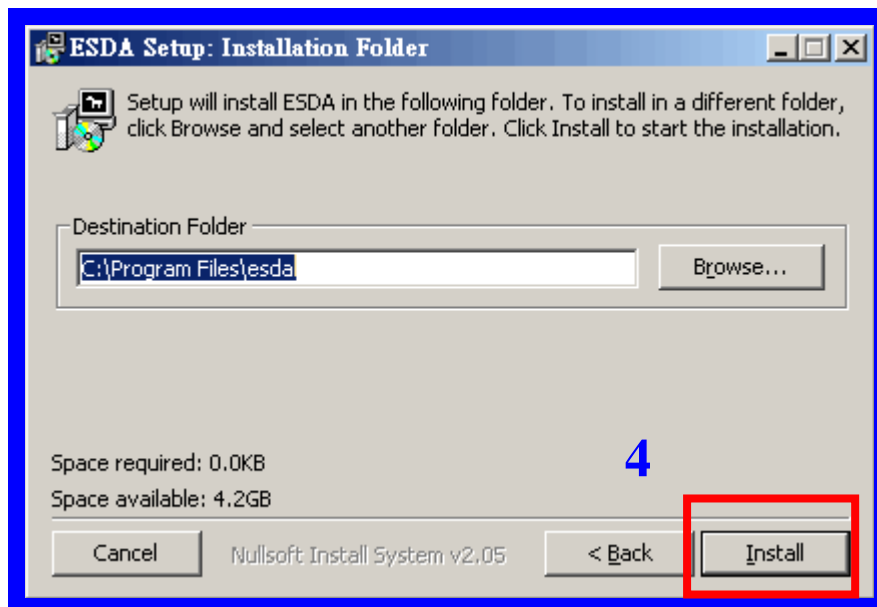


Figure 1.3 Installation folder

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

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

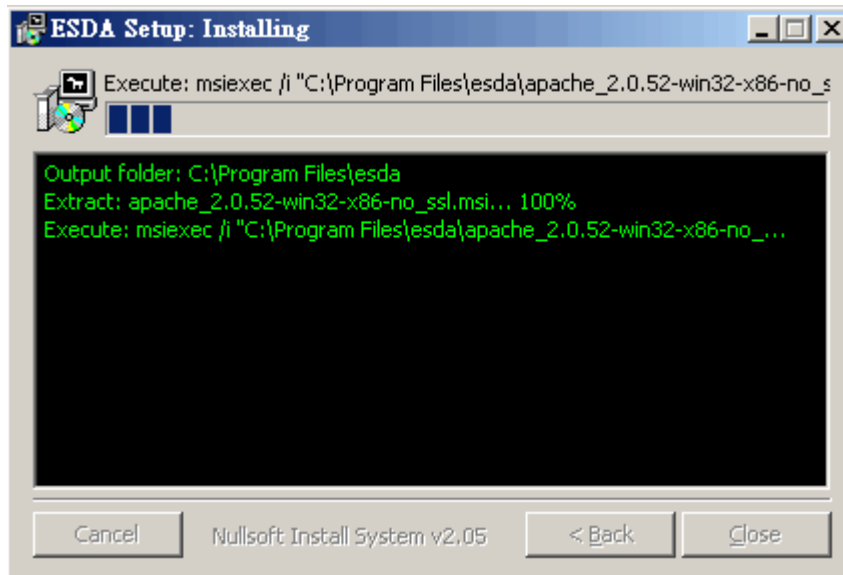


Figure 1.4 ESDA is installing

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

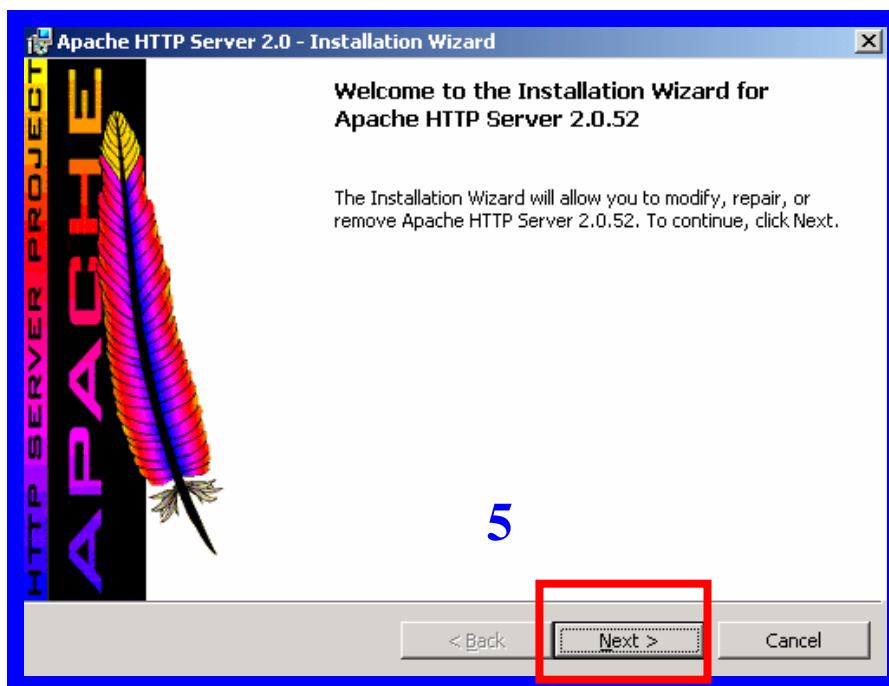


Figure 1.5 Apache HTTP server installation screen

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

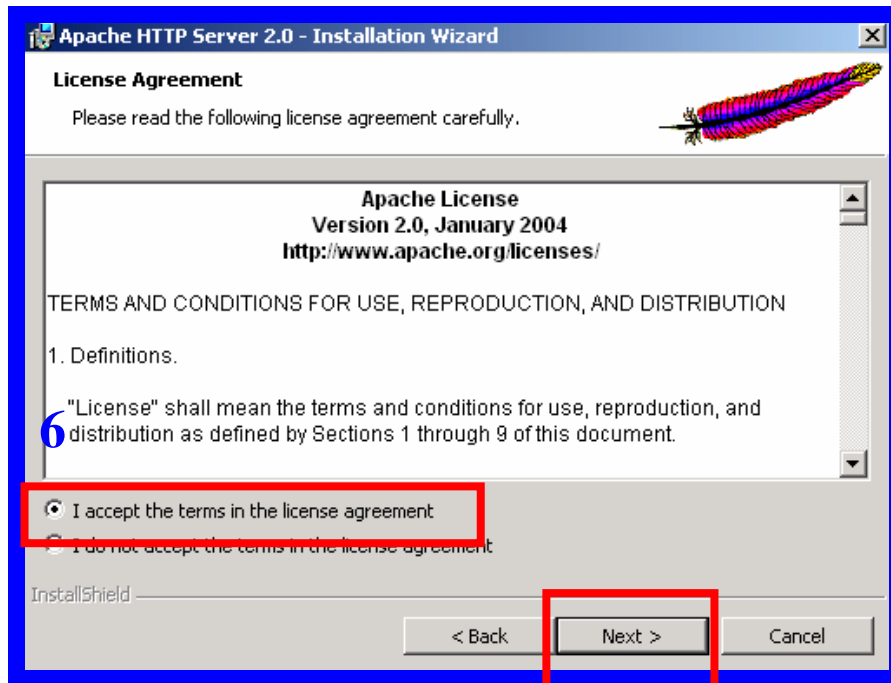


Figure 1.6 Apache HTTP server License Agreement

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

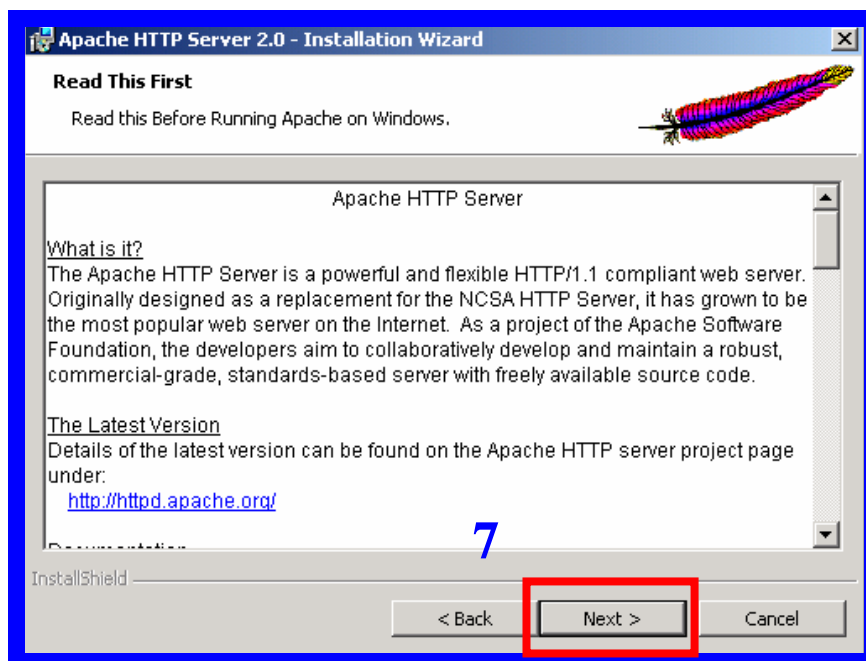


Figure 1.7 Apache HTTP server information screen

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

<i>Network Domain:</i>	The domain name, for example www.schoolABC.edu.hk.
<i>Server Name:</i>	The name of the server on which ESDA is installed, for example www.schoolABC.edu.hk.
<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.

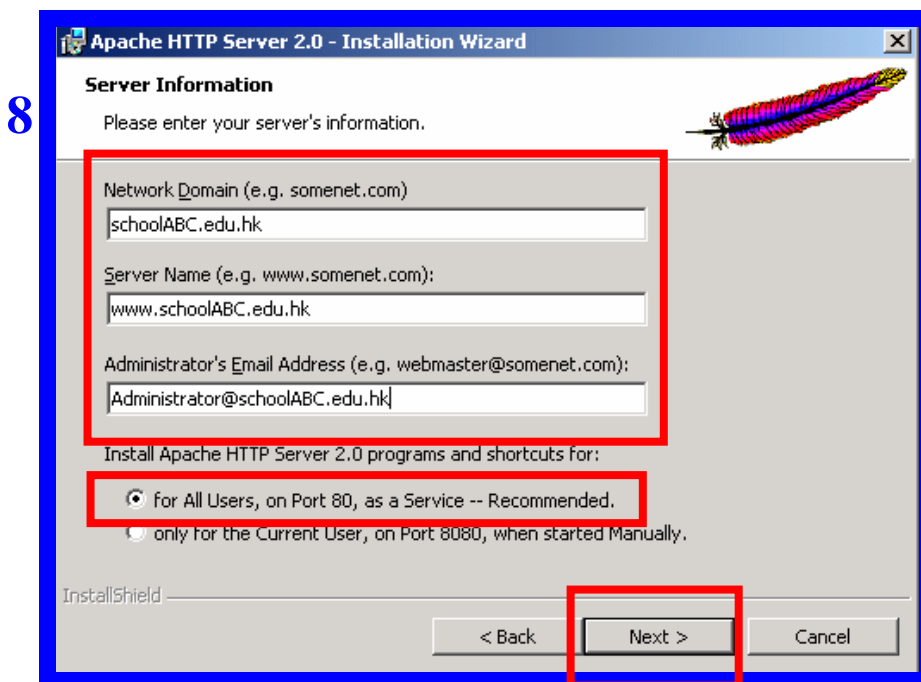


Figure 1.8 Apache HTTP Server information screen

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

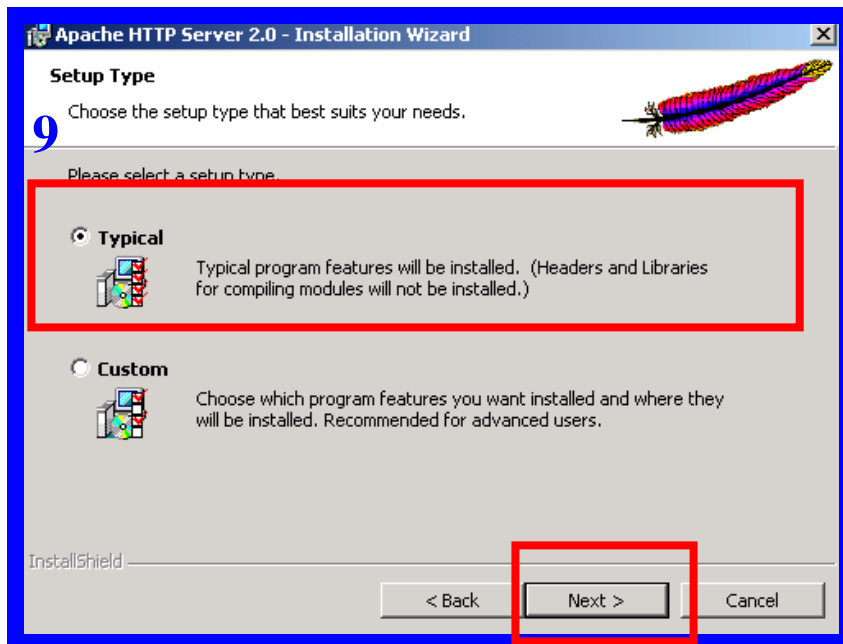


Figure 1.9 Setup Type for Apache HTTP server installation

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

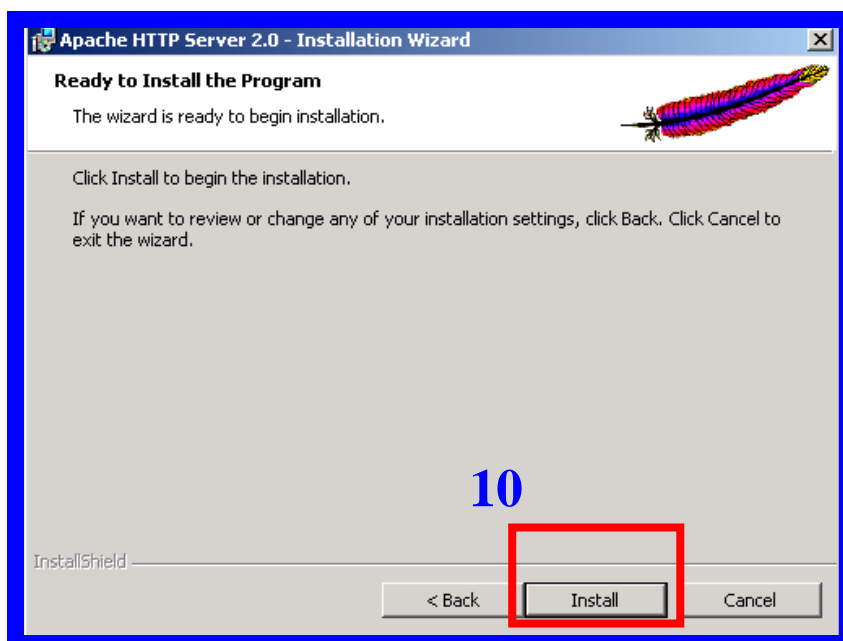


Figure 1.10 Ready to install for Apache HTTP server

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

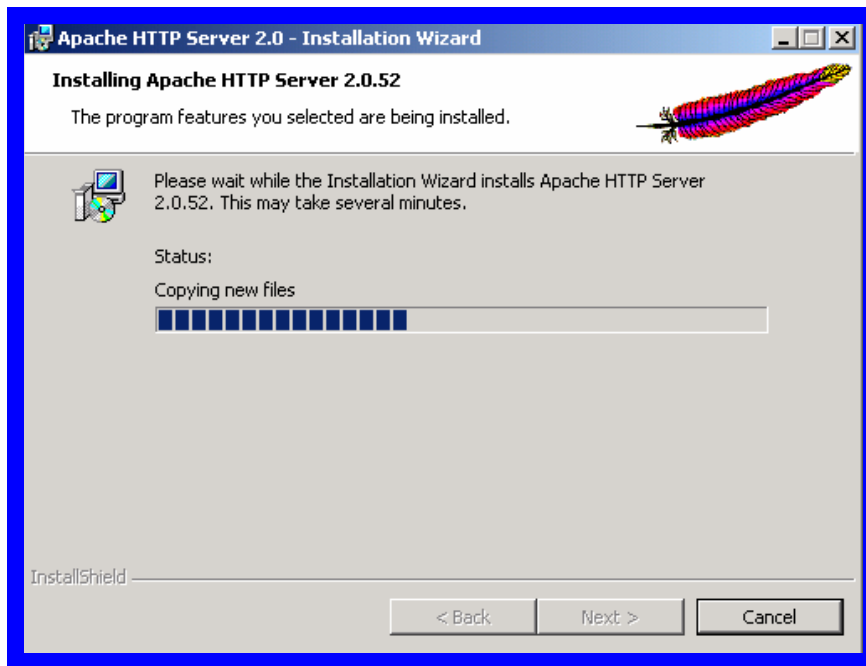


Figure 1.11 Installation for Apache HTTP server

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

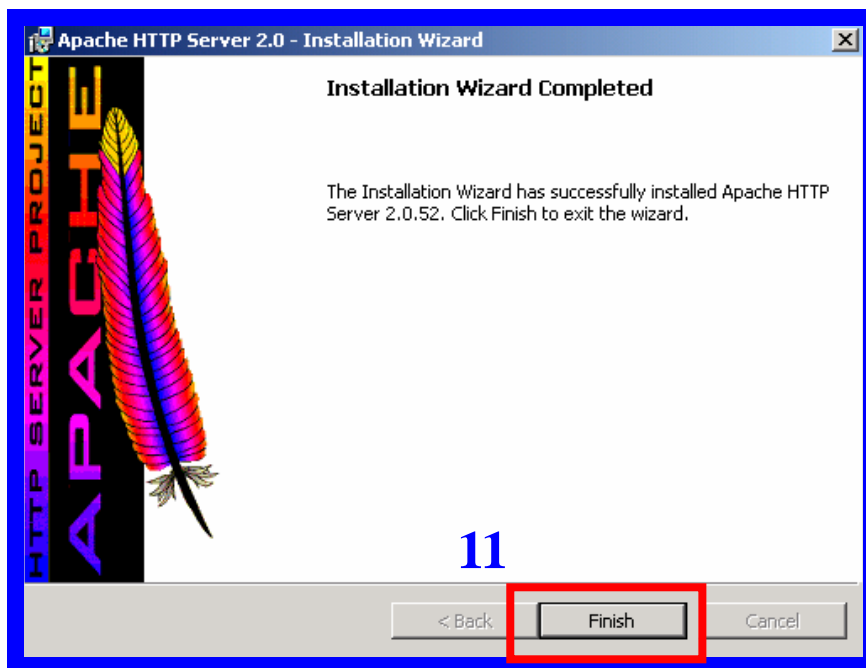


Figure 1.12 Installation for Apache HTTP server completed

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

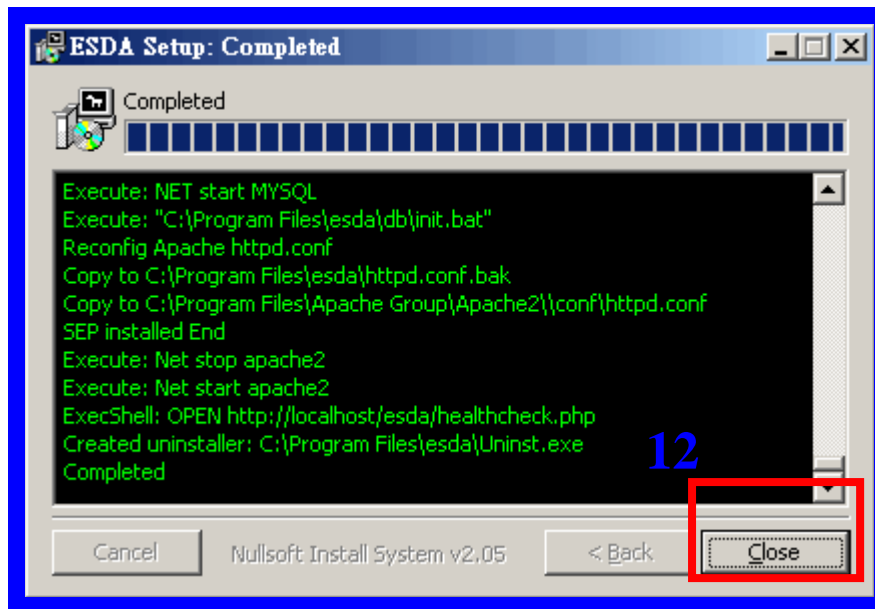


Figure 1.13 Installation of other software components

Step 3: System Health Check

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

- Username: esda
- Password: +-*/



Figure 1.14 ESDA 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 ESDA 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 ESDA is functional and usable.

1.3.1 Logon Test

- 1) Logon as an Administrator to the Windows 2000 server on which ESDA is installed.
- 2) Invoke Internet Explorer.
- 3) Type in `http://127.0.0.1/esda` or `http://<IP address or domain name>/esda`.
- 4) The logon interface of ESDA will be displayed (Figure1.16).



Figure 1.16 Login page for ESDA

1.3.2 Logon 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. For changing the administrator password, please refer to Section 3.3.3 of the Operation Manual.

1.4 Customization

To customize ESDA, the Administrator can define the following parameters (Figure 1.17):

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

1.4.1 Uploading School Logo

The Administrator can update School Logo by using “Interface Setting” (Figure 1.17).

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

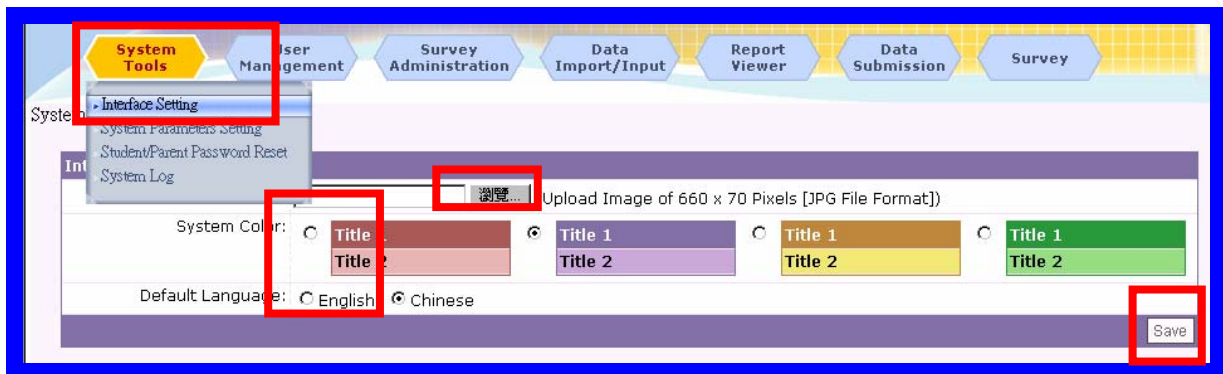


Figure 1.17 System Parameters Settings

1.4.2 Defining System Parameters

There are eight System Parameters as shown in Figure 1.18.

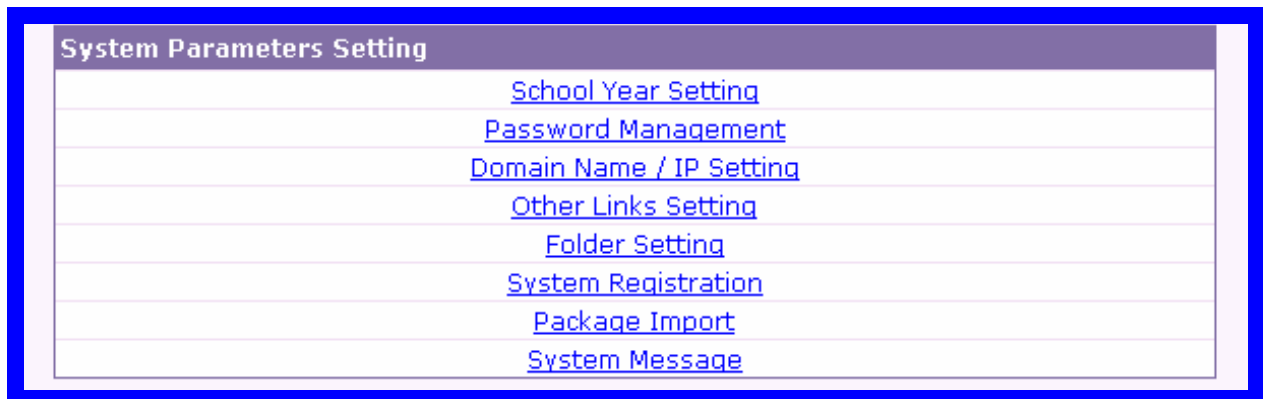


Figure 1.18 System Parameters

School Year Setting – update the current school year. Please refer to 1.4.3 for details.

Password Management – set the password minimum length and maximum length, and set the changing password authorization to each user type (Figure 1.19).

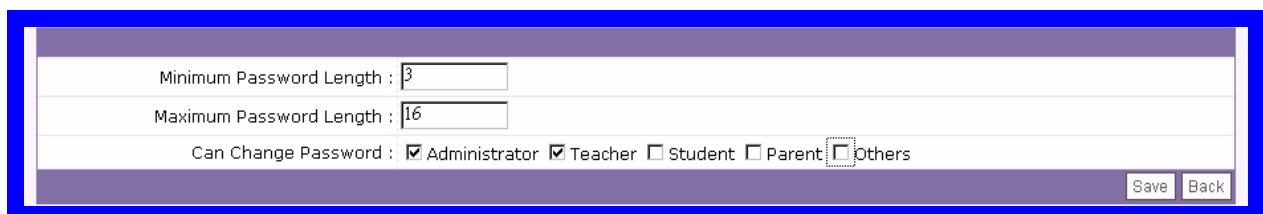


Figure 1.19 Set Password Length

Domain Name / IP Setting - A static IP address should be assigned to the computer in which ESDA is installed. If the ESDA server is also used for Internet access, it must be protected by a firewall and assigned to a routable IP address.

Other Links Setting – add other links (Figure 1.20).

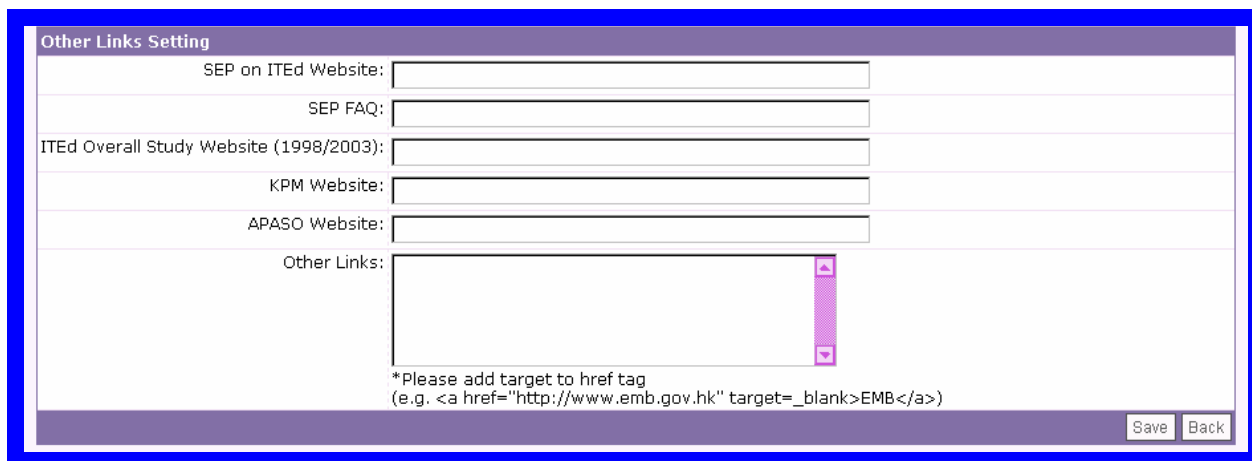


Figure 1.20 Add Other Links

Folder Setting – please refer SEP Operation Manual.

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

1.4.3 Updating School Year

The Administrator can update the current school year by using “Current Year Setting” (Figure 1.21 and Figure 1.22).

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

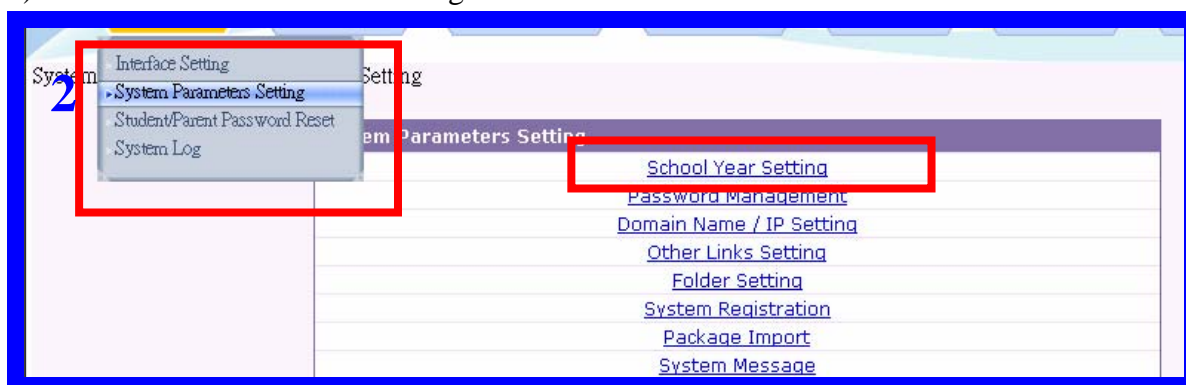


Figure 1.21 System Parameters Settings

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

4

School Year		
Current School Year	School Year	Enable Data Input
<input type="radio"/>	2003-04	<input checked="" type="checkbox"/>
<input type="radio"/>	2004-05	<input type="checkbox"/>
<input checked="" type="radio"/>	2005-06	<input checked="" type="checkbox"/>
<input type="radio"/>	2006-07	<input type="checkbox"/>

Save Back

Figure 1.22 School Year Setting

Chapter 2 System Upgrading Procedures for ESDA

The upgrading procedures described in this chapter apply to schools that have already installed the Self-evaluation Platform for Information Technology in Education (SEP) in their system.

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 <http://svais.emb.gov.hk/kpmweb/esda/eng/index.htm> (English interface) or <http://svais.emb.gov.hk/kpmweb/esda/chi/index.htm> (Chinese interface). You can find the patches under the download area and the patch version next to the patch download link(s). It is recommended that you download the latest patch for the system upgrade. If you are migrating ESDA from Windows platform to Linux platform or vice versa, please refer to Appendix F for details.

2.1 Upgrading ESDA for Windows Platform

Step 1: Downloading ESDA 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://svais.emb.gov.hk/kpmweb/esda/eng/index.htm> (English interface) or
<http://svais.emb.gov.hk/kpmweb/esda/chi/index.htm> (Chinese interface)
- 3) Go to the download area.
- 4) Download the full ESDA upgrade program (i.e. sep_upgrade-v2.0.0.exe) and save it to your computer desktop.

Step 2: Upgrading ESDA

- 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 ESDA License Agreement.

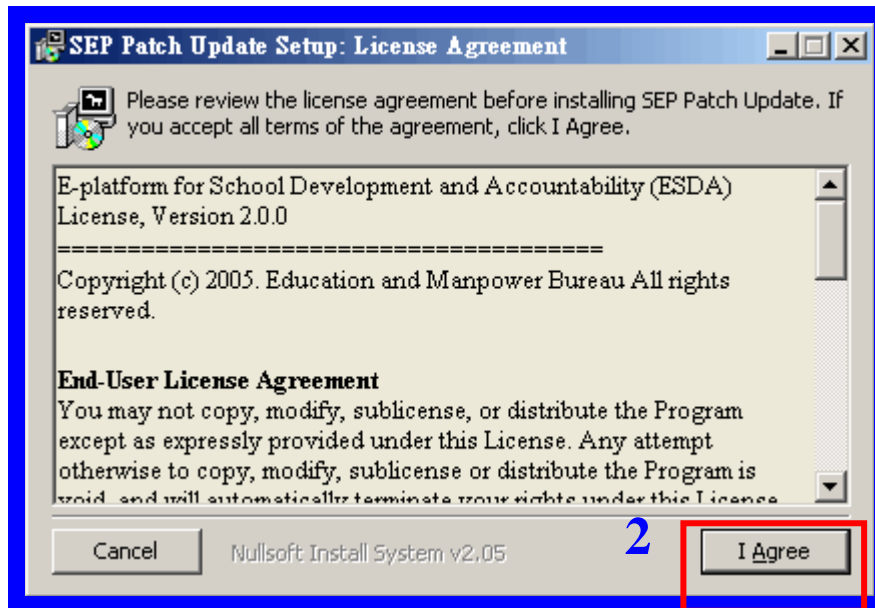


Figure 2.1 ESDA License Agreement

- 3) The upgrade program will enable the system upgrade with the ESDA installation directory, as shown in Figure 2.2. Click “Install” button.

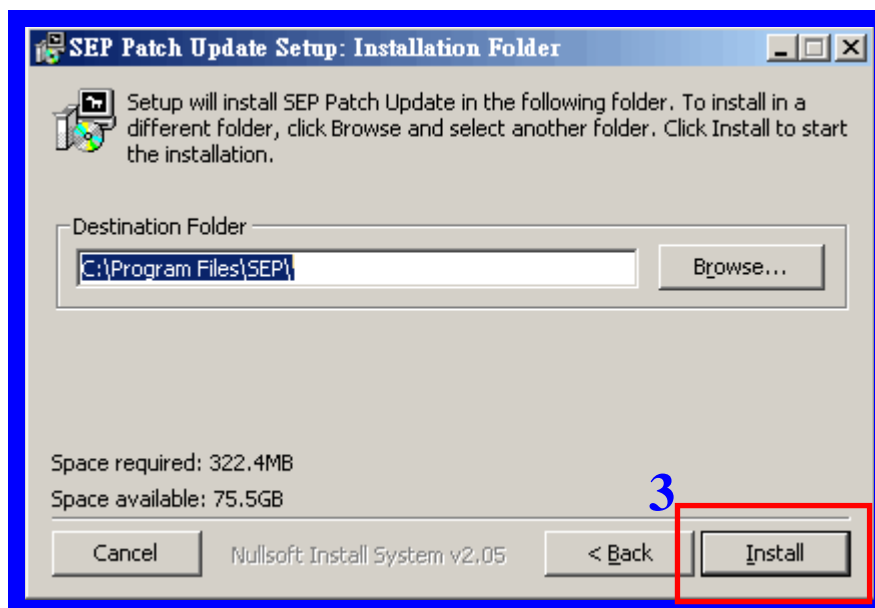


Figure 2.2 Installation folder

4) ESDA is being upgraded as shown in Figure 2.3.

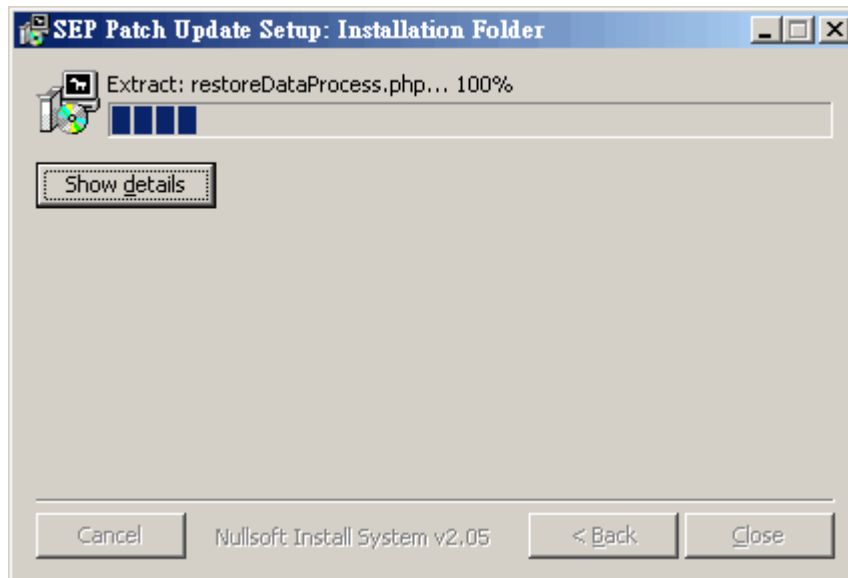


Figure 2.3 ESDA is being upgraded

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

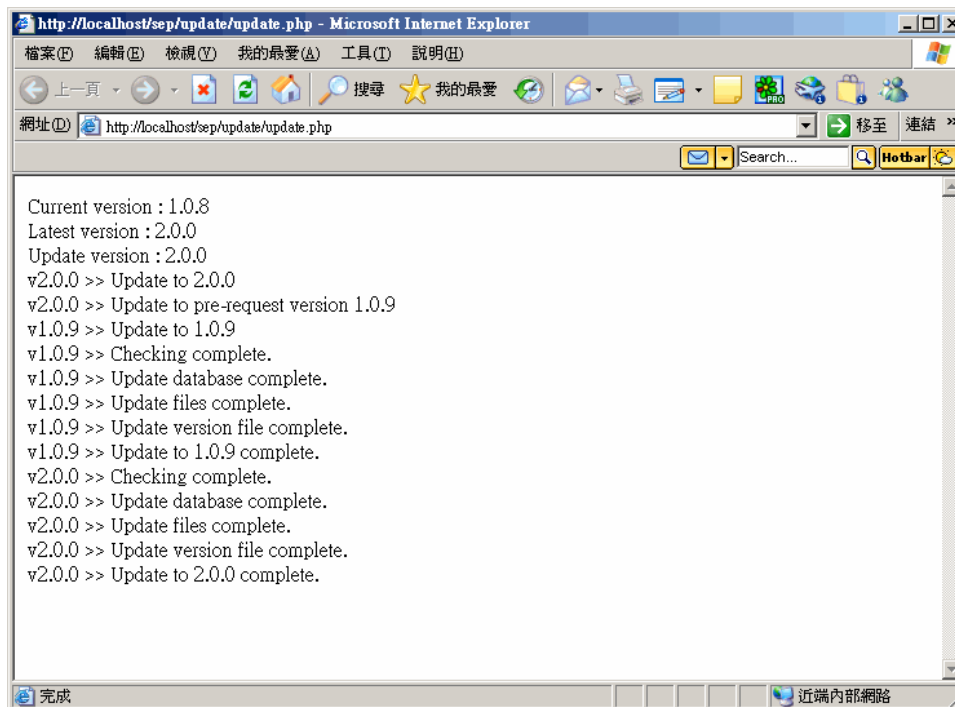


Figure 2.4 List of version upgrade

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



Figure 2.5 ESDA login page

2.2 Upgrading ESDA for Linux Platform

Step 1: Downloading ESDA patch

- 1) Login Linux as root.
- 2) Follow the procedures in section 2.1 Step 1 to download the installation files.
- 3) Download the full ESDA upgrade program (i.e. sep_upgrade-v2.0.0.tar.gz) and save it to your computer desktop.

Step 2: Upgrading ESDA

- 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 ESDA 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 ESDA, update 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 ESDA and access relevant resources.
Backing up and recovery (Section 3.3)	Perform regular backups for restoration of ESDA data.
Problems and diagnoses (Section 3.4)	Monitor ESDA performance and detect problems.

Table 3.1 ESDA Administrative Services

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 should be / performed frequently or yearly. To stop or start the ESDA system, the Administrator can stop or start the Apache and MySQL service. After stopping the Apache and MySQL service, no one can access ESDA. 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 update to the current school year before importing new user accounts.

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

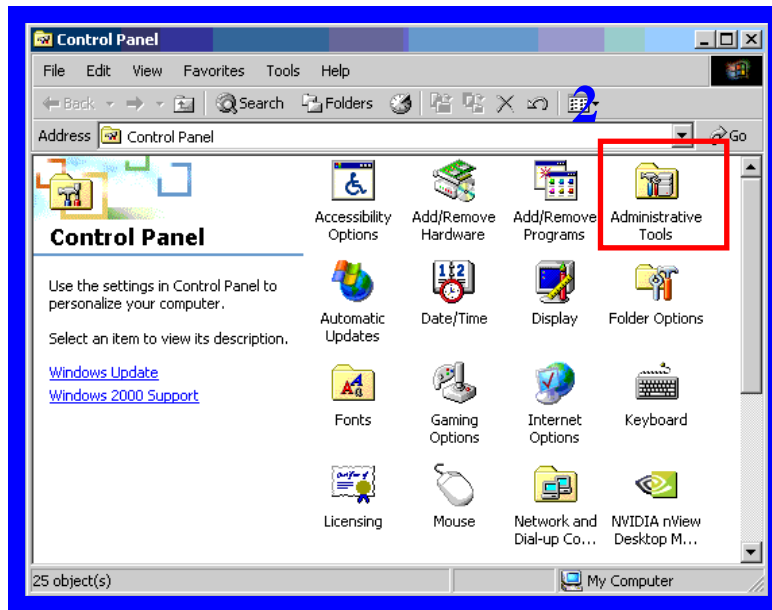


Figure 3.2 Open the Administrative Tools

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

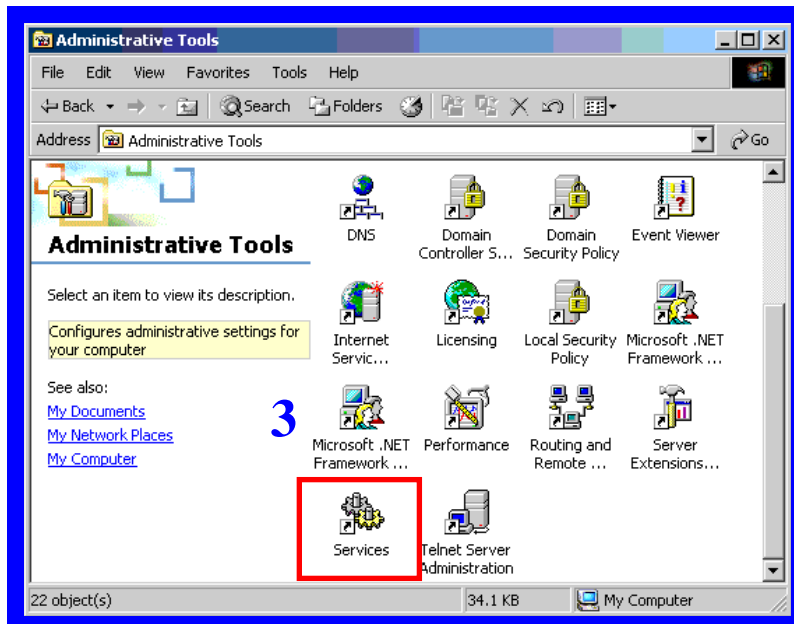


Figure 3.3 Open the “Services”

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

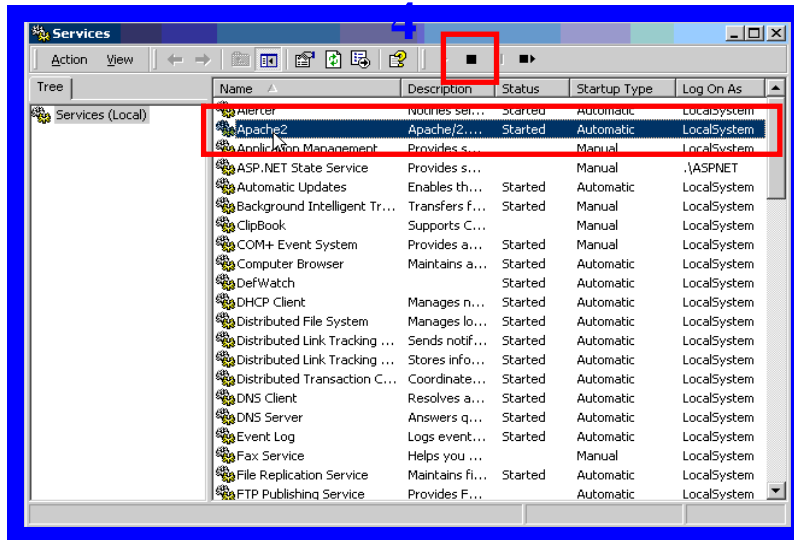


Figure 3.4 Stop the Apache service

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

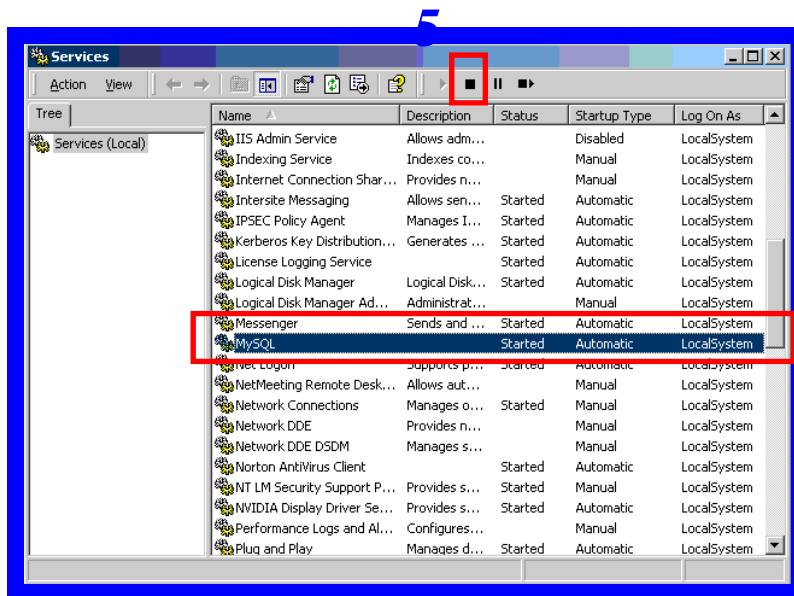


Figure 3.5 Stop the My SQL service

B) Starting ESDA

Perform the following steps to start the ESDA service if it has been stopped.

- 1) Repeat step 1 to 3 of “A) Stopping ESDA”.
- 2) Select “Apache2” Service and click the “Start” icon (Figure 3.6).

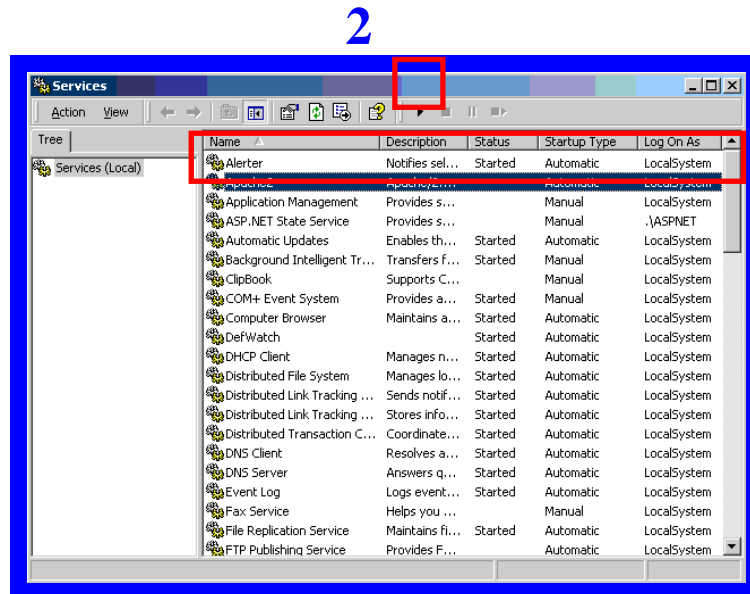


Figure 3.6 Start the Apache service

- 3) Select “MySQL” Service and click the “Start” button (Figure 3.7).

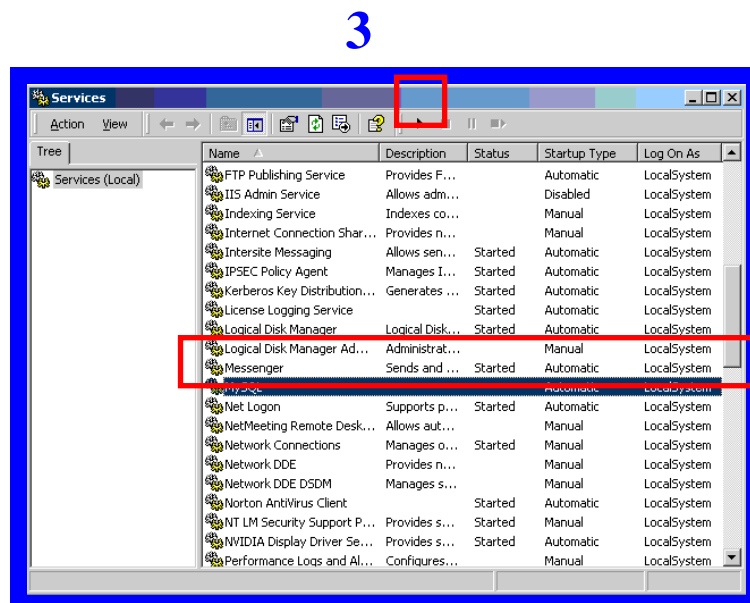


Figure 3.7 Start the MySQL service

(blank page)

3.1.2 System Registration

Modules designed for ESDA are disabled by default. You need to register the system with a registration key provided by QA Division, EMB in order to activate these modules. This registration key consists of 5 groups of 5 characters, i.e. 25 characters in total. In addition, this key will be used as an identity of your school when you submit data to QA Division. The key will be sent to you as a CDS message in WebSAMS.

To register the system, the Administrator inputs the key furnished by QA Division, EMB and click “Save” (Figure 3.8). The system shows the school sector if the registration key is valid. For the detailed procedures, please refer to section 2.8 of the Operation Manual.



Figure 3.8 Register ESDA

3.1.3 Enabling ESDA Modules

Before you can access ESDA modules, you must select privileges related to ESDA modules. To enable these privileges, you should access “User Management > Group Management” and then assign privileges to appropriate groups. If you assign privileges to the group of which you belong to, you should reload the browser or logout and re-login the system after the assignment.

For detailed procedures, please refer to section 3.2.4 of the Operation Manual.

3.1.4 Importing Stakeholder Survey Package

The Stakeholder Surveys will be updated by QA Division, EMB every year if necessary. This update will be sent to you via WebSAMS. The initial installation package already contains Stakeholder Surveys for 2003-04, 2004-05, and 2005-06. Therefore, you must import a set of Stakeholder Survey at the beginning of each subsequent school year in order to administer the latest survey.



Figure 3.9 Register ESDA

To import Stakeholder Survey package, browse a Stakeholder Survey package file and then click “Import” (Figure 3.9). The system shows the titles of the Stakeholder Surveys after import.

For detailed procedures, please refer to section 2.9 of the Operation Manual.

3.1.5 Importing Reference Data Package (for primary and secondary schools)

QA Division, EMB will distribute reference data to schools through the reference data package. The system incorporated with the latest version of reference data. You can download the latest version of the reference data from ESDA website in future. The system incorporates the reference data of 2004-05 school year. You should visit ESDA website to download the latest version of the reference data.

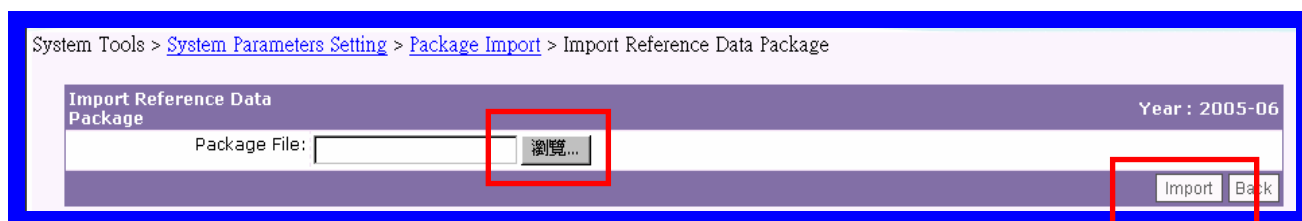


Figure 3.10 Register ESDA

To import reference data package, browse a reference data package file and then click “Import” (Figure 3.9).

For detailed procedures, please refer to section 2.10 of the Operation Manual.

3.1.6 Setting KPM Item (for special schools)

Not all KPM Items are applicable to the school. Some are applicable to special schools only. Some are applicable to primary schools but not secondary schools and vice versa. To prevent inapplicable KPM data being input or submitted to QA Division, you should de-select those

inappropriate KPM Items in “KPM Item Setting”.

KPM Item Setting		Year: 2005-06
KPM Item	Enable	
01. Composition of School Management Committee (SMC)	Must	
02. Staff's view on school leadership	Must	
03. Teachers' professional development	Must	
04. Teacher qualification and experience	<input checked="" type="checkbox"/>	
05. School expenditure on learning and student support	Must	
06. Teachers', parents' and students' view on learning & teaching	Must	
07. Number of active school days	Must	
08. Percentage of lesson time allocated to KLAs as per school timetable	Must	
09. Students' reading habit (entire school year)	<input checked="" type="checkbox"/>	
10. Provision of co-curricular activities (entire school year)	<input checked="" type="checkbox"/>	
11. Teachers', students' & parents' views on school culture	Must	
12. Parents' views on home-school partnership	Must	
13. No. of graduate students in the following destination categories	<input checked="" type="checkbox"/>	
14. Mean score of students' attitudes to school (based on date of the survey)	<input checked="" type="checkbox"/>	
15. Raw mean scores of HKAT in the core-three subjects	<input checked="" type="checkbox"/>	
17. HKCEE	<input checked="" type="checkbox"/>	
20. Total no. of students participated in any of the following inter-school events (entire school year)	<input checked="" type="checkbox"/>	
21. Total no. of students participated in any of the uniform/social and voluntary services groups (entire school year)	<input checked="" type="checkbox"/>	
22. Students' attendance (entire school year)	Must	
23. Students' physical development (based on date of the physical tests)	<input checked="" type="checkbox"/>	

Save Back

Figure 3.11 Register ESDA

To enable input of applicable KPM Items, select the checkbox next to that item and Click “Save” (Fig 3.11).

For detailed procedures, please refer to section 2.11 of the Operation Manual.

3.1.7 Updating School Year

The Administrator should update the school year before the commencement of each 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. It is recommended that schools generate the CSV from WebSAMS. For detailed procedures, please refer to section 3.3.5 of the Operation Manual.

In addition, KPM Items can be updated only if the “Enable Data Input” of specific school year has been checked. It can protect the KPM Item data from being updated unintentionally.

Therefore, you should select school years for which you will input KPM Item data. For the current school year, the “Enable Data Input” of that year is enabled by default and you cannot disable it.

Current School Year	School Year	Enable Data Input
<input type="radio"/>	2003-04	<input checked="" type="checkbox"/>
<input type="radio"/>	2004-05	<input checked="" type="checkbox"/>
<input type="radio"/>	2005-06	<input type="checkbox"/>
<input type="radio"/>	2006-07	<input type="checkbox"/>

Figure 3.12 Update Current School Year

To update the school year, the Administrator can select the new “Current School Year” and click “Save” (Figure 3.12). School years are created automatically after entering the first day of the school year.

For detailed procedures, please refer to section 2.3 of the Operation Manual.

3.1.8 System Upgrade Procedures

- 5) The Administrator can download the upgrade version of ESDA program and reference data set from <http://svais.emb.gov.hk/kpmweb/esda/eng/index.htm> (English interface) or <http://svais.emb.gov.hk/kpmweb/esda/chi/index.htm> (Chinese interface).

3.2 User Group and Account Administration

ESDA 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 ESDA Groups and User accounts

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

ESDA 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 group 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 students 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 ESDA system and cannot be created/ edited /deleted. • When importing batch students, parents and teachers accounts via csv file, we can automatically assign 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
Form Group	<ul style="list-style-type: none"> • When batch student accounts have been imported via csv file, form group will be automatically created OR The Administrator can manually create it. 	<ul style="list-style-type: none"> • Example 2: Form Name: Primary 1 Form Code: P1
Class Group	<ul style="list-style-type: none"> • When batch student accounts have been imported via csv file, class group will be automatically created OR The Administrator can manually create it. 	<ul style="list-style-type: none"> • Example 1: Class Name: 1A Class Code: 1A
Survey Group	<ul style="list-style-type: none"> • Survey Group(s) is/are created by Administrator in User Management Module, in which Survey Group can be assigned to all surveys. 	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

ESDA User Accounts

In ESDA, there are five types of user accounts. They are students and/or parents, teachers, administrators, and others. To create student and/or parent user accounts, the Administrator can import the Student users from WebSAMS or create them in the ESDA system. To create teacher user accounts, the Administrator can import teacher user accounts from spreadsheet or create them in ESDA. The Administrator can create an administrator user account in ESDA.

3.2.2 Group Planning Strategy

With a strategy for implementing groups, it will streamline administration. This section provides information 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. Boy Scout) and add the appropriate user accounts (e.g. Student User Accounts) to the survey group.

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 points:

- 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 passwords for all user accounts.

Before a new school year starts, the Administrator needs to update student user accounts. For details, please refer to 3.2.5. Within a school year, the Administrator may need to update student user accounts (e.g. a student is transferred from 1A to 1B). For detailed operation procedures, please refer to section 3.3 of 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 section 3.3 of the Operation Manual.

3.2.4 Adding, Editing and Deleting Groups and User Accounts

The Administrator can add, change and delete Groups and User Accounts. For detailed operation procedures, please refer to section 3.2 of the Operation Manual.

3.2.5 Importing User Accounts from WebSAMS

To facilitate the Administrator's creation of student accounts, a set of procedures is prepared for the Administrator to extract the student accounts from WebSAMS. For detailed procedures, please refer to section 3.3.5 of the Operation Manual.

When importing user accounts from the CSV file, the system will perform the following tasks: 1) adding new user accounts, 2) updating existing user accounts, 3) deleting existing user accounts, and 4) creating 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) Adding new user accounts

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.

2) Updating existing user accounts

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.

3) Deleting existing user accounts

There is a user account in the database, corresponding to his/her registration number, but no such user in the CSV file. Then the system removes the user account from the database.

4) Creating Class Groups (forms and classes)

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

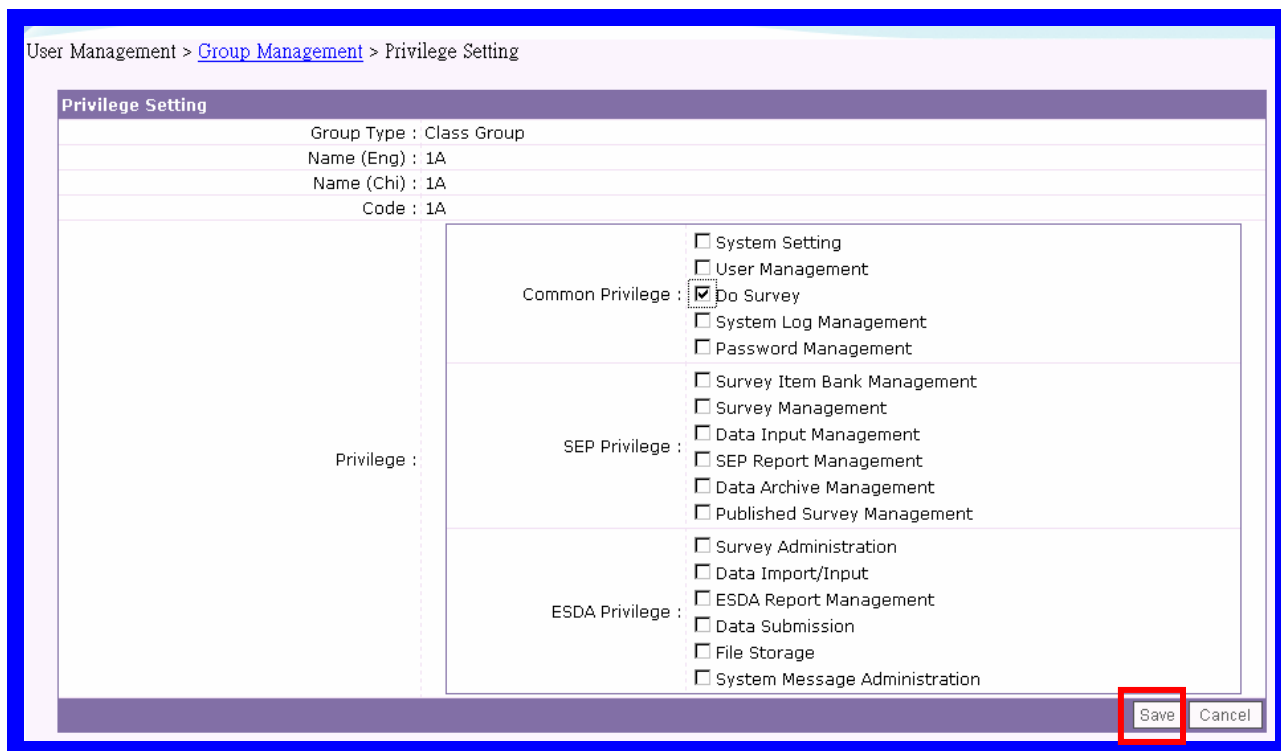


Figure 3.12 Privilege setting

For detailed procedures, please refer to section 3.2.6 of Operation Manual.

3.2.7 Best Practices

To minimize the tedious jobs of ESDA 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 sections 3.3.7 and 3.3.8 of the Operation Manual.

3.3 Backup and Recovery

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

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

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

To recover data of ESDA, please make a copy of the 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 ESDA (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/ESDA/datadir” and “c:/Program Files/ESDA/mysql/data”) and then start ESDA (please refer to 3.1.1).

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

3.4 Problems and Diagnoses

This section describes the tools and procedures for problem solving.

3.4.1 Resetting User Password

If the class or user(s) forget the 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 section 2.6 of the Operation Manual.

3.4.2 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 can assist the Administrator to diagnose problems. Recommended procedures by the Microsoft are:

- 1) Logon Windows 2000 as a 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**.

3.4.3 ESDA System Log Monitoring

In ESDA, there are several types of system log to enable the Administrator to review daily operations. For each type of operation, the system logs contain different detailed information.

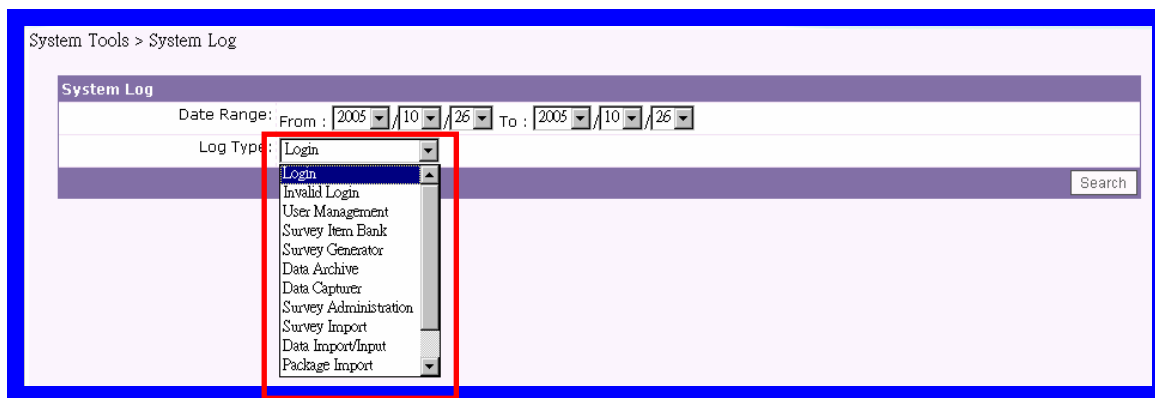


Figure 3.14 System Log

To view the log records, select a date range and a log type and then click the “Search” button (Figure 3.15). 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 “View” button next to the log to be viewed and the system shows the details of the log with remarks (Figure 3.16).

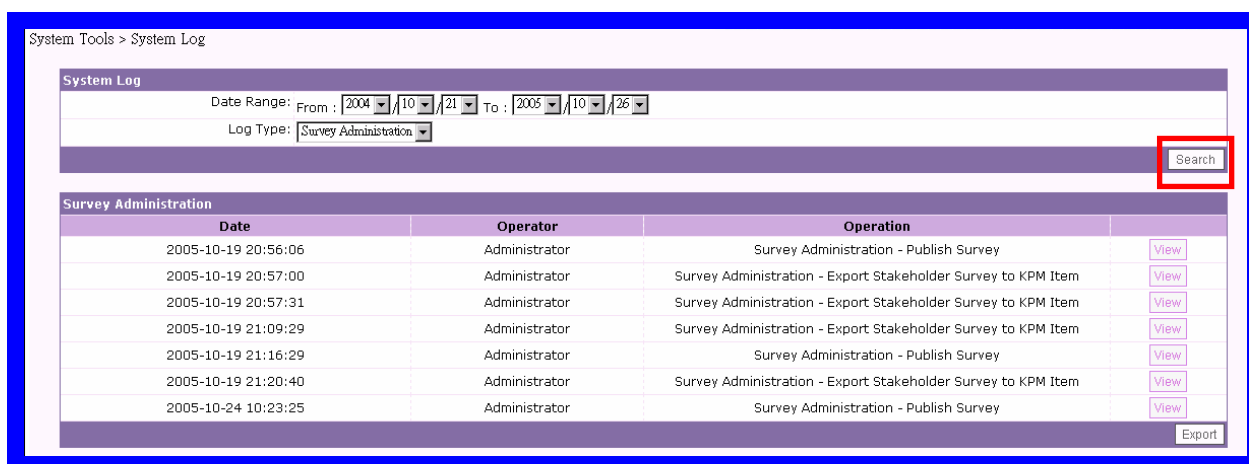


Figure 3.15 Search system logs

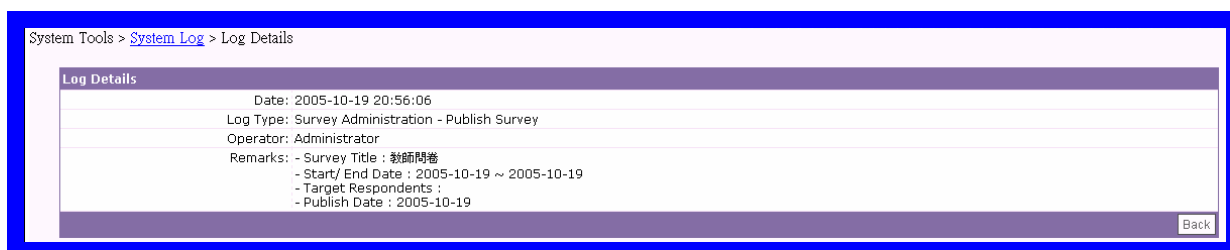


Figure 3.16 Log details

For detailed procedures, please refer to section 2.7 of the Operation Manual.

3.4.4 Health Checking

In ESDA, 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/esda/healthCheck.php>.
- 4) The system launches a browser and requests for login (The default username: esda password: +-*/) (Figure 3.17).



Figure 3.17 ESDA Health Check Logon interface

- 5) The system shows the status of the machine and the installed components (Figure 3.18).

```
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 3.18 ESDA Installation Status report

Appendix A - Installing ESDA on RedHat Linux 9.0

Before the installation of ESDA 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-xxxxxx.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, the Administrator is advised to follow Steps 1 to 11 for ESDA installation.

- 1) Download the ESDA package for Linux from ESDA website:
 - <http://svais.emb.gov.hk/kpmweb/esda/eng/index.htm> (English interface) or <http://svais.emb.gov.hk/kpmweb/esda/chi/index.htm> (Chinese interface)
 - Package for Linux: esda-xxxx.tar.gz (e.g. esda-v2.0.0.tar.gz).
- 2) Extract the tarball to /usr/local directory:
 - Assume that ESDA will be installed in /usr/local directory.
 - `tar -zxvf esda-v2.0.0.tar.gz -C /usr/local.`
- 3) Change owner of the esda and Apache directory:
 - Make sure that the owner of the esda 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/esda/conf/profile.php;
 - Check if the installation path is correct;
 - Modify the \$phydir, if necessary (e.g. \$phydir = “/usr/local/esda”).
- 5) Import Database:
 - Change to /usr/local/esda/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 ESDA alias to the Apache configuration file - httpd.conf:
 - Edit [Apache]/conf/httpd.conf, where [Apache] is the installed directory of Apache.
 - Add the esda alias (e.g. `Alias /esda /usr/local/esda/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/esda/index.php>.
- 11) Please follow the procedures in sections 1.3 to 1.4 to verify and customize ESDA 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) Create 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 - Installing ESDA on other Windows Platforms

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

B1. License Issues on installation of ESDA to Windows Workstation

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

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

- ESDA 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 – ESDA File Structures and Software Components

ESDA includes the components as follows:

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

Appendix D – Uninstalling ESDA

The Administrator can un-install ESDA by using the following steps:

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

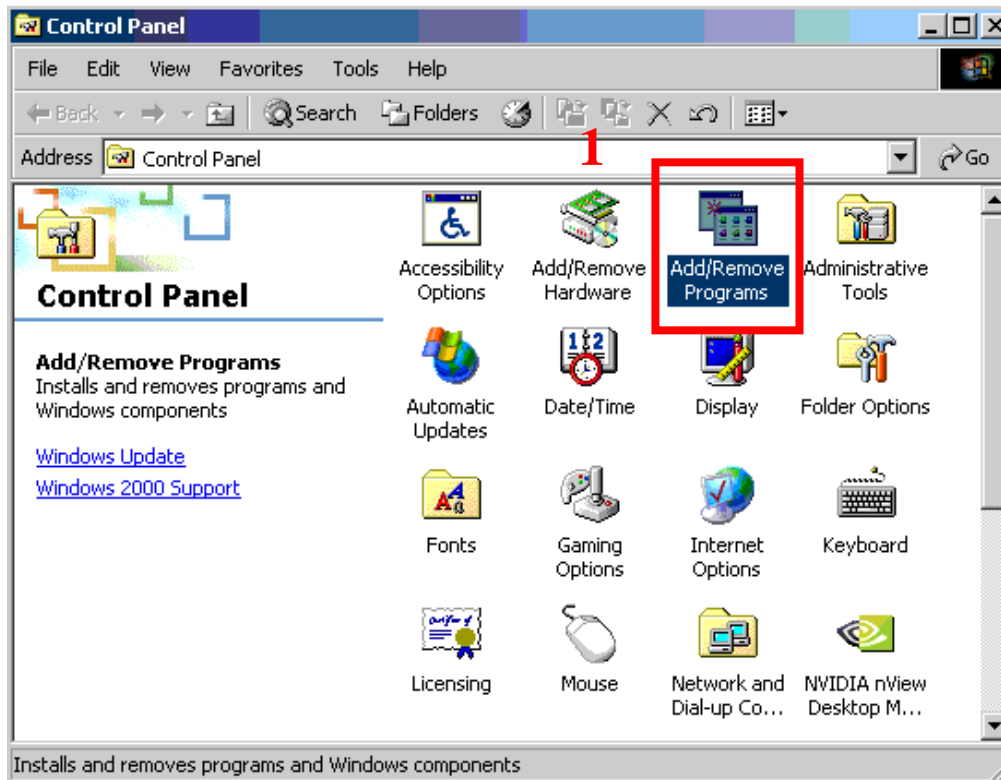


Figure D.1 Add/Remove Programs

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

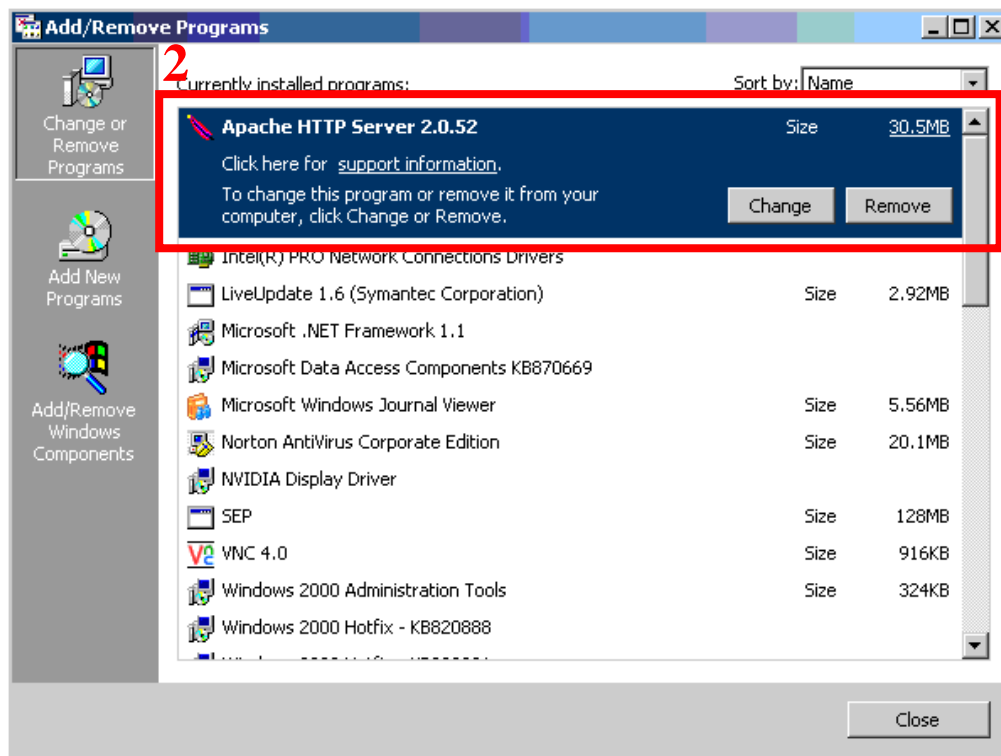


Figure D.2 Un-install Apache HTTP Server

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

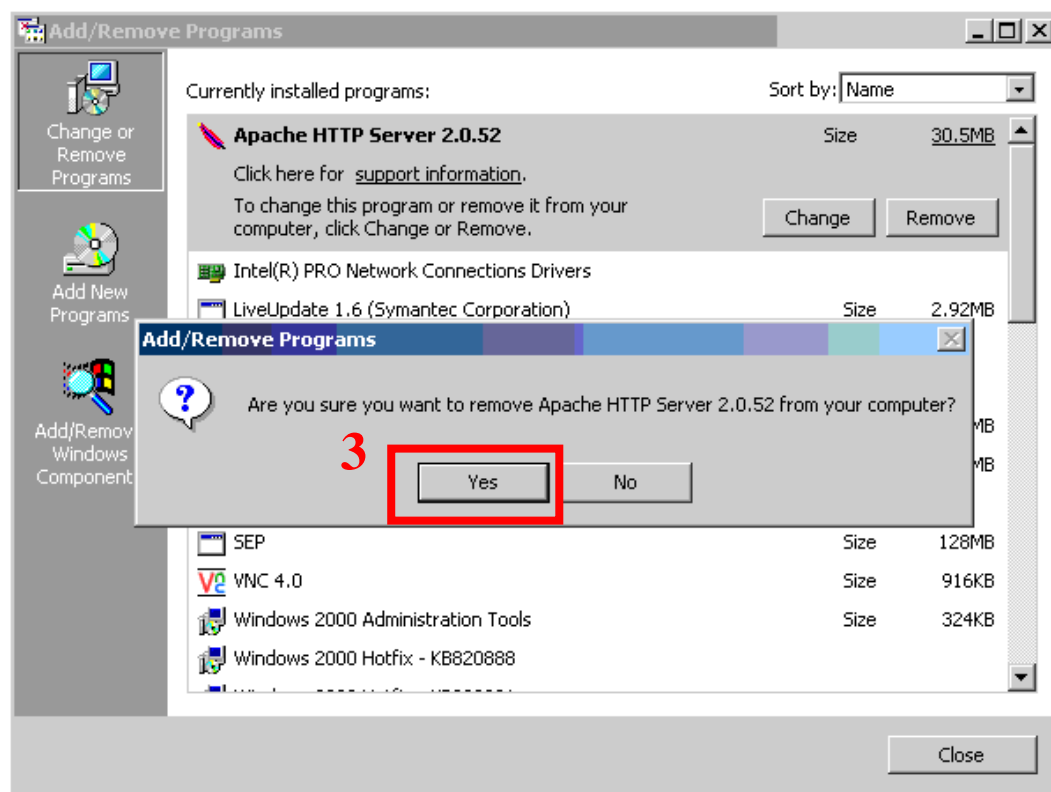


Figure D.3 Confirm un-install Apache HTTP Server

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

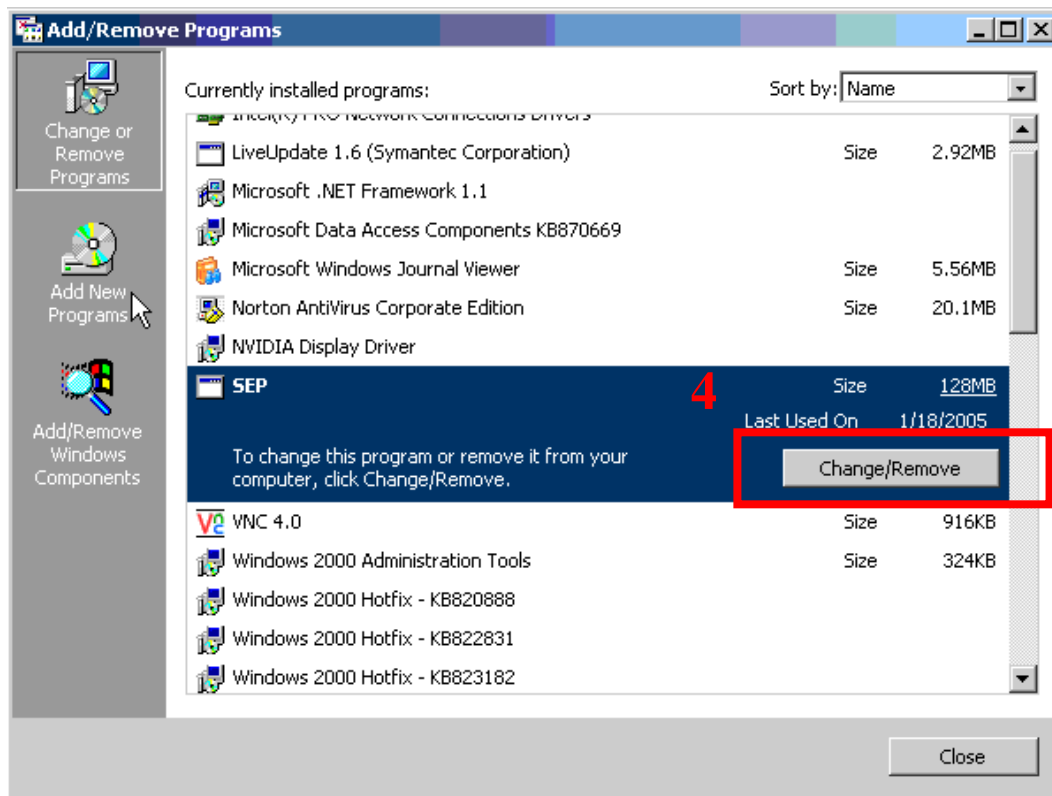


Figure D.4 Un-install ESDA

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

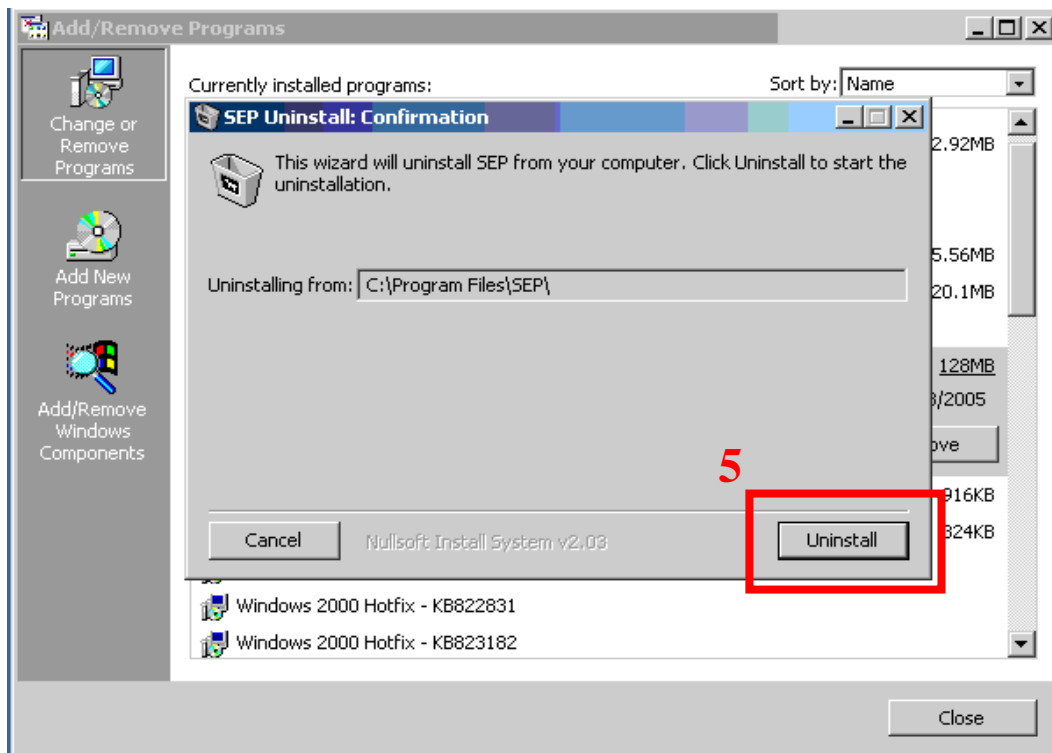


Figure D.5 Confirm un-install ESDA

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

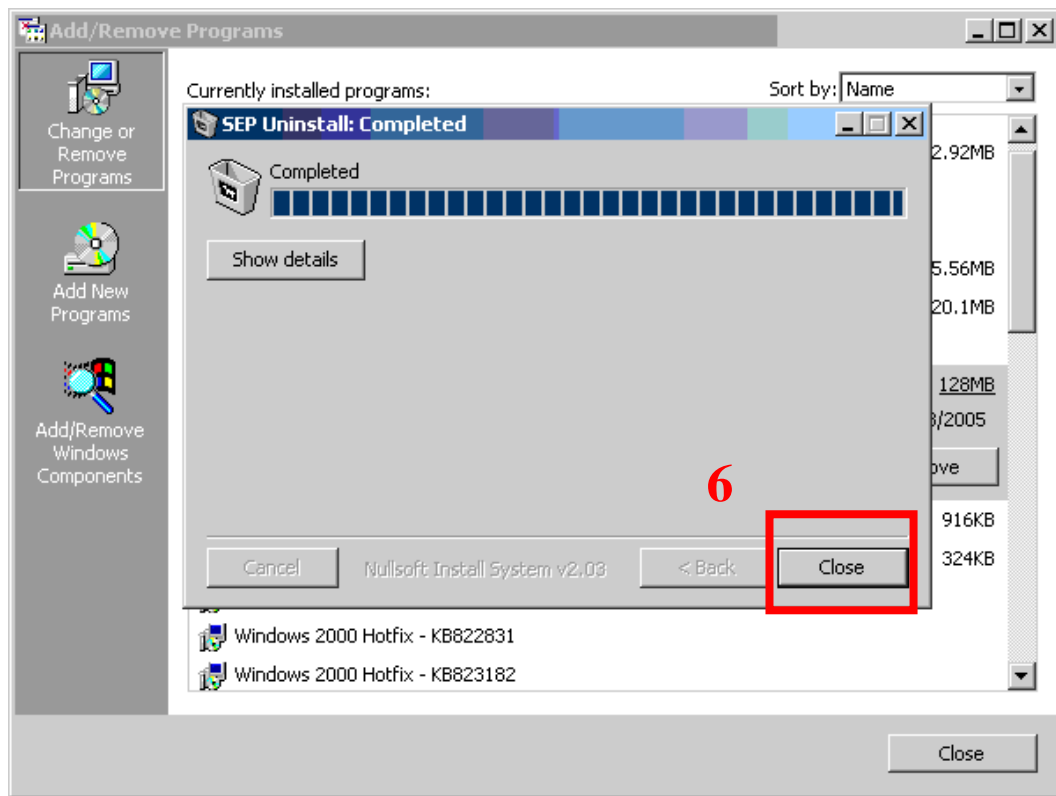


Figure D.6 Un-install ESDA completed

- 7) Select the Apache2 folder, right-click the mouse and click “Delete” to delete the “Apache2” directory (Figure D.7).

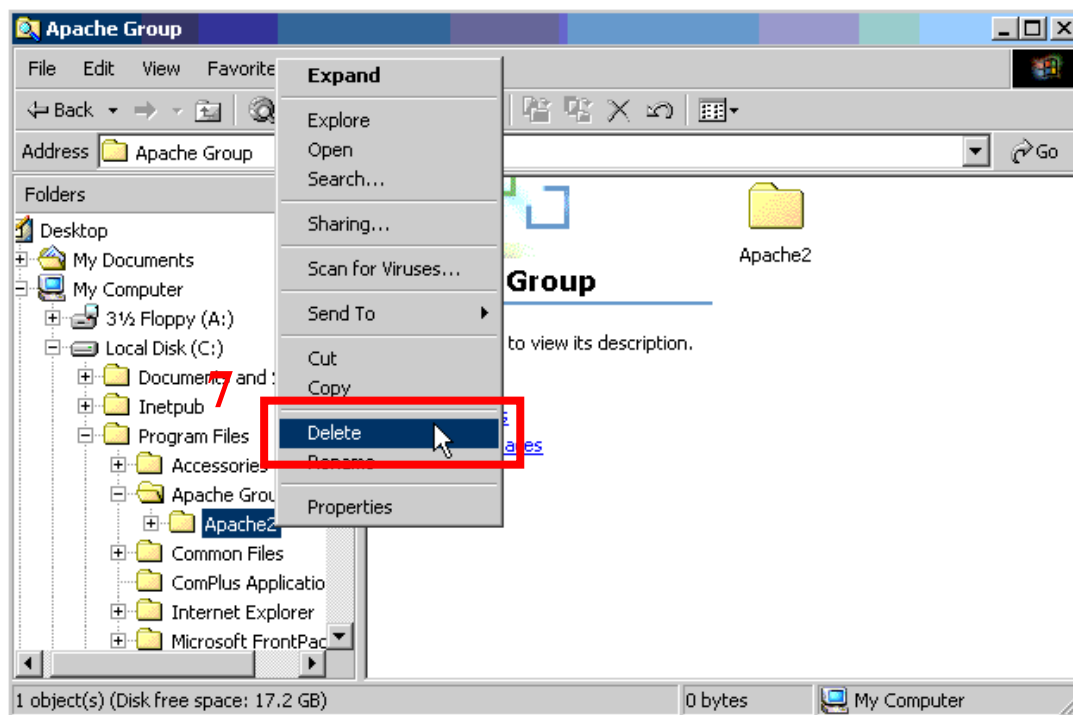


Figure D.7 Remove Apache2 directory

Appendix E – Installing ESDA 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/esda/

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

Appendix F – Cross-Platform Migration Procedures for ESDA

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 – esda/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 ESDA 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 – esda/datadir
```