



Installation Guidelines

for

WebSAMS 3.0

Version 1.3.7
Feb 2021

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Amendment History				
Change No.	Revision Description	Author	Revision Number	Date
1.	In Appendix 7, add: D. Enable Windows Firewall	EDB	1.1	27/6/2014
2.	Add Appendix 9 - Install WebSAMS Root Certificate on Workstations	EDB	1.1	27/6/2014
3.	Updating of section 8.1	EDB	1.2	10/7/2014
4.	Updating of section 8.2 – reminder for the command to backup the configuration file	EDB	1.2.1	16/7/2014
5.	Updating of section 7.6.3, point 3 - reminder on data conversion program	EDB	1.3	2/9/2014
6.	Updating of section 3, Overview – reminder to follow the sequence of installation procedure	EDB	1.3	2/9/2014
7.	Updating of section 8.7.2, patch for HTTP Server	EDB	1.3	2/9/2014
8.	Updating of section 9.3.1, reminder for installing ODBC driver on 64-bit workstation	EDB	1.3	2/9/2014
9.	Updating of section 4.2.2, a new file “Test39(ChineseChar).RTF” & “Annex: Acceptance Test Procedure”, Test No.39, copy and paste of the two Chinese characters to perform the test.	EDB	1.3	2/9/2014
10.	Updating of Form C in Appendix 5.	EDB	1.3	2/9/2014
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12.	Updating of Form C in Appendix 5: - Renumber the test ID in Part I - Update in Test 12 of Annex	EDB	1.3.1	7/10/2014
13.	Updating of point 1 in section 7.7.4 - Update item 4) to revise the setting in ‘Command Line Parameters’	EDB	1.3.2	1/11/2014

Amendment History				
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17.	Updating of section 7.4.1: - Add point 4 to provide more instruction for SQL Anywhere installation.	EDB	1.3.2	7/1/2015
18.	Updating of section 7.7.4: - Add point 9, 10, 11 to validate the installation of Crystal Server 2013	EDB	1.3.2	7/1/2015
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21	Updating of Account information	EDB	1.3.5	23/12/2019
22	Updating of Application components Removing upgrade procedure for WebSAMS 2.0	EDB	1.3.6	01/02/2020
23	Updating of Section 7.8 - Update point 6, 12 and 13 to renew the screenshots	EDB	1.3.7	02/02/2021

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1. Objective

Since the rollout of WebSAMS from 2003, its usage rate keeps on rising and there have also been continuous enhancements to its functions to meet the increasing needs. On the other hand, we note that the system software of WebSAMS will not have upgrade patches from the vendors for fixing problems and addressing security issues in coming future. To improve the efficiency of the system and minimize the security risks, the Education Bureau considers it necessary to upgrade the WebSAMS server and system software.

The major objective of this document is to provide technical details on how to upgrade the existing WebSAMS to the new version of WebSAMS.

Throughout this document:

- The “*New WebSAMS*” that has been adapted to a new software platform with *MS Windows Server 2012 R2 and Sybase SQL Anywhere 16 (64-bit)* will be referred to as “*WebSAMS 3.0*”;

Roughly speaking, the complete process environment should include the following major tasks:

1. Install and configure the WebSAMS 3.0 server;
2. Installation of SAP Crystal Server 2013;
3. Installation of Sybase SQL Anywhere 16 (64-bit);
4. Installation of the WebSAMS 3.0 application;
5. Installation of WebSAMS training;
6. Installation of HTTP server;
7. Install Sybase 16 ODBC driver (32-bit) and Crystal Reports 2013 as well as configure ODBC accounts in WebSAMS workstations.

This document also facilitates schools to install a brand new WebSAMS or to resume the WebSAMS operation when facing situations such as reinstallation of WebSAMS, upgrading of related system equipment or change of network settings.

2. Target Audience

This document is mainly for engineers who are responsible for the actual planning and installation works. They are expected to have total understanding of the existing network environment in school and also have basic knowledge in installation, configuration and administration of the network components such as routers, DNS service, DHCP service, Windows Server 2012 R2, and Linux server etc. The section regarding network setup is, in particular, recommended only to readers who possess *in-depth expertise and practical experience* in network design and implementation.

System administrators and technical support staff who have interest may also refer to this document in understanding the settings and installation procedures for the WebSAMS environment.

3. Overview

3.1 Scenarios

Two different scenarios for WebSAMS installation in school environment that have been mentioned above can be concluded as follows:

1. New WebSAMS Installation **N**
2. WebSAMS Reinstallation **R**

Please refer to the “Task checklist for different scenarios” in next section to check what tasks have to be performed for the above 2 scenarios.

From now on, each subsequent section will be labeled with the icons, at the left side under the section heading, showing the scenarios that the section is related to. Where **N** stands for new WebSAMS installation, **R** for WebSAMS Reinstallation.

For example:

4.2.1 WebSAMS Server Installation

N R

1. Windows Server 2012 R2 Standard Edition DVD
2. Device drivers for the RAID controller and other system devices.
3. Anti-Virus software
4. Backup software

The above example indicates that the section is related to “New WebSAMS Installation” and “WebSAMS Reinstallation”.

Inside a section, if specific steps are applicable to only some scenarios, these steps will be highlighted with colour and the square arrow shapes with the scenario icon inside like the followings:



Note: **N** New installation **R** Re-installation

(a) Network Setup

Subject to the events happened, the engineer has to judge the appropriate tasks that needed to be involved.

Common scenarios	Tasks that may be involved for setting up of the network
<ul style="list-style-type: none"> ● Reconstruction of network Setup ● Change of IP scheme ● Relocation of critical network component such as moving HTTP server from ITED segment to DMZ ● Replacement of network equipment 	<ol style="list-style-type: none"> 1. Configure WebSAMS Router. 2. Configure DNS services in WebSAMS server and ITed Domain Controller. 3. Configure DHCP services in WebSAMS server and ITed Domain Controller. 4. Configure other network equipment.

(b) WebSAMS Server & Application

Common Scenarios
Reinstallation due to <ul style="list-style-type: none"> ● Hard disk crashed ● System corrupted ● Replacement of server hardware <p><i>When a set of WebSAMS server backup data is on hand, a school can recover the server to the status up to the moment when the system is being backed up.</i></p> <p><i>Should WebSAMS server backup data is not available or the school prefers to build up the school data from scratch, a brand-new WebSAMS has to be installed.</i></p>

(c) HTTP Server

Common scenarios
<ul style="list-style-type: none"> ● Hard disk crashed ● System corrupted ● System hacked ● Replacement of server hardware

(d) Crystal Reports (For workstation)

Common scenarios
<ul style="list-style-type: none"> ● Hard disk crashed ● System corrupted ● Replacement of workstation hardware ● Transfer of license from one workstation to another



Note: **N** New installation **R** Re-installation

3.2 Task Checklist for Different Scenarios



			Scenarios				
			N New Installation	R Re-Installation			
				Network Setup	WebSAMS Server & Application	HTTP Server	Crystal Reports (For workstation)
	Major Tasks	Section					
1.	Collect information	4	✓	✓	✓	✓	✓
2.	Restore WebSAMS server and application	7.11			✓		
3.	Network setup – Understanding the network setting of WebSAMS.	5.1	✓	✓		✓	✓
4.	Network Setup – Configure WebSAMS router and other network equipment	5.2, 5.3	✓	✓			
5.	WebSAMS server installation <ul style="list-style-type: none">Windows Server 2012 R2 Standard EditionInstall anti-virus software.Install backup software.	6	✓				
6.	Network configuration for WebSAMS Server	7.3.1, 7.3.2, 7.3.3.1	✓				
7.	Network configuration for WebSAMS Workstations	7.3.3.2	✓	✓			
8.	Sybase SQL Anywhere 16 installation	7.4	✓				
9.	SAP Crystal Server 2013 installation	7.5	✓				
10.	WebSAMS 3.0 application installation	7.7	✓				
11.	Start up WebSAMS	7.8	✓		✓		
12.	WebSAMS training installation	7.9	✓				
13.	Schedule jobs	7.10	✓				

Note: N New installation R Re-installation

Major Tasks		Section	Scenarios				
			 New Installation	 Re-Installation			
				Network Setup	WebSAMS Server & Application	HTTP Server	Crystal Reports (For workstation)
14.	HTTP Server installation	8	✓			✓	
15.	Installation of Crystal Reports in workstation	9.2	✓				✓
16.	<ul style="list-style-type: none"> Installation of Sybase 16 ODBC driver for Crystal Reports in workstation Configuration of ODBC accounts in workstation 	9.1, 9.3	✓				✓
17.	Post installation check	10	✓	✓	✓	✓	✓

Note:  New installation  Re-installation

3.3 Setup Types



Other than different scenarios for installation, since the last 1 Server 2 WebSAMS school split to 2 servers. Only 1 setup type for all schools: 1 Server 1 WebSAMS (1S1W) – This is the most typical installation type. A school have one server for operating a WebSAMS system and one HTTP server for handling traffic between WebSAMS server and clients not in WebSAMS Segment

3.4 Assistance



Schools please contact their WebSAMS school liaison officer of the Education Bureau (EDB) for any clarification or assistance. The list of the school liaison officers is available from <http://cdr.websams.edb.gov.hk>.

4. WebSAMS Installation Kits and Media DVD/CDs



4.1 Information Worksheet



Before any installation or re-configuration, a school information worksheet including both administrative and technical information of school, such as the password of administrator accounts, IP addresses and subnet mask for different machines is recommended to be on hand in first place. A sample information worksheet can be used for reference in Appendix 2.

4.2 Installation Kits and Software



Subject to the scenarios of installation required, please verify that the following kits, product CDs, license keys and configuration information are ready and available.

4.2.1 WebSAMS Server Installation

1. Windows Server 2012 R2 Standard Edition DVD
2. Device drivers for the RAID controller and other system devices.
3. Anti-Virus software
4. Backup software

4.2.2 WebSAMS 3.0 Application Installation

1. Windows Server 2012 R2 Standard Edition DVD
2. Sybase SQL Anywhere 16 (64-bit) DVD
3. SAP Crystal Server 2013 DVD (to be provided by the school)
4. SAP Crystal Reports 2013 DVD (to be provided by the school)
5. New School Database CD (For a new WebSAMS installation) with digital certificates
**
6. System Installation DVD for WebSAMS 3.0 that includes:
 - *Basic Installer – contains tools for basic installation of WebSAMS*
 - *Training Installer - contains tools for installation of training system*
 - *Guidelines – documentation*
 - *Misc – dummy database and certificate files that may be needed for re-installation of WebSAMS application.*

7. Test39(ChineseChar).RTF ,this file contains the Chinese characters to perform the test no.39 in the “Annex:Acceptance Test Procedure”

**** Note:** *Schools may contact the WebSAMS Team of the EDB for acquiring the files when needed.*

4.2.3 HTTP Server Installation

1. HTTP Server Installation CD for WebSAMS 3.0

5. Network Setup

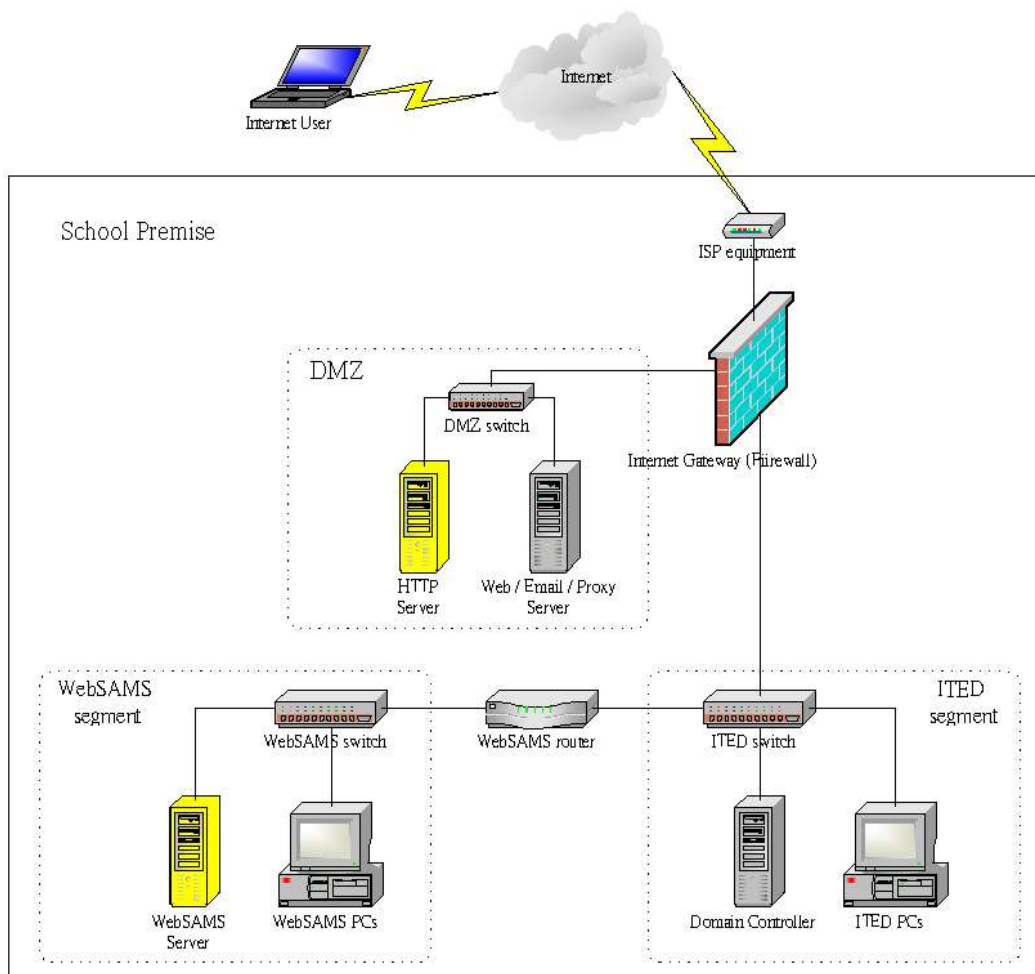


5.1 Introduction



5.1.1 Typical School Network Design

Design 1: Internet Gateway with DMZ



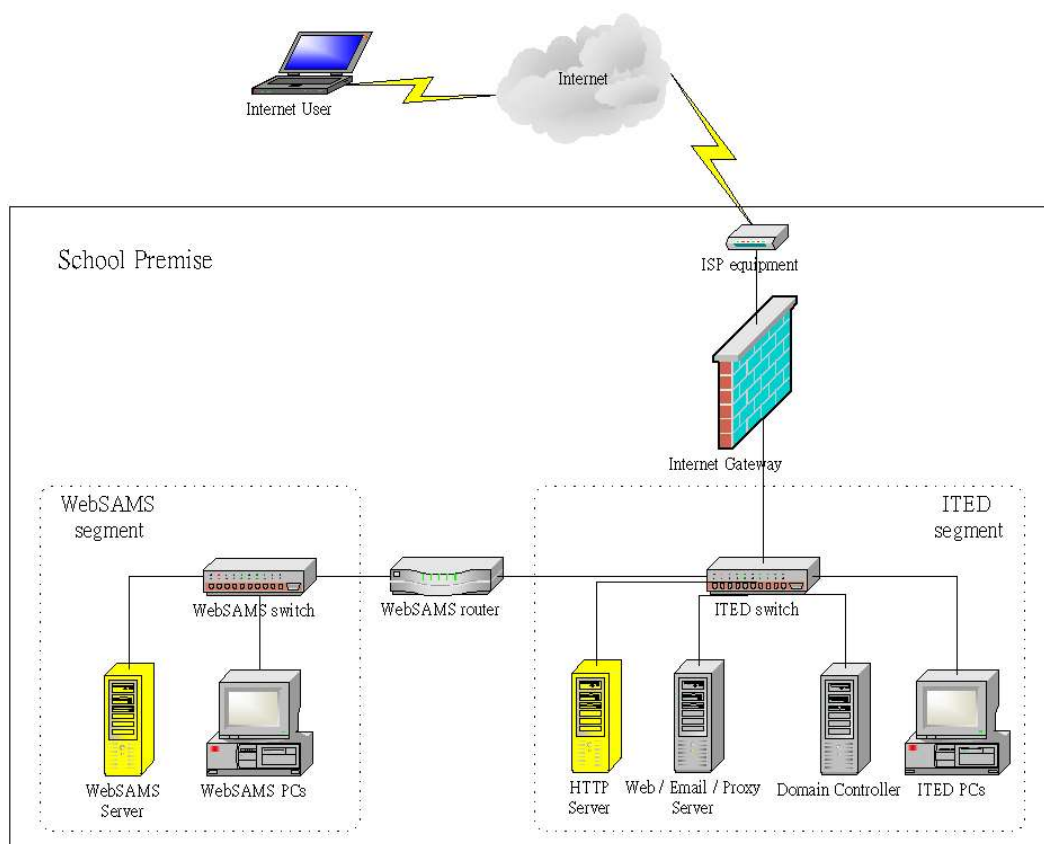
The characteristic of this setup is that the school has an Internet Gateway, in this case a firewall, to separate ITED segment, DMZ and Intranet. Servers which are exposed to Internet are placed in DMZ.

The firewall filters any IP traffic that pass among Internet, DMZ and ITED segment.

In this design, the HTTP server would be placed in DMZ while WebSAMS server would be placed in WebSAMS segment.

Note: New installation Re-installation

Design 2: Internet Gateway without DMZ



The characteristic of this category is that the school has an Internet Gateway to separate Internet and ITED segment.

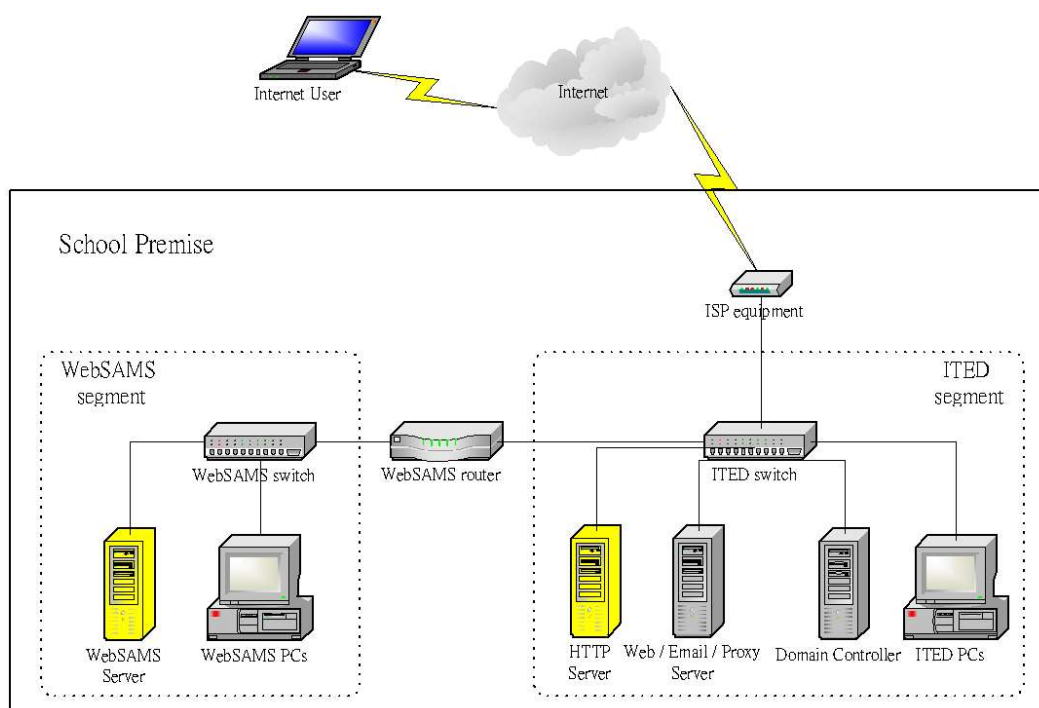
The Internet Gateway could be a:

- Hardware Firewall
- Proxy Server supporting Network Address Translation (NAT)
- Router implementing NAT
- Linux box with two network Interface cards and running iptables or ipchains
- Windows Server 2012 R2 with two network interface cards and “running routing and remote access”.

The Internet Gateway filters any IP traffic that pass between Internet and ITED segment.

In this design, the HTTP server would be placed in ITED segment while WebSAMS server would be placed in WebSAMS segment.

Not recommended School Network Design



This design assumes the school does NOT have a trusted Internet gateway to separate Internet from ITED segment. The coexistence of real IP network and the ITED segment in the same ITED switch will subsequently cause the ITED segment to be exposed to the Internet directly.

With the security of ITED segment solely rely on the protection mechanism of the server's operating system, this is a least secure design that school should be aware of. Adoption of this solution is not recommended.

Note: N New installation R Re-installation

5.1.2 User Characteristic

Based on the access pattern, there are 3 types of WebSAMS users. They are WebSAMS user, ITED user, and Internet user.

WebSAMS users are those users that access WebSAMS application in the WebSAMS segment. They would access WebSAMS server directly.

ITED users are those users that access WebSAMS application in the ITED segment. They are served by HTTP server.

Internet users are those users that access WebSAMS from Internet. They are served by HTTP server.

5.1.3 IP Address

The WebSAMS server needs a fixed private IP address in the WebSAMS segment. WebSAMS users access WebSAMS application by this IP address.

The HTTP server needs a fixed private IP address in the ITED segment. ITED users access WebSAMS application by this IP address.

The HTTP server also needs a public (real) IP address. Internet users access WebSAMS application by this IP address.

In summary, there should be:

- one private IP address for clients in WebSAMS segment
- one private IP address for clients in ITED segment and one public (real) IP address for Internet users are needed

The 3 IP addresses are considered as one set of IP addresses for WebSAMS.

5.1.4 IP Address Scheme for WebSAMS Network

Based on ITED project's Technical Guidelines for School Network Implementation, schools are recommended to follow the pre-assigned IP address range and each school will have 16 subnets which provide 4,096 IP address space (16 subnets * 256 IP address space per subnet). It should be noted that the first and the last IP addresses of each subnet are reserved for identifying the subnet itself and IP broadcasts within the subnet respectively. These two IP addresses in the subnet are not usable for hosts/network devices. The pre-assigned IP address range for each type of schools is as follow:

<u>IP Address Range</u>	<u>School Type</u>
10.40.0.0 to 10.99.255.255	(Primary)
10.100.0.0 to 10.179.255.255	(Secondary)
10.180.0.0 to 10.199.255.255	(Special)

For example: 10.40.0.0 to 10.40.15.255 assigned to ABC Primary School
 10.40.16.0 to 10.40.31.255 assigned to 123 Primary School

It is recommended that WebSAMS network to subscribe an IP address range in the last subnet of each school as WebSAMS network segment. The IP address scheme should be ready before

Note:  New installation  Re-installation

proceeding to the Configuration of Windows server for WebSAMS.

The DHCP server is to lease IP address to workstations that run TCP/IP protocol as its communicating tool with server and other workstations. Workstation can obtain IP address dynamically from the DHCP server. This will ease the management of IP addresses for WebSAMS workstations and other IP-dependent devices. The use of DHCP server is a preferred and default option for the management of IP addresses of WebSAMS network.

The following example illustrates how to determine the IP address for WebSAMS Network:

If IP address 10.40.0.0 to 10.40.15.255 belongs to ABC Primary school, the last subnet of ABC school is 10.40.15.n (where n is 0 to 255). WebSAMS network will subscribe the IP address range from 10.40.**15.1** to 10.40.**15.254**.

For school with one server, the NIC adapter of server will use IP address = 10.40.**15.254**.

If schools follow the ITed 's IP allocation Standard and use DHCP 's dynamic assignment of IP address for WebSAMS network, IP Scheme for WebSAMS will be similar as follows:

Number of WebSAMS server in school	Subnet used by WebSAMS	WebSAMS Server IP Address	DHCP IP Range	Example of DHCP Start and End Range of ABC Primary School
1	10.x.y.	10.x.y.254	10.x.y.128 to 10.x.y.239	<u>Start</u> 10.40.15.128 <u>End</u> 10.40.15.239

Where 10.x.y is the last subnet of your school networks.

5.1.5 Domain Name Service (DNS)

The WebSAMS application is accessed from a web browser using a unique domain name, regardless of the user pattern. Since different users access WebSAMS application by different means, the unique domain name should resolve to different IP addresses accordingly.

The following example illustrates the idea.

Assume “websams1.schabc.edu.hk” to be the unique domain name,
192.168.1.100 to be the private IP address of the WebSAMS server,
10.10.10.100 to be the private IP address of the HTTP server,
202.202.202.100 to be the public IP of the HTTP server

In WebSAMS segment, the unique domain name should be resolved to the private IP address of the WebSAMS server. A local DNS service in WebSAMS server should resolve the unique domain name.

websams1.schabc.edu.hk = 192.168.1.100

In ITED segment, the unique domain name should be resolved to the private IP address of the HTTP server. A local DNS server in ITED segment should resolve the unique domain name.

websams1.schabc.edu.hk = 10.10.10.100

In Internet, the unique domain name should be resolved to the public (real) IP address of the HTTP server. The DNS server of school ISP should resolve the unique domain name.

websams1.schabc.edu.hk = 202.202.202.100

5.2 Configure WebSAMS Router



Due to security concern, the details have been included in the document “***Document 36 - Rules for Configuration of WebSAMS Router and Internet Gateway***” to be supplied by EDB separately in your package of WebSAMS rollout deliverables for new WebSAMS schools. You may also consult your WebSAMS school liaison officer for more details.

After configuration of the WebSAMS router is completed, you can test whether the access list is set up properly by using the telnet command in the HTTP Server to connect to the WebSAMS server at port 8009 and 7009. The following shows an example:

```
$ telnet 10.40.15.201 8009
Trying 10.40.15.201...
Connected to 10.40.15.201.
Escape character is '^]'.
```

Fallback school router configuration in case of any problem encountered
Load the backup configuration back to the router.

5.3 Configure Other Network Equipment



Depending on the network setup of individual schools, there may be other network equipment that needs to be configured. Some examples of such equipment are

- Firewall, ISP router or other gateway,
- Proxy Server
- ISP equipment

Configuration of Firewall, ISP router or other gateway

Due to security concern, the details have been included in the document “***Document 36 - Rules for Configuration of WebSAMS Router and Internet Gateway***” to be supplied by EDB separately in your package of WebSAMS rollout deliverables for new WebSAMS schools. You may also consult your WebSAMS school liaison officer for more details.

Configuration of Proxy Server

- Make sure the host table in the WebSAMS server has been modified as mentioned in the section of “Configure DNS and DHCP Services”
- Configure proxy server to bypass WebSAMS domain name

6. WebSAMS Server Installation



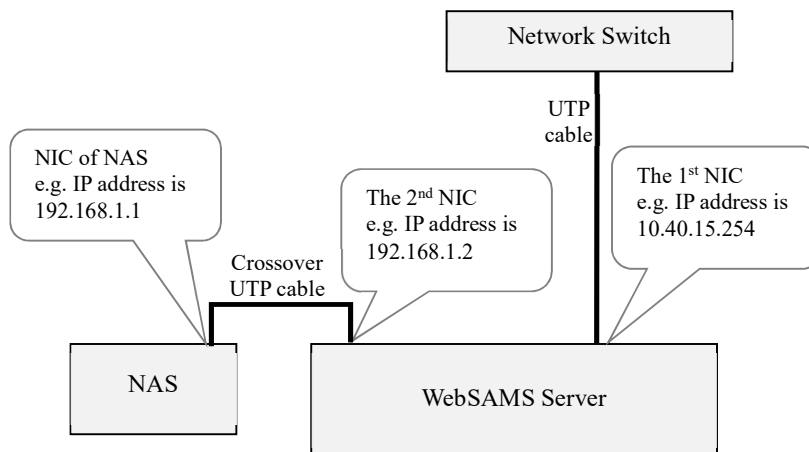
In addition to the normal steps in installing the operating system of a server guided by the Windows Server 2012 R2 installation program, other settings specific to the WebSAMS server also have to be noted as follows:

1. Install the server as a standalone workgroup server. **Do not set up or join any domain.**
2. Hard Disk Partitioning
Partition the hard disk into three partitions:
 - C drive as 200GB;
 - D drive as 200GB and;
 - E drive as the remaining.
3. File system
All Drive (C, D and E) must be in NTFS format. **Compression** feature **should not** be used for the whole file system.
4. Disk Volume Name
Do not assign Drive C, Drive D and Drive E with any volume name.
5. Paging File
Initial Paging file size of Windows server 2012 R2 should be “Auto”.
6. Time Zone
Set Time Zone to (UTC+08:00).
7. Network Protocol
Each server should have two network interface cards (NIC):
 - ☐ The first NIC will be used for connecting the WebSAMS server to the network switch in the WebSAMS segment. For this network connection, only install TCP/IP network protocol and choose the obtaining of IP address and DNS server address automatically as the default (A fixed IP address will be required later before WebSAMS application is installed).
 - ☐ The second NIC is reserved for connecting the WebSAMS server to the network-attached storage device (NAS) when applicable (Physically a crossover UTP cable supporting Gigabit Ethernet may be necessary for making the direct connection between the server and the NAS).
 - The NAS device and the second NIC should form a private segment. A “192.168.1.X” scheme with subnet mask of “255.255.255.0” for this segment is recommended.
 - To configure the second NIC, choose installation of only the TCP/IP network protocol and set the fixed IP address to “192.168.1.x” where x can be any number from 1 to 254. This fixed IP address should be different from that of the NAS device.

For example, assuming the fixed IP address of the NAS device is

Note:  New installation  Re-installation

“192.168.1.1”, the IP address of the second NIC can be set to “192.168.1.2”. The DNS server address for the second NIC is always not needed and should be empty.



8. Video Display Setting

Select 1024x768 (or higher resolution when appropriate) screen size in server and install the appropriate Video driver.

9. Computer Name

Don't change the computer name. Keep the default computer name assigned by the system.



10. Workgroup

Use “WebSAMSGROUP” as the Workgroup name.

11. Date Format

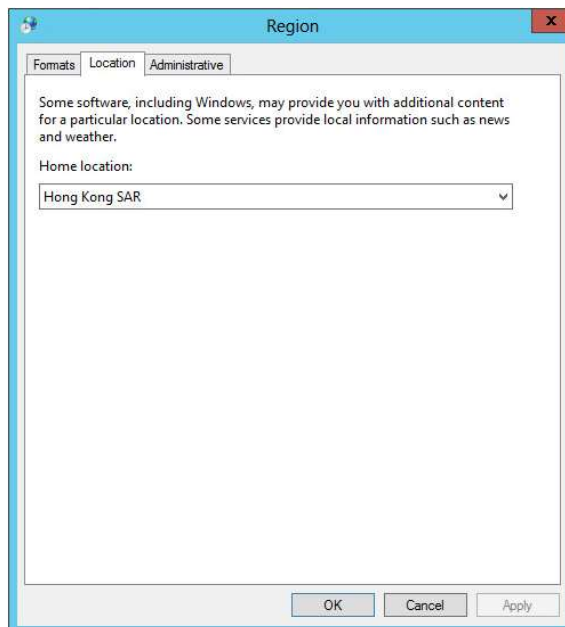
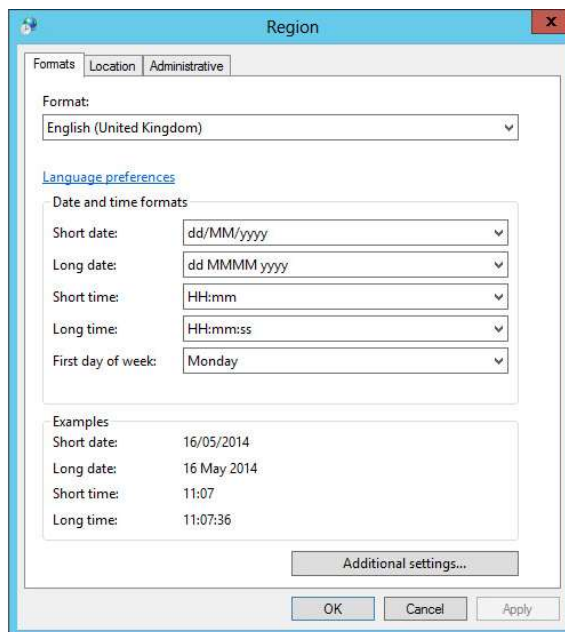
The format order should be set to dd/MM/yyyy in short date format.

Note: N New installation R Re-installation

12. Regional options

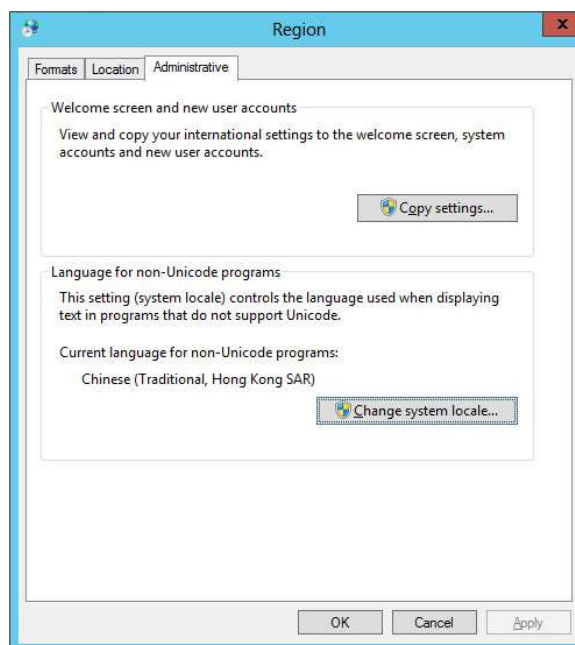
(Start -> Control Panel -> Change date, time, or number formats / Region)

Set your **Formats** to “**English (United Kingdom)**” on the **Formats** tab and **Home location** to “**Hong Kong SAR**” on the **Location** tab.



Set your **Language for non-Unicode programs** to “**Chinese (Traditional, Hong Kong SAR)**” on the **Administrative** tab.

Note: **N** New installation **R** Re-installation



13. **Must apply Windows Update regularly and apply Windows Server hardening (Please refer to Appendix 7 for details)**
14. Keep Internet Explorer 11 or, if necessary, install a later version.
15. When you are prompted for installing Microsoft Internet Information Server, uncheck the check box and do not install the Microsoft Internet Information Server.
16. Disable the following unnecessary services, if any:
 - Distributed File System
 - Print Spooler (if no print queue is to be installed in the server)
 - SMTP
 - License Logging Service
17. Other configurations
 1. Anti-virus software
Install the anti-virus software immediately after the installation of Windows Server 2012 R2
 2. Backup software
Install backup software into the server with proper settings that can communicate with the backup device.
 3. Print queue
Set up a print queue for printers controlled by the server if any.
 4. UPS
If UPS is to be installed for supporting the WebSAMS server, it should be compatible with Microsoft Windows Server 2012 R2 and be properly configured.

Note: N New installation R Re-installation

7. WebSAMS Application Installation in WebSAMS Server



The following steps should be taken in sequence:

1. Network Configuration
2. “SAP Crystal Server 2013” installation
3. “Sybase SQL Anywhere 16 (64-bit)” installation
4. “WebSAMS Version 3.0” installation

7.1 Health Check (Obsoleted)

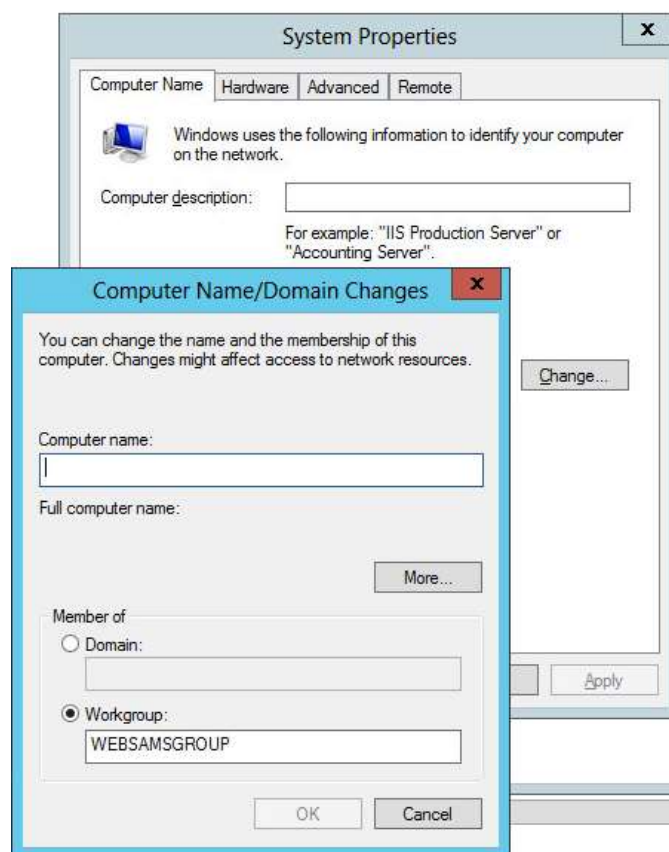
7.2 Migration of Data from WebSAMS 2.0 to 3.0 (Obsoleted)

7.3 Network Configuration for WebSAMS Server and Workstation



7.3.1 Basic Network Setting

1. Disable the DHCP client service.
2. Assign the IP address of the WebSAMS server and the DNS server address to the network interface card that is used for connecting the WebSAMS server to the network switch in the WebSAMS segment.
3. Assign computer name for the server.
Path: *Start-> Control Panel -> System -> Change Settings -> ‘Change...’ in Computer Name tab*



The computer name should be equal to the top level sub-domain name of WebSAMS fully qualified domain name (FQDN).

e.g., websams, if the FQDN is websams.abc.edu.hk

e.g., sams, if the FQDN is sams.abc.edu.hk

7.3.2 Configure DNS and DHCP Services in WebSAMS Server

7.3.2.1 Introduction

In WebSAMS segment, a DNS service running on the WebSAMS server is required to provide domain name resolution for the WebSAMS clients.

In ITed segment, a DNS service is needed if the ITed clients surf the web without using proxy. On the other hand, the proxy can provide the domain name resolution if ITed clients are configured to use proxy. If the latter is the case, the host table of the proxy should be modified instead of setting up a DNS service in ITed segment.

The following table summarizes what need to be done under different situations:

	WebSAMS segment	ITed segment
Client PCs surf the Web through proxy server with domain name resolution	Configure DNS service in WebSAMS server	Update host table in proxy server.

Note: N New installation R Re-installation

Client PCs surf the Web without a proxy server or proxy server without domain name resolution	Configure DNS service in WebSAMS server	Configure DNS service in ITed domain controller.
---	---	--

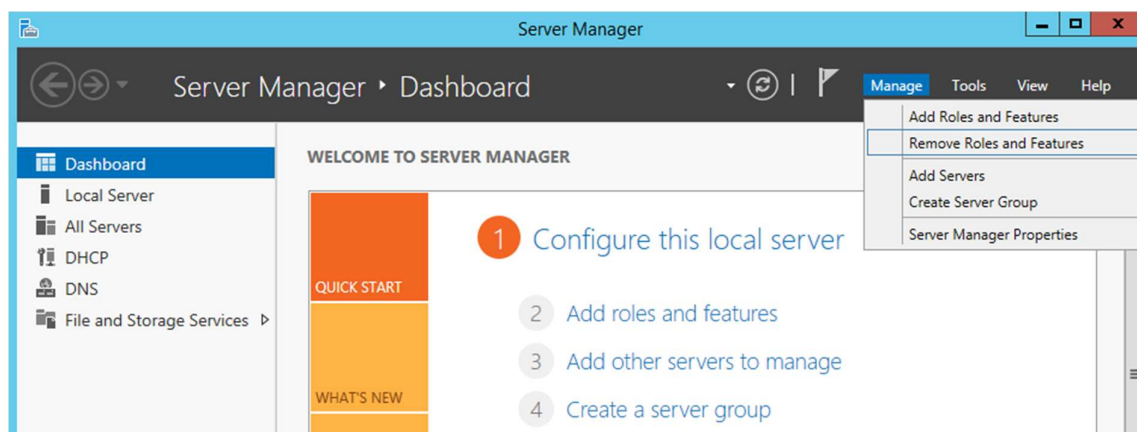
On the other hand, the DHCP service should also be provided by the WebSAMS server.

In ITed segment, the Windows domain controller usually provides the DHCP service.

If a new DNS server has been introduced, the DHCP service should be modified to reflect the changes. Usually, this could be done by adding the DNS option in DHCP.

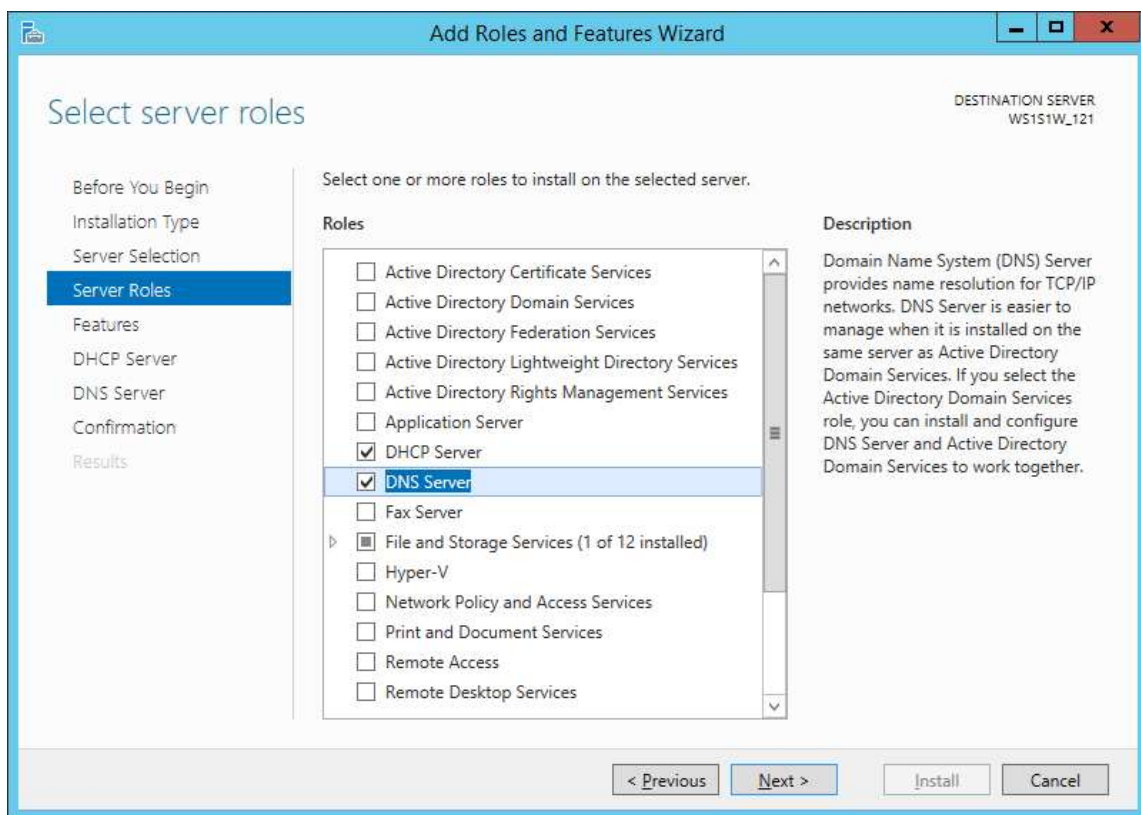
Before configuration of the DNS and DHCP services, make sure the Windows components of these two services have been added.

1. From “Add Roles and Features Wizard”, select “Add Roles and Features”. In “Before You Begin” select Next, In “Installation Type” select Next, In “Server Selection” select Next.



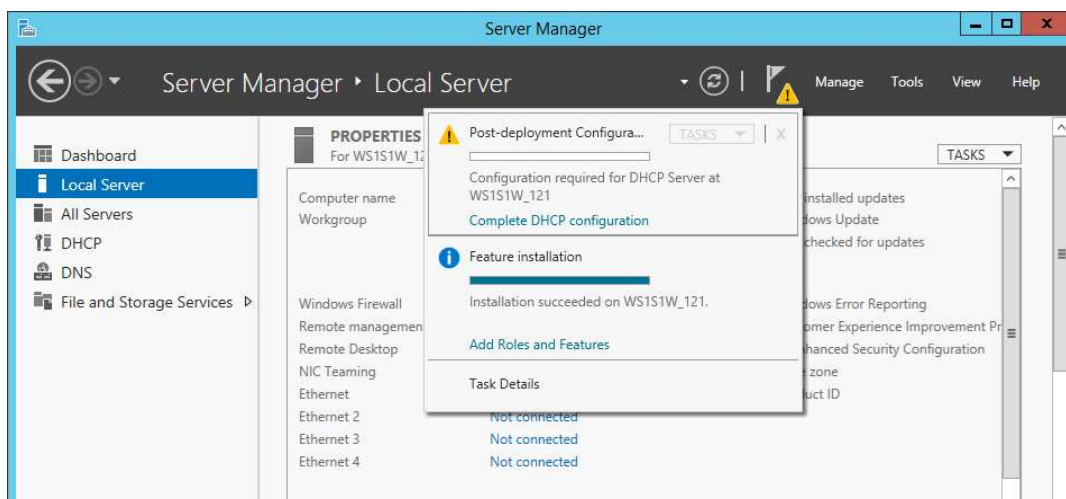
Note: **N** New installation **R** Re-installation

2. In Server Roles, Choose “DHCP Server” and “DNS Server”, click “Next”. In “Features”, click “Next”, In “DHCP Server” and “DNS Server”, click “Next”,

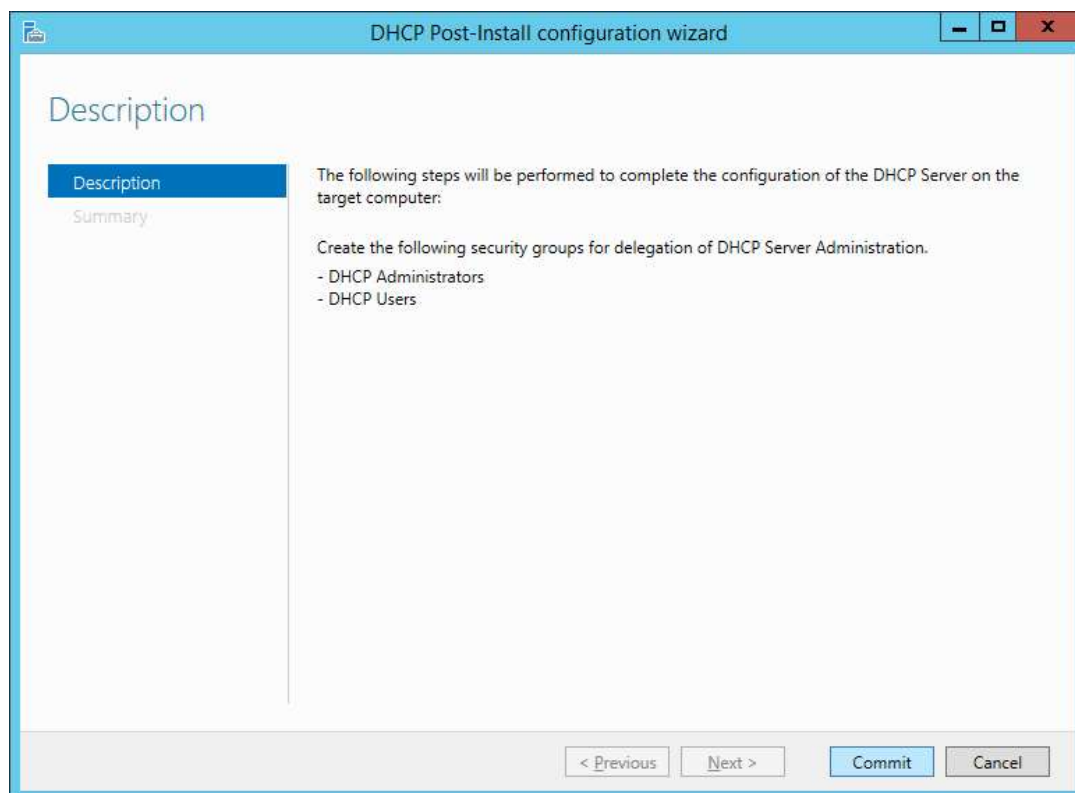


Note: N New installation R Re-installation

3. In “Server Manager” click “Complete DHCP configuration”



4. In “DHCP Post-Install configuration wizard” click “Commit” and “Close”



Note: N New installation R Re-installation

7.3.2.2 Setup DNS Service

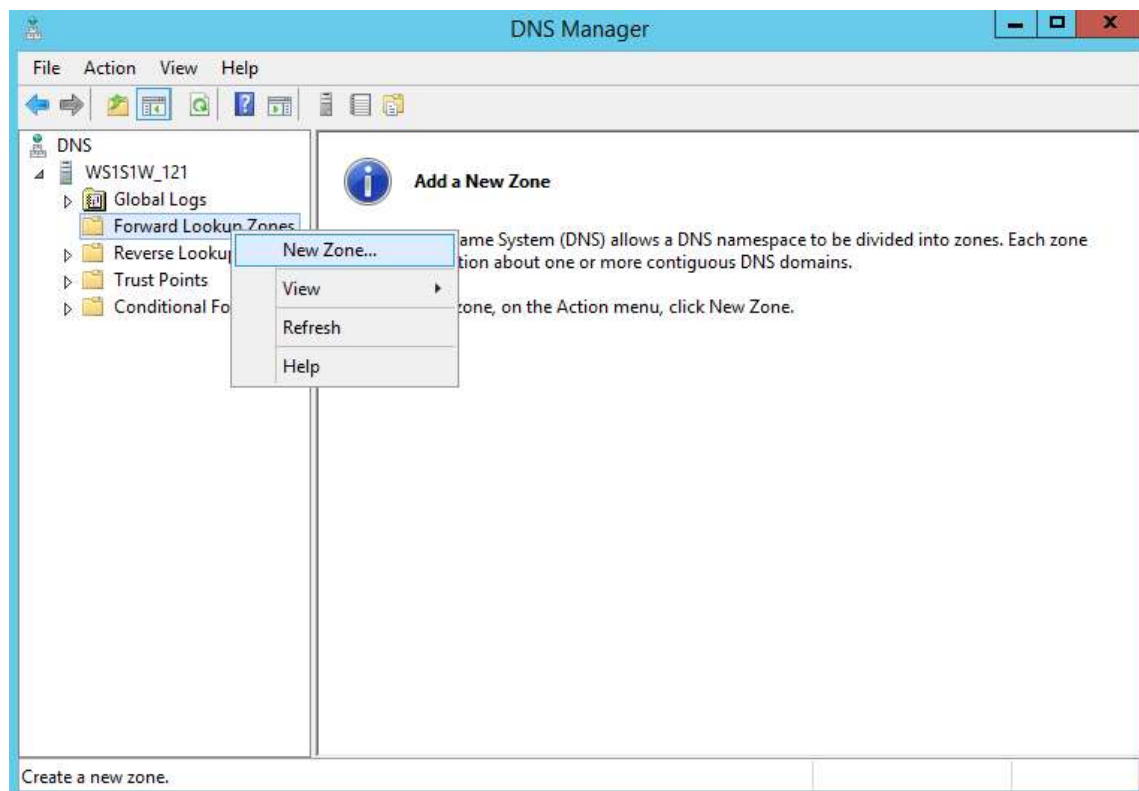
The configuration involves the following three tasks:

- Setup a forward lookup zone
- Add a host record for WebSAMS
- Configure DNS forwarder

(a) Setup a forward lookup zone for School Domain Name

1. Launch DNS management console. Right Click on the “**Forward Lookup Zone**” and choose “**New Zone...**”.

(Start -> Programs -> Administrative tools -> DNS)

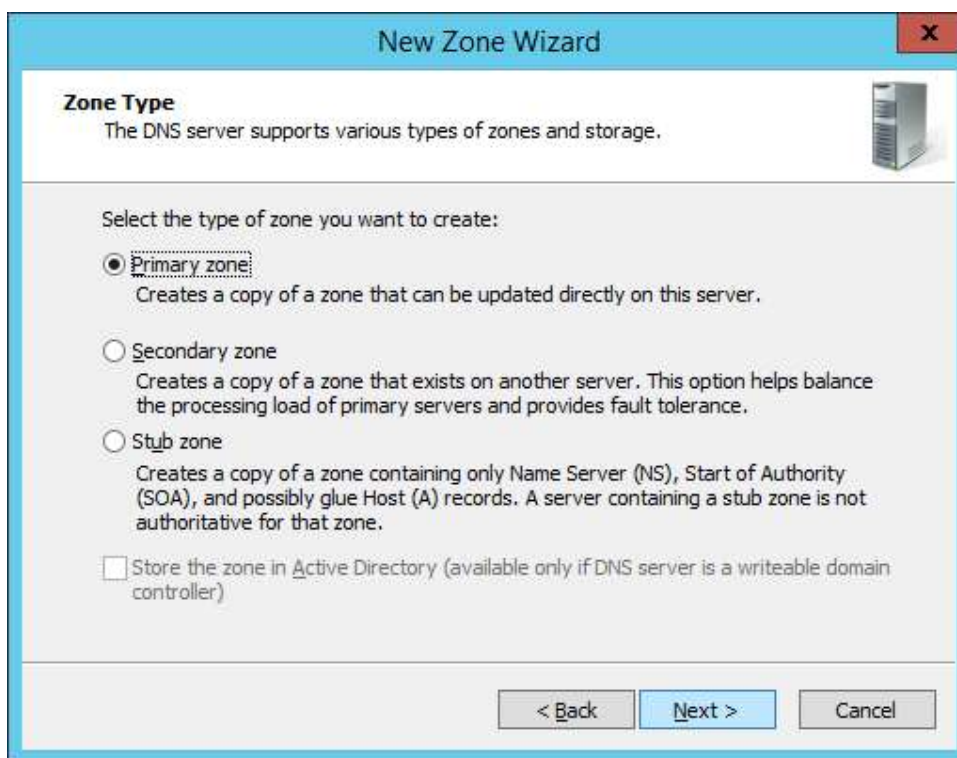


Note: N New installation R Re-installation

2. Click “Next”



3. Choose “Primary zone”. Click “Next”.



Note: N New installation R Re-installation

4. Fill in the WebSAMS Domain Name in the text box. Click “Next”.
(e.g. websams.abc.edu.hk)



The screenshot shows the 'New Zone Wizard' window with the 'Zone Name' tab selected. The title bar says 'New Zone Wizard' with a close button. The main area has a sub-header 'Zone Name' and the question 'What is the name of the new zone?'. Below this is an explanatory paragraph: 'The zone name specifies the portion of the DNS namespace for which this server is authoritative. It might be your organization's domain name (for example, microsoft.com) or a portion of the domain name (for example, newzone.microsoft.com). The zone name is not the name of the DNS server.' A text box labeled 'Zone name:' contains the text 'websams.abc.edu.hk'. At the bottom are three buttons: '< Back', 'Next >', and 'Cancel'.

5. Accept the default file name. Click “Next”.



The screenshot shows the 'New Zone Wizard' window with the 'Zone File' tab selected. The title bar says 'New Zone Wizard' with a close button. The main area has a sub-header 'Zone File' and the text 'You can create a new zone file or use a file copied from another DNS server.' Below this is a question: 'Do you want to create a new zone file or use an existing file that you have copied from another DNS server?'. There are two radio button options: 'Create a new file with this file name:' (which is selected) and 'Use this existing file:'. The first option has a text box containing 'websams.abc.edu.hk.dns'. The second option has an empty text box. Below the options is a note: 'To use this existing file, ensure that it has been copied to the folder %SystemRoot%\system32\dns on this server, and then click Next.' At the bottom are three buttons: '< Back', 'Next >', and 'Cancel'.

Note: N New installation R Re-installation

6. Select “Do not allow dynamic updates” and click “Next”.



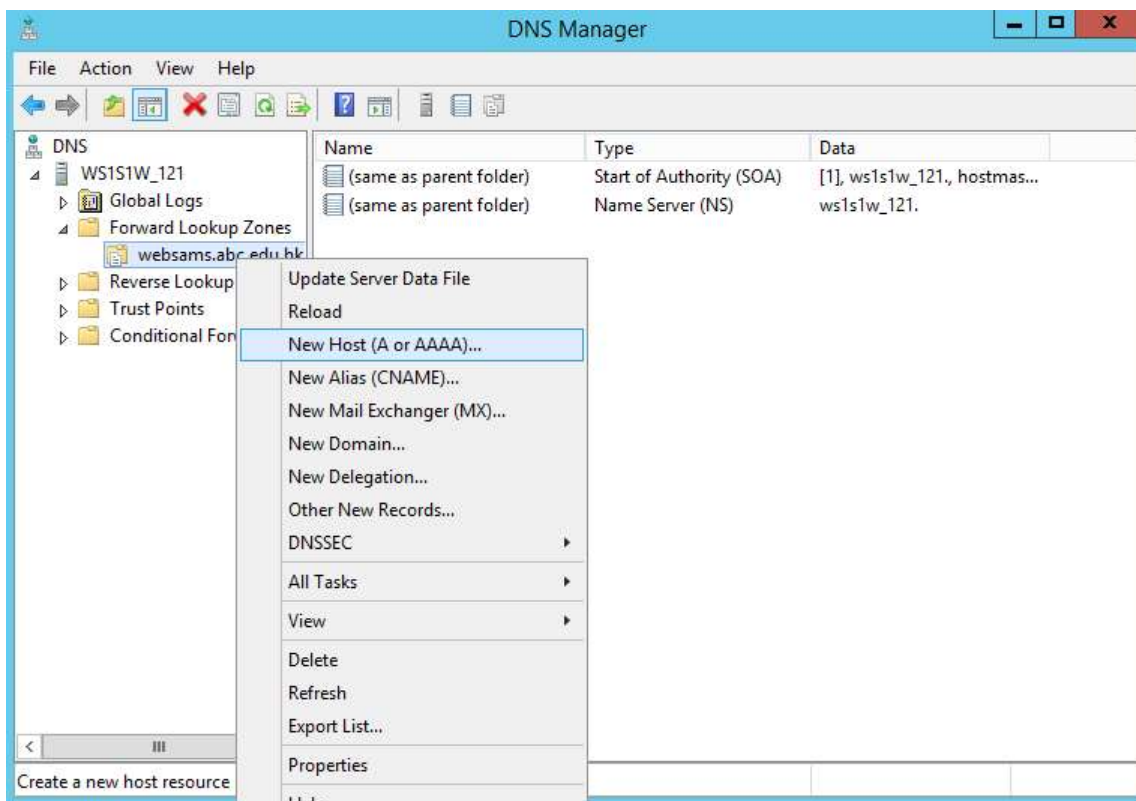
7. Click “Finish.”



Note: N New installation R Re-installation

(b) Add Host record for WebSAMS

1. Right click your new forward lookup zone under “Forward Lookup Zones”, click “New Host (A)…”.



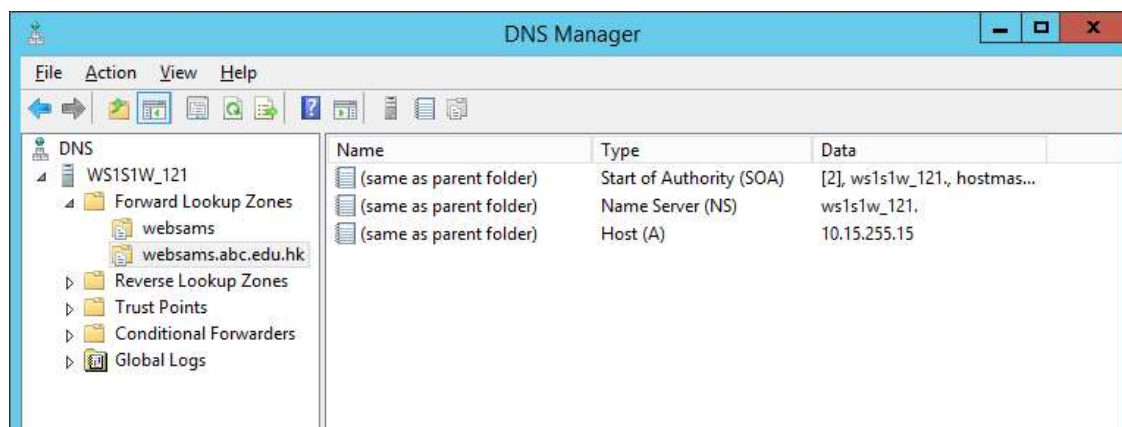
2. Leave the Name blank and fill in the IP address. Click “Add Host”.

The screenshot shows the 'New Host' dialog box. It has a title bar 'New Host' with a close button. The dialog contains the following fields and controls:

- 'Name (uses parent domain name if blank):' with an empty text box.
- 'Fully qualified domain name (FQDN):' with a text box containing 'websams.abc.edu.hk'.
- 'IP address:' with a text box containing '10.10.10.100'.
- A checkbox labeled 'Create associated pointer (PTR) record' which is currently unchecked.
- At the bottom, there are two buttons: 'Add Host' and 'Cancel'.

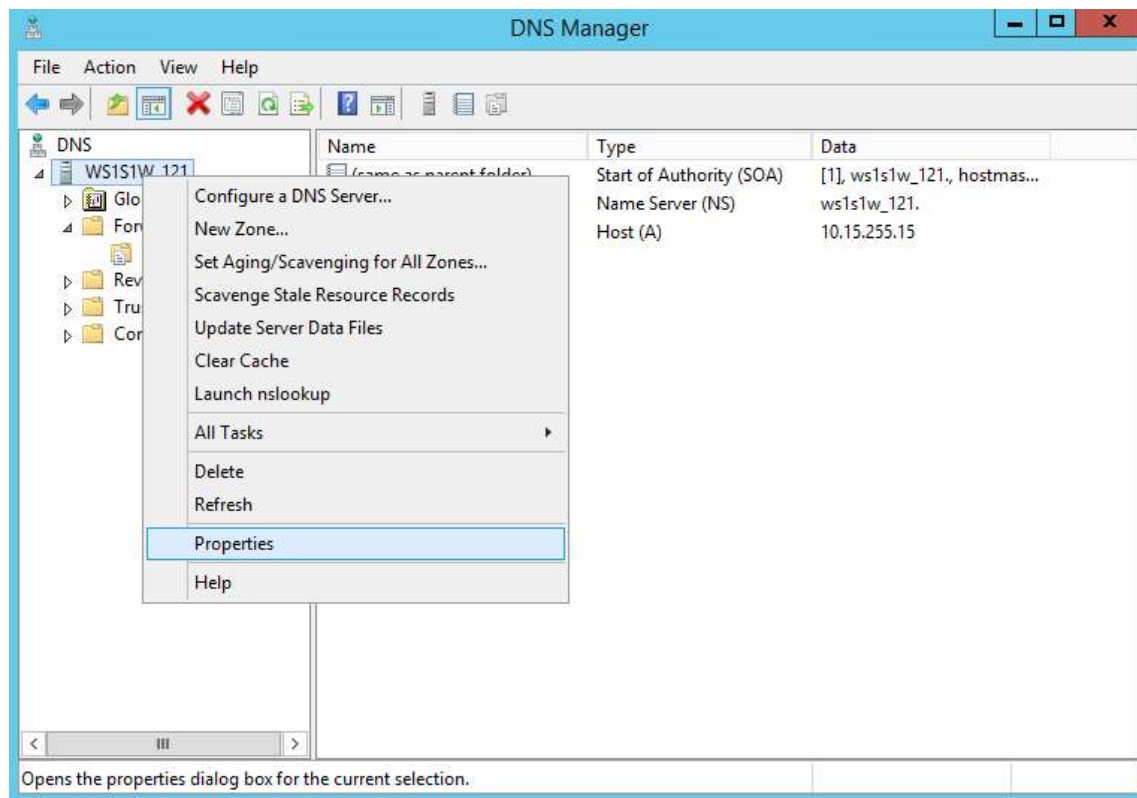
Note: N New installation R Re-installation

- The new host is displayed after creation.



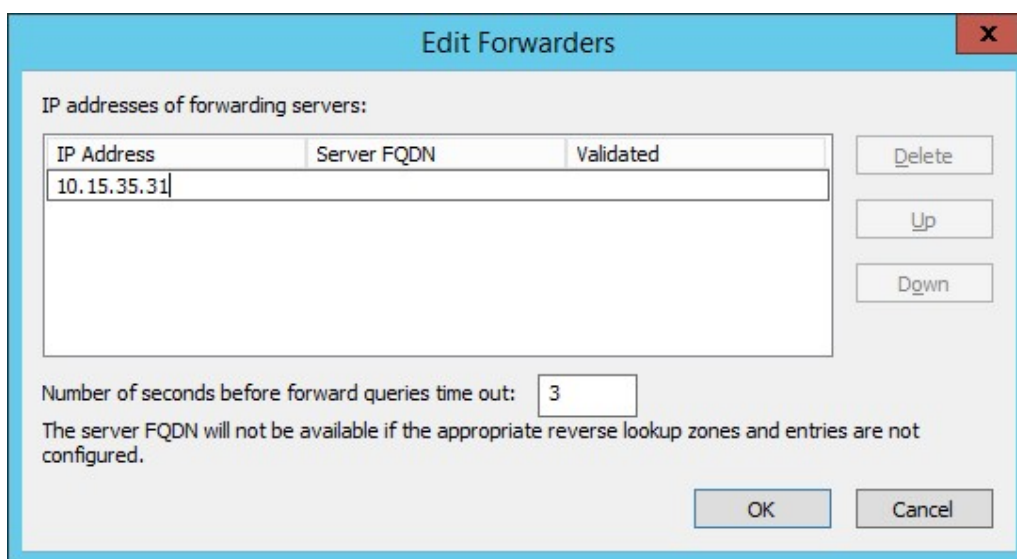
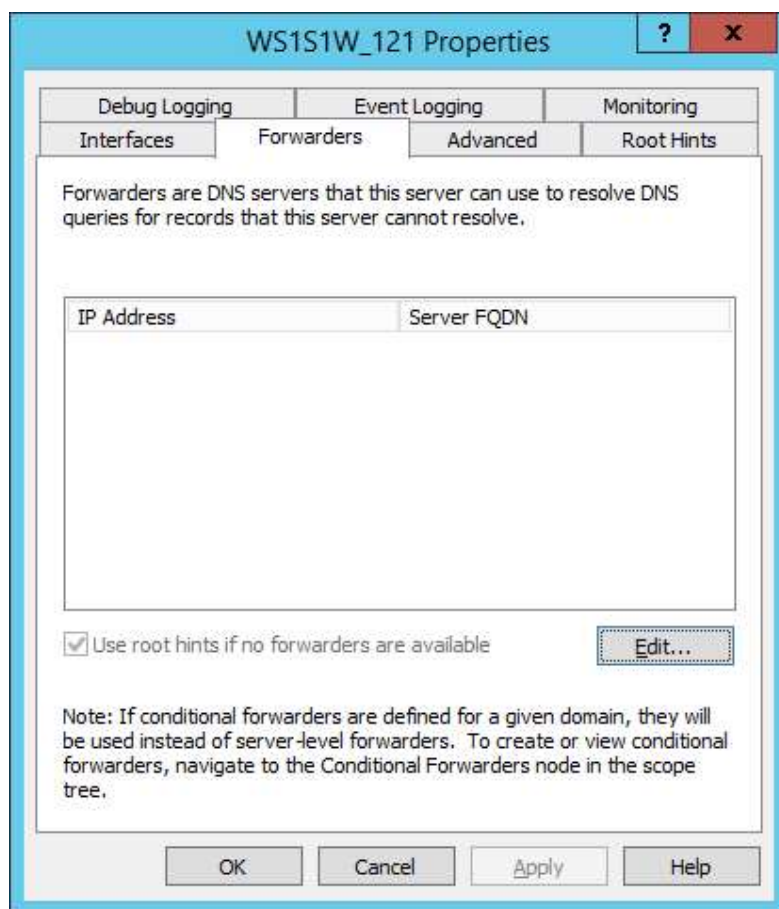
(c) Configure DNS forwarder

- Right click your DNS server, click “Properties”.



Note: N New installation R Re-installation

- Under the Forwarders tab, add the DNS server IP of ITED network. If the school does not have a DNS server, add the Internet Service Provider DNS server IP instead.



Note: N New installation R Re-installation

(d) Update host table

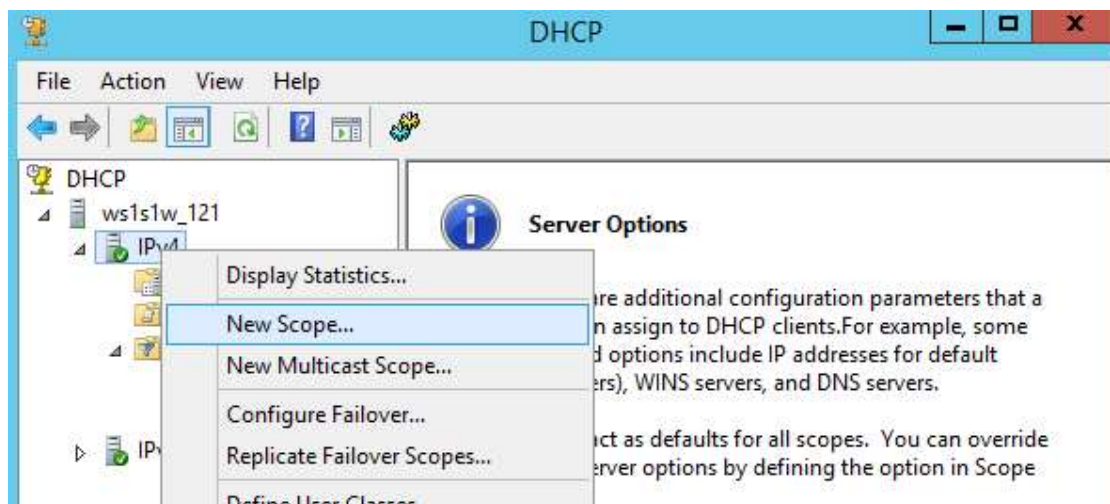
For Windows operating system, the host table is located in **%SYSTEMROOT%\system32\drivers\etc\hosts**.

Assuming the IP address is **10.10.10.100** and the domain name is **websams.abc.edu.hk**, use a text editor to append the following line in the host table:

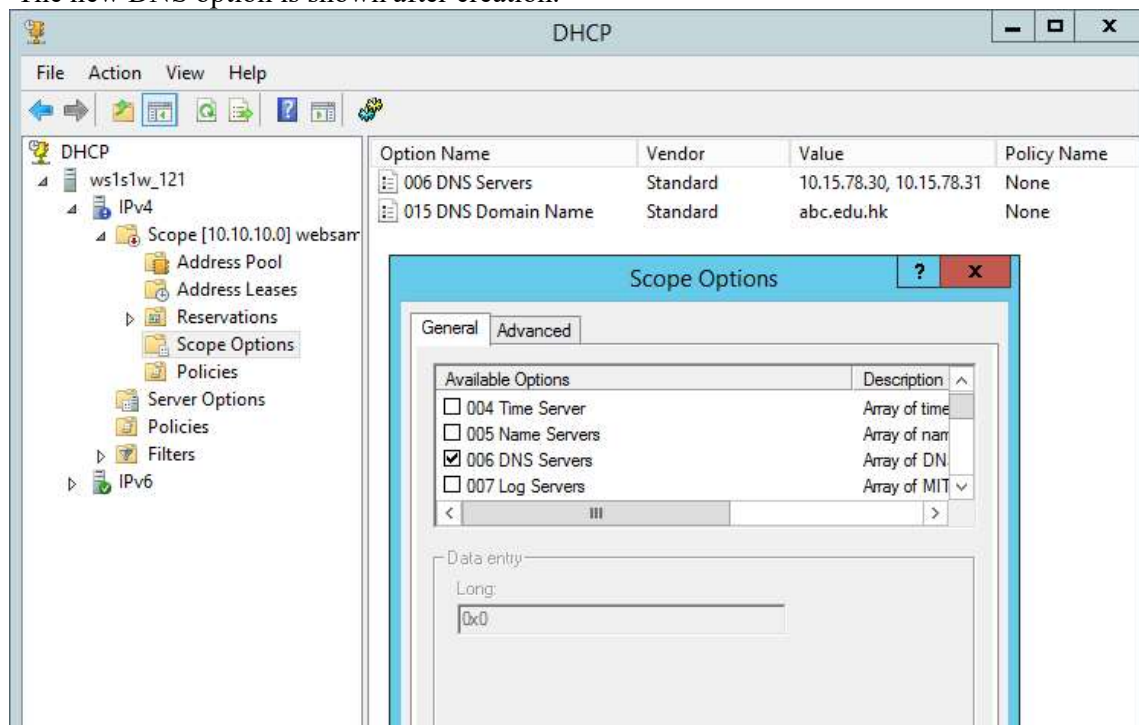
10.10.10.100 websams.abc.edu.hk
--

7.3.2.3 Set up DHCP Service in WebSAMS Server

1. Open the **DHCP** in **Server Manager**. Make sure the DHCP scope has been set up; otherwise, create a new scope by right click the IPv4 of server node and then select “**New Scope...**” from the popup menu. Input the IP address range that will be automatically distributed to workstations in WebSAMS segment



2. The new DNS option is shown after creation.



3. Configure other options (if any) similarly, e.g. “Default Router”.

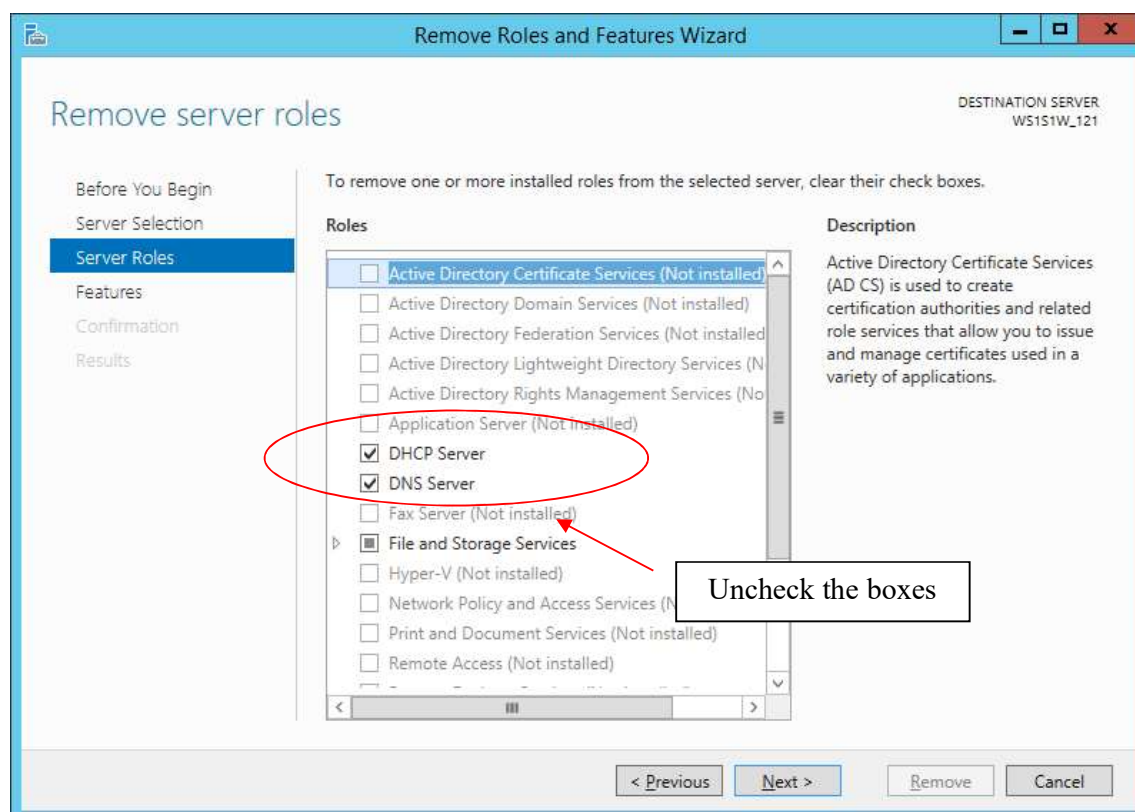
Note: N New installation R Re-installation

7.3.2.4 Fallback Procedures

Please refer to the following steps in case you need to recover the original settings:

Uninstall DNS or DHCP Service

Uncheck **Domain Name System (DNS)** or **Dynamic Host Configuration Protocol (DHCP)**.



Note: N New installation R Re-installation

7.3.3 WebSAMS Workstations Login to the ITED Domain



This section provides the general guideline on setting the WebSAMS workstation to login to ITED domain. For further detail setting on the ITED domain, please refer to official document of the Windows Domain or technical support from Microsoft.

Please ensure that the Windows versions of WebSAMS workstations can support joining Windows domain, e.g. Windows 10 or etc.

7.3.3.1 Configuration to be done by Site Engineers or Experienced TSS

TSS may configure ITED domain DNS as DNS forwarder in WebSAMS server, as described in previous section.

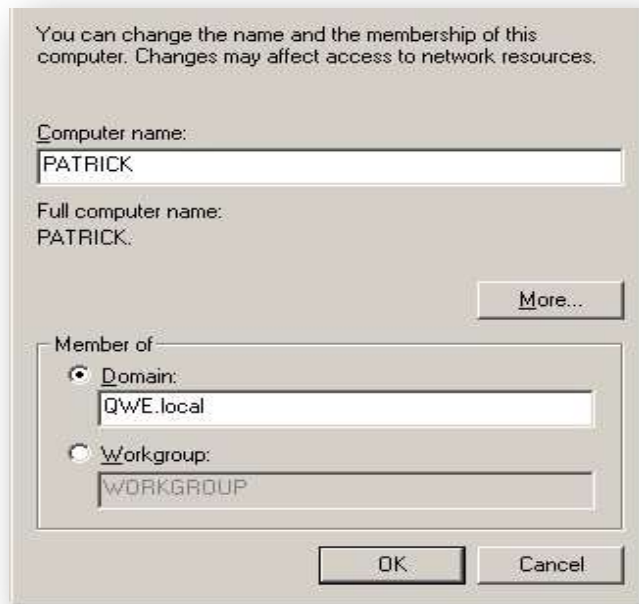
(You should have already done it. It is stated here just for reference.)

7.3.3.2 Configuration to be done by the School TSS (Or the Site Engineers)

1. Reboot the WebSAMS workstation to refresh the DHCP settings.
2. **Configure the workstation to join the ITED domain the same as you did for ITED workstations.**

The following figure shows an example assuming the domain is QWE.local.

(Path: Right click My Computer -> Properties -> Network Identification -> Properties)



7.4 Sybase SQL Anywhere 16 (64-bit) Installation



7.4.1 Install Sybase SQL Anywhere 16 (64-bit)

1. Insert the Sybase SQL Anywhere 16 media disc into the DVD drive.
2. Once the Sybase installation program has been launched, follow the installation wizard and choose the following:

Setup Language: English
Country or region: Hong Kong

3. Accept the license Agreement and click “Next”. After that, input the Registration key and click “Next” directly.
4. Fill in **User Name** and **Organization** appropriately. For **Licensed cores**, please input the number of CPU cores of the WebSAMS Server. Then click “Next”.

SQL Anywhere 16 - InstallShield Wizard

Server Licensing Information

Please enter the following server license information

User Name:

Organization:

Licensed cores:

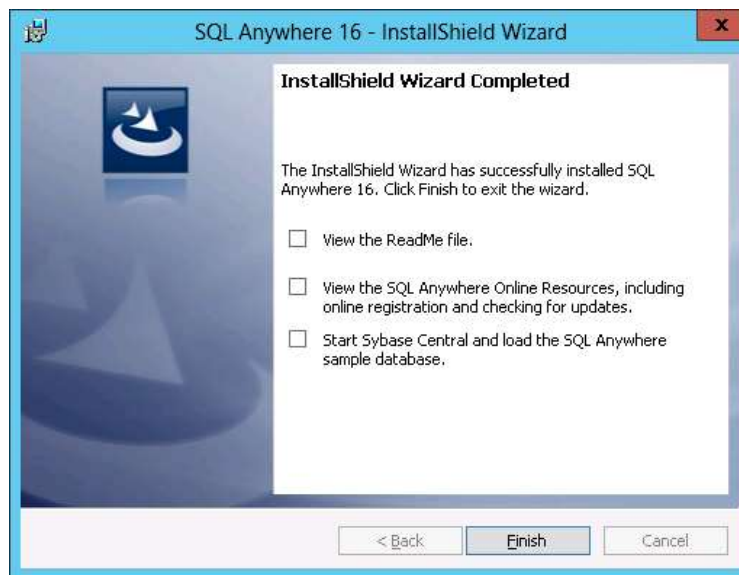
InstallShield

Next > Cancel

5. Choose **Typical** for ‘Setup Type’ and click ‘Next’.
6. Uncheck the option “Allow SQL Anywhere 16 to send info...” and click “Install”.

Note:  New installation  Re-installation

7. When the installation completes, uncheck ALL the checkboxes and click '**Finish**'.



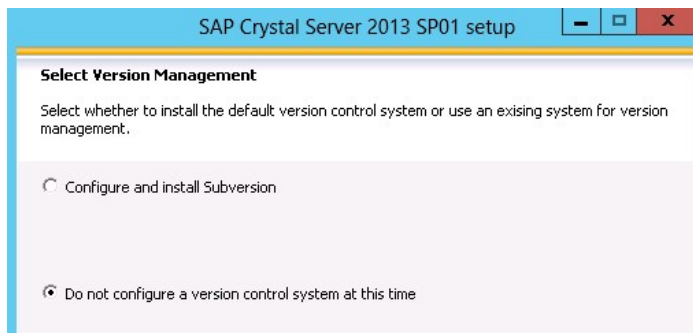
Note: **N** New installation **R** Re-installation

7.5 SAP Crystal Server 2013 Installation

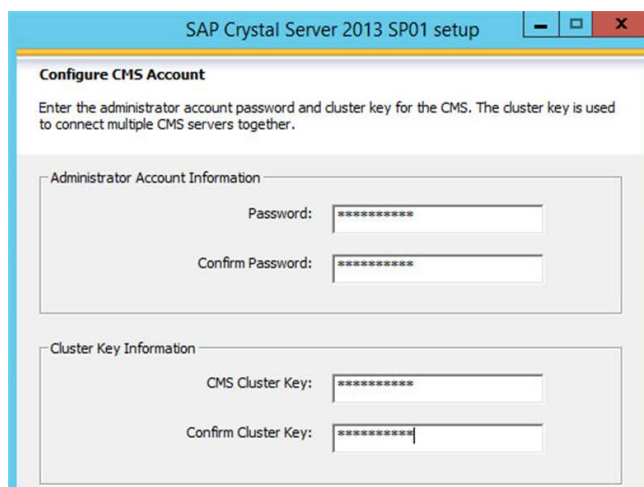
N

7.5.1 Install SAP Crystal Server 2013

- 1 Insert the SAP Crystal Server 2013 media CD into the DVD drive.
- 2 The Crystal Server installation program will be launched. Follow the installation wizard, and accept ALL default setting.
- 3 Fill in the following for user information and license key:
 - Product Key: {license key}
- 4 Continue to follow the installation wizard, and accept ALL default setting.
- 5 Select “Do not configure a version control system at this time” for the screen “Select Version Management” and click “Next”.

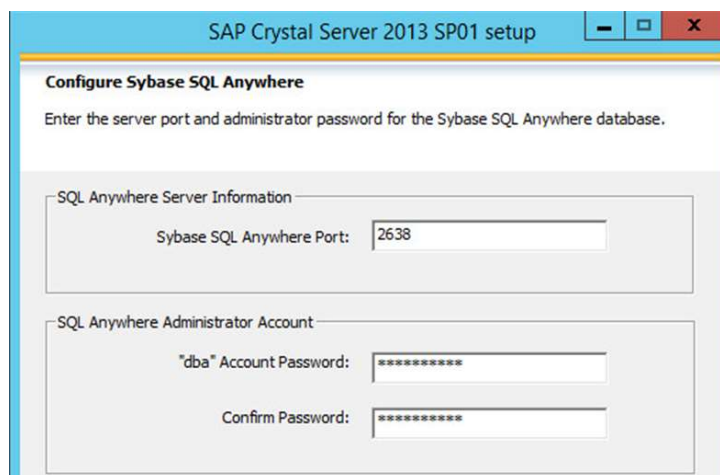


- 6 Continue to follow the installation wizard, and accept ALL default setting and click “Next”.
- 7 For the screen “Configure CMS Account”, type in the password and cluster key. The “Administrator Account” will be used to login in the “Central Management Console” in section “7.7.1 Post Installation Task”.



Note: **N** New installation **R** Re-installation

- 8 For the screen “Configure Sybase SQL Anywhere”, type in the password. This database account is only used for the Crystal Server 2013.

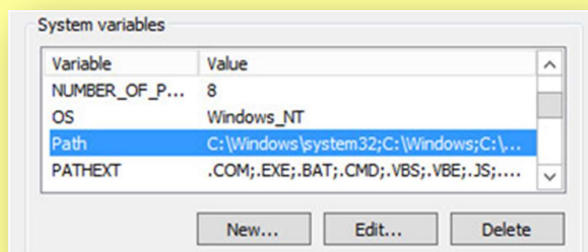


- 9 Again, accept ALL default setting and click “Next”. The installation will last for about 30 minutes. After the installation, click “Finish”.
- 10 Finally, perform the following checking:



After the installation of database and report server, you can perform the following steps to make sure the related path in the environment variables are being correctly set.

- Select the system variable “Path” by clicking “Start > Control Panel > System > Advanced system settings > Environment Variables” and click “Edit”



- Make sure the path of Sybase 16 comes first. The follow is an example:

```
%SystemRoot%\system32;%SystemRoot%;%SystemRoot%\System32\Wbem
;%SYSTEMROOT%\System32\WindowsPowerShell\v1.0\;C:\Program
Files\SQL Anywhere 16\bin64;C:\Program Files\SQL Anywhere
16\bin32;C:\Program Files (x86)\SAP
BusinessObjects\sqlanywhere\bin64;C:\Program Files (x86)\SAP
BusinessObjects\sqlanywhere\bin32
```

Please ensure the green part is placed before the blue part.

Note:  New installation  Re-installation

7.6 Data Conversion (Obsoleted)

7.7 WebSAMS 3.0 Application Installation



The installation wizard will guide you through the installation of WebSAMS 3.0 application. It will install the following programs into WebSAMS server:

Programs	Path
Zulu Java 11	D:\Java\zulu11.2.3-jdk11.0.1\
Dyna font	C:\Windows\Fonts\mingliu.ttc, the original one is renamed to mingliu.ttc.bak
Barcode font	C:\Windows\Fonts\FRE3OF9X.TTF
Wildfly 15.0.0	D:\WebSAMS3.0\wildfly-15.0.0.Final\
Apache 2.4.39	D:\WebSAMS3.0\Apache\
School data, report templates and keystores	E:\Data\

7.7.1 Install WebSAMS 3.0 Application

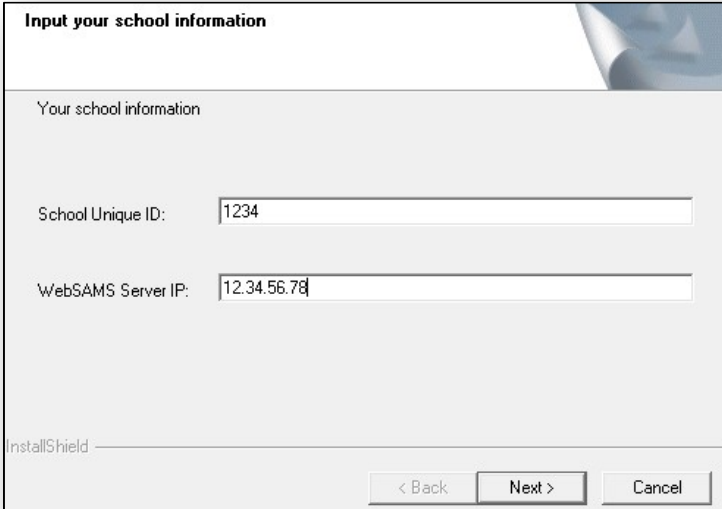
- Execute the WebSAMS 3.0 installation wizard.
Path: *System Installation DVD for WebSAMS 3.0:Basic Installer\autorun.vbs*
- Click “Next” on the welcome screen.



Note: New installation Re-installation

3. Fill in the 4-digit unique SUID and the WebSAMS Server IP.

School Unique ID: {SUID} e.g. 1234
WebSAMS Server IP: {WebSAMS server IP} e.g. 12.34.56.78



Input your school information

Your school information

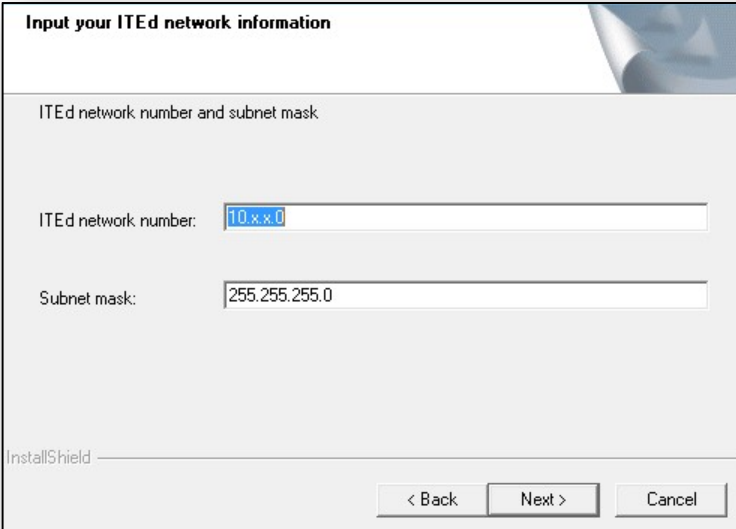
School Unique ID: 1234

WebSAMS Server IP: 12.34.56.78

InstallShield

< Back Next > Cancel

4. Fill in the ITED network number and the subnet mask.



Input your ITED network information

ITED network number and subnet mask

ITED network number: 10.x.x.0

Subnet mask: 255.255.255.0

InstallShield

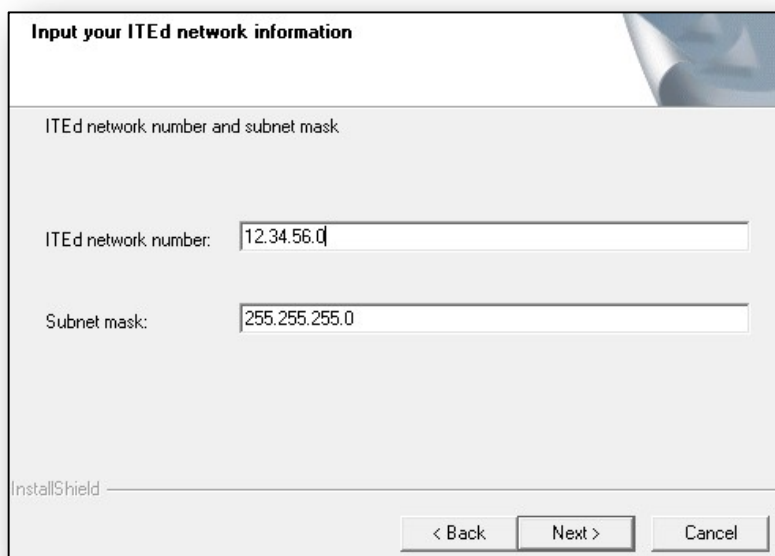
< Back Next > Cancel

Note: **N** New installation **R** Re-installation

e.g.

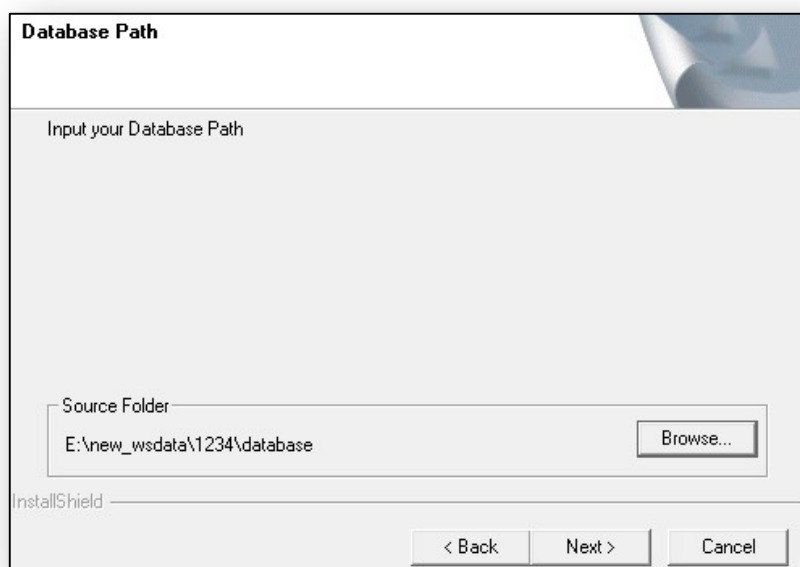
ITEd network number: 12.34.56.0

Subnet mask: 255.255.255.0



The screenshot shows a dialog box titled "Input your ITed network information". Below the title bar, the text "ITEd network number and subnet mask" is displayed. There are two input fields: "ITEd network number:" with the value "12.34.56.0" and "Subnet mask:" with the value "255.255.255.0". At the bottom left, the "InstallShield" logo is visible. At the bottom right, there are three buttons: "< Back", "Next >", and "Cancel".

5. Input your data source path.



The screenshot shows a dialog box titled "Database Path". Below the title bar, the text "Input your Database Path" is displayed. There is a "Source Folder" input field containing the path "E:\new_wsdata\1234\database". To the right of this field is a "Browse..." button. At the bottom left, the "InstallShield" logo is visible. At the bottom right, there are three buttons: "< Back", "Next >", and "Cancel".

Note: **N** New installation **R** Re-installation

Scenario: Installing new WebSAMS

Click “Browse ...” to locate the source folder.

Path: *WebSAMS Database and Digital Certificate CD:\<SUID>\database*

Note: The source folder should contain the following files:

```
websams_{school_id}.db
websams_db1.dbRR
websams_db2.dbRR
... to ...
websams_db8.dbRR
```

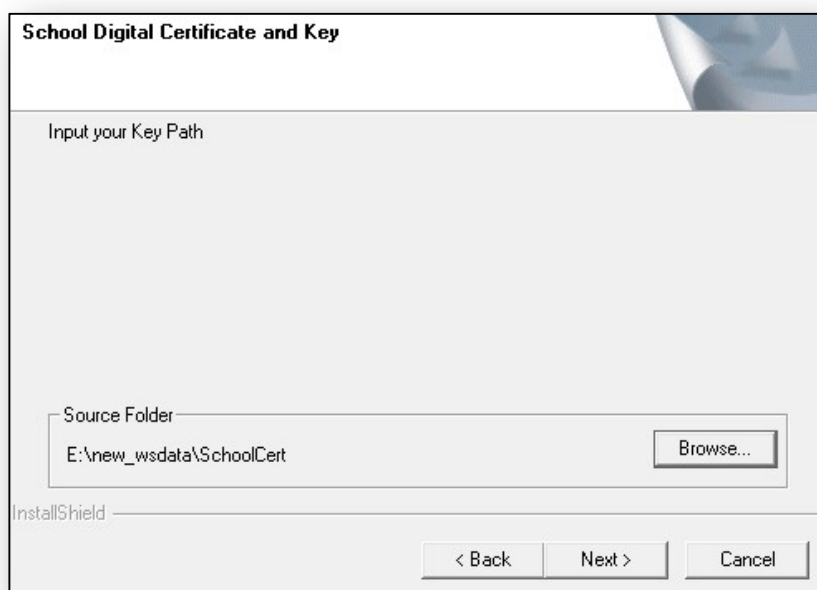
6. Input your CDS path and press “Next”.

Scenario: Installing new WebSAMS

Click “Browse ...”to locate the CDS folder.

Path: *WebSAMS Database and Digital Certificate CD:\CDSKit*

7. Input your digital certificate and key path. Press “Next” to proceed.



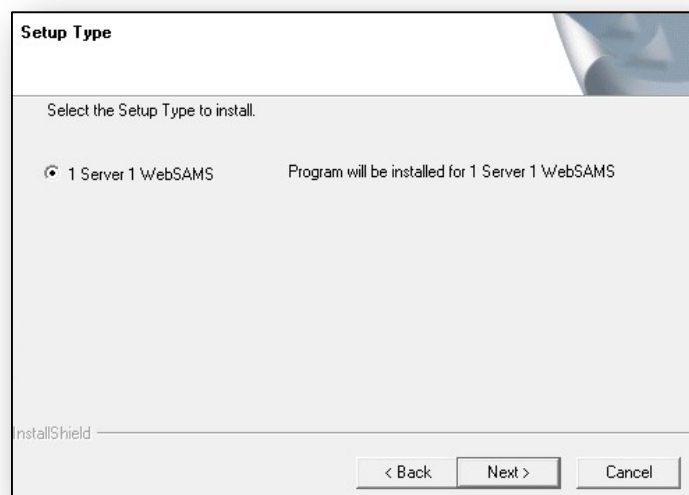
Scenario: Installing new WebSAMS



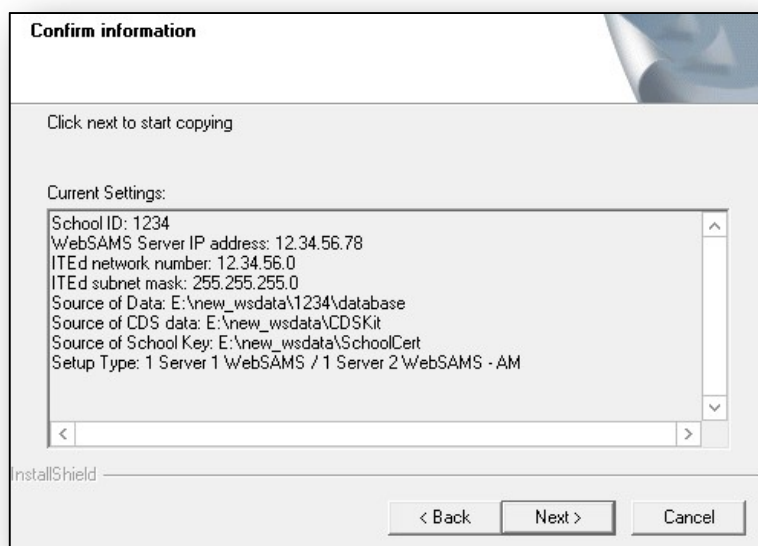
Click “Browse ...” to locate the folder that contains the digital certificate and key.

Path: *WebSAMS Database and Digital Certificate CD:\SchoolCert*

8. Select your setup type and click “Next”.

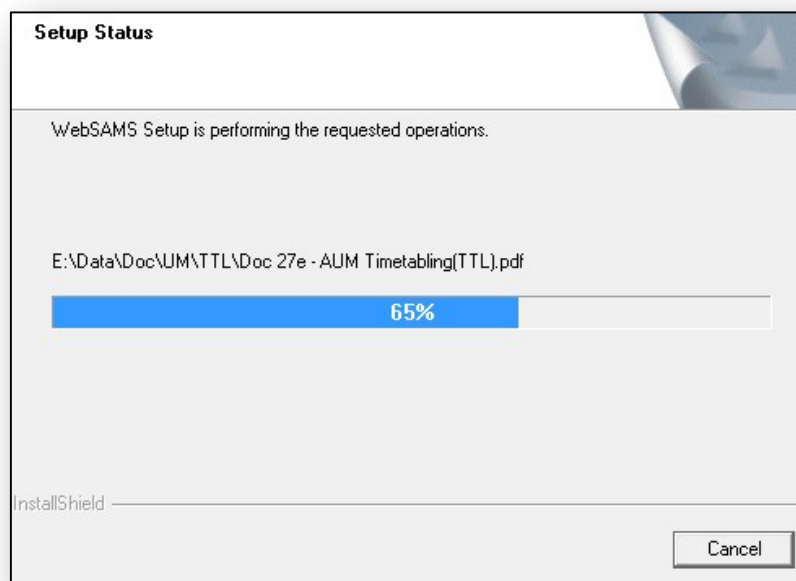


9. The summary of information will be shown. Click “Next” to continue the installation.

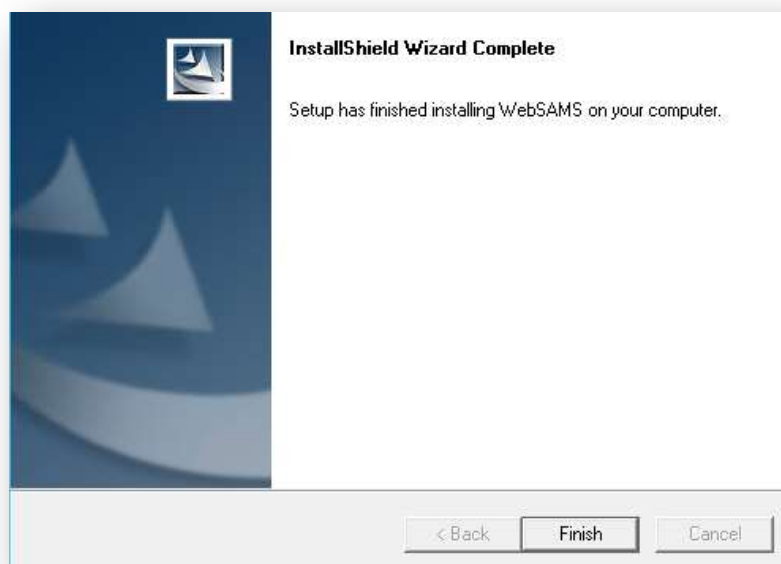


Note: **N** New installation **R** Re-installation

10. The installation wizard will perform some configuration and file copying tasks. This could take a few minutes.



11. Once all installations are completed, you should find the following screen. Press "Finish" to exit.



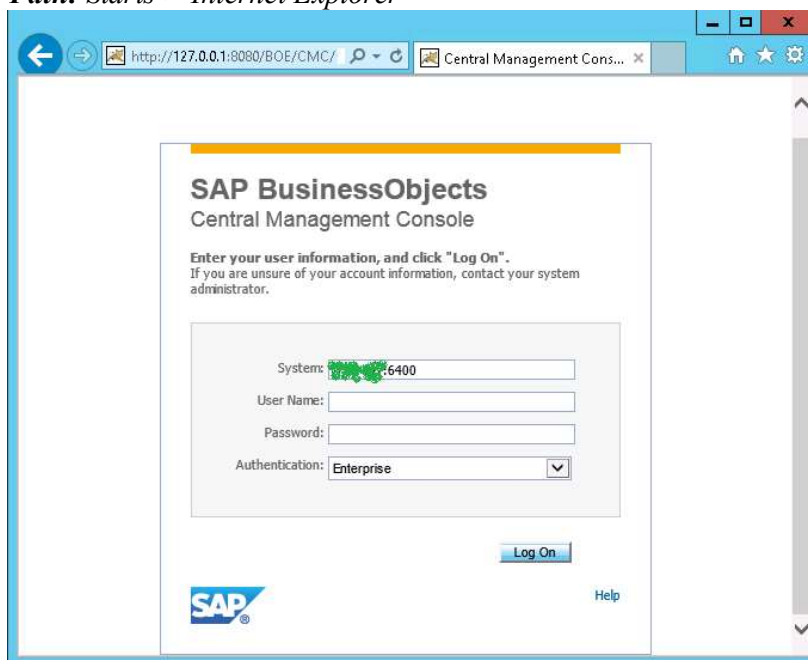
Note: **N** New installation **R** Re-installation

Post Installation Tasks

1. Configure the SAP Crystal Server 2013

1) Open Internet Explorer and go to “http://127.0.0.1:8080/BOE/CMC/”

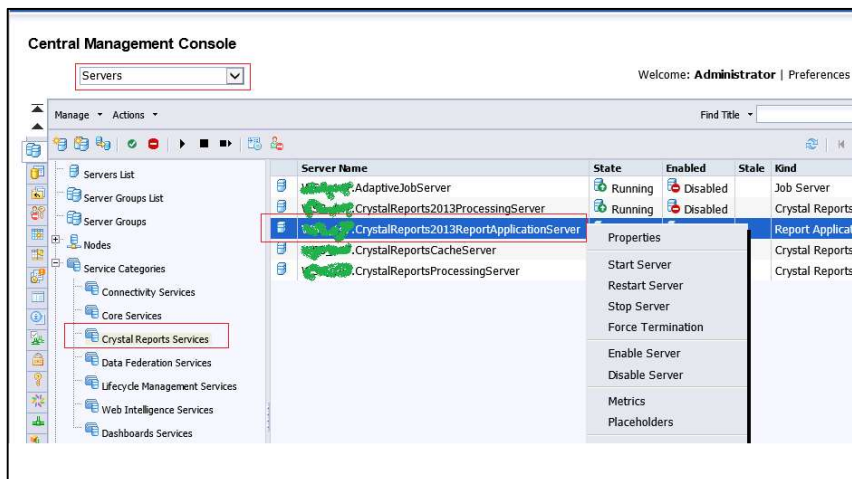
Path: Starts > Internet Explorer



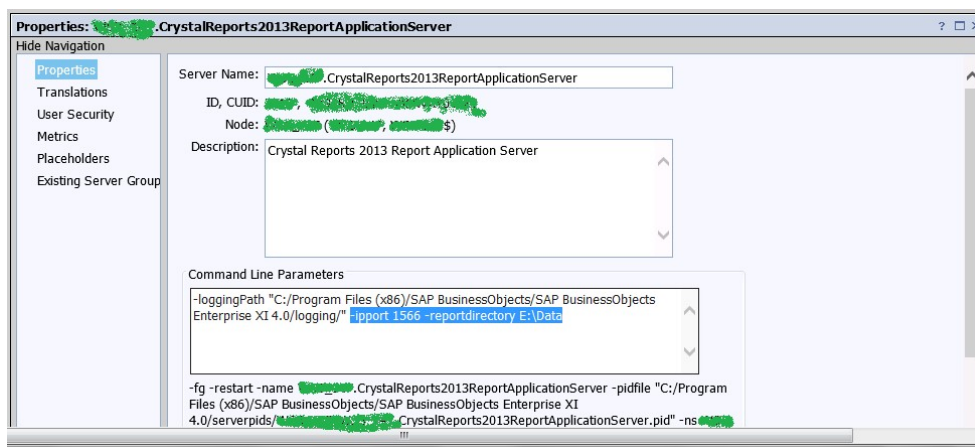
2) Log in the Central Management Console with ‘administrator’ account which has setup during installation before. Click “Close” to skip the welcome screen.

Note: **N** New installation **R** Re-installation

- 3) Select 'Servers' in the drop down list of top left corner. Click on 'Crystal Reports Services' under the 'Service Categories' on the left. Right click on the server name ends with 'CrystalReports2013ReportApplicationServer' and select 'Properties'.

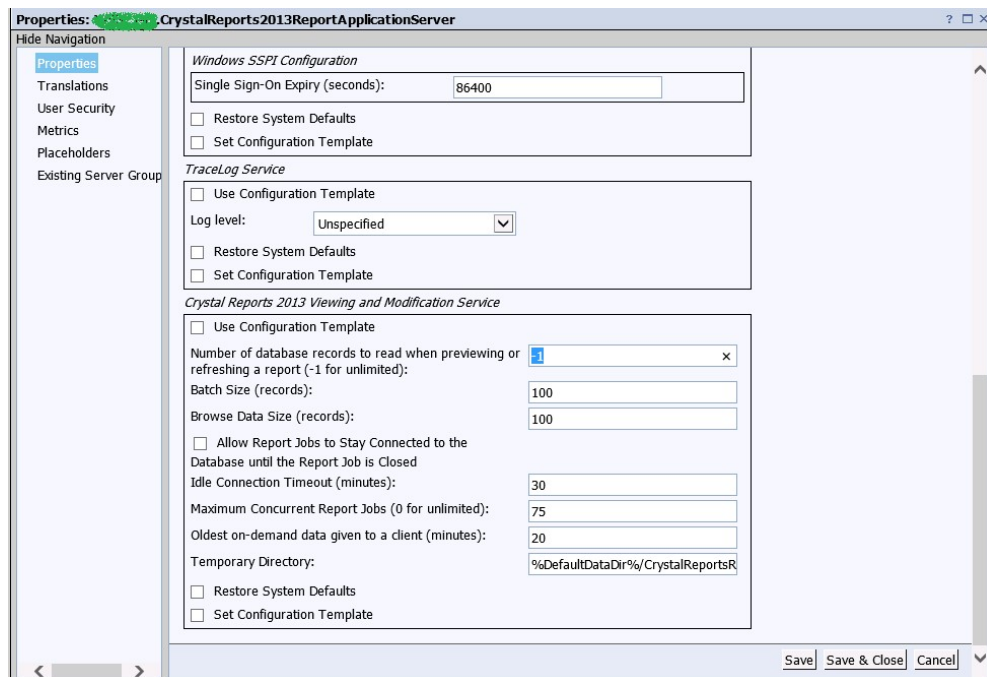


- 4) Append ' -ipport 1566 -reportdirectory E:\Data' in 'Command Line Parameters' part. Please note that the first character before "-ipport" is an empty space and no double quote is needed for the report template home path E:\Data.

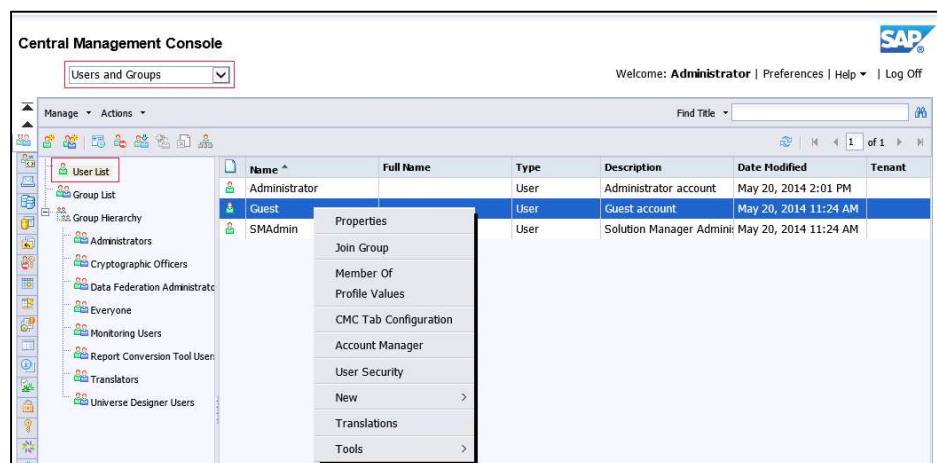


Note: N New installation R Re-installation

- 5) Scroll to end of the page and change the value of **‘Number of database records to read when previewing or refreshing a report’** in **‘Crystal Reports 2013 Viewing and Modification Service’** part to -1. Click **‘Save & Close’**.



- 6) Select **‘Users and Groups’** in the drop down list of top left corner. Click on **‘User List’** on the left. Right click on the user **‘Guest’** and select **‘Properties’**.



Note: N New installation R Re-installation

- 7) Scroll to end of the page and uncheck the 'Account is disabled' checkbox under 'Attribute Binding' part. Click 'Save & Close'.

Properties: Guest

Hide Navigation

Properties
Translations
User Security
Member Of
Profile Values
Account Manager

Password: ☐ Password never expires
Confirm: ☐ User must change password at next logon
☐ User cannot change password

Database Credentials

☐ Enable
Account Name:
Password:
Confirm:

Connection Type

☒ Concurrent User
☐ Named User

Attribute Binding

☐ Import Full Name, Email Address and other attributes
☒ Account is disabled

Alias: secEnterprise:Guest **Authentication Type:** Enterprise **Enabled:** ☒ [Assign Alias...](#) [New Alias...](#)

[Save](#) [Save & Close](#) [Cancel](#)

- 8) Select 'Auditing' in the drop down list of top left corner. Set cursor to 'Off' under 'Set Event'. Click 'Save'.

Central Management Console

Auditing

Welcome: Administrator | Preferences | Help | Log Off

Status Summary

Warning: Client auditing is unavailable.
Warning: Auditing data may remain in server buffers.
WS3_UAT.EventServer, WS3_UAT.AdaptiveJobServer, WS3_UAT.DashboardsCacheServer

ADS Last Updated On: 5/2/18 12:12:31 PM CST
Auditing Thread Utilization (%): 0
Last Polling Cycle Duration (Seconds): 180

CMS Auditor: WS3_UAT.CentralManagementServer
ADS Database Connection Name: BH4_Audit_DSN
ADS Database User Name: dba

Set Events

Off Minimal Default Complete Custom

Common Events

☐ View
☐ Refresh
☐ Prompt
☐ Create
☐ Delete
☐ Modify
☐ Save
☐ Search
☐ Edit
☐ Run
☐ Deliver
☐ Retrieve
☐ Logon
☐ Logout
☐ Trigger

Platform Events

☐ Auditing Modification
☐ Custom Access Level Modified
☐ Rights Modification

Lifecycle management Events

☐ LCM Configuration
☐ Rollback
☐ VMS Add
☐ VMS Checkin
☐ VMS Checkout

Set Event Details

☐ Query
☐ User Group Details
☐ Folder Path Details
☐ Rights Details
☐ Property Value Details

Configuration

ADS Database

Connection Name: BH4_Audit_DSN
Type: SQL Anywhere
Use Windows Authentication: ☐
User Name: dba
Password: *****
Delete Events Older Than (Days): 36500
☒ ADS Auto Reconnect

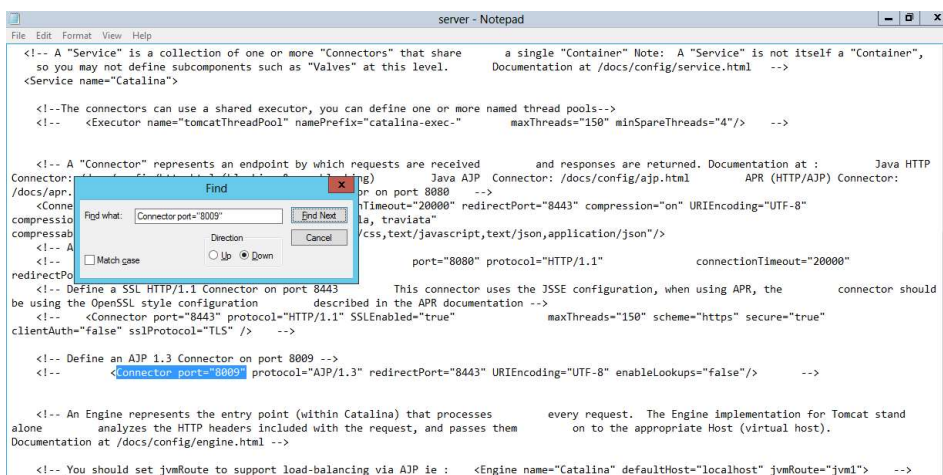
[Save](#) [Restore Defaults](#)

- 9) Click 'Log Off' on the top right corner to log off the console.

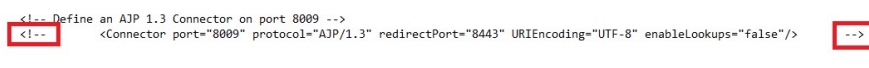
Note: N New installation R Re-installation



- 10) Open the following file by Notepad
C:\Program Files (x86)\SAP BusinessObjects\tomcat\conf\server.xml
- 11) Search for the line with keywords **Connector port="8009"**



- 12) Check if the line is enclosed by the tags **<!-- -->** as shown below.



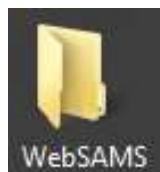
If not, add the tags, then save the file and close Notepad.

- 13) Reboot the server so that the change can take effect.

7.8 First Time to Start WebSAMS Application

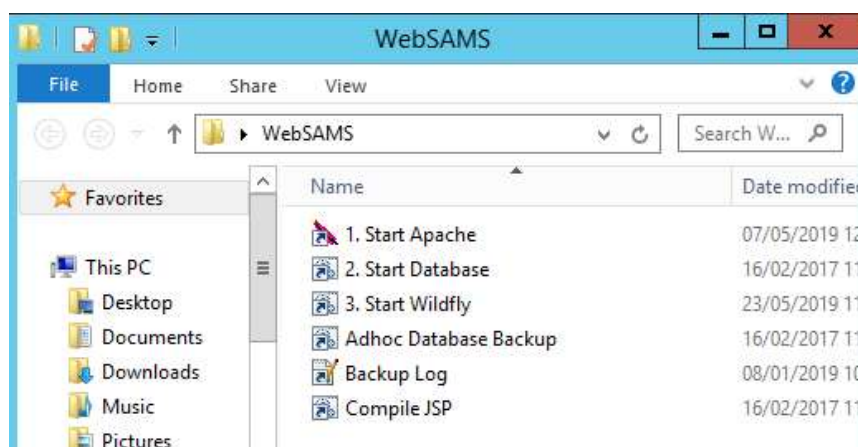


1. After the WebSAMS installation, you should find a folder created on the desktop named “WebSAMS”:

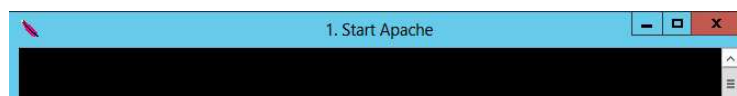


2. Open the WebSAMS folder, you should find the shortcuts as shown below.
To start WebSAMS application, you need to execute the following shortcuts in sequence:

1. Start Apache
2. Start Database
3. Start Wildfly

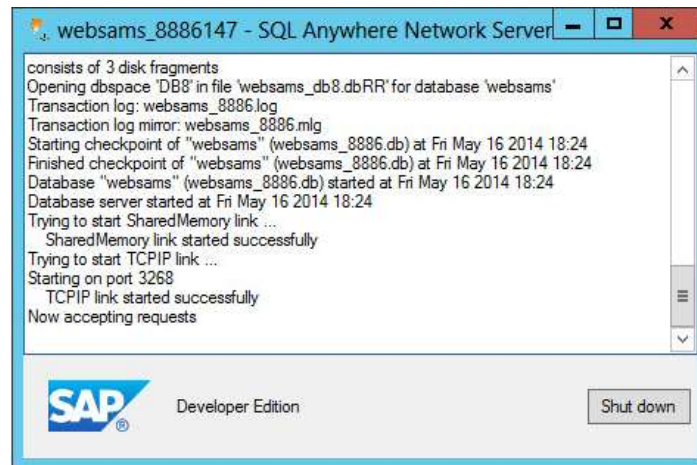


3. Execute the “**1. Start Apache**” shortcut to start the apache.

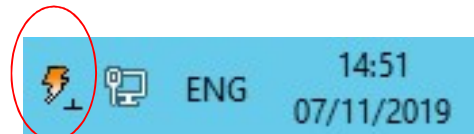


Note:  New installation  Re-installation

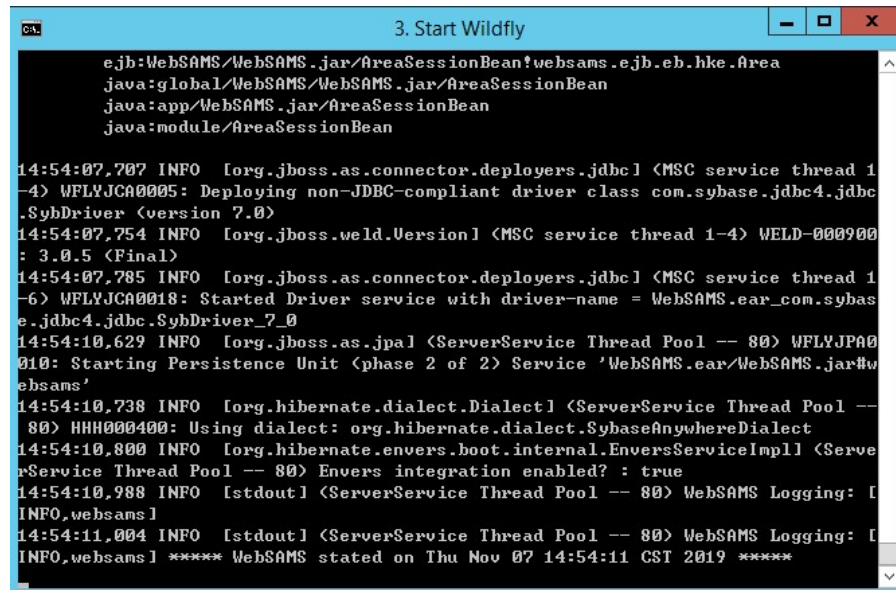
4. Execute the “2. Start Database” shortcut to start the database.



When the database completely loaded, the window will be automatically minimized as an icon on the taskbar as follow:



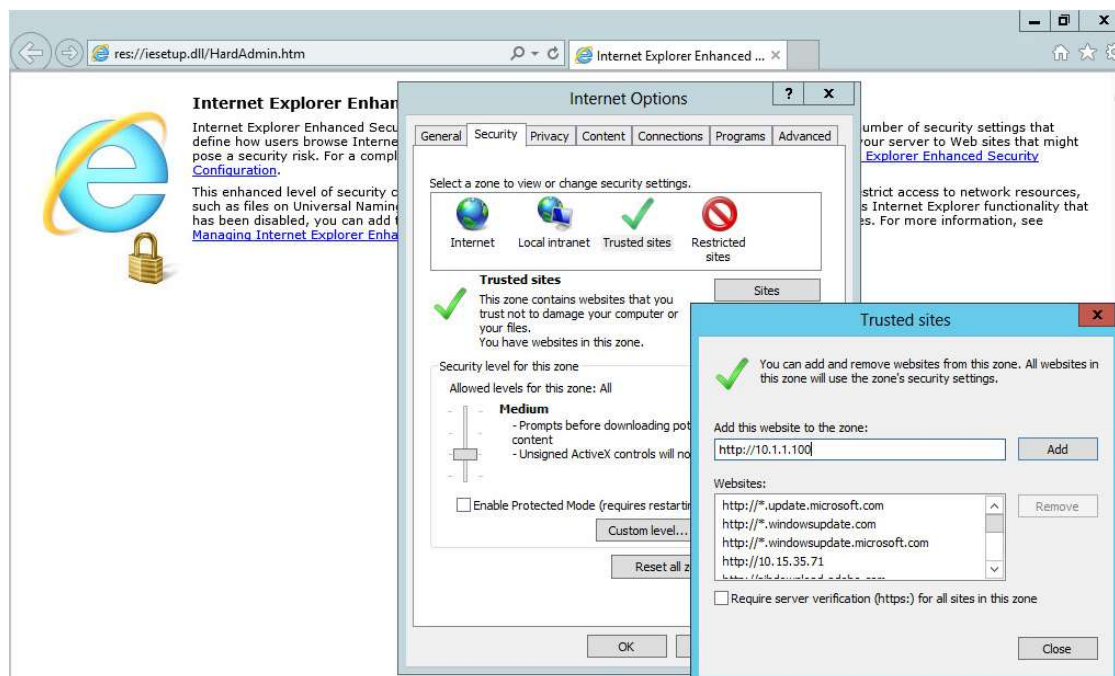
5. Execute “3. Start Wildfly” to start the WebSAMS application. The initialization of Wildfly could take a few minutes, depending on the performance of your server. When the Wildfly is ready, a message ‘ **** WebSAMS started on **** ’ will be shown, like the following:



Note: N New installation R Re-installation

6. If Internet Explorer is the default browser of your WebSAMS server, add the following IP addresses of the sites into the “Trusted Sites” in the Internet Explorer:
- IP address of your **WebSAMS server**, e.g. <http://10.1.1.100>
 - The link of the **WebSAMS Central Repository**, i.e. <https://cdr.websams.edb.gov.hk/>

Path: Internet Explorer: Tools -> Internet Options -> Security -> Trusted sites -> Sites.



7. Now, open a browser in the WebSAMS server and access the WebSAMS login page. A page similar to the following should be shown

URL: http://<your_websams_domain_name>/



Note: You should make sure an entry for mapping your WebSAMS IP and WebSAMS domain name has been added in the hosts file.

Path: C:\WINDOWS\system32\drivers\etc\hosts

Please see “Update Host Table” in the Section of “Setup DNS Service” under “Network Configuration for WebSAMS Server” for details.

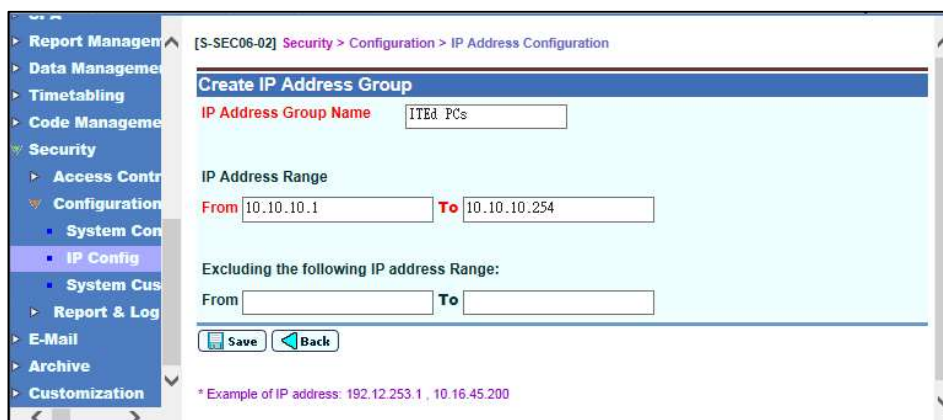
Note: N New installation R Re-installation

8. Login as “sysadmin”
9. Define the IP range of ITED PCs by clicking the “Add” button on the “IP Configuration” page.

Path: Left pane > Security > Configuration > IPConfig



10. Give a Group Name for your reference, e.g. “ITED PCs”.
Fill in the IP Address Range for ITED network, egg. “10.10.10.1 to 10.10.10.254”
Fill in the excluding range (if any).
Click “Save”.



11. Logout
12. Perform a major upgrade manually if a more recent major upgrade for WebSAMS 3.0 can be found.

<https://cdr.websams.edb.gov.hk/版本升級/>

Note: N New installation R Re-installation

版本升級

主頁 > 版本升級



13. Select the corresponding build version to upgrade and synchronized the build version.

網上校管系統版本升級

主頁 > 版本升級 > 網上校管系統

網上校管系統版本升級主要包含各式系統更新，例如程式變更、新增模組、功能提升及資料庫結構改動。
 進行升級前，學校應閱讀版本升級指南及相關版本說明，並按所屬網上校管系統版本的升級連結進行升級。

注意事項

為確保網上校管系統運作暢順，以及在有需要時獲得迅速而適切的技術支援，學校務必適時進行版本升級。
 學校系統管理員亦應監察整個過程，以確保系統升級成功。

發行日期	系統現時版本	目標版本	版本說明	升級連結
28.01.2021	3.0.0.26112020	3.0.0.28012021	英	即時升級

► [按這裡下載以前升級版本](#)

Note: N New installation R Re-installation

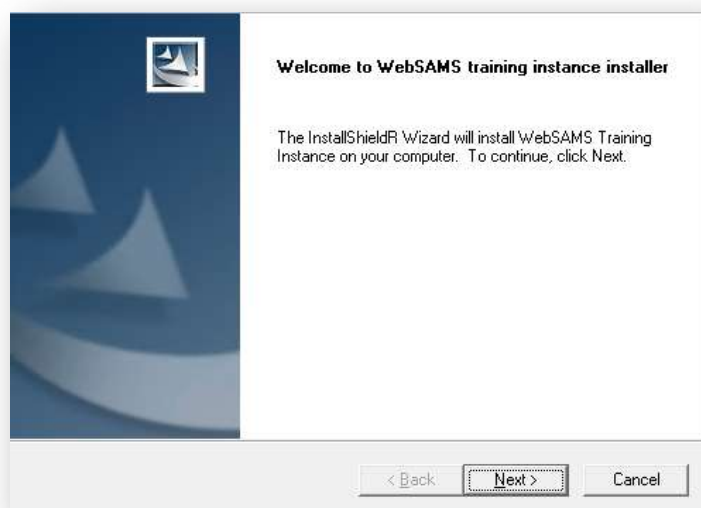
7.9 WebSAMS Training Instance Installation (Optional)



The Training Instance is an add-on program to the WebSAMS application. The WebSAMS production instance must be installed prior to the installation of training instance.

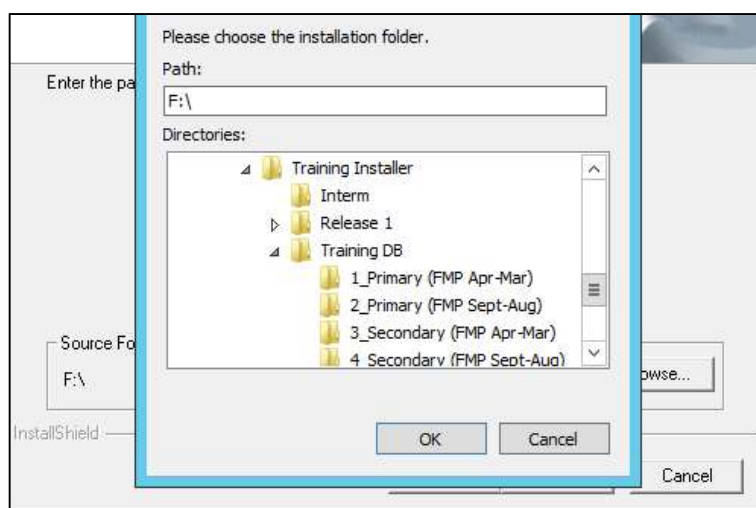
1. Launch the training instance installation wizard.

Path: *System Installation DVD: Training Installer/autorun.vbs*



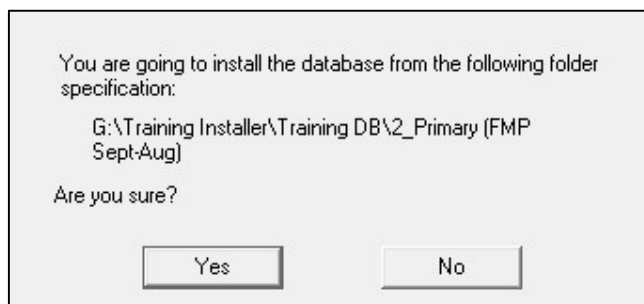
2. Click “Browse” and select the path for the Training Database (Please consult school for choosing appropriate database. For those through-train schools that have both primary and secondary school level, the school should be informed that only primary or secondary level of training database can be selected.)

Path: *System Installation DVD: Training Installer/Training DB/...*

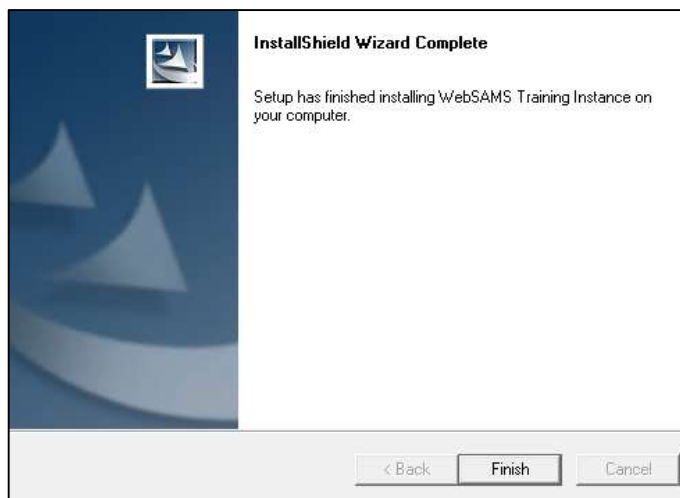


Note: New installation Re-installation

3. Click “Yes” to confirm the database path and let the installation wizard to proceed.



4. When the installation is completed the screen below will be shown:

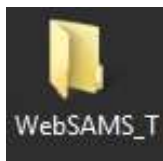


Note: The installer installs the following programs into WebSAMS server:

- WebSAMS training application directory
Path: D:\WebSAMS_T\
- WebSAMS training school data and report templates
Path: E:\Data\9999\
- WebSAMS training school original data set
Path: E:\Data\training

5. Re-start the server.
6. Steps to start the training instance and login:

After the installation, you should find a folder on the desktop named “WebSAMS_T” :



Note: N New installation R Re-installation

Open the “WebSAMS_T” folder, you should find the shortcuts as shown below.
To start WebSAMS Training Instance, you need to execute the shortcuts in sequence:

1. Start Apache_t
2. Start Database_t
3. Start Wildfly_t

After Wildfly is started, open a browser and access the WebSAMS login page.

URL: *http://<your_websams_domain_name>:7010/*

7. Other tools which are helpful to the operation of WebSAMS training environment.

User can perform database restore or backup tasks for training database by the three script files as follows:

1. Restore_to_original.bat – to reset or restore the training database to the original image
2. Backup_snapshot.bat – to backup a training database snapshot
3. Restore_snapshot.bat – to restore the training database snapshot

Path: *Desktop/ WebSAMS_T/tools/*

7.10 Schedule Jobs



7.10.1 Window Scheduler Jobs

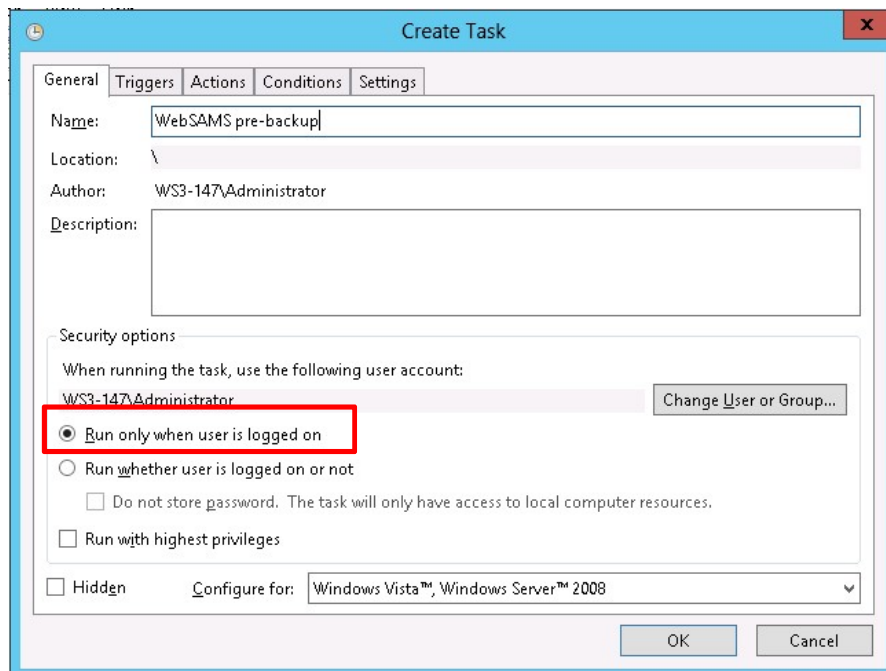
Upon completion of the WebSAMS installation program, there would be a number of batch scripts in “D:\WebSAMS3.0\batch\”.

Window Scheduler would be used to schedule:

- “pre_backup.bat” to be run at 0000 everyday, and
- “post_backup.bat” to be run at 0400 everyday

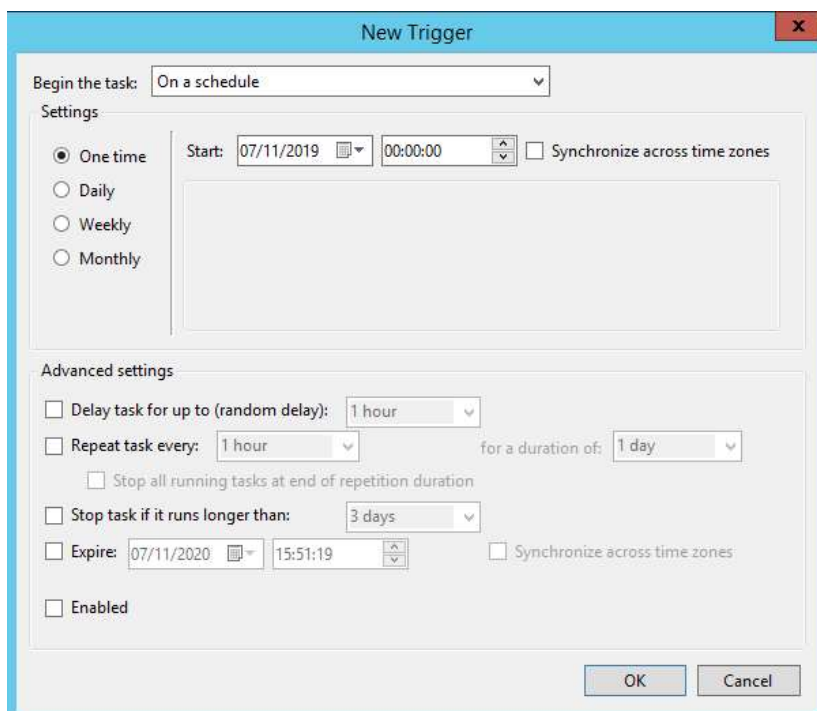
The following shows how to use Windows Scheduler to schedule the task “pre_backup.bat”. Similarly, “post_backup.bat” can be done in the similar way.

1. Launch the “Task Scheduler” by “Start -> Administrative Tools -> **Task Scheduler**”.
2. Click ‘**Create Task...**’ in the Action Menu.
3. Type a name in ‘General’ tab for this task: WebSAMS pre-backup and select the option of “**Run only when user is logged on**”.

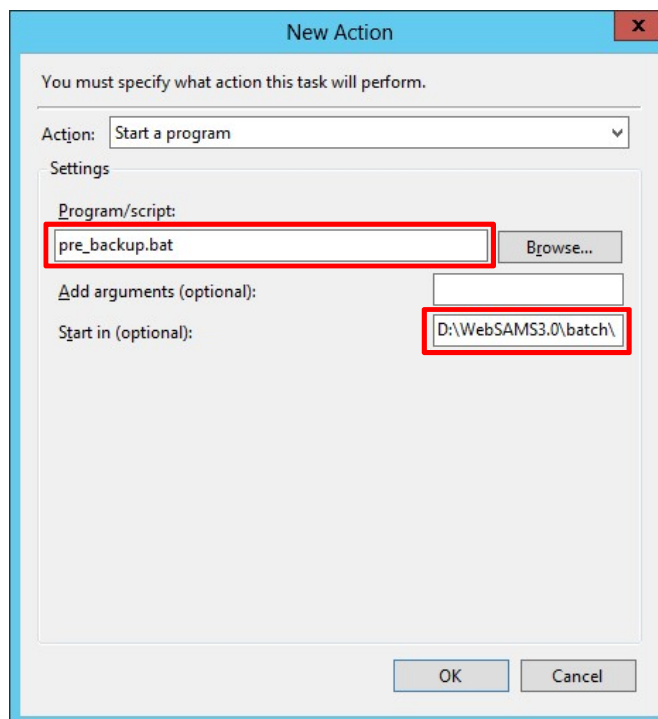


Note:  New installation  Re-installation

4. Click 'New...' button in 'Triggers' tab. In Settings, select '**Daily**' and set start date time to '**(tomorrow) 00:00:00**', then click 'OK' button.

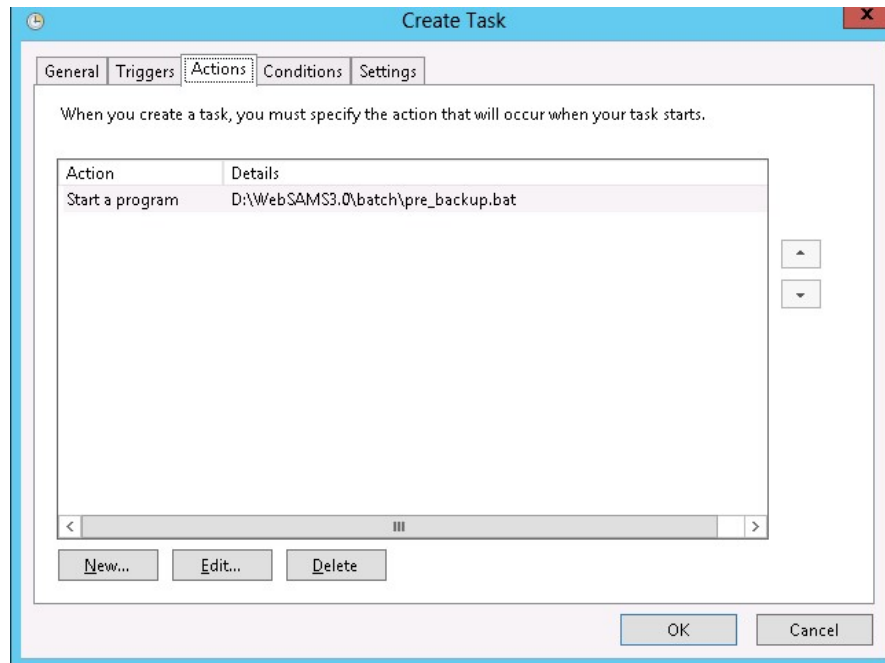


5. Click 'New...' button in 'Actions' tab and click **Browse** button to choose the location of the script file (i.e. "**D:\WebSAMS3.0\batch\pre_backup.bat**"). And then cut the path "**D:\WebSAMS3.0\batch**" from the "**Program/script**" field and paste it to the "**Start in (optional)**" field. And click 'OK' button.



Note: N New installation R Re-installation

6. Click **OK** button.



Note: **N** New installation **R** Re-installation

7.10.2 Backup Job

It is recommended to make a full backup of the whole WebSAMS server for backup job.

Daily backup should be performed from Monday to Sunday. Weekly backup should be run every Sunday and finally a monthly backup has to be run every 1st day of the month.

Retention periods for the backup images are subject to the requirement of a school. A suggested retention plan is list for reference as follows:

Type of backup image	Retention Period
Daily	1 month
Weekly	3 months
Monthly	3 years

The following shows an example of how to schedule the backup jobs using the software of “Symantec Backup Exec System Recovery”.

The configuration of “Symantec Backup Exec System Recovery” consists of 4 tasks. They are

- Set up share folder in NAS,
- Set up Daily backup job,
- Set up Weekly backup job, and
- Set up Monthly backup job

Set up share folder in the NAS device

(The method to configure a shared folder shown below may vary from your machine. Please consult the user manual or your vendors for more details on sharing a folder specific to your machine).

1. Open Internet Explorer in WebSAMS Server and connect to the configuration website of the NAS. (e.g. <http://192.168.1.1>)



2. Log in the site

Note: N New installation R Re-installation

- Click “Basic” in left hand menu, in Date and Time setup, click “Use Local Time” and then click “Apply”

Date and Time Setup

Date: 2008 Year 12 Month 12 Day

Time: 17 Hours 8 Mins 8 Secs

Time Zone: GMT+08:00

NTP Settings

NTP Server: ☐ Enable ☒ Disable

NTP Server Address:

☐ Use default NTP server (ntp.jst.mfeed.ad.jp)

NTP Synchronization Frequency: Once a day

Text Display Settings

Display Language: English English 英語

Windows Client Language: CP437 (United States, Canada)

- Click “Shared Folders” in left menu

Shared Folders

Shared Folders Setup

☐ Disk or Array

Shared Folder Name	Shared Folder Description
info	Teststation utilities

All trash boxes in every shared folder are emptied at once.
It might take for long time depending on folder usage.

Note: N New installation R Re-installation

5. Click “Add”

Input the values as the following screen.

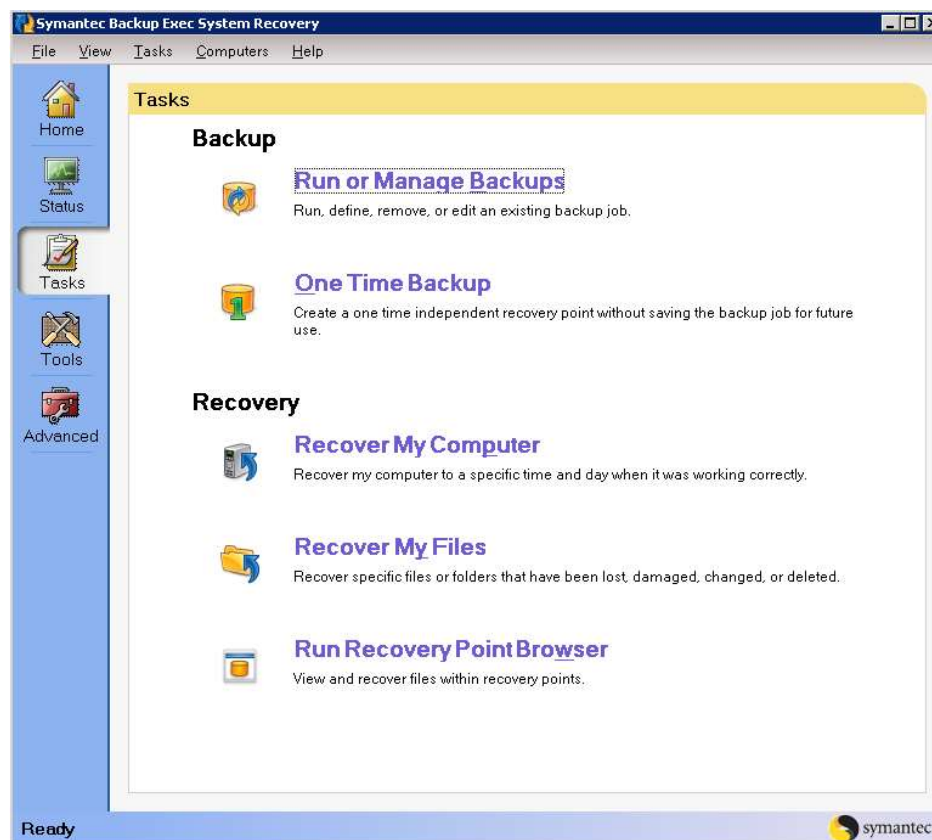
6. Click “Apply” to save the record.

7. The shared folder has been created successfully and can be accessed by WebSAMS server now.

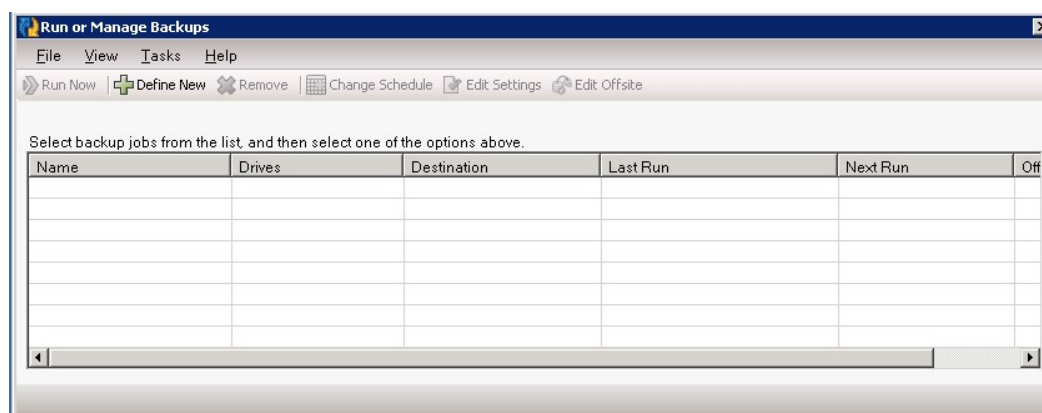
Note: **N** New installation **R** Re-installation

Set up Daily backup job

1. Launch the “Backup Exec System Recovery” application in Start → All Programs → Symantec → Backup Exec System Recovery → Backup Exec System Recovery
2. Click “Tasks”
3. Click “Run or Manage Backups”



4. Click “Define New”

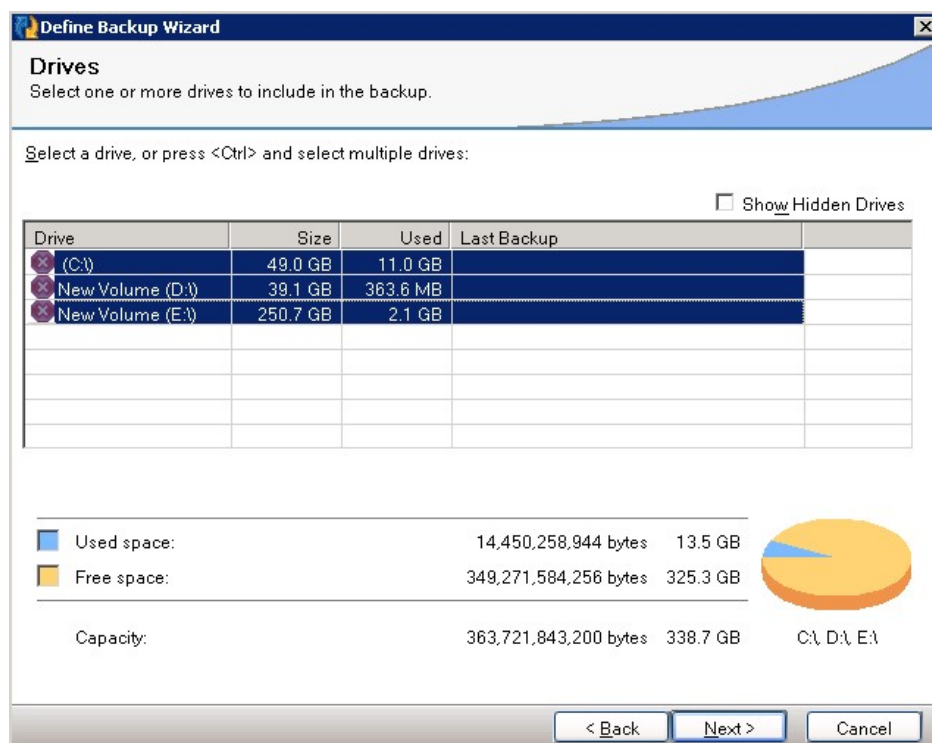


Note: N New installation R Re-installation

5. Choose “Back up my computer” and click “Next”

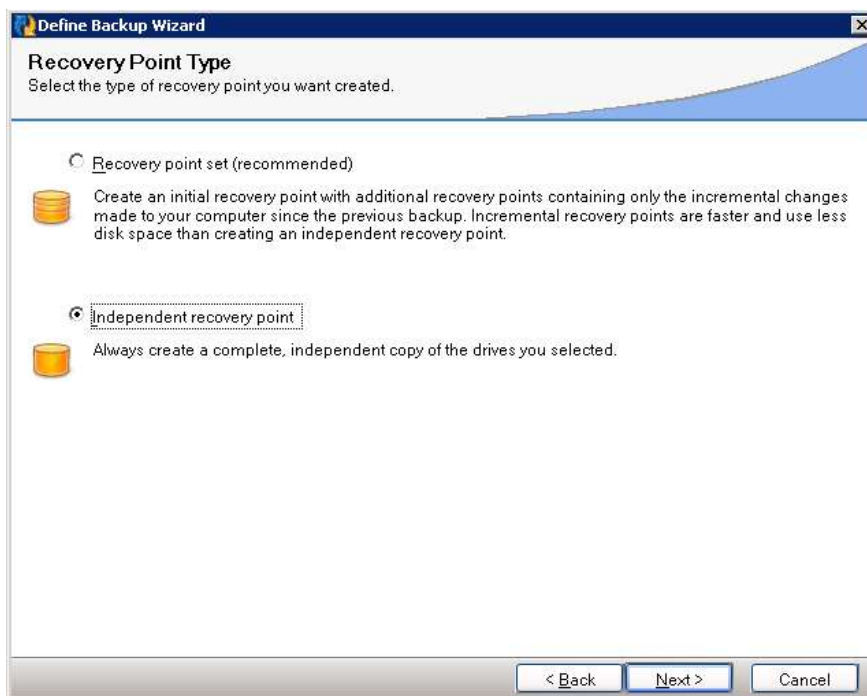


6. Select “C”, “D” and “E” drive and click “Next”

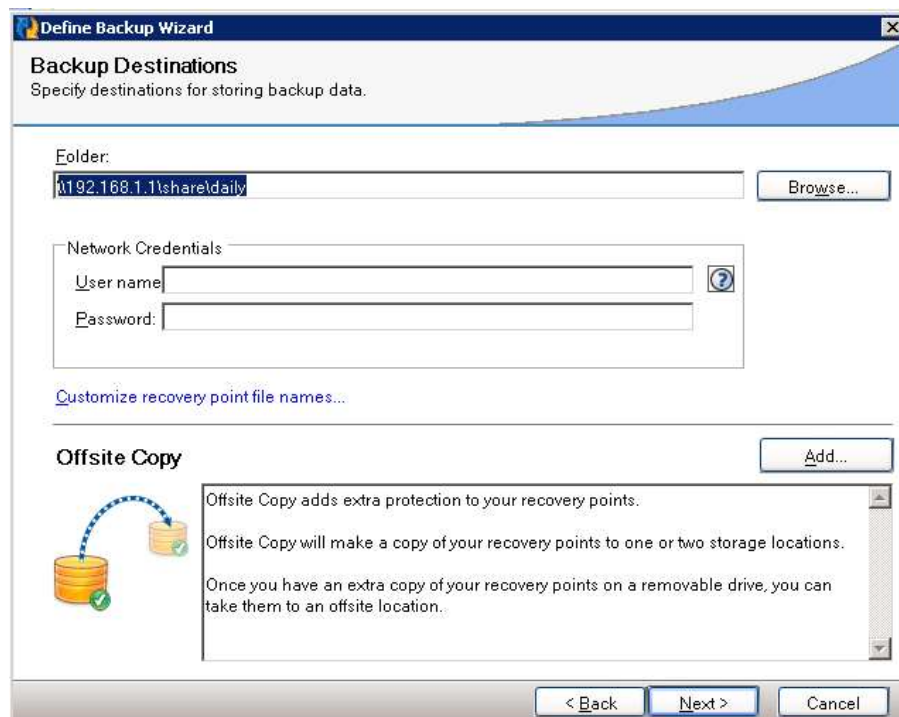


Note: N New installation R Re-installation

7. Select “Independent recovery point” and click “Next”

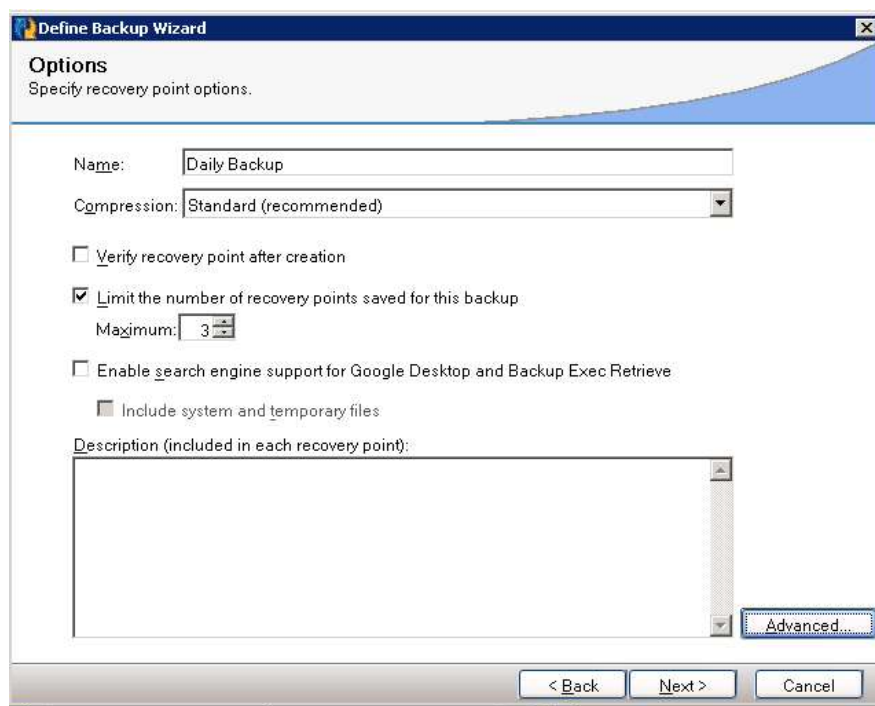


8. In Folder, type “\\192.168.1.1\share\daily” (let’s say IP address of the NAS is “192.168.1.1”) and click “Next”. If system asks whether to create the “daily” folder, click “Yes”.

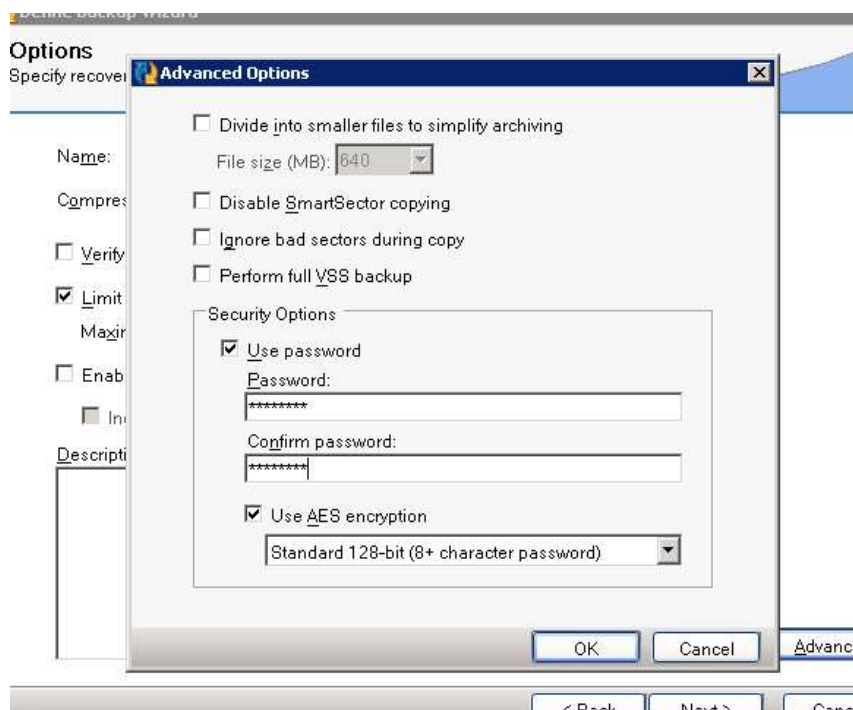


Note: **N** New installation **R** Re-installation

9. Input “Daily Backup” as the name and then click “Advanced”.

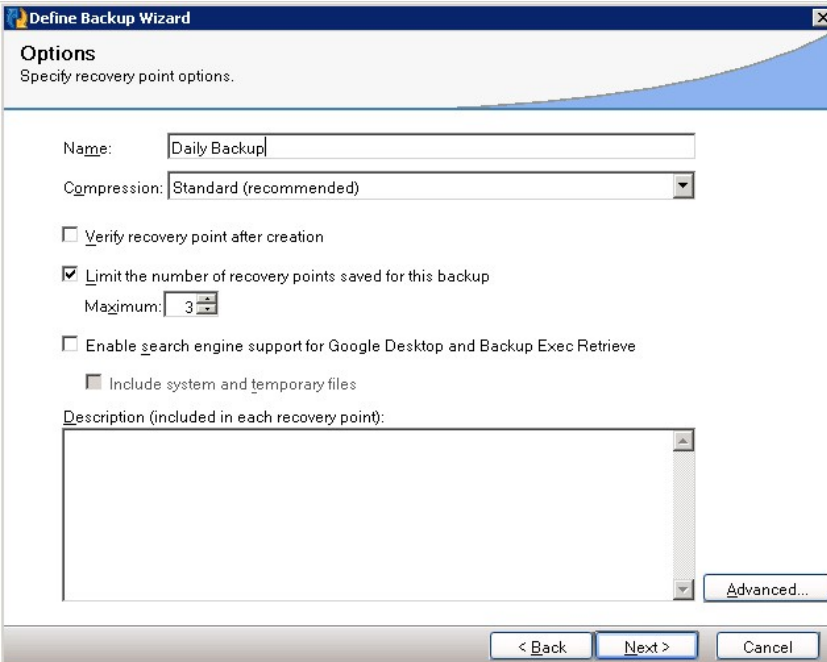


10. Check the “Use password” option and request the school users to input the Password. Also check “Use AES encryption” for higher security level. Press “OK” to return to the previous “Options” screen.



Note: N New installation R Re-installation

11. Click “Next” to proceed to next step.



Define Backup Wizard
Options
Specify recovery point options.

Name:

Compression:

☐ Verify recovery point after creation

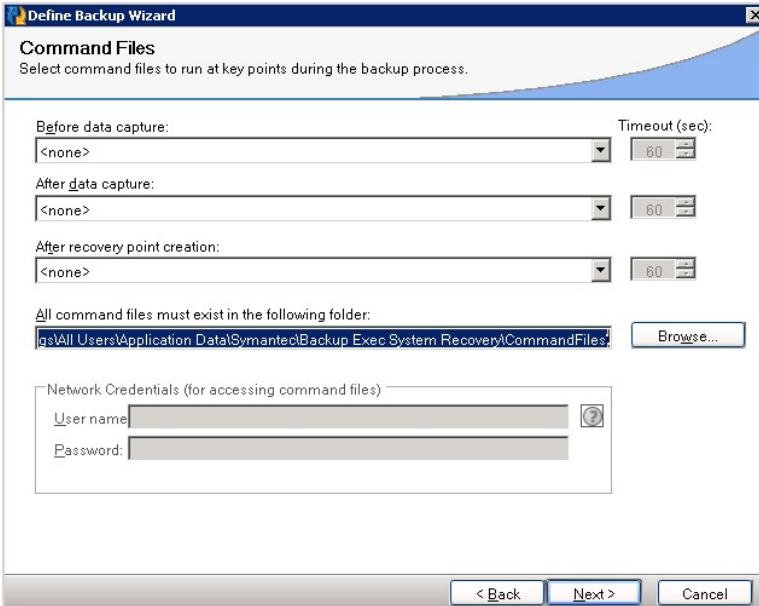
☒ Limit the number of recovery points saved for this backup
Maximum:

☐ Enable search engine support for Google Desktop and Backup Exec Retrieve

☐ Include system and temporary files

Description (included in each recovery point):

12. Click “Next” again.



Define Backup Wizard
Command Files
Select command files to run at key points during the backup process.

Before data capture: Timeout (sec):

After data capture:

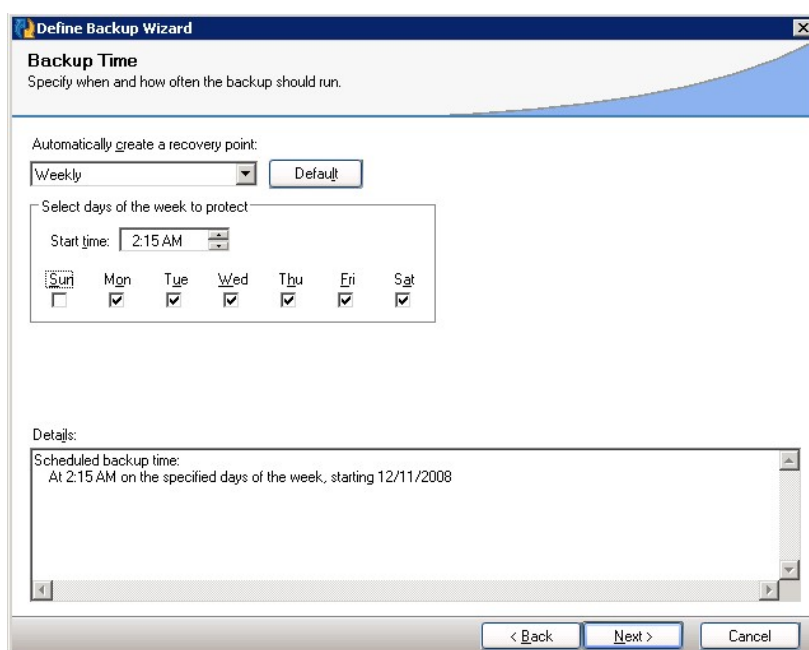
After recovery point creation:

All command files must exist in the following folder:

Network Credentials (for accessing command files)
User name:
Password:

Note: N New installation R Re-installation

13. Select “Weekly” in the “Automatically create a recovery point:” option. Set start time to “2:15”a.m. and select week days from Monday to Saturday. At last click “Next”

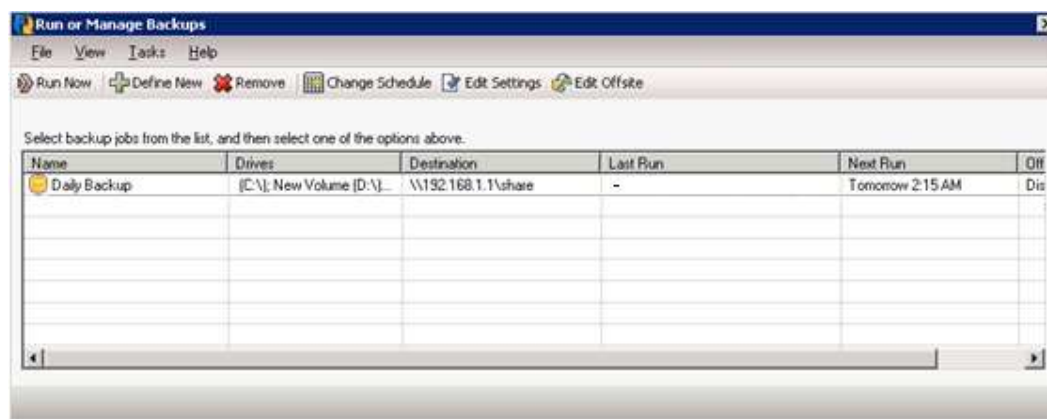


14. Click “Finish” to save the schedule

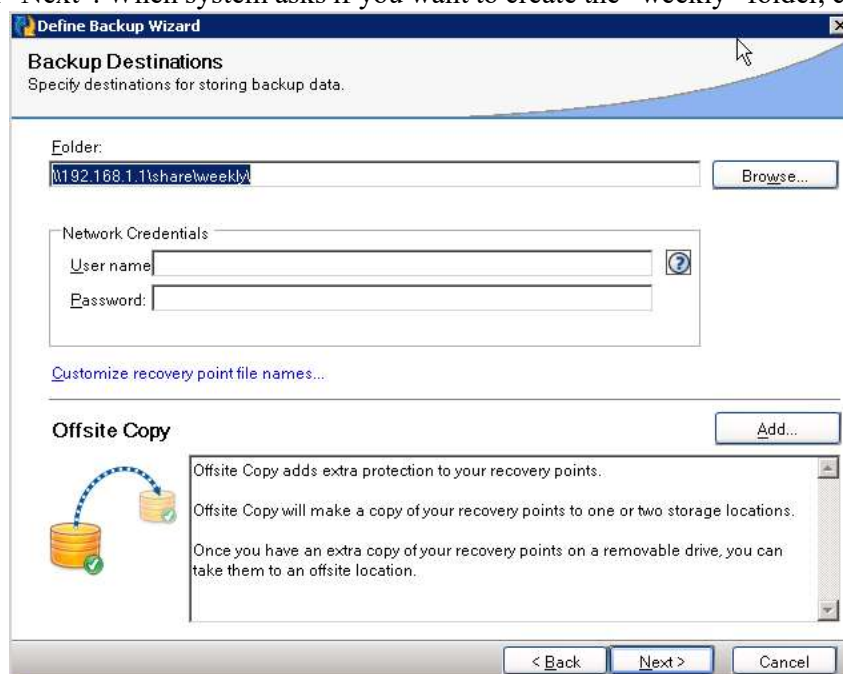


Note: N New installation R Re-installation

15. Schedule entry is added

**Set up Weekly backup job**

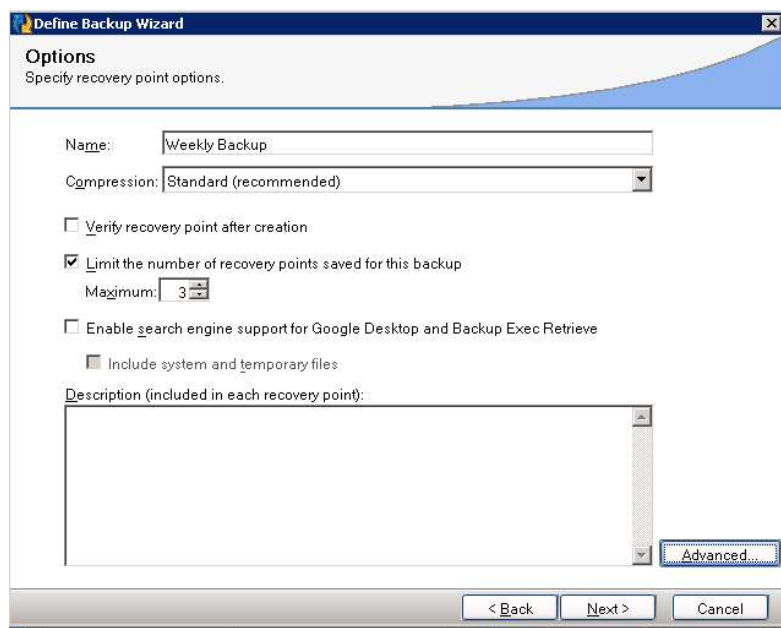
1. Repeat step 1 to Step 7 of the part for “Setup up Daily backup job”.
2. In Folder, type “\\192.168.1.1\share\weekly” (let’s say IP address of NAS is “192.168.1.1”) and click “Next”. When system asks if you want to create the “weekly” folder, click “Yes”.



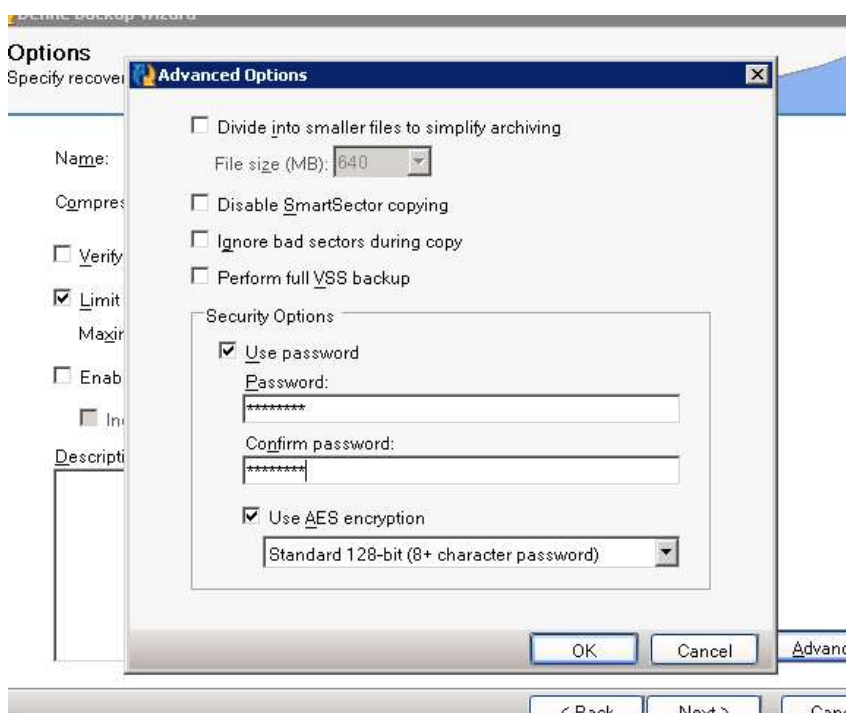
3. System will ask if you want to create the “weekly” folder, click “Yes”

Note: **N** New installation **R** Re-installation

4. Input “Weekly Backup” as the name and then click “Advanced”.

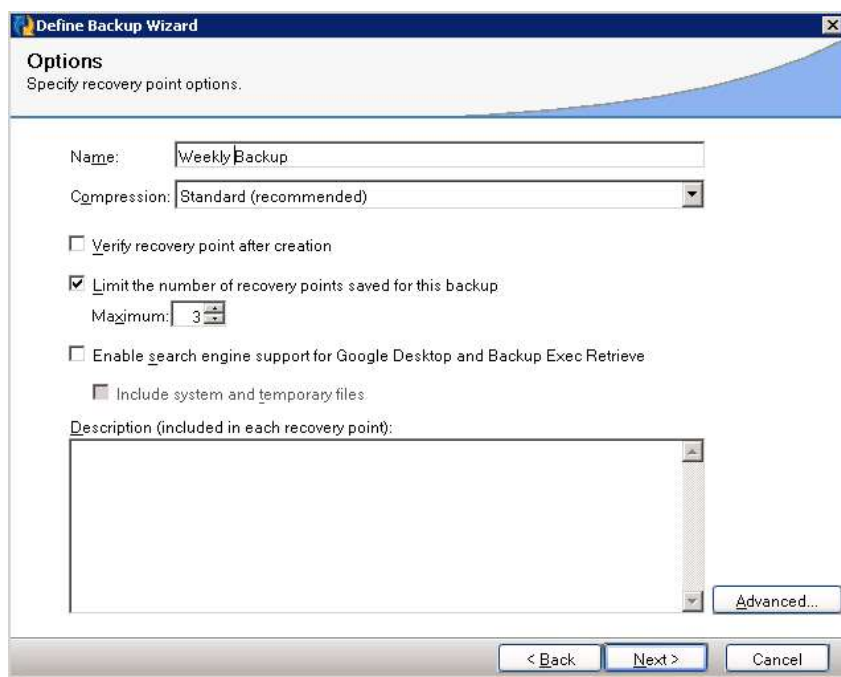


5. Check the “Use password” option and request the school users to input the Password. Also check “Use AES encryption” for higher security level. Press “OK” to return to the previous “Options” screen.

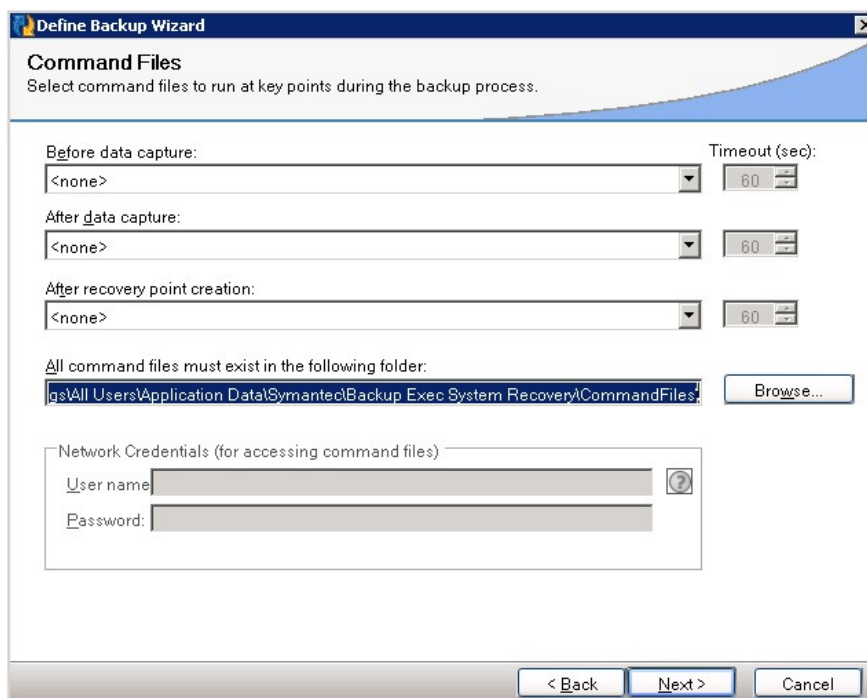


Note: N New installation R Re-installation

6. Click “Next” to proceed to next step.

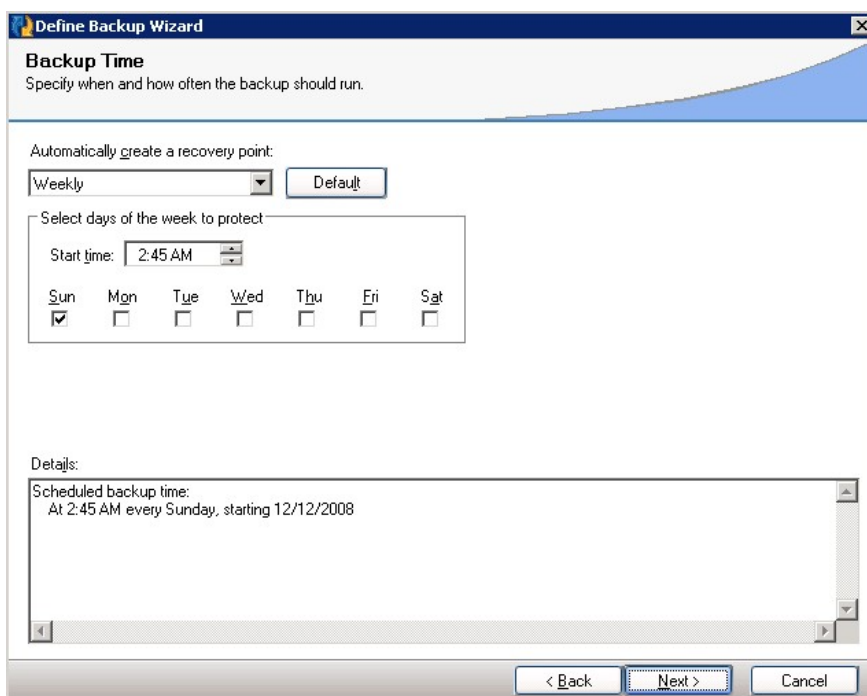


7. Click “Next” again

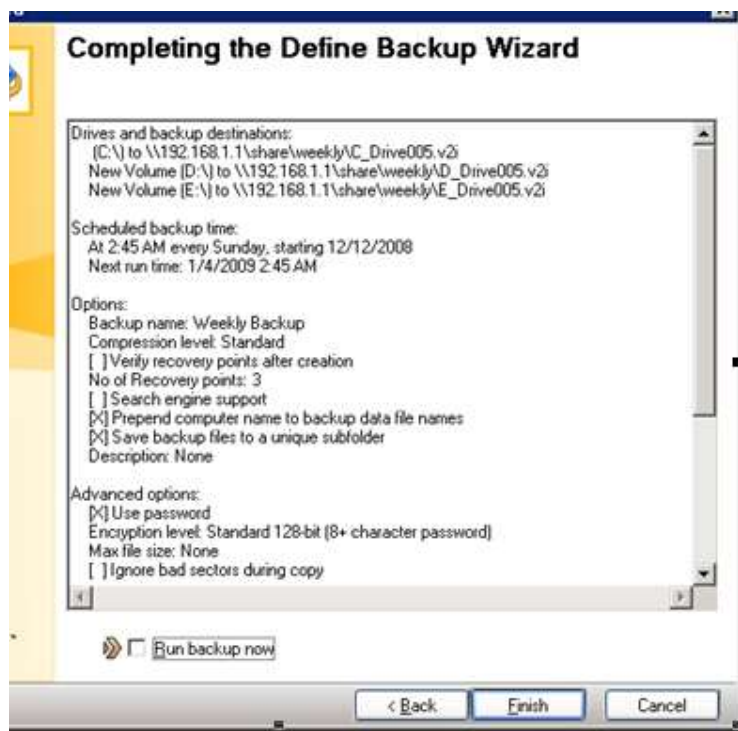


Note: N New installation R Re-installation

8. Select “Weekly” in the “Automatically create a recovery point:” option. Then set start time to “2:45” a.m. and select “Sunday” only. At last, click “Next”.

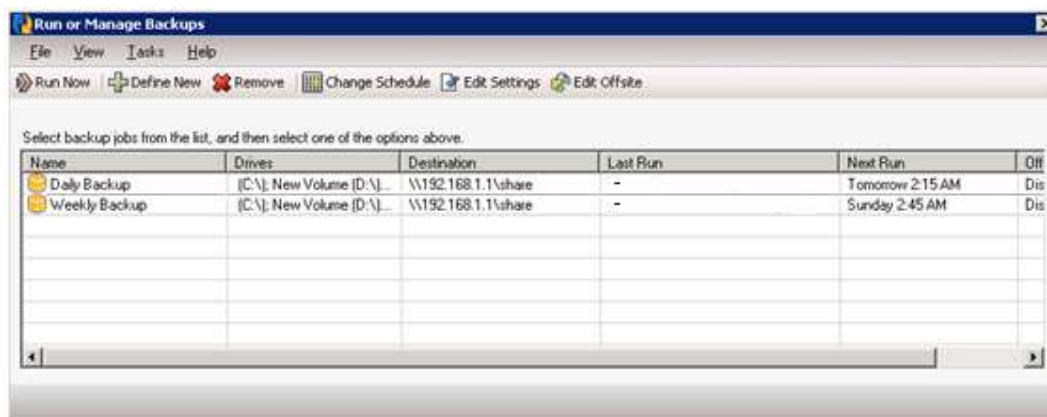


9. Click “Finish” to save the schedule

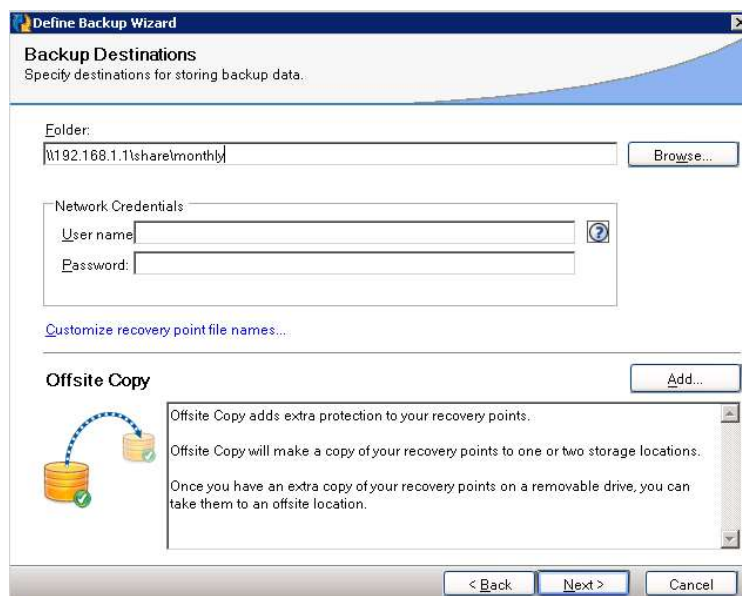


Note: N New installation R Re-installation

10. Schedule entry is added

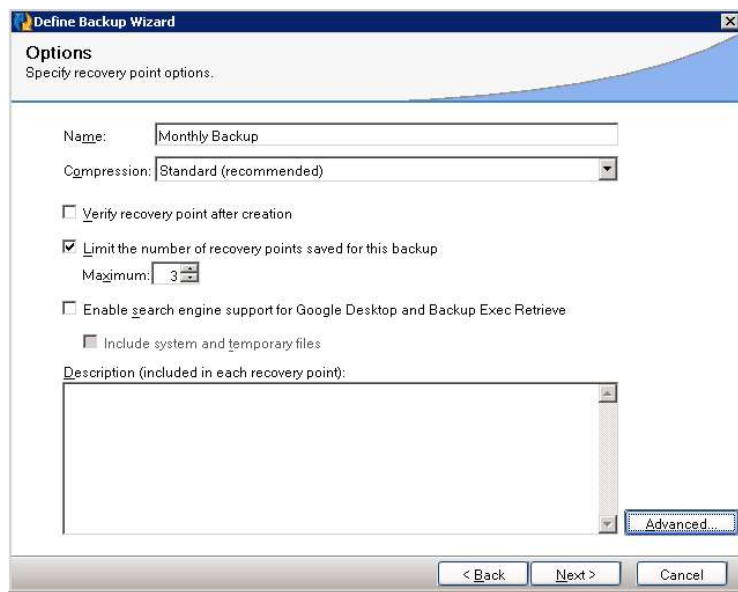
**Set up Monthly Backup Job**

1. Repeat step 1 to Step 7 of the part for “Setup up Daily backup job”.
2. In Folder, type “\\192.168.1.1\share\monthly” (let’s say IP address of NAS is “192.168.1.1”) and click “Next”. If system asks whether you want to create the “monthly” folder, click “Yes”.

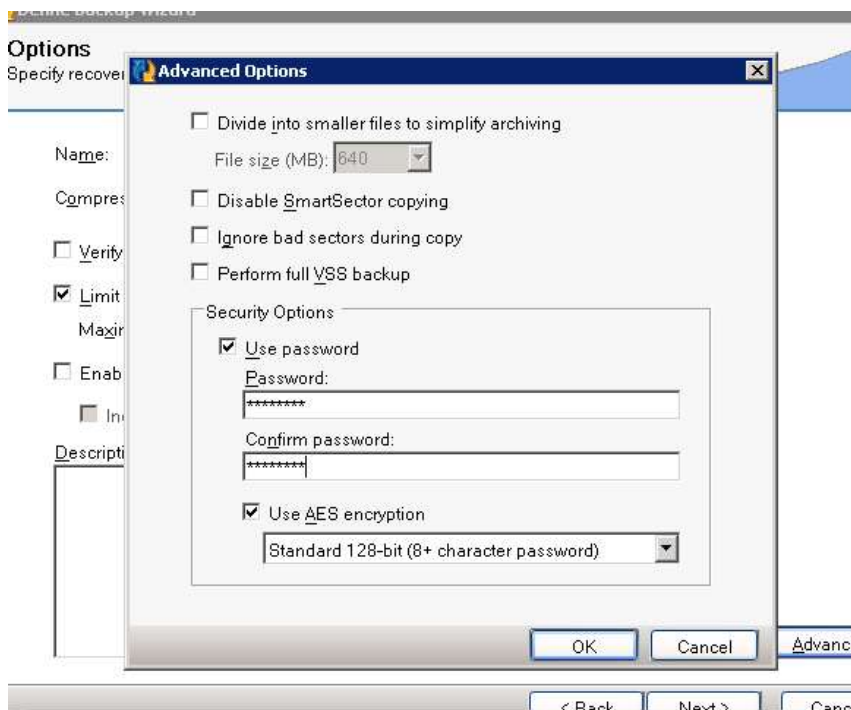


Note: N New installation R Re-installation

3. Input “Monthly Backup” as the name and then click “Advanced”.

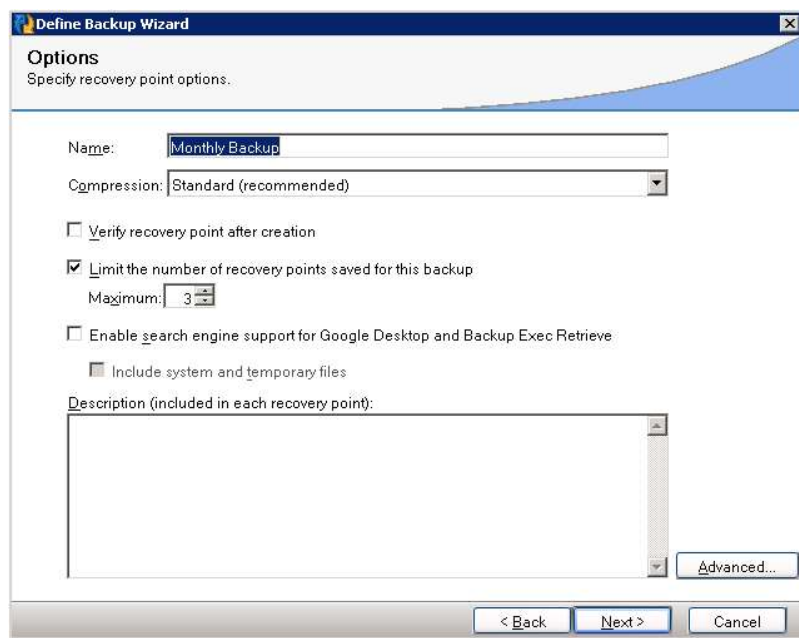


4. Check the “Use password” option and request the school users to input the Password. Also check “Use AES encryption” for higher security level. Press “OK” to return to the previous “Options” screen.

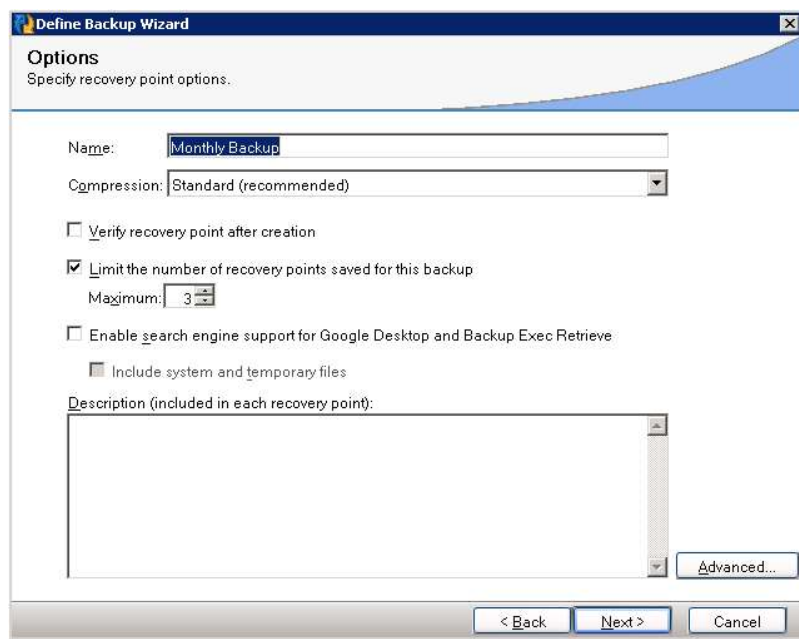


Note: N New installation R Re-installation

5. Click “Next” to proceed to next step.

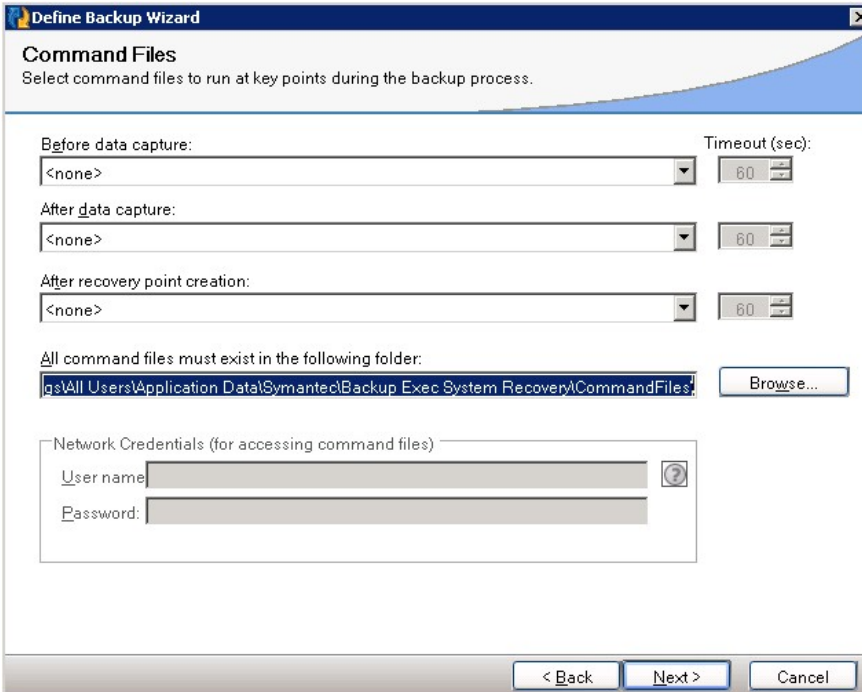


6. Click “Next” to proceed to next step.



Note: **N** New installation **R** Re-installation

7. Click “Next” again



Define Backup Wizard

Command Files
Select command files to run at key points during the backup process.

Before data capture: Timeout (sec):

After data capture:

After recovery point creation:

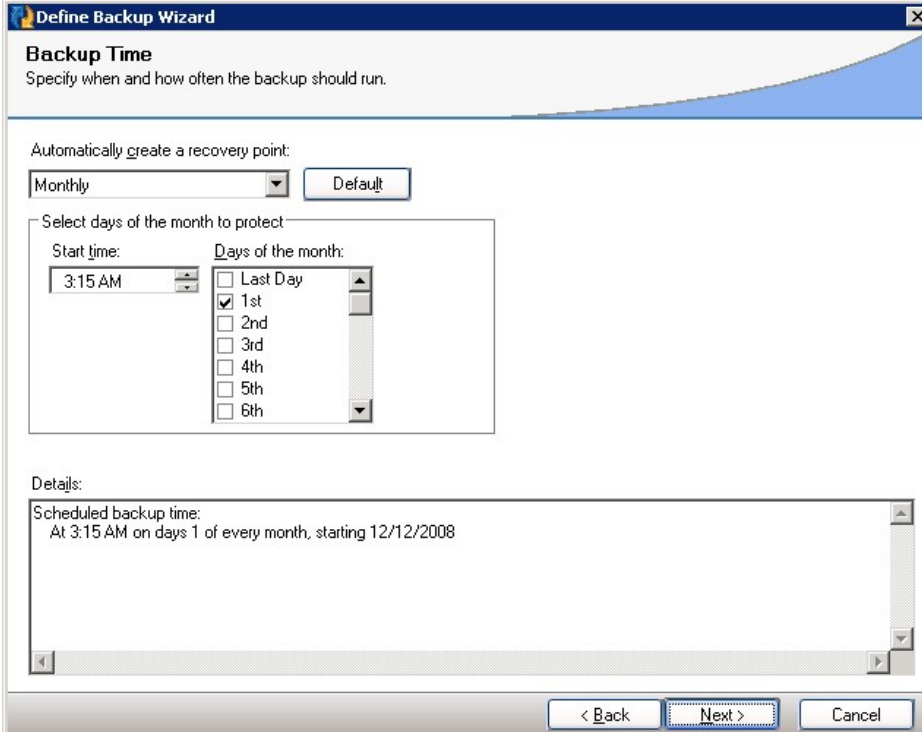
All command files must exist in the following folder:

Network Credentials (for accessing command files)

User name:

Password:

< Back Next > Cancel

8. Select “Monthly” in the “Automatically create a recovery point:” option. Then set start time to “3:15” a.m. and select “1st” day of the month to protect. At last, click “Next”.


Define Backup Wizard

Backup Time
Specify when and how often the backup should run.

Automatically create a recovery point:

Select days of the month to protect

Start time:

Days of the month:

- ☐ Last Day
- ☒ 1st
- ☐ 2nd
- ☐ 3rd
- ☐ 4th
- ☐ 5th
- ☐ 6th

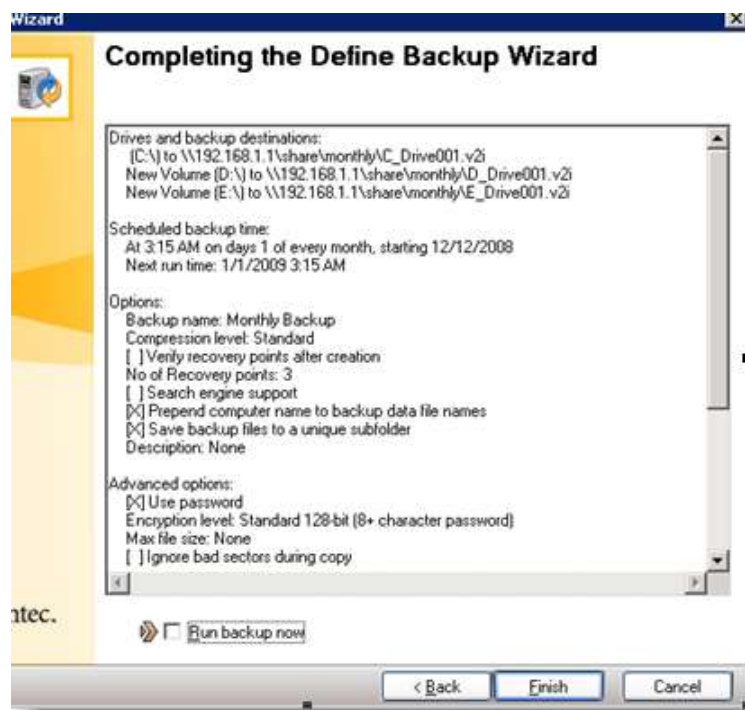
Details:

Scheduled backup time:
 At 3:15 AM on days 1 of every month, starting 12/12/2008

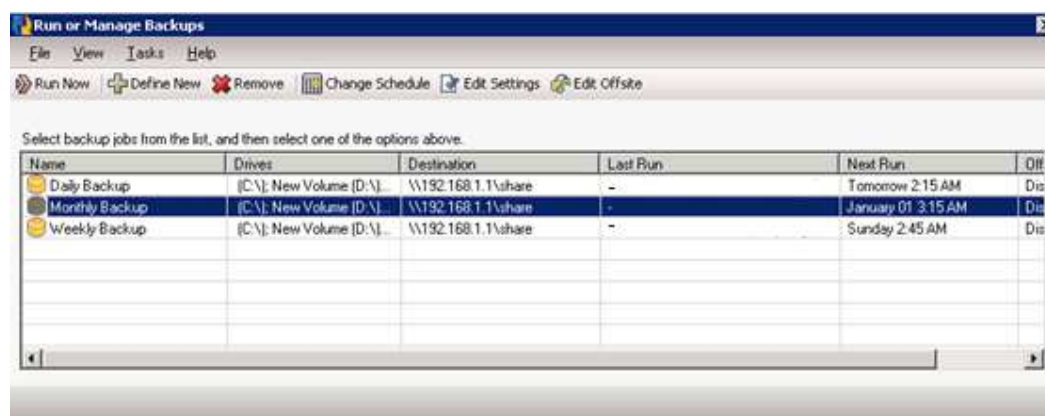
< Back Next > Cancel

Note: N New installation R Re-installation

9. Click “Finish” to save the schedule



10. Schedule entry is added



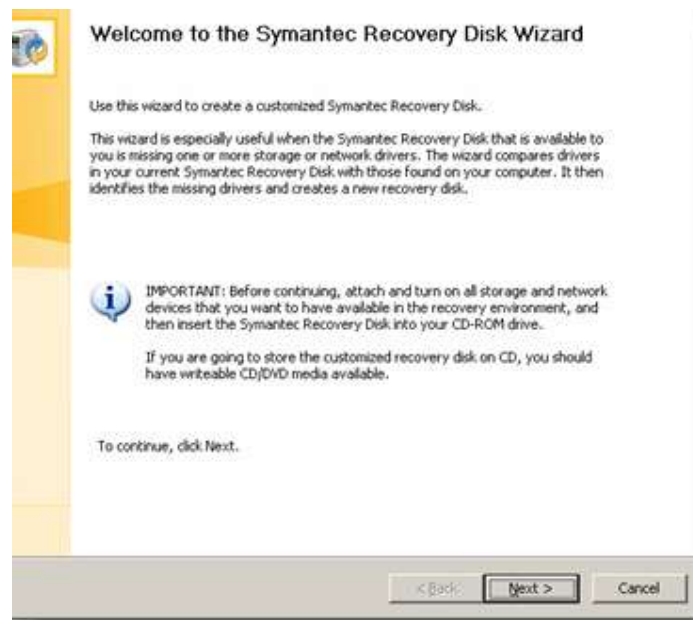
Note: N New installation R Re-installation

7.10.3 Create Recovery CD

At the moment when disaster happens that your system cannot function properly or you need to roll back your system to the status of a specific backup moment, system restoration or recovery is necessary. To restore your WebSAMS system, in addition to your backup copy of full system image, a tool that can boot up your machine to an rescue environment for supporting recovery of your machine, despite how worse the current situation of your system is, has to be available. This tool, which is usually called as Recovery CD or Rescue CD, can normally be created by your backup software. In view of the importance of this Recovery CD, you are highly recommended to ALWAYS store it in a safe place that can only be accessed by the authorized persons and also can easily be found at the critical moment when it is needed.

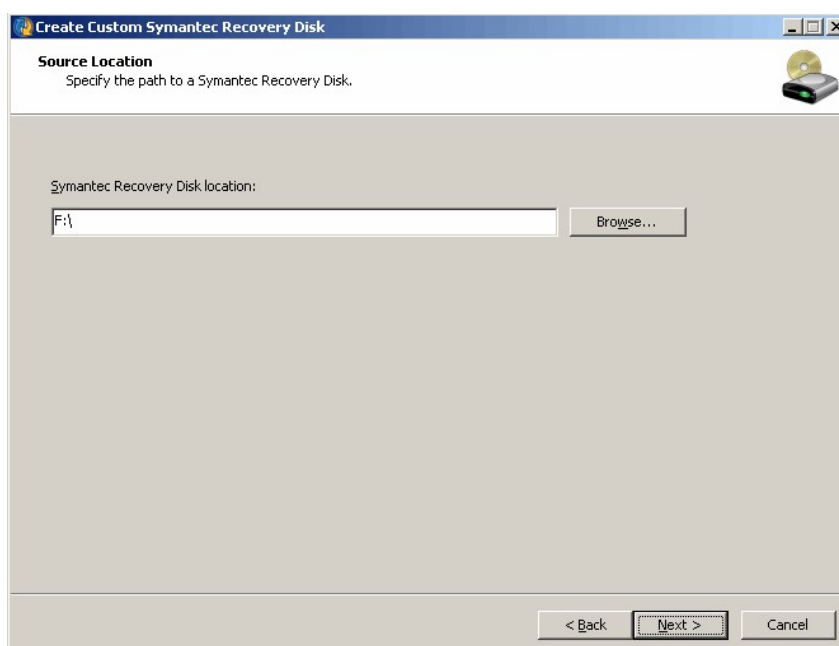
The following shows an example of how to create a recovery CD using the software of “Symantec Backup Exec System Recovery”.

1. Launch the “Backup Exec System Recovery” software
Path: Start > Symantec > Backup Exec System Recovery > Backup Exec System Recovery
2. Open the “Create Recovery Disk” user interface
Path: Task > Create Recovery Disk
3. Click “Next” on the welcome screen.

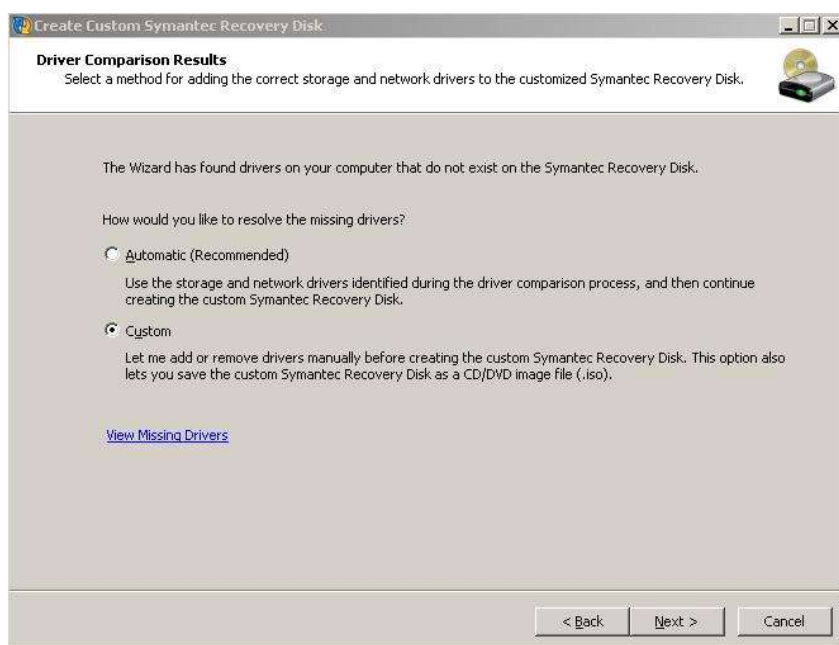


Note: **N** New installation **R** Re-installation

4. Insert the *Symantec Recovery Disk* to your CD-ROM drive. Click “Browse” and select the CD-ROM drive. Click “next” to proceed.

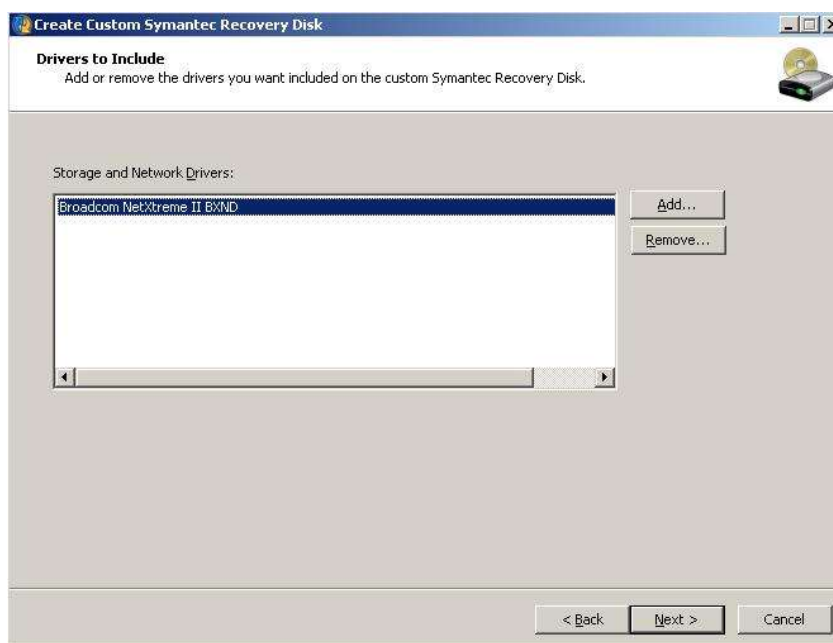


5. Select “Custom” and click “Next”.

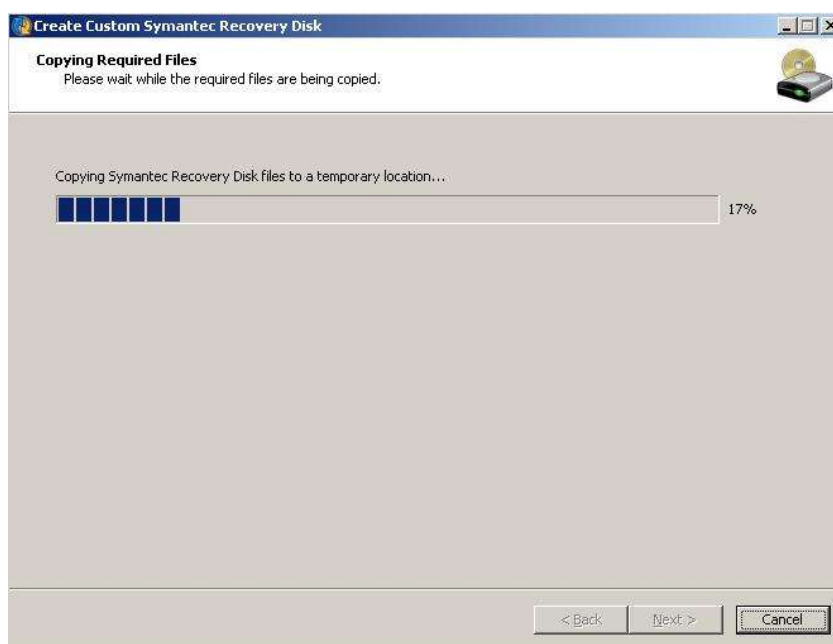


Note: **N** New installation **R** Re-installation

6. If the Storage and Network Drivers of your WebSAMS server is different from those drivers in the *Symantec Recovery Disk*, the drivers should be shown like the screen below. Accept the default and click “Next”.

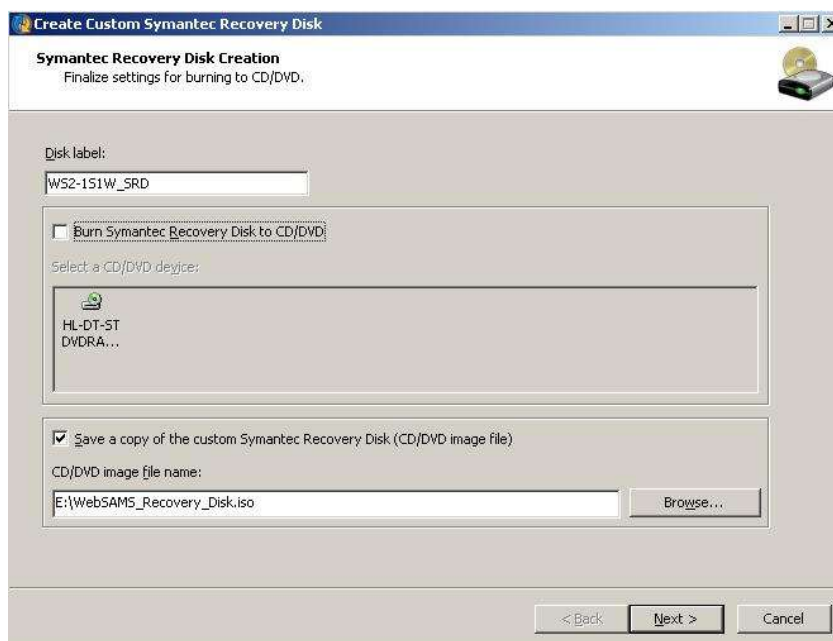


7. Copying task will be started automatically. Click “Next” when it completes.

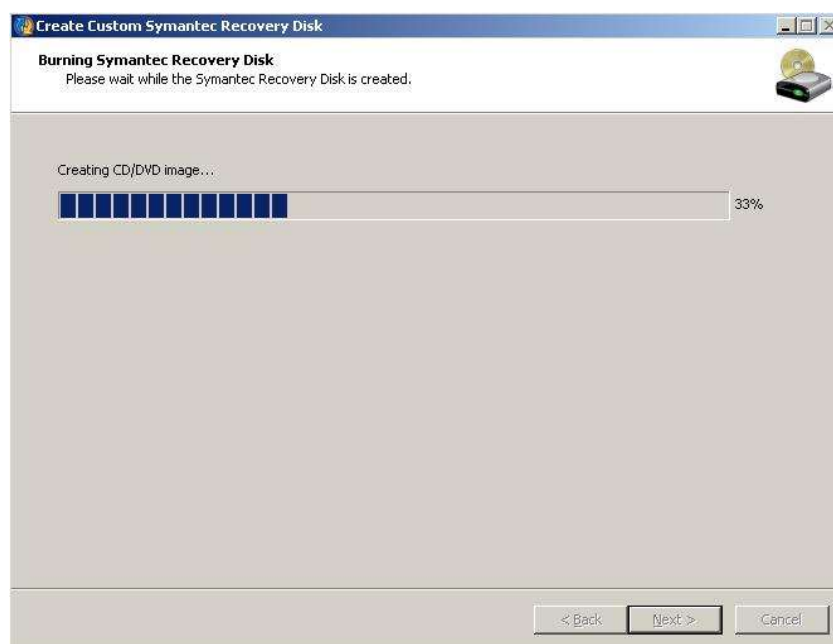


Note: N New installation R Re-installation

8. Make sure to uncheck the first option and select the second option only. You should create the ISO file of the custom Recovery CD directly. Choose a destination and decide the file name as you like.



9. The CD image will be created automatically.



Note: **N** New installation **R** Re-installation

10. Your custom Recovery CD image is created successfully.



Note: You should manually burn the Recovery CD from the ISO image right away and **store your custom Recovery CD in a safe place.**

7.11 Restore WebSAMS Server and Application

R

As your backup software supports the bare-metal restore, the only resources you need to recover your system are only:

- A recovery CD that you have created beforehand;
- A full backup image of your system and;
- The password that entitle the reading of the full backup image.

Please be alerted that while the system is being restored, all data in the hard disk of the WebSAMS server **will be erased** in order to restore the system back to the moment when the backup job is run. **Restore your WebSAMS server only when it is really necessary.**

The following shows an example of how to create a recovery CD using the software of “Symantec Backup Exec System Recovery”.

1. Insert the Backup Exec System Recovery CD (created in 7.10.3) into the DVD/CD-ROM drive of the WebSAMS server.
2. Restart the server and boot by the CD.
Note: Make sure the boot sequence of your server is set.
3. As soon as you see the prompt “Press any key to boot from CD”, press a key to start the recovery environment.
4. The system will start loading the necessary setting. Read the license agreement and then click “Accept” to proceed.
5. The main window of the recovery environment will be launch. First of all, you should configure the network setting.

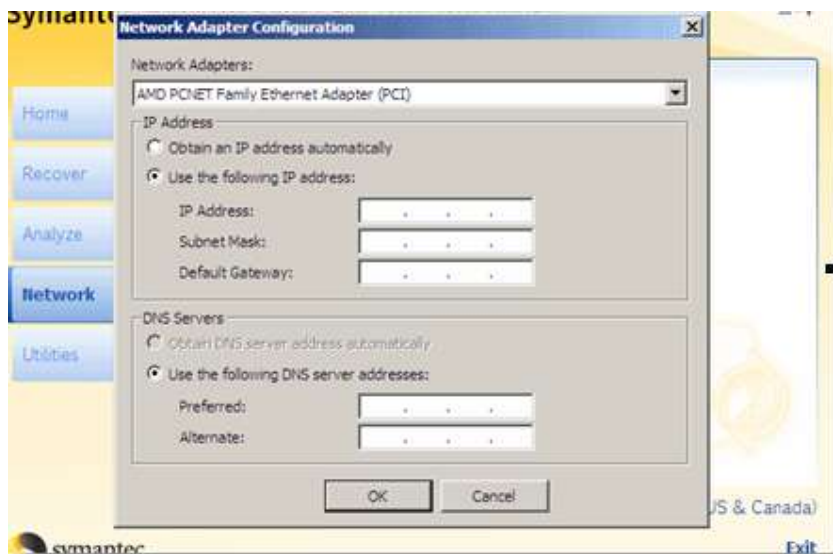
Path: Network > Configure Network Connection Settings



Note: **N** New installation **R** Re-installation

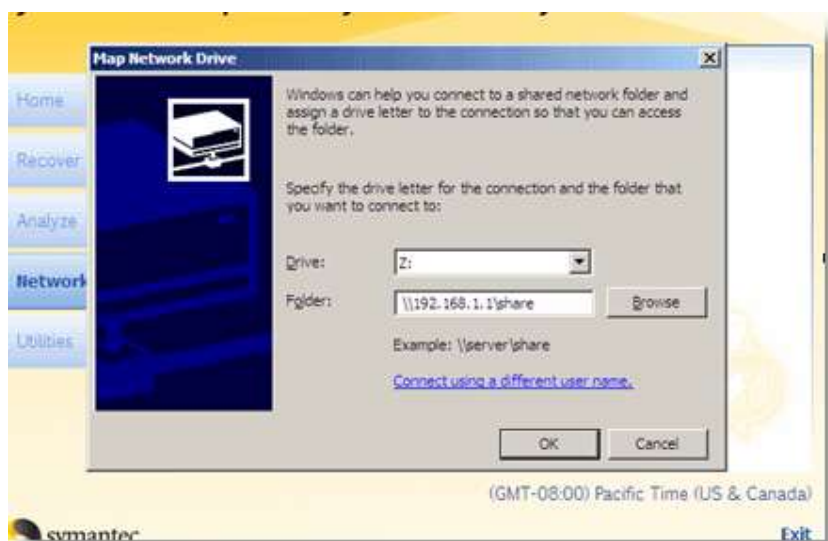
6. In the Network Adapter Configuration screen, select the option “Use the following IP address”. Specify a unique IP address (e.g. 192.168.1.2) and subnet mask of the WebSAMS server. Be sure that the subnet mask matches the subnet mask of the network Segment. Click “OK” to proceed.

Path: Network > Configure Network Connection Settings



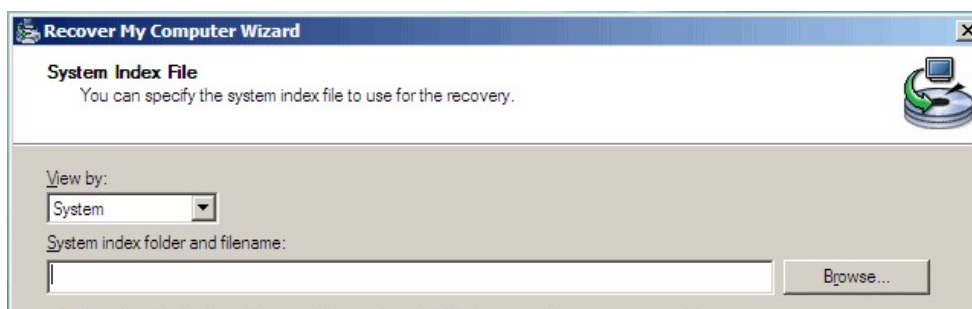
7. Click “Close” to return to the recovery environment's main menu.
8. Input IP address (e.g. “\\192.168.1.1\share”) of the **NAS server**. Click “OK” to proceed.

Path: Network > Map Network Drive

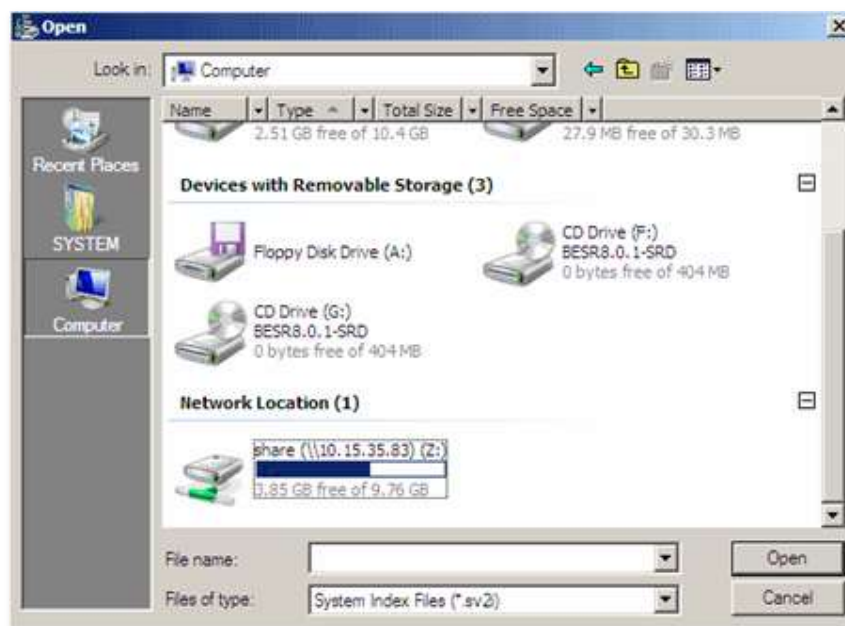


Note: N New installation R Re-installation

9. Return to the Home panel, click “Recover My Computer”.
10. On the Welcome page of the wizard, click “Next”.
11. Select “System” in the “View by” tab.



12. Click “Browse”, locate and select a recovery point (.sv2i) in the mapped drive, and then click “Open”.

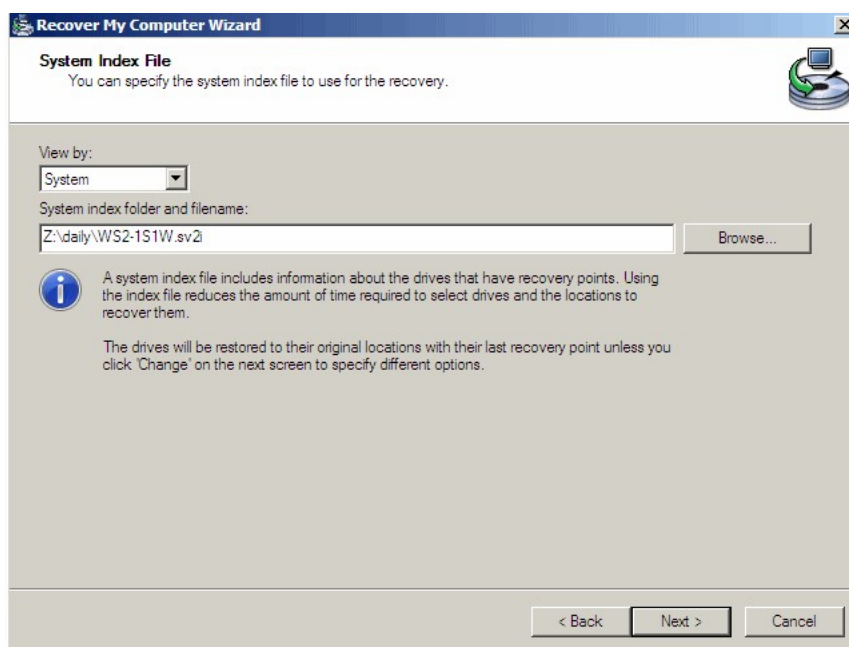


Note: N New installation R Re-installation

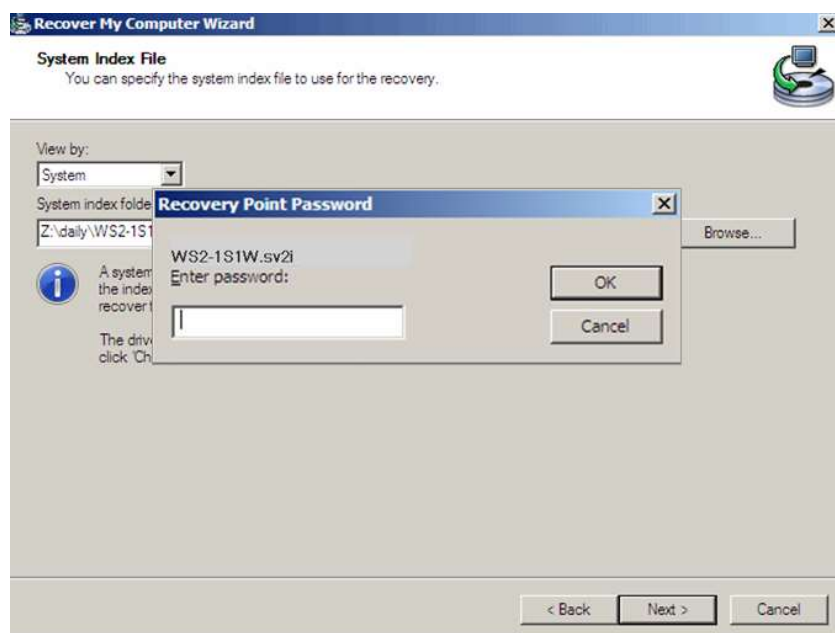


Note: **N** New installation **R** Re-installation

13. Click “Next”

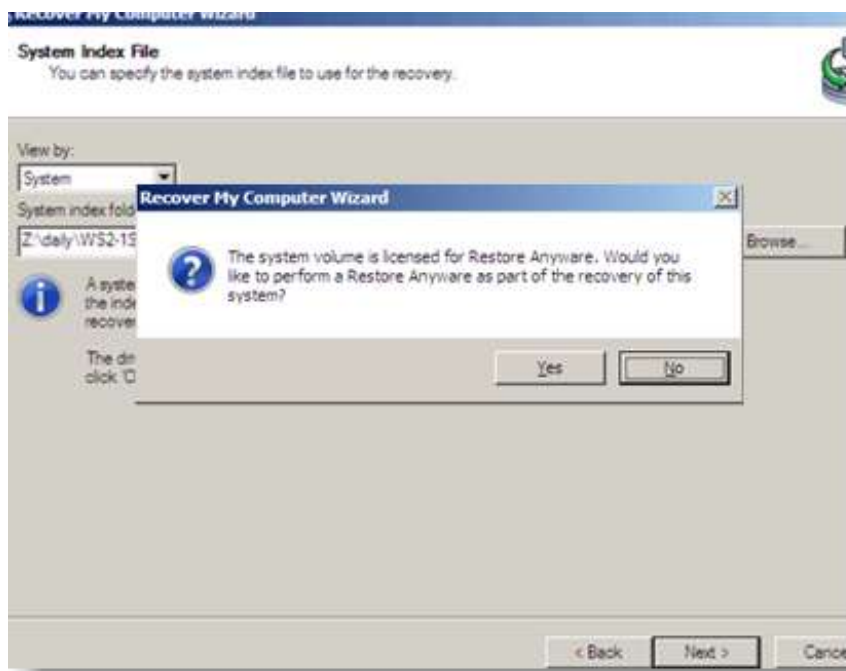


14. Enter the password for the backup image and press “OK”.

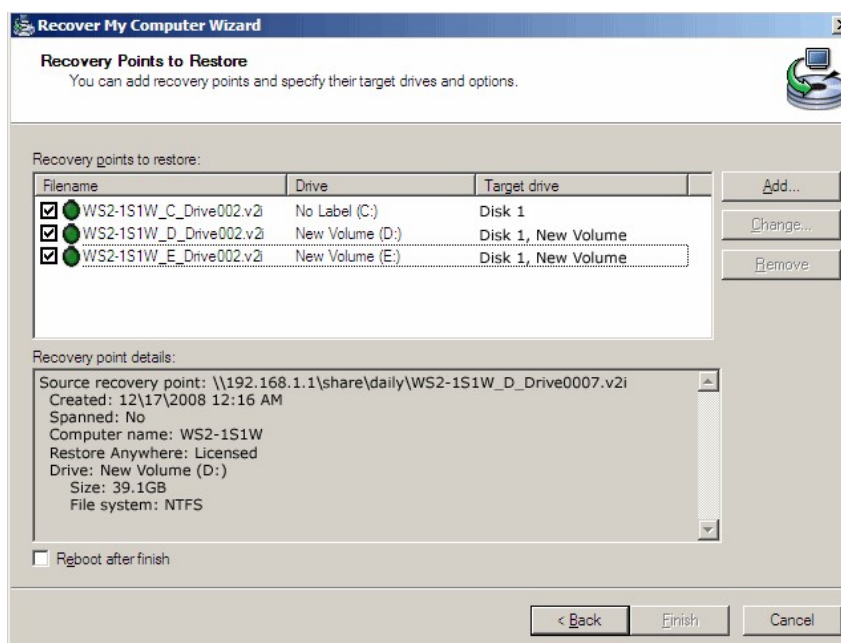


Note: **N** New installation **R** Re-installation

15. A prompt may be shown to let the system to know whether the recovery is to be applied to a machine different from the one where the backup image created. Normally, the answer is “No”.

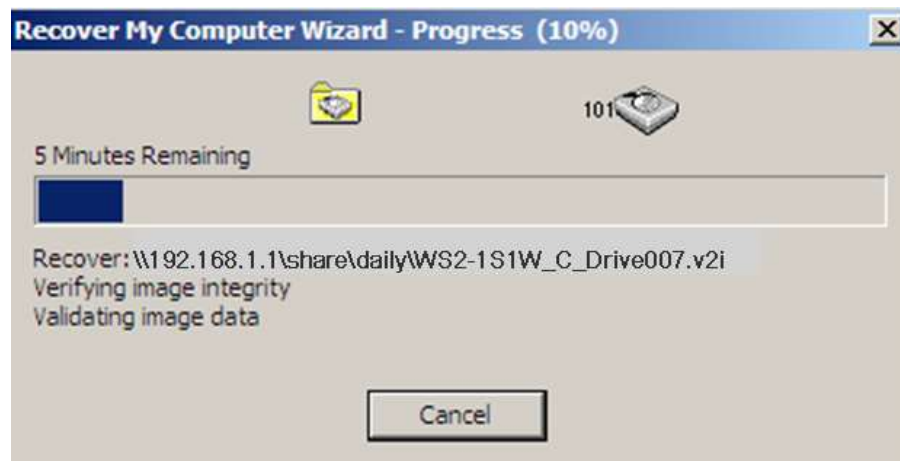


16. The latest backup will be loaded and listed automatically by the system. Check “Reboot when finished” and click “Finish”



Note: N New installation R Re-installation

17. The recovery process will start and the system will reboot once the process is completed.



Note: N New installation R Re-installation

7.12 Fallback and Recovery



This section describes how to uninstall WebSAMS applications. Make sure that you have shutdown Apache, Wildfly, and Sybase before you are going to do so.

Removal of WebSAMS training instance

1. From **Start -> Control Panel -> Programs and Features**, select **WebSAMS Training** and follow the wizard to remove.

Removal of WebSAMS application (includes Apache, Wildfly, Java development kit, school data, report templates and keystores)

2. From **Start -> Control Panel -> Program and Features**, select **WebSAMS** and follow the wizard to remove.

Removal of SAP Crystal Server 2013

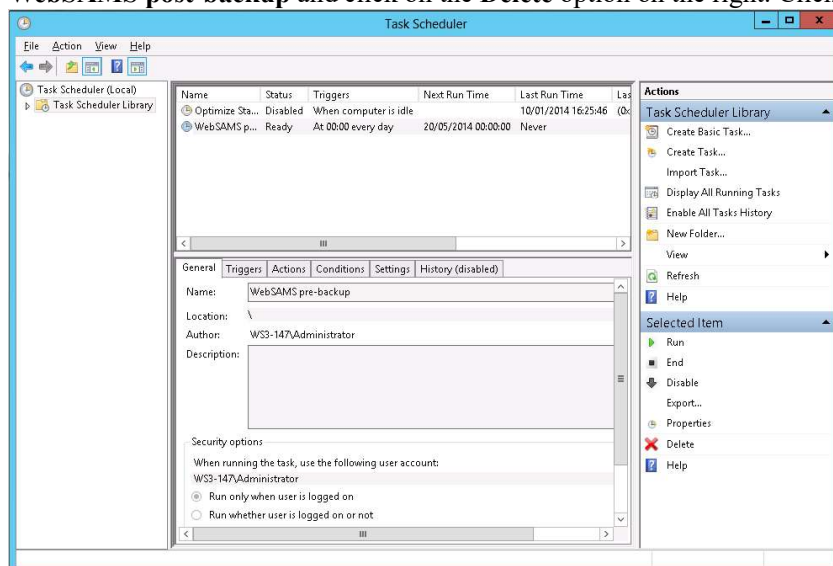
3. From **Start -> Control Panel -> Program and Features**, select **SAP Crystal Server 2013 SP01** and follow the wizard to remove.

Removal of Sybase SQL Anywhere 16

4. From **Start -> Control Panel -> Program and Features**, select **SQL Anywhere 16** and follow the wizard to remove.

Removal of Windows Scheduler Tasks

5. **Start -> Administrative Tools -> Task Scheduler**. Double click on **WebSAMS pre-backup** and **WebSAMS post-backup** and click on the **Delete** option on the right. Click 'Yes' to remove.



Note: New installation Re-installation

8. HTTP Server Installation



The following steps should be taken in sequence:

1. Back up the configuration of the HTTP Server for WebSAMS 3.0
2. Installation of the SUSE Linux
3. Installation of the anti-virus software – Trend Micro ServerProtect 3.0
4. Configuration of the new HTTP Server with backup configuration files
5. Configuration of the new HTTP Server for new installation
6. Post installation tasks

As the installation of the HTTP server has no direct dependency on the installation of the WebSAMS' server and application, it may be performed concurrently with other installations.

Should any school need to change the SSL Certificate, please refer to *Section 8.8* for detailed procedures.

8.1 Back up the Configuration of HTTP Server for WebSAMS 2.0 (Obsoleted)

8.2 Back up the Configuration of HTTP Server for WebSAMS 3.0



In case after the installation of the HTTP server for WebSAMS 3.0, it happens that re-installation of the HTTP server is necessary. If possible, please back up the configuration in the first place.

Please follow steps below to save the HTTP configuration and School Certificate:

1. Log in HTTP server using the “root” account.
2. Execute the backup script that is located in HTTP server by the following commands:
 - 2.1. In case the USB flash drive is to be used for backup:

- a. Find the name of the USB flash drive first by:

- i. **DON'T INSERT** any USB device and type the command “fdisk -l” (note: l is the lower case “L”). Usually hard disk device names (e.g. hdb1, hdb2, etc.) will be shown on the screen like the following:

```
Disk /dev/hdb: 40.9 GB, 40982151168 bytes
255 heads, 63 sectors/track, 4982 cylinders
Units = cylinders of 16065 * 512 = 8225280 bytes

   Device   Boot    Start        End    Blocks   Id  System
/dev/hdb1             1         121     971901    82  Linux swap / Solaris
/dev/hdb2      *       122        4982   39045982+   83  Linux
```

- ii. **NOW INSERT** the USB flash drive to the HTTP server, and type the command “fdisk -l” (note: l is the lower case “L”) again. A new device in addition to those shown before should appear, such as sda1 or sdb1. In the example below, the system shows that your USB flash drive gets the device name “sda1”

```
Disk /dev/sda: 2004 MB, 2004877312 bytes
129 heads, 32 sectors/track, 948 cylinders
Units = cylinders of 4128 * 512 = 2113536 bytes

   Device   Boot    Start        End    Blocks   Id  System
/dev/sda1      *          1         949    1957872    b  W95 FAT32

Partition 1 has different physical/logical endings:
phys=(956, 128, 32) logical=(948, 75, 32)
```

- b. After recognizing the device name of the USB flash drive, enter the following command:
 - i. For ordinary schools of 1 Server 1 WebSAMS, please type:

Note: New installation Re-installation

```
grepconfig /dev/<<usb device name>>
```

Note: please type **grepconfigHTTP081211** if the above command cannot be found.

3. Once “y” has been entered, the script then collects the information of the current configuration. If there is any missing information, it is required to enter it manually. The script will not proceed until all configuration information has been either collected or entered manually.

For ordinary schools of 1 Server 1 WebSAMS,

```
Current HTTP Server Configuration

(1) Hostname      : HTTP
(2) IP            : 192.168.2.211
(3) netmask       : 255.255.255.0
(4) gateway       : 192.168.2.1
(5) DNS           : 192.168.1.204

(6) WebSAMS IP    : 192.168.3.111
(7) Router ITED Leg : 192.168.2.254
(8) FQDN          : websams.abcschool.edu.hk
(9) SUID          : 1234

Choose 1 - 9 for Modification,
or enter 0 if All Information is Correct: 0
Confirm to copy configuration and files into the floppy? (y/n) _
```

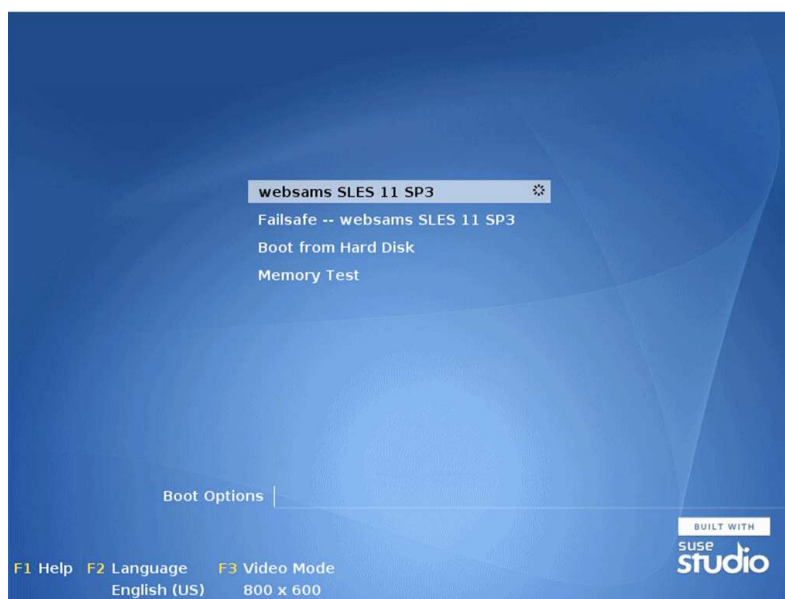
(The message of “Confirm to copy configuration and files into the floppy” is also applicable to the case of using thumb drive for backup)

8.3 Installation of the SUSE Linux



- a. Insert the HTTP Server Installation CD into the CD-ROM drive and restart the machine for installation of the HTTP Server. The “Welcome” screen will be displayed.
- b. Select “websams SLES 11 SP3” and press “Enter” for installation
(Remark: After pressing the “Enter”, the hard disk will be automatically re-partitioned. All the data will be **lost**.)

Note:  New installation  Re-installation



- c. Read the license terms carefully and press “q”

```

SUSE(R) Linux Enterprise Server 11 SP3
SUSE Software License Agreement

PLEASE READ THIS AGREEMENT CAREFULLY. BY PURCHASING, INSTALLING
AND/OR USING THE SOFTWARE (INCLUDING ITS COMPONENTS), YOU AGREE TO
THE TERMS OF THIS AGREEMENT AND ACKNOWLEDGE THAT YOU HAVE READ AND
UNDERSTAND THIS AGREEMENT. IF YOU DO NOT AGREE WITH THESE TERMS, DO
NOT DOWNLOAD, INSTALL OR USE THE SOFTWARE. AN INDIVIDUAL ACTING ON
BEHALF OF AN ENTITY REPRESENTS THAT HE OR SHE HAS THE AUTHORITY TO
ENTER INTO THIS AGREEMENT ON BEHALF OF THAT ENTITY.

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(collectively the "Software") is protected by the copyright laws and
treaties of the United States and other countries and is subject to
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or upgrade to the Software that You may download or receive that are
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or other licensors and are protected under copyright laws and other
applicable laws. Subject to compliance with the terms and conditions
of this Agreement, SUSE grants to You a perpetual, non-transferable,
worldwide license to reproduce and use copies of the Software within
Your Organization (as defined below). Many of the individual
components included in the Software are licensed pursuant to an open
source license identified in the documentation or located in the
source code or binary code for the component. This Agreement does
not limit Your rights under such licenses or supersede or conflict
/etc/YaST2/licenses/license.txt

```

Note: N New installation R Re-installation

- d. Press “y” to accept the EULA and press enter.
- e. After that, login with “root” and password.

```

Setting up (localfs) network interfaces:
lo
lo      IP address: 127.0.0.1/8
lo      IP address: 127.0.0.2/8
eth0    device: VMware VMXNET3 Ethernet Controller
eth0    Startmode is 'manual'
Setting up service (localfs) network . . . . .
Starting haveged daemon
Not starting NFS client services - no NFS found in /etc/fstab:
Starting irqbalance
Loading console font lat9u-16.psfu
Loading keymap assuming iso-8859-15 euro
Loading /usr/share/kbd/keymaps/i386/qwerty/us.map.gz
Loading compose table winkeys shiftctrl latin1.add
Stop Unicode mode
Starting CRON daemon
Setting up (remotefs) network interfaces:
Setting up service (remotefs) network . . . . .
ssh-keygen: generating new host keys: RSA1 RSA DSA ECDSA
Starting SSH daemon
Master Resource Control: runlevel 3 has been
Skipped services in runlevel 3:
nfs irq_balancer

websams installation - login with root and execute "yast live-installer"

linux-6rgs login:

```

- f. Type “yast live-installer” to start installation

```
linux-6rgs:~ # yast live-installer
```

- g. The alert will appear if the machine has less than 1GB of memory. Select “continue” and press enter.

```

Your computer has less than 1 GB of memory. This may not be
sufficient for the live installation, especially when installing
while running other applications.
Before continuing, finish all running applications.

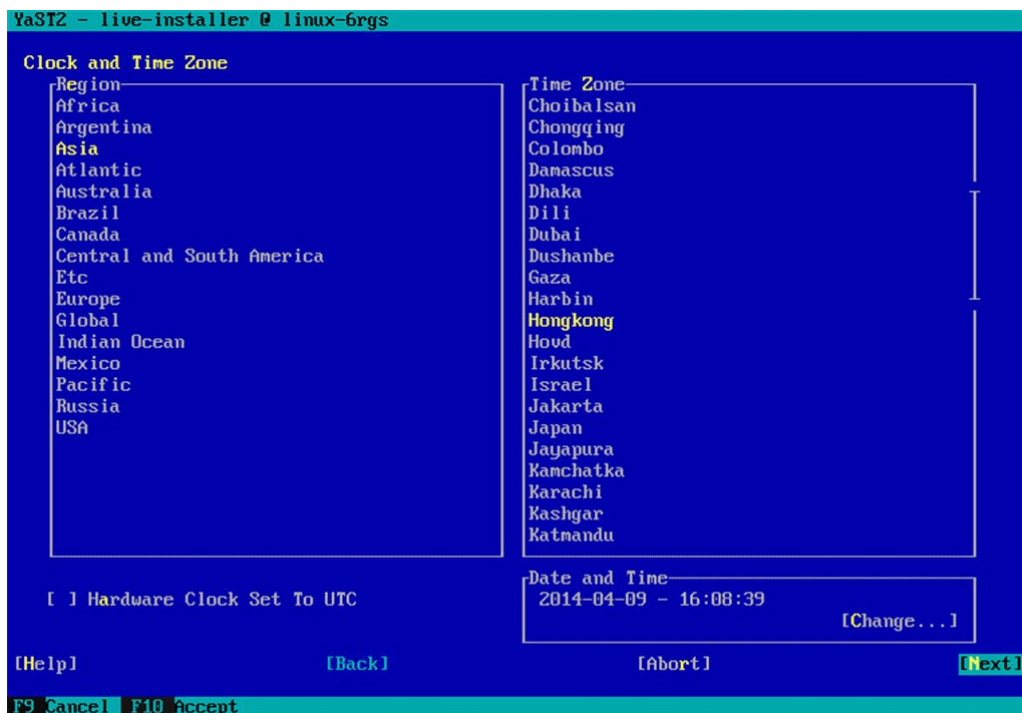
[Continue] [Cancel]

```

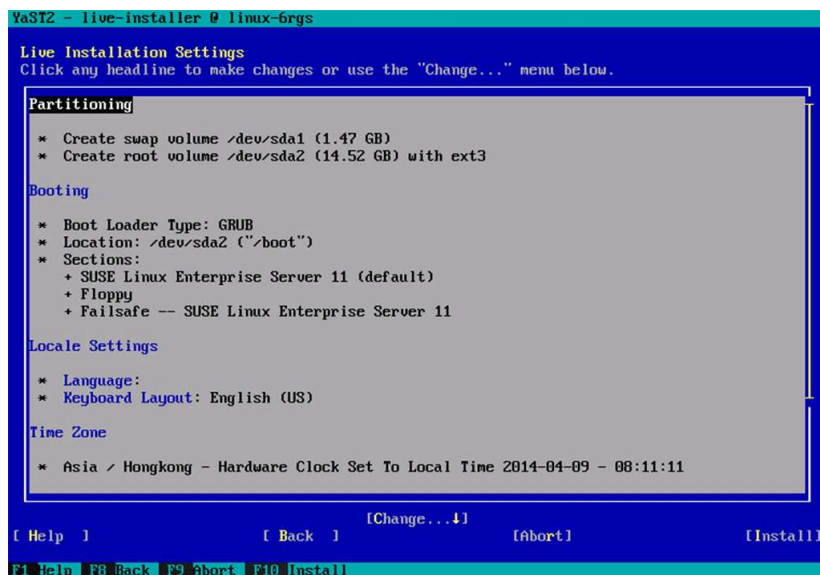
Note: N New installation R Re-installation

- h. Select “Next” and press enter.

Note: If you want to change the date and time, select “change” at Date and Time to change it.

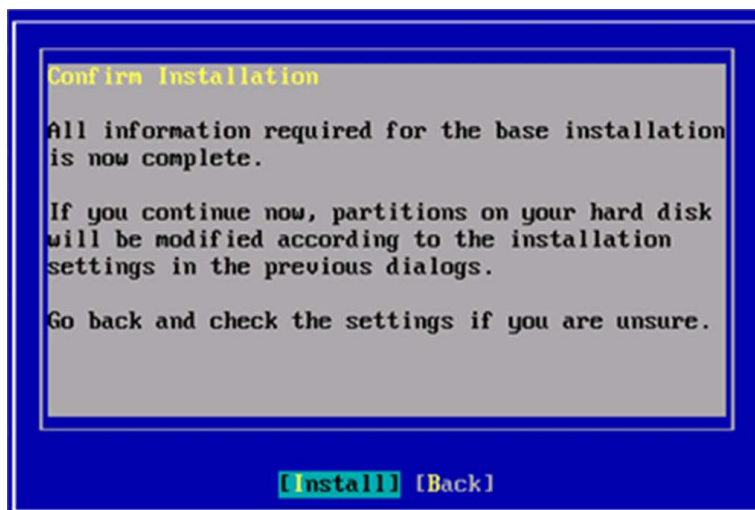


- i. Select “install” and press enter.

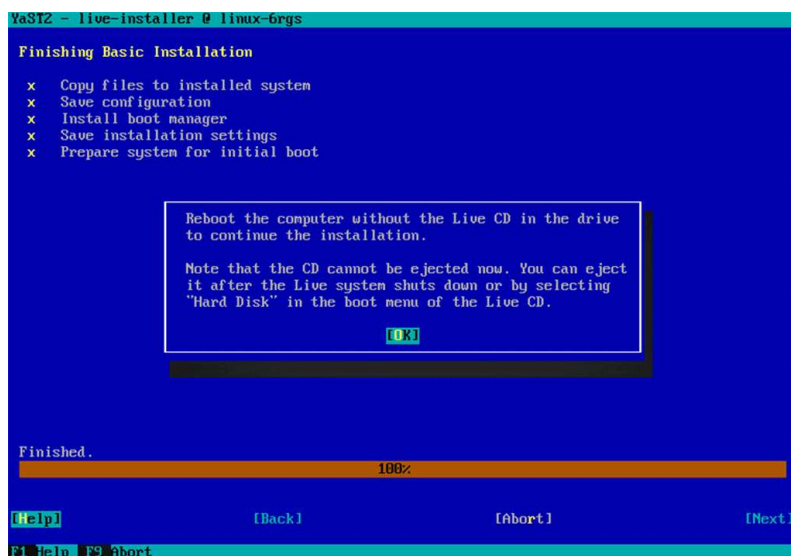


Note: N New installation R Re-installation

- j. Click “Install” and press enter.



- k. Once the installation completed, select “OK” and press enter.
After that, type “reboot” to reboot the machine. Please remember to keep the CD in the CD rom at the moment.



- l. For this first boot, select “Boot from Hard Disk” and press enter.



Note: N New installation R Re-installation

- m. At this moment, the linux has been installed.
Now, login with “root” account

```
Starting mail service (Postfix)           done
Starting CRON daemon                     done
Master Resource Control: runlevel 3 has been reached
Skipped services in runlevel 3:          nfs irq_balancer

Welcome to SUSE Linux Enterprise Server 11 SP3 (i586) - Kernel 3.0.76-0.11-default (tty1).

linux-mdt5 login: _
```

8.4 Installation of the Anti-Virus Software – Trend Micro ServerProtect 3.0



- First, log in the server using the “root” account.
- In command mode, enter the following command to trigger the installation.

SProtectLinux-3.0.bin

- The Trend Micro license agreement will be displayed on the screen. Press “Enter” to read the license agreement.

```
accepted a Trend Micro license agreement. A courtesy copy of a representative
Trend Micro License Agreement is included for reference below. The language
and terms of the actual Trend Micro license agreement that you accepted may
vary. By accepting the License Agreement below, or using the Software, You
confirm Your agreement to the terms and conditions of the original Trend Micro
license agreement you accepted.

Trend Micro License Agreement
(Package Version 0403Nov03E021004)

READ THESE TERMS CAREFULLY BEFORE BREAKING THE SEAL ON THE ACCOMPANYING CD
JACKET OR INPUTTING A SERIAL NUMBER, REGISTRATION KEY OR ACTIVATION CODE.
THESE ACTIONS CONSTITUTE AN ACKNOWLEDGEMENT THAT YOU HAVE READ AND UNDERSTOOD
THIS AGREEMENT AND AGREE TO BE BOUND BY ITS TERMS.

IF YOU DO NOT AGREE TO THESE TERMS, THE LICENSOR IS UNWILLING TO LICENSE THE
SOFTWARE TO YOU AND YOU MUST RETURN THE SOFTWARE (INCLUDING THE UNOPENED CD
PACKAGE, WRITTEN MATERIALS AND PACKAGING) TO THE SELLER NO LATER THAN 30 DAYS
AFTER RECEIPT OF THE SOFTWARE FOR A REFUND SUBJECT TO THE SELLER'S RESTOCKING
FEES AND RETURN POLICIES.

Except as set forth in the paragraph below, Trend Micro Incorporated ("Trend
Micro") offers to license the Trend Micro(TM) software (including documenta-
tion) for which you ("You") have paid ("Software"), subject to the terms and
conditions of this License Agreement (the "Agreement"). IF YOU ARE ACQUIRING
THE SOFTWARE ON BEHALF OF YOUR COMPANY OR ORGANIZATION (COLLECTIVELY
"COMPANY"), BY BREAKING THE SEAL ON THE ACCOMPANYING CD JACKET, INSTALLING
AND/OR USING THE SERIAL NUMBER, REGISTRATION KEY, ACTIVATION CODE OR SOFTWARE,
OR CLICKING AN "I ACCEPT" BUTTON DURING THE INSTALLATION OR DOWNLOADING
PROCESS, YOU REPRESENT THAT (A) YOU ARE DULY AUTHORIZED TO REPRESENT YOUR
COMPANY AND (B) YOU ACCEPT THE TERMS AND CONDITIONS OF THIS AGREEMENT ON
BEHALF OF YOUR COMPANY. AN AGREEMENT IS THEN FORMED.

If, for technical or other reasons, You are prompted to accept a license
agreement during the process of installing or downloading the Software, by
clicking an "I Accept" button, You shall be deemed merely to confirm the
terms and conditions of this Agreement. If You or another authorized
representative of Your Company demonstrate that You have already entered into
a valid written license agreement with Trend Micro regarding this Software
```

Note: New installation Re-installation

- d. Enter “yes” to accept the licence terms then the installation will be started automatically.

```

Do you agree to the above license terms? (yes or no)
yes
Installing ServerProtect for Linux:
Unpacking...
Installing rpm file...
Preparing... ##### [100%]
1:SPProtectLinux ##### [100%]

```

- e. When the statement ““Do you wish to connect this SPLX server to Trend Micro Control Manager?” displayed on the screen, press “n” to refuse the connection to Trend Micro Control Manager.
- f. When the statement “Activation code :” is displayed, enter the 32 digits “Activation code” in the format as follows:

“XX-XXXXXX-XXXXXX-XXXXXX-XXXXXX-XXXXXX”

```

Step 1. Register
Use the Registration Key that came with your product to register online
(https://olr.trendmicro.com/redirect/product_register.aspx).
(Please skip this step if the product is already registered.)

Step 2. Activate
Type the Activation Code received after registration to activate ServerProtect.
(Press [Ctrl+B] to abort activation.)

Activation Code: XXXXXXXX-XXXXXX-XXXXXX-XXXXXX-XXXXXX-XXXXXX
Activated ServerProtect with an expired full version Activation Code. Renewal is necessary to keep your security and product updates current.

World Virus Tracking Program

Trend Micro consolidates virus-scanning results from worldwide customers,
compiles real-time statistics, and displays them on the Virus Map
(http://www.trendmicro.com/map). Use this map to view virus trends for
each continent and selected countries.

Yes, I would like to join the World Virus Tracking Program.
I understand that when a virus is detected on my system, aggregated
detection information, including virus names and number of detections,
will be sent to the World Virus Tracking Program. It will not send out
company names, individual names, machine names, site names, IP addresses,
or any other identifying information. I understand that I can disable
this automatic reporting function at any time by changing the
configuration to "No" within the product's management console.

No, I don't want to participate.

```

- g. At the end, enter “No” when you are asked to participate in the “World Virus Tracking Program”. **Now, you have successfully installed the Trend Micro and ready to proceed to next step to install the patch.**

h. Installation of Trend Micro patch 5

Now, type “cd /usr/bin/” and press enter.

Then, type ./cp_deploy_script.sh and press enter.

Note: N New installation R Re-installation

```

linux-6rgs:~ # cd /usr/bin/
linux-6rgs:/usr/bin # ./cp_deploy_script.sh
Check system .....
The current installation of ServerProtect on your system is SProtectLinux-3.0-1298.
Shutting down ServerProtect for Linux:
Shutting down splxcore:
Shutting down vsapiapp [ OK ]
Unloading splx kernel module: [ OK ]
Shutting down entity: [ OK ]
ServerProtect for Linux core stopped normally.
Shutting down splxhttpd:
Shutting down splxhttpd: [ OK ]
ServerProtect for Linux httpd stopped normally.
ServerProtect for Linux stopped normally.
Starting ServerProtect for Linux:
Checking configuration file: [ OK ]
Starting splxcore:
Starting Entity: [ OK ]
Loading splx kernel module: [ OK ]
Starting vsapiapp: [ OK ]
ServerProtect for Linux core started.
Starting splxhttpd:
Starting splxhttpd: [ OK ]
ServerProtect for Linux httpd started.
ServerProtect for Linux started.
The product has expired.
You may purchase a new activation Code or renew your current license to keep your security and product updates current.
Successfully deployed critical patch.
linux-6rgs:/usr/bin #

```

- i. After that, type “splx_30_lx_en_spl_patch5.bin” to install the patch.
And, type “yes” to remove the previous RPM info.

```

linux-scj:~ # splx_30_lx_en_spl_patch5.bin
Installing ServerProtect for Linux 3.0 Service Pack 1 patch 5:
Patch 5 must remove the previous SPLX 3.0 Patch RPM information from the RPM Data
base to avoid inconsistencies if a rollback is required.
The removed RPM information will be stored in /opt/TrendMicro/SProtectLinux/Version.ini .
For more detailed information, please refer to the patch readme file.
Do you want to continue and remove the previous RPM information? (yes or no)
yes

```

- j. The patch5 has been installed successfully!

```

Shutting down splxcore:
Shutting down vsapiapp [ OK ]
Unloading splx kernel module: [ OK ]
Shutting down entity: [ OK ]
ServerProtect for Linux core stopped normally.
Shutting down splxhttpd:
Shutting down splxhttpd: [ OK ]
ServerProtect for Linux httpd stopped normally.
ServerProtect for Linux stopped normally.
Starting ServerProtect for Linux:
Checking configuration file: [ OK ]
Starting splxcore:
Starting Entity: [ OK ]
Loading splx kernel module: [ OK ]
Starting vsapiapp: [ OK ]
ServerProtect for Linux core started.
Starting splxhttpd:
Starting splxhttpd: [ OK ]
ServerProtect for Linux httpd started.
ServerProtect for Linux started.
The product has expired.
You may purchase a new activation Code or renew your current license to keep your product updates current.
ServerProtect for Linux 3.0 Service Pack 1 patch 5 installation completed.
linux-6rgs:/usr/bin #

```

Note: N New installation R Re-installation

8.5 Configuration of HTTP Server with Backup Configuration Files



This section is applicable mainly for upgrading of the HTTP server or re-installation of HTTP server. A backup copy of configuration files (SUSE Linux Enterprise 11) of HTTP Server must be on hand.

1. Log in the HTTP server using the “root” account.
2. Execute the installation script which is located in the HTTP server by typing the following command:

2.1. In case the School Certificate and Configuration file are located in the USB flash drive:

- a. Find the name of the USB flash drive first by:

- i. **DON'T INSERT** any USB device and type the command “fdisk -l” (note: l is the lower case “L”). Usually hard disk device names (e.g. hdb1, hdb2, etc.) will be shown on the screen like the following:

```
Disk /dev/hdb: 40.9 GB, 40982151168 bytes
255 heads, 63 sectors/track, 4982 cylinders
Units = cylinders of 16065 * 512 = 8225280 bytes

   Device   Boot    Start        End    Blocks   Id  System
/dev/hdb1             1         121     971901    82  Linux swap / Solaris
/dev/hdb2      *       122        4982    39045982+   83   Linux
```

- ii. **NOW INSERT** the USB flash drive to the HTTP server, and type the command “fdisk -l” (note: l is the lower case “L”) again. A new device in addition to those shown before should appear, such as sda1 or sdb1. In the example below, the system shows that your USB flash drive gets the device name “sda1”

```
Disk /dev/sda: 2004 MB, 2004877312 bytes
129 heads, 32 sectors/track, 948 cylinders
Units = cylinders of 4128 * 512 = 2113536 bytes

   Device   Boot    Start        End    Blocks   Id  System
/dev/sda1      *           1         949     1957872    b  W95 FAT32

Partition 1 has different physical/logical endings:
phys=(956, 128, 32) logical=(948, 75, 32)
```

- b. After recognizing the device name of the USB flash drive, enter the following command:

Note: New installation Re-installation

- i. For ordinary schools of 1 Server 1 WebSAMS, please type:

```
reinstall /dev/<<usb device name>>
```

Note:  New installation  Re-installation

3. After message of the HTTP server meeting the prerequisites has been confirmed, the HTTP server configuration will be shown. Adjust it when it is necessary or confirm it if it is correct. Then enter “reboot” to re-boot the new SUSE Linux machine.

For ordinary schools of 1 Server 1 WebSAMS:

```
Current HTTP Server Configuration:

(1) Hostname           : HTTP
(2) IP                 : 192.168.2.211
(3) Netmask            : 255.255.255.0
(4) Gateway            : 192.168.2.1
(5) DNS                : 192.168.1.204

(6) WebSAMS IP         : 192.168.3.111
(7) Router ITED Interface IP : 192.168.2.254
(8) FQDN               : websams.abcschool.edu.hk
(9) SUID               : 1234

Choice 1 - 9 for Modification,
or Enter 0 if All Information are Correct: 0
Confirm to install? (y/n)
```

Note: N New installation R Re-installation

8.6 Configuration of HTTP Server for New Installation



This section is applicable mainly for new installation of the HTTP server. The following files which are provided by EDB must be on hand and copied into a USB flash drive under the folder “/SchoolCert”:

- “<School_ID>SvrCert.pem”; and
- “<School_ID>SvrKey.key”

1. First, log in the HTTP server using the “root” account.
2. Execute the configuration script which is located in the HTTP server by typing the following command:

- 2.1. In case the School Certificate and Configuration file are located in the USB flash drive:

- a. Find the name of the USB flash drive first by:

- i. **DON'T INSERT** any USB device and type the command “fdisk -l” (note: l is the lower case “L”). Usually hard disk device names (e.g. hdb1, hdb2, etc.) will be shown on the screen like the following:

```
Disk /dev/hdb: 40.9 GB, 40982151168 bytes
255 heads, 63 sectors/track, 4982 cylinders
Units = cylinders of 16065 * 512 = 8225280 bytes
```

Device	Boot	Start	End	Blocks	Id	System
/dev/hdb1		1	121	971901	82	Linux swap / Solaris
/dev/hdb2	*	122	4982	39045982+	83	Linux

- ii. **NOW INSERT** the USB flash drive to the HTTP server, and type the command “fdisk -l” (note: l is the lower case “L”) again. A new device in addition to those shown before should appear, such as sda1 or sdb1. In the example below, the system shows that your USB flash drive gets the device name “sda1”

```
Disk /dev/sda: 2004 MB, 2004877312 bytes
129 heads, 32 sectors/track, 948 cylinders
Units = cylinders of 4128 * 512 = 2113536 bytes

   Device   Boot    Start      End  Blocks   Id  System
/dev/sda1   *         1       949   1957872    b  W95 FAT32

Partition 1 has different physical/logical endings:
phys=(956, 128, 32) logical=(948, 75, 32)
```

- b. After recognizing the device name of the USB flash drive, enter the following command:

- i. For ordinary schools of 1 Server 1 WebSAMS, please type:

```
reinstall /dev/<<usb device name>>
```

3. When the installation script is executed, the following options are shown.

For ordinary Schools of 1 Server 1 WebSAMS:

```
Current HTTP Server Configuration:
(1) Hostname      :
(2) IP            :
(3) Netmask       :
(4) Gateway       :
(5) DNS           :
(6) WebSAMS IP    :
(7) Router ITED Interface IP :
(8) FQDN          :
(9) SUID          :
Choice 1 - 9 for Modification,
Or Enter 0 if All Information are Correct:
```

Choices	Descriptions	Examples (Examples only. DON'T just key in these values)
(1) Hostname	– Any name for the HTTP Server	HTTP
(2) IP	- The IP address of the HTTP Server.	10.10.10.10
(3) Netmask	- The subnet mask for the HTTP Server.	255.255.255.0
(4) Gateway	- The default gateway for the HTTP Server	10.10.10.254
(5) DNS	- The IP address of the DNS Server for the HTTP Server	210.210.210.20
(6) WebSAMS IP	- The IP address of the WebSAMS server inside the WebSAMS network segment	10.30.30.30
(7) Router ITED Interface IP	- The IP address of the router's interface which is connecting the ITED network segment	10.10.10.1
(8) FQDN	- The "Fully Qualified Domain Name" for the WebSAMS	Websams.mysch.edu.hk
(9) SUID	- The school unique ID for identification of the school in WebSAMS	1234

Note: N New installation R Re-installation

4. Enter '0' to finish the input and then type 'Y' to confirm.
5. The script would terminate itself once it finishes the installation. Restart the server to make the configuration effective.

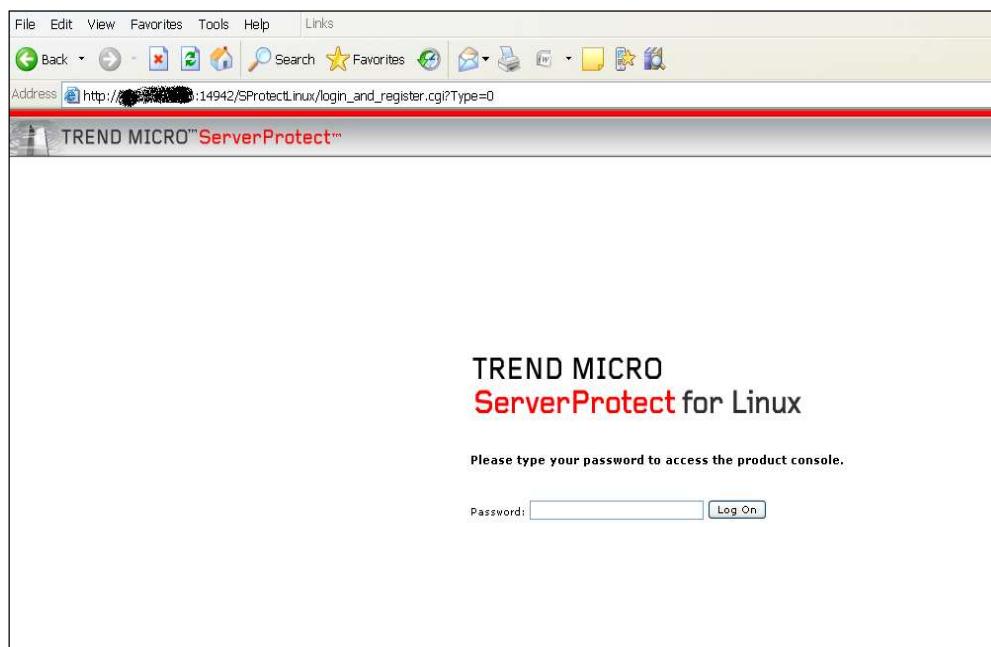
8.7 Post Installation Tasks



8.7.1 Configuration of Trend Micro

After restarting the HTTP server, perform the following tasks:

- 1) Log in HTTP server by using the “root” account. Enter the command “passwd” and ask the school to change the “root” account password. Please note that a complex password is needed and ensure no warning has been shown after the new password has been inputted.
- 2) Configure of the Trend Micro Version 3.0 by:
 - a. Accessing the Server Protect Web console at “http://<HTTP Server IP>:14942” from the browser of a workstation in ITED network segment.
 - b. Pressing “Log On” button to enter Trend Micro Version 3.0. (The password can be ignored).



Note: New installation Re-installation

- c. The below screen will be displayed indicating that the license has ended on 2008-09-30

TREND MICRO™ ServerProtect™

Summary

Product updates ended on 2008-09-30.

System Information (2008-10-03 23:15:19)

Product version: Trend Micro ServerProtect for Linux 3.0
Platform: Intel(R) Pentium(R) M processor 1.70GHz (i686)
OS: SUSE Linux Enterprise Server 10 (i586)
Kernel version: 2.6.16.46-0.12-default

Scan Results for Virus 0 viruses/spywares detected today.

Summary	Today	Last 7 days
Virus undecanable	0	0
Virus quarantined	0	0
Virus deleted	0	0
Virus passed	0	0
Virus cleaned	0	0
Virus renamed	0	0

Scan Status

Real-time Scan: Enabled (Incoming files)
Scheduled Scan: Disabled
Manual Scan:

Update Status

Component	Current Version	Last Updated
<input checked="" type="checkbox"/> Virus Pattern	4.543.00	2007-06-20 10:09:23
<input checked="" type="checkbox"/> Spyware/Grayware Pattern	0.513.00	2007-06-20 10:09:23

- d. Update the Trend Micro 3.0 license as below:

- Select the “Administration” at the left hand side.
- Select “Product Registration”.
- Press “Update Information” button for renew License.

TREND MICRO™ ServerProtect™

Product Registration

Product updates ended on 2008-09-30. [View renewal instructions](#)

Maintenance expired on 2008-08-31 and the grace period ended on 2008-09-30.
Renewal is necessary to keep your security and product updates current.

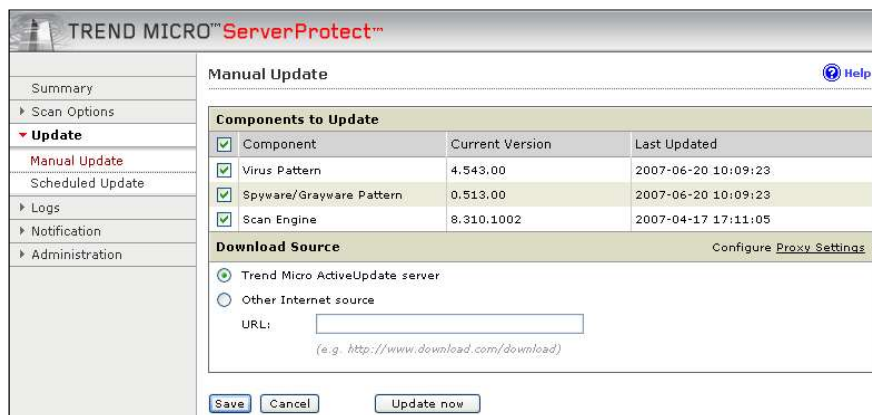
License information last updated on: 2008-10-03

License Information [View detailed license online](#)

Product: TrendMicro ServerProtect for Linux 3.0
License: Full
Activation Code:
Status: Maintenance expired
Maintenance expiration: 2008-08-31

Note: N New installation R Re-installation

- e. Update the Trend Micro 3.0 components
 - i. Select the “Update” at the left hand side.
 - ii. Select “Manual Update”.
 - iii. Press “Update now” button for update the new components



8.7.2 Applying the patch for HTTP Server

New patch for **HTTP Server of WebSAMS 3.0** is now available for download. Please go through the steps in **Part I** to apply the patch.

For new installation of the HTTP server, please go through steps of Section 8.6 to setup the configuration first.

Part I: Normal Operation

- 1) Log in HTTP server by using the “root” account.
- 2) Type the following command and press [Enter]:

```
starthsp
```

- 3) Possible results will be shown:

- a) If the following message is shown:

```
HTTP1:~ # starthsp
-bash: starthsp: command not found
```

Please go through the steps in **Part II**.

Note: N New installation R Re-installation

- b) If the process is successful, the following message will be shown:

```
*****
All patches have been applied!
*****

Please be reminded to input the PassPhrase for starting the Apache SSL service
after system reboot!

System will be rebooted!
Confirm? (y/n)
```

Type “y” to reboot the HTTP Server.

***** Please be reminded to input the PassPhrase for starting the Apache SSL service after system reboot!***

The process is completed.

- c) If there is no new patch to be downloaded, the following message will be shown:

```
HTTP1:~ # starthsp

*****
Get the patch list ....
--2014-12-15 02:11:38-- http://www.websams.edb.gov.hk/hspatch_SELS11/latest_hs_ver3.conf
Resolving www.websams.edb.gov.hk... 192.168.206.32
Connecting to www.websams.edb.gov.hk|192.168.206.32|:80... connected.
HTTP request sent, awaiting response... 200 OK
Length: 27 [text/plain]
Saving to: 'latest_hs_ver3.conf'

      OK                               100% 2.67M=0s

2014-12-15 02:11:38 (2.67 MB/s) - 'latest_hs_ver3.conf' saved [27/27]

*****
No Patch to be downloaded!

*****
The script is terminated now!
```

The process is completed.

Part II: Setup Operation

- 1) Type the following command and press enter:

```
cd /tmp
```

- 2) Then, type the following command and press enter:

```
wget http://cdr.websams.edb.gov.hk/hspatch_SELS11/setuphsp
```

The following screen will be shown:

```
HTTP1:/tmp # wget http://www.websams.edb.gov.hk/hspatch_SELS11/setuphsp
--2014-12-15 01:56:31-- http://www.websams.edb.gov.hk/hspatch_SELS11/setuphsp
Resolving www.websams.edb.gov.hk... 192.168.206.32
Connecting to www.websams.edb.gov.hk|192.168.206.32|:80... connected.
HTTP request sent, awaiting response... 200 OK
Length: 557
Saving to: 'setuphsp'

100%[=====>] 557      --.-K/s   in 0s

2014-12-15 01:56:36 (48.6 MB/s) - 'setuphsp' saved [557/557]
```

- 3) Finally, type the following command and press [Enter]:

```
sh setuphsp
```

The following screen will appear if the patch execution is successful.

```
*****
All patches have been applied!

*****

Please be reminded to input the PassPhrase for starting the Apache SSL service
after system reboot!

System will be rebooted!
Confirm? (y/n)
```

Type “y” to reboot the HTTP Server.

***** Please be reminded to input the PassPhrase for starting the Apache SSL service after system reboot!***

Note: N New installation R Re-installation

- 4) Since 2019 Jan, SP4 will applied to HTTP server and the following new login page will be shown:



The process is completed.

**** Notice ****

For any assistance, schools may contact WebSAMS Help Desk at 3125-8510 for further assistance or enquiry.

8.8 Change the SSL certificate

R

There may be circumstances that the SSL certificate is needed to change or renew, such as the domain URL has been changed. To change the SSK certificate, the following steps should be taken in sequence:

- 1) Go through steps of Section 8.1 to back up the configuration of the HTTP Server.
- 2) In folder “/SchoolCert” of above backup media, replace the following files with the new ones which are provided by EDB:
 - “<School_ID>SvrCert.pem”; and
 - “<School_ID>SvrKey.key”
- 3) Go through steps of Section 8.4 by using the above backup media.

9. Crystal Reports Installation in Workstation



The SAP Crystal Reports 2013 is supposed to be installed in **ONE** WebSAMS workstation. Consult the school to see which workstation the software should be installed.

The installation of Crystal Reports involves four tasks:

- Install Sybase 16 ODBC driver **N R**,
- Install SAP Crystal Reports 2013 **N R** and,
- Configure two System DSNs (ODBC accounts) **N R**.

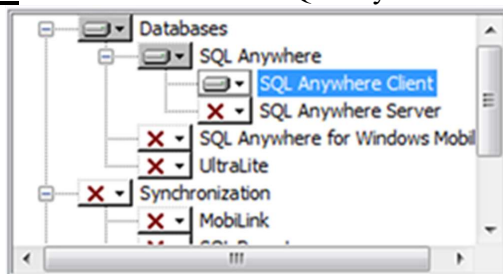
For new installation of WebSAMS and re-installation of WebSAMS (in case re-installation of workstation is required), all the above tasks are necessary.

9.1 Install Sybase 16 ODBC Driver

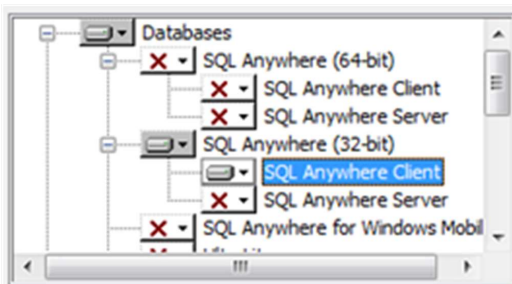


1. Remove Sybase 10 ODBC driver (if exists)
2. Insert the Sybase SQL Anywhere 16 CD into the CD-ROM drive. The installation wizard will be shown.
3. Install the 32-bit SQL Anywhere Client only:

For 32-bit workstation: Select “Databases > SQL Anywhere > SQL Anywhere Client”



For 64-bit workstation: Select “Databases > SQL Anywhere (32-bit) > SQL Anywhere Client”



👉 Only 32-bit SQL Anywhere client should be installed no matter the workstation is 64-bit or 32-bit!

Note: **N** New installation **R** Re-installation

9.2 Install SAP Crystal Reports 2013



1. Insert the Crystal Report CD into the CD drive.
2. Follow the installation wizard, and accept all default settings.
3. Input school name and license key when being asked for registration information.

9.3 Configure Two ODBC Accounts

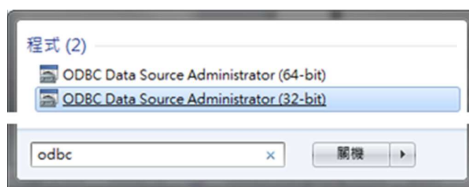


The following figures illustrate how to configure the ODBC accounts for a school with the following settings:

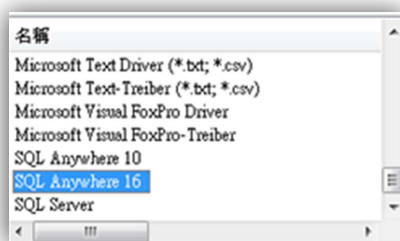
School Unique ID (suid): 9999

WebSAMS server IP (websams_ip): 10.15.38.38

1. Setup a System DSN (ODBC account) called *websams*.
 - a. **For 32-bit workstation:**
Go to ODBC configuration for SQL Anywhere
(Start -> Control Panel -> Administrative Tools -> Data Sources (ODBC) -> System DSN -> Add... -> Select “SQL Anywhere 16” and click ‘Finish’)
 - b. **For 64-bit workstation:**
Go to “Start” > and type “odbc” to search for “[ODBC Data Source Administrator \(32-bit\)](#)”



Then, click “Add” on the “System DSN” screen and select “SQL Anywhere16” and click “Finish”



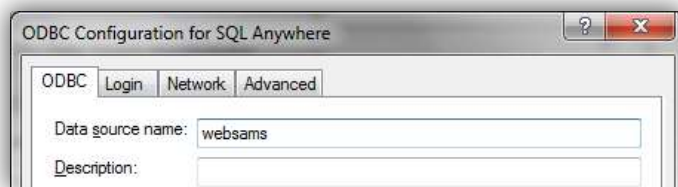
Note: New installation Re-installation

Tips:

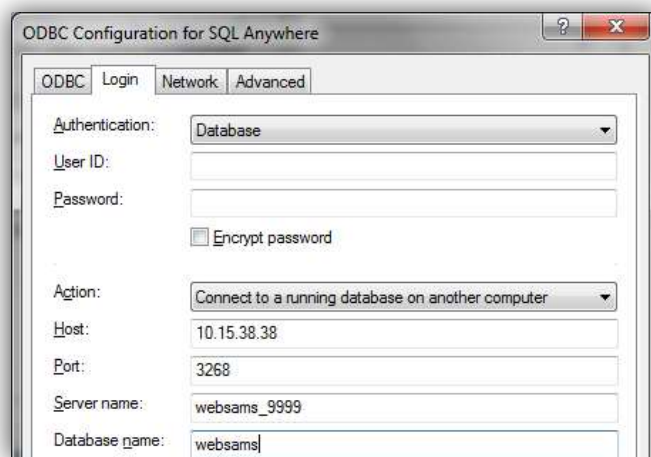
You are recommended to create a short cut for the “ODBC Data Source Administrator (32-bit)” and place it on desktop.



- c. Under ODBC tab, fill in Data source name as ***websams***.



- d. Under **Login** tab, leave the **User ID** and **Password** blank. Select ‘Connect to a running database on another computer’ as **Action**. Fill in **Host** with {websams_ip} and **Port** with 3268. Fill in **Server name** as websams_{suid} and **Database name** as ***websams***.



- e. Click **OK**.
2. Setup a System DSN (ODBC account) called ***websamsfmp***.
- a. Repeat step 1 to create another Data source name as ***websamsfmp***.

Note: **N** New installation **R** Re-installation

10. Post Installation Check



After the installation has been set up, the following preliminary testing could be carried out to verify the installation.

DHCP Test

1. Re-boot an ITED client PC. The PC can get an IP address and a DNS address (if any) from DHCP.
2. Re-boot a WebSAMS client PC. The PC can get an IP address and a DNS address from DHCP.

DNS Test

1. An ITED client PC can resolve the unique domain name of WebSAMS. The domain name is resolved to the private IP address of the HTTP server.
2. A WebSAMS client PC can ping the unique domain name of WebSAMS. The domain name is resolved to the private IP address of the WebSAMS server.

URL Accessing Test

1. An ITED client PC can view the WebSAMS login page from a browser.
2. A WebSAMS client PC can view the WebSAMS login page from a browser.

Unauthorized Access Test

1. An ITED client PC cannot ping any WebSAMS segment IP.

More detailed tests have been documented in the “**Form C - Report on Completion of Upgrading of WebSAMS 3.0**” in Appendix 5.

Appendix 1: Hardware and Software Specification

Hardware and Software Specification

WebSAMS Server

Hardware

Basic server requirement

- Intel Quad-Core Xeon E5 3.0 GHz and 6.4 GT/s, or other compatible model with better performance
- At least 16 GB DDR3 ECC RDIMM RAM
- At least 800 GB usable disk capacity in RAID 5 configuration
- 6Gbps SAS hot swap hard disks at least 10,000 rpm
- At least two Gigabit Ethernet network adaptors (one for connection to the backup device)
- DVD writer
- On-board VGA display supporting 1024x768 resolution
- Redundant hot swap power supply
- 2U or less rack mount form factor

Software

- Microsoft Windows Server 2012 R2 Standard Edition
- SAP Crystal Server 2013
- Sybase SQL Anywhere 16 (64-bit)
- Zulu Java 11 (64bit)
- Wildfly 15.0.0
- Apache 2.4.39
- Anti-virus software
- System backup & recovery software

HTTP Server

Hardware

PC workstation with basic requirement:

- Pentium IV 1.4 GHz or above CPU
- At least 512 MB RAM
- At least 20GB hard disk
- 10/100 Ethernet network adapter supported by SUSE Linux Enterprise 11
- Monitor supports at least 800x600 resolution (preferably 1024 x 768)

Software

- SUSE Linux Enterprise 11
- Trend Micro ServerProtect for Linux 3.0

Information Sheet

(For reference only)

For reference only

Information Sheet

This sheet is for one session of a school.

School Contact Person: _____ Tel No: _____ E-mail: _____

School Name (Eng): _____
(Chi): _____

School Address (Eng): _____
(Chi): _____

SUID (School Unique ID)*: _____ (4 digits e.g. "0123")

** Apart from the new schools with no WebSAMS server, a school can find its SUID by:*

- 1) ***Checking the name of a folder with a 4-digit figure (other than the "9999") inside the "E:\data" folder of the WebSAMS server. This name is the SUID of the school.***

WebSAMS Setup Type: ☐ 1 Server 1 WebSAMS (1S1W)

The training database to be installed in WebSAMS (choose only one):

- ☐ For primary school with FMP data of Apr.-Mar. accounting period
☐ For primary school with FMP data of Sep.-Aug. accounting period
☐ For secondary school with FMP data of Apr.-Mar. accounting period
☐ For secondary school with FMP data of Sep.-Aug. accounting period

WebSAMS server IP and subnet mask:

(The private IP address in WebSAMS segment assigned for the WebSAMS server)

HTTP server IP and subnet mask:

(The private IP address in ITED segment assigned for the HTTP server)

FQDN (Fully Qualified Domain Name):

(That is the URL for accessing WebSAMS e.g. websams.schabc.edu.hk)

ITED network number and ITED subnet mask:

(The network IP scheme of ITED network and its subnet mask e.g. 10.15.40.0 (255.255.255.0))

Current WebSAMS version number (Not applicable to new installation of WebSAMS):

Administrator account and password for the operating systems of WebSAMS 3.0 server:

(WebSAMS 3.0) _____

Schools MUST change the password of the account after the completion of all installation tasks.

For reference only

Other Information for Authentication

A school may not need to supply the following information to the contractor but has to ensure the following information have to be available at the moment when they are needed to be inputted by users:

1. Account and password of the administrator of WebSAMS
2. The 3 user accounts and passwords for connecting the WebSAMS database via ODBC:
 - **genuser**
 - **fmpuser**
 - **stfuser**

(If the above 3 passwords are forgotten, please call WebSAMS helpdesk at 3125 8510 and ask for their assistance in resetting the passwords.)
3. Password for the 'root' account of the HTTP Server
4. Activation code for the anti-virus software used in HTTP Server - Trend Micro ServerProtect 3
5. Password (school key) for encryption and decryption of CDS messages
(This password is used for performing CDS registration after WebSAMS installation.)

The following are mainly for new installation of WebSAMS:

Real IP (For new installation of WebSAMS for new school only):
(The public (real) IP address provided by the ISP (Internet Service Provider) for HTTP server setup)

The default gateway for the HTTP Server : _____

The IP address of the DNS Server for the HTTP Server: _____

The router interface connecting the ITED segment: _____

Other Information:

Appendix 3: Form A

Form A

**索取網上學校行政及管理系統 3.0 安裝套件
Request Form for WebSAMS 3.0 Installation Kit**

索取網上學校行政及管理系統 3.0 安裝套件

致：教育局常任秘書長

收件人：「網上校管系統」小組學校聯絡主任

(完成甲部及乙部後，請把已填妥的表格傳真至 3464 0567。)

甲部 (由學校填寫)

本校已委託_____ (供應商名稱) 為本校安裝新「網上校管系統」及系統遷移服務。請將所須的套件*轉交上述供應商。

校長簽署 : _____
校長姓名 : _____
學校名稱 : _____
學校編號 : _____
總支出 : _____ (上限 \$50,000)
負責老師姓名 : _____
學校電話號碼 : _____
日期 : _____

學校印鑑

乙部 (由供應商填寫)

請將安裝新「網上校管系統」所須的套件轉交本公司。本公司承諾所取得的套件將只用於學校安裝新「網上校管系統」伺服器。

負責人簽署 : _____
負責人姓名 : _____
負責人職位 : _____
公司名稱 : _____
公司地址 : _____
公司電郵 : _____
公司電話號碼 : _____
日期 : _____

公司印鑑

* 系統及資訊管理組將提供下載的超連結

Request Form for WebSAMS 3.0 Installation Kit

To: Permanent Secretary for Education
Attn: WebSAMS School Liaison Officer (SLO)
(Please fax to 3464 0567 after completion of both Parts A and B)

Part A (to be completed by the school)

My school has appointed _____ (name of the vendor) to provide the system installation and migration services for upgrading of our WebSAMS to Version 3.0. Please provide the installation kit* to the above-named vendor for this upgrading exercise.

Signature of Principal : _____
Name of Principal : _____
Name of School : _____
School Number : _____
Cost of the upgrade : _____ (max \$50,000)
Teacher-in-charge : _____
Telephone number : _____
Date : _____

School chop

Part B (to be completed by the vendor)

Please provide the WebSAMS 3.0 installation kit* mentioned in Part A to my company. I understand that my company can only use the installation kit for upgrading the WebSAMS of the school.

Signature of Authorized

Person : _____
Name of Authorized Person : _____
Post of Authorized Person : _____
Name of Company : _____
Address of Company : _____
Email address : _____
Telephone number : _____
Date : _____

Company chop

* SIM section will provide the hyperlink for downloading.

Form B

**Hardware Equipment Acceptance Form for
Upgrading of WebSAMS 3.0**

(For reference only)

Hardware Equipment Acceptance Form for Upgrading of WebSAMS 3.0

(in English version only)

Note: The Windows operating system should have been installed before conducting these tests. This form is for school's reference. Schools are **NOT required** to submit this form to the EDB.

Server System Unit

Item Model: _____

Serial No.: _____

Test Result: Pass / Fail

	Test to be conducted	Expected Result
LAN port (Ethernet network adaptors)	Check how many LAN port the server has.	The server should have at least 2 Gigabit LAN ports
USB port	Check how many USB port the server has.	The server should have at least 2 front and 2 rear USB 2.0 ports.
Server size	Check the size of the server.	The server should be 2U (approximately 3.5 inches) or less in height.
Power-On Self Test (POST)	Power on the server and note the memory checking and other BIOS items being loaded during POST.	Memory check should report no error during POST.
Hard Disk Test	<p>There are usually several ways to test the Hard Disk (HDD). Any one of the following is acceptable:</p> <ol style="list-style-type: none"> 1. When the server boots up, before loading into Windows, HDD information might be listed alongside with CPU and memory checking result. 2. When the server boots up, before loading into Windows, it might prompt you to press certain keys to startup the BIOS configuration menu, or RAID utility program. In those programs you should be able to see HDD info. 3. Some server manufacturers provide Windows program for you to manage the HDD. Usually you need to install the Utility Disc bundled with the server first. 	The HDD should be detected. Its model number and ID should be displayed.

For reference only

	Test to be conducted	Expected Result
RAID Test	<p>There are usually several ways to check the RAID status. Any one of the following is acceptable:</p> <ol style="list-style-type: none"> 1. When the server boots up, before loading into Windows, it might prompt you to press certain keys to startup the RAID utility program. In this program you should be able to see the RAID status. 2. Some server manufacturers provide Windows program for you to manage the RAID status. Usually you need to install the Utility Disc bundled with the server first. 	The program should show a RAID disk with at least 800GiB useable space, composed of at least 3 HDD in RAID 5 configuration.
Boot-up Test	Power on the server and let the operating system boots up.	The Windows Server 2012 R2 Standard Edition should start up. Users can log into the system and use the services provided by the server.
CPU Speed Test	Open “Control Panel → View by Category → System and Security → System”.	The CPU should be Intel Quad-core Xeon E5 processor with clock speed at least 3.0GHz, or other Intel model with better performance.
Memory Size Test	Open “Control Panel → View by Category → System and Security → System”.	The memory size should be at least 16GB
Workgroup Setting	Open “Control Panel → View by Category → System and Security → System”.	The server is in a workgroup called “WebSAMSGROUP”.
Computer Name	Open “Control Panel → View by Category → System and Security → System”.	<p>The computer name should be the default computer name assigned by the system or any other name but MUST NOT equal to the ‘top level sub-domain name’ of the WebSAMS fully qualified domain name (FQDN) as long as WebSAMS 3.0 has not been installed.</p> <p>E.g. the top level sub-domain name is “websams”, if the FQDN is “websams.abc.edu.hk”; or “sams”, if the FQDN is “sams.abc.edu.hk”.</p>
Scandisk Test	Run "CHKDSK" in "Windows Command Prompt" for all partitions.	No error reported.
Shutdown And Reset Test	Shutdown the server and do Boot-up Test again (both warm and cold boot).	The server should be shut down normally and then can be restarted successfully.
Graphic Mode Test	Change the resolution of the screen to 800x600.	The screen under the resolution of 800x600 should be displayed correctly without distortion.
Hard Disk Size Check	Open “Windows Disk Management”	The hard disk size should match with the RAID Disk created.
Hard Disk Partitioning Check	Open “Windows Disk Management”	C drive has 200 GB; D drive has 200 GB and E drive has the remaining space.
Anti-Virus	Perform a manual scan on the whole system.	No virus is found.
System Date and time test	Click the system clock on the taskbar.	The date and time are correct.

For reference only

	Test to be conducted	Expected Result
Regional Option	Open “Control Panel → View by Category → Change date, time, or number formats”.	<ul style="list-style-type: none">• On “Formats” tab, the Format should be “Chinese (Traditional, Hong Kong SAR.)”.• On “Location” tab, the Home location should be “Hong Kong SAR”.• On “Administrative” tab, the Language for non-Unicode programs should be “Chinese (Traditional, Hong Kong SAR.)”.
Data Writing Test	Insert a blank writable DVD into the drive. Open the Windows explorer and copy some files to the X: drive (X: is drive letter of DVD writer drive). Finally, right click the X: drive icon and select to burn the files into the DVD.	A message will show that the burning process is done successfully.
Data Reading Test	Eject the DVD after burning process is completed and insert the same DVD disc into the DVD writer again. In the Windows explorer, open the X: drive and check the files.	The files listed should be equal to those that have been copied into the X: drive for burning.

Form C

User Acceptance Test Form

USER ACCEPTANCE TEST FORM FOR INSTALLATION OF WEBSAMS 3.0

For Office Use:

--	--	--	--

WebSAMS Installation Date: _____

Test Cases: Please refer to the **Appendix: Acceptance Test Procedures** for the details of each test item.

Item No.	Test Items	Test Results / Answers
1. WebSAMS Application		
1.1	Start-up of WebSAMS System	Test 1: _____
1.2	Start-up of WebSAMS Training System	Test 2: _____
1.3	Version Upgrade of WebSAMS System	Test 3: _____ Test 4: _____ Test 5: _____
1.4	Account Name & Password	Test 6: <input type="checkbox"/> Yes <input type="checkbox"/> No
1.5	Software Components	
	Apache	Test 7: _____
	Wildfly	Test 8: _____
	JDK	Test 9: _____
	Sybase SQL Anywhere 16	Test 10: <input type="checkbox"/> Yes <input type="checkbox"/> No Test 11: _____
	Crystal Server 2013	Test 12: <input type="checkbox"/> Yes <input type="checkbox"/> No Test 13: _____
	Anti-Virus	Test 14: <input type="checkbox"/> Yes <input type="checkbox"/> No
1.6	Configuration of the Operating System	
	Hard Disk Partitioning	Test 15: C drive _____ GB D drive _____ GB E drive _____ GB
	File System	Test 16: _____
	Workgroup	Test 17: _____
	System Locale and Language Setting	Test 18: _____
1.7	Internet Connectivity	Test 19: <input type="checkbox"/> Yes <input type="checkbox"/> No
1.8	Scheduled Backup Job	Test 20: Pre-backup _____ Post-backup _____ Test 21: _____ _____

USER ACCEPTANCE TEST FORM FOR INSTALLATION OF WEBSAMS 3.0

2. HTTP Server		
2.1	Environment of the HTTP Server	Test 22: _____ Test 23: _____ Test 24: <input type="checkbox"/> Yes <input type="checkbox"/> No
2.2	Anti-Virus Software of the HTTP Server	Test 25: _____
3. ITED Workstation		
3.1	Accessing WebSAMS Website	Test 26: <input type="checkbox"/> Yes <input type="checkbox"/> No
3.2	DNS Test	Test 27: _____
3.3	WebSAMS System Login	Test 28: <input type="checkbox"/> Yes <input type="checkbox"/> No
3.4	Training System Login	Test 29: <input type="checkbox"/> Yes <input type="checkbox"/> No
4. WebSAMS Workstation		
4.1	Crystal Report 2013 Designer Edition	Test 30: <input type="checkbox"/> Yes <input type="checkbox"/> No Test 31: _____
4.2	ODBC Test	Test 32: genuser _____ fmpuser <input type="checkbox"/> _____ <input type="checkbox"/> N/A (Government school) stfuser _____
4.3	DHCP Test	Test 33: _____
4.4	Accessing WebSAMS Website	Test 34: <input type="checkbox"/> Yes <input type="checkbox"/> No
4.5	WebSAMS System Login	Test 35: <input type="checkbox"/> Yes <input type="checkbox"/> No
4.6	Training System Login	Test 36: <input type="checkbox"/> Yes <input type="checkbox"/> No
5. Communication and Delivery System (CDS)		Test 37: <input type="checkbox"/> Yes <input type="checkbox"/> No
6. Generation of Reports		Test 38: <input type="checkbox"/> Yes <input type="checkbox"/> No
7. Special Chinese Characters		Test 39: <input type="checkbox"/> Yes <input type="checkbox"/> No
8. Application User Manual (AUM)		Test 40: <input type="checkbox"/> Yes <input type="checkbox"/> No
9. Pre-loaded Data in Training System		
9.1	Pre-loaded User Accounts	Test 41: <input type="checkbox"/> Yes <input type="checkbox"/> No
9.2	Generate Report	Test 42: <input type="checkbox"/> Yes <input type="checkbox"/> No
9.3	FMP Accounting Period	Test 43: _____

USER ACCEPTANCE TEST FORM FOR INSTALLATION OF WEBSAMS 3.0

Remarks (if any):

For Office Use: (WebSAMS support Team)

This is to confirm that my school has conducted the above criteria test cases completely and acknowledge that WebSAMS installation is successful

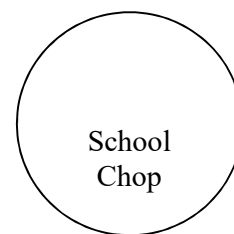
Signature of Principal : _____

Name of Principal : _____

Name of School : _____

School Number : _____

Date : _____




For Office Use: _____

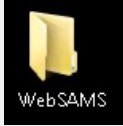
Annex: Acceptance Test Procedures


1. WebSAMS Application

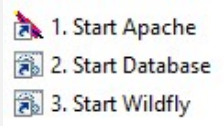
1.1. Start-up of WebSAMS System

 **Test 1** What is the message shown in the position as masked below?


1. In WebSAMS server, open the folder named “WebSAMS” and execute the shortcuts in sequence as shown:
Path: Desktop > “WebSAMS” folder









2. The Wildfly console will be launched. Wait for a few minutes until a message is shown on the screen which indicates that the WebSAMS Production System has been started up successfully.




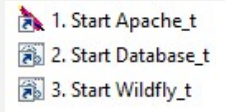
1.2. Start-up of WebSAMS Training System

 **Test 2** What is the message shown in the position as masked below?

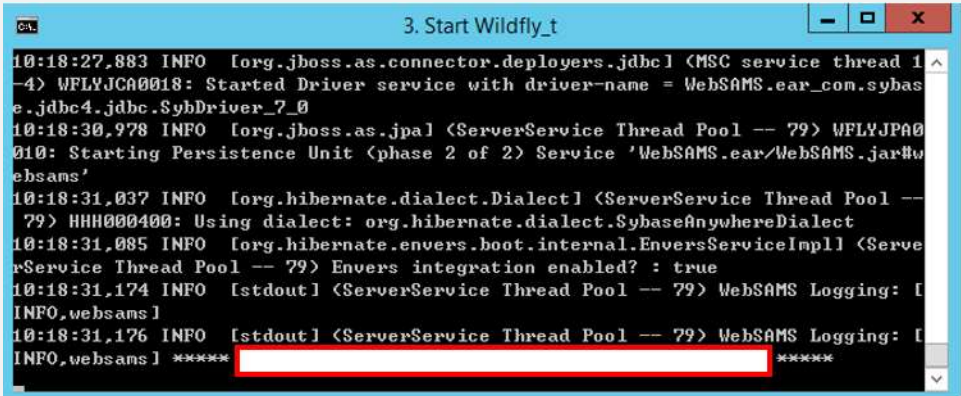
1. In WebSAMS server, open the folder named “WebSAMS_T” and execute the shortcuts in sequence as shown:
Path: Desktop > “WebSAMS_T” folder







2. The Wildfly console will be launched. Wait for a few minutes until a message is shown on the screen which indicates that the WebSAMS Training System has been started up successfully.



Annex: Acceptance Test Procedures

1.3. Version Upgrade of WebSAMS System



Test 3

What is the WebSAMS version shown in the position as masked below?

1. In WebSAMS server, open an Internet Explorer and go to the WebSAMS login page.



Test 4

What is the message that you have recorded according to the following instructions?

1. In WebSAMS server, shut down Wildfly
2. Go to WebSAMS Download Site
URL: <http://cdr.websams.edb.gov.hk>
3. Go to the webpage of “版本升級 > 網上校管系統”. Find the first upgrade link.
Path: Version Upgrade

網上校管系統版本升級

主頁 > 版本升級 > 網上校管系統

網上校管系統版本升級主要包含各式系統更新，例如程式變更、新增模組、功能提升及資料庫結構改動。進行升級前，學校應閱讀版本升級指南及相關版本說明，並按所屬網上校管系統版本的升級連結進行升級。

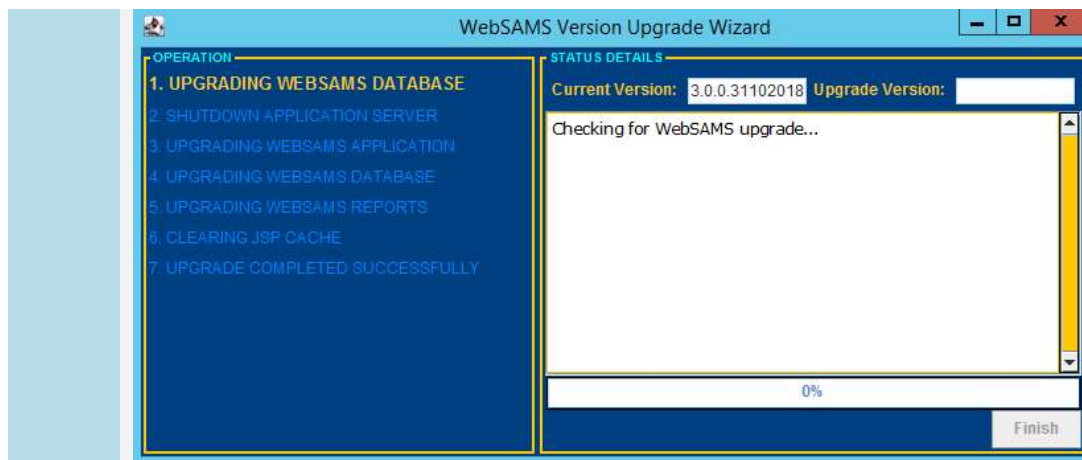
注意事項

為確保網上校管系統運作暢順，以及在有需要時獲得迅速而適切的技術支援，學校務必適時進行版本升級。學校系統管理員亦應監察整個過程，以確保系統升級成功。

發行日期	系統現時版本	目標版本	版本說明	升級連結
28.01.2021	3.0.0.26112020	3.0.0.28012021	英	即時升級

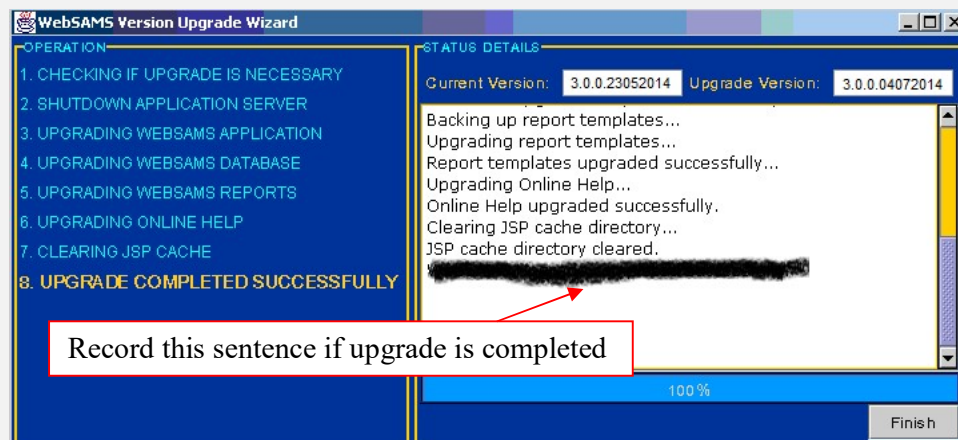
4. Click “Upgrade Now” to launch the wizard. The wizard will execute the upgrade immediately.

Annex: Acceptance Test Procedures



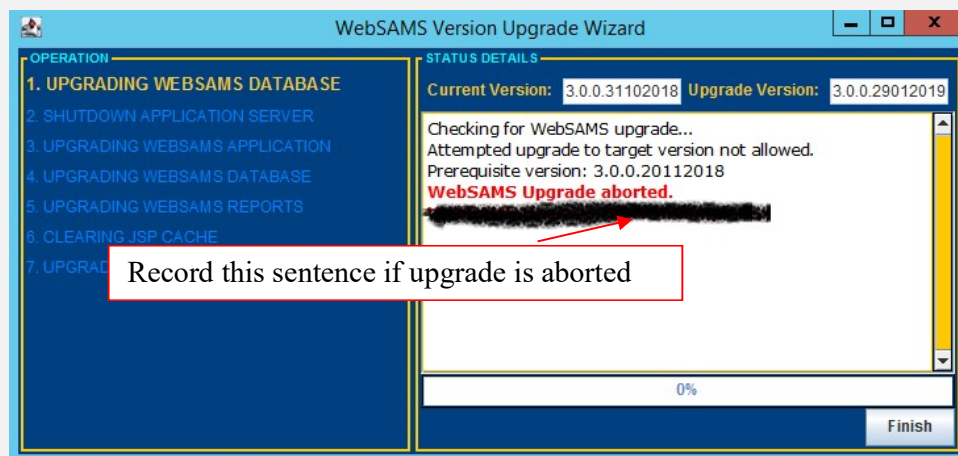
5. Wait for a while until the upgrade process is finished and “Finish” button is activated.

If the upgrade is completed, the following screen will be shown.



Record this sentence if upgrade is completed

Otherwise, the upgrade will be aborted by the system and the following screen will be shown.



Record this sentence if upgrade is aborted

Test 5 What is the WebSAMS Version shown in the position as masked below?

1. After the Test 4, start the Wildfly again.
2. After the Wildfly has been started up, open the Internet Explorer and go to the WebSAMS login page.

Annex: Acceptance Test Procedures



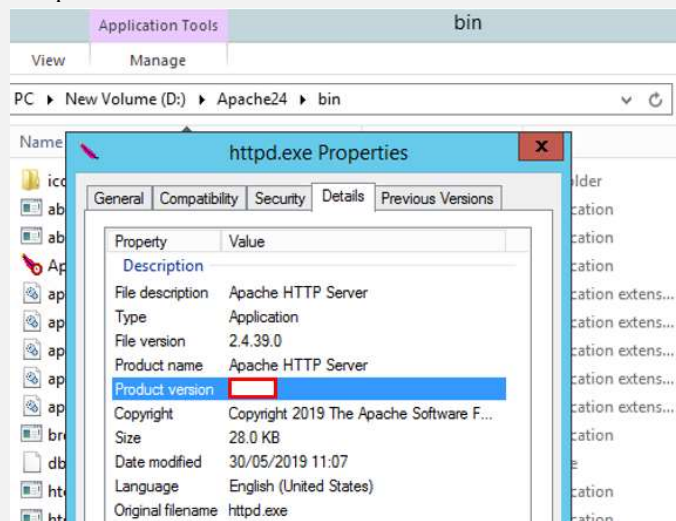
3. Record the WebSAMS version shown no matter it has been changed or not.

1.4. Account Name & Password

- | | |
|---------------|--|
| Test 6 | Can you successfully log into the system with the Administrator account? |
| 1. | In the WebSAMS server, open an Internet Explorer and go to the WebSAMS login page. |
| 2. | Log into the “sysadmin” account. |

1.5. Software Components

- | | |
|---------------|--|
| Test 7 | What is the Apache version shown in the position as masked below? |
| 1. | Open the window “httpd.exe Properties” in WebSAMS server.
Path: Right click on the file “D:\WebSAMS3.0\Apache24\bin\httpd.exe” and click “Properties” > “Details” |

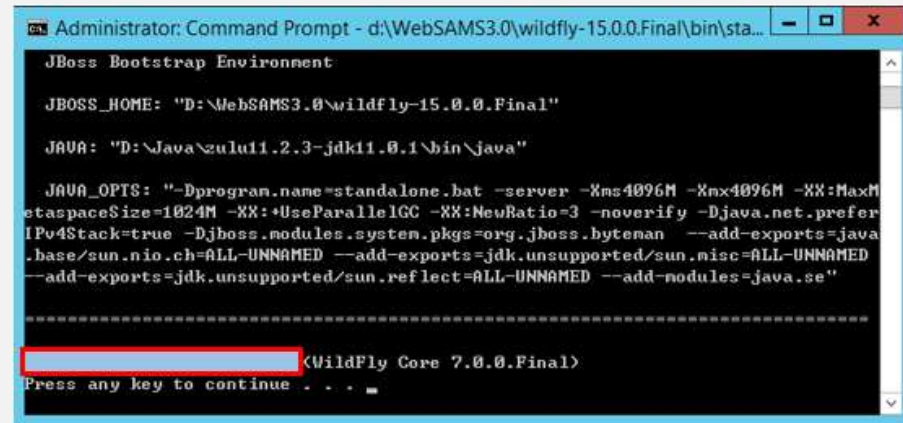


- | | |
|---------------|--|
| Test 8 | What is the Wildfly version shown in the position as masked below? |
|---------------|--|

Annex: Acceptance Test Procedures

1. In WebSAMS server, open a DOS command window and type the command ‘%JBOSS_HOME%\bin\standalone.bat --version’.

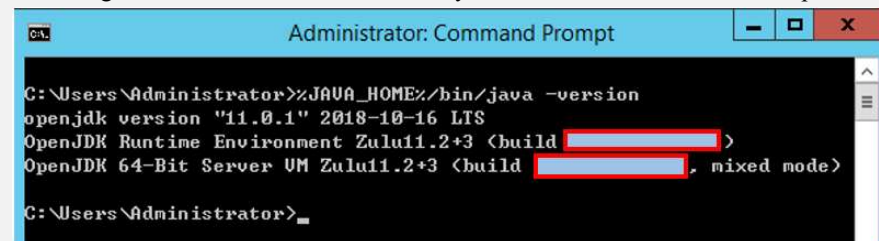
Path: Right click on the taskbar with Wildfly icon and select ‘Command Prompt’



Test 9 What is the java version shown in the position as masked below?

1. In WebSAMS server, open a DOS command window and type the command ‘%JAVA_HOME%\bin/java -version’.

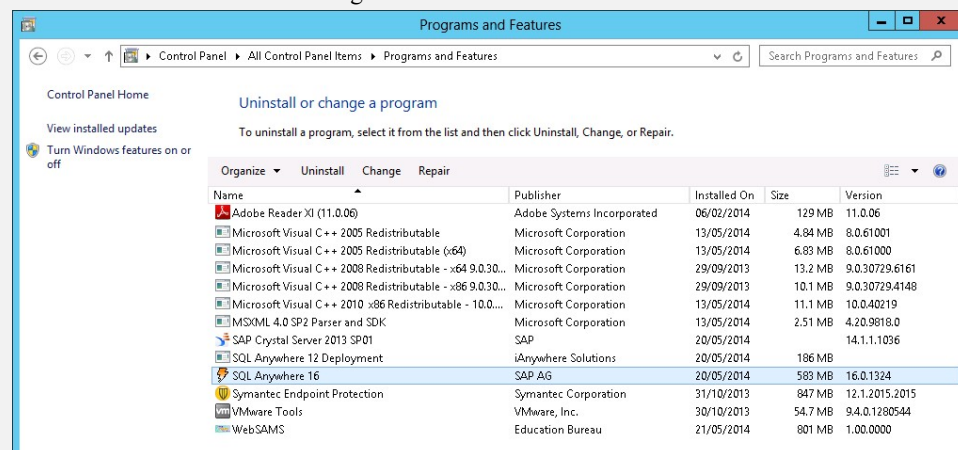
Path: Right click on the taskbar with Wildfly icon and select ‘Command Prompt’



Test 10 Does the application “SQL Anywhere 16” exist?

1. In WebSAMS server, open the “Programs and Features” window and find the application “SQL Anywhere 16”.

Path: Start > Control Panel > Programs and Features



Test 11 What is the Sybase Central version shown in the position as masked below?

1. In WebSAMS server, launch the Sybase Central

Path: Start > Sybase Central (64-bit)

Annex: Acceptance Test Procedures

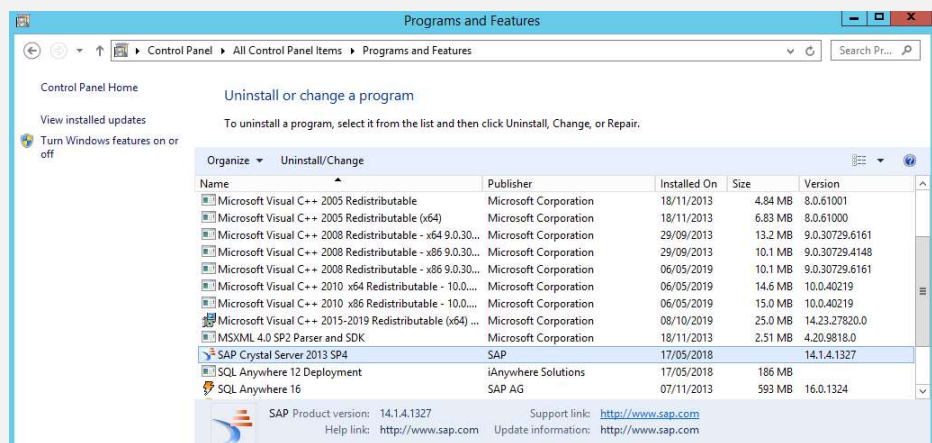
2. Click Help > About Sybase Central



Test 12 Does the application SAP Crystal Server 2013 exist?

1. In WebSAMS server, open the “Programs and Features” window and find the application “SAP Crystal Server 2013”.

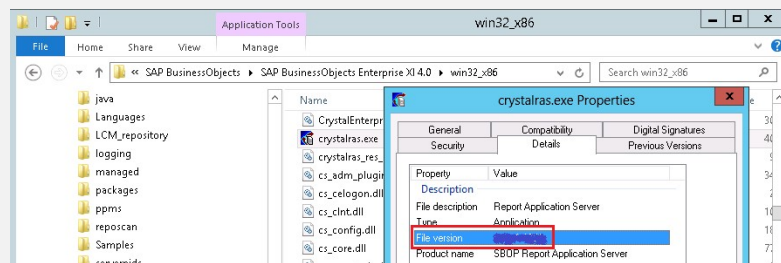
Path: Start > Control Panel > Programs and Features



Test 13 What is the file version of the Crystal Server 2013 file “crystalras.exe”?

1. Open the window “crystalras.exe Properties” in WebSAMS server.

Path: Right click on the file “C:\Program Files (x86)\SAP BusinessObjects\SAP BusinessObjects Enterprise XI 4.0\win32_x86\crystalras.exe” and click “Properties” > “Details”



Test 14 Does the Anti-Virus software exist?

1. Click “Start” > “Control Panel” > “Programs and Features”
2. Locate the anti-virus software in WebSAMS server.

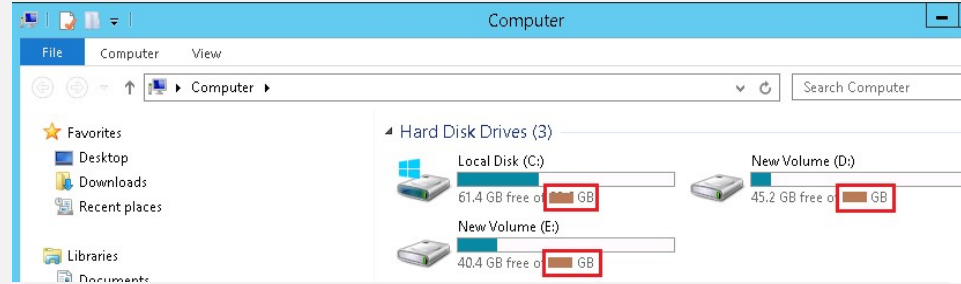
1.6. Configuration of the Operating System

Annex: Acceptance Test Procedures

Test 15 What is the capacity of C, D and E drive of the WebSAMS Server?

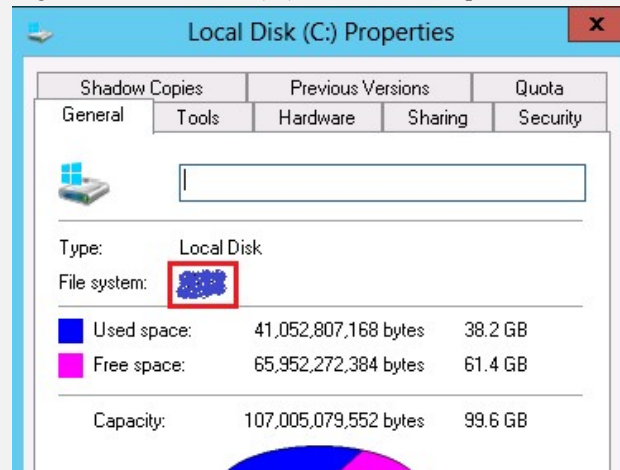
1. Click “Computer” of the WebSAMS server.

Path: Start -> Computer



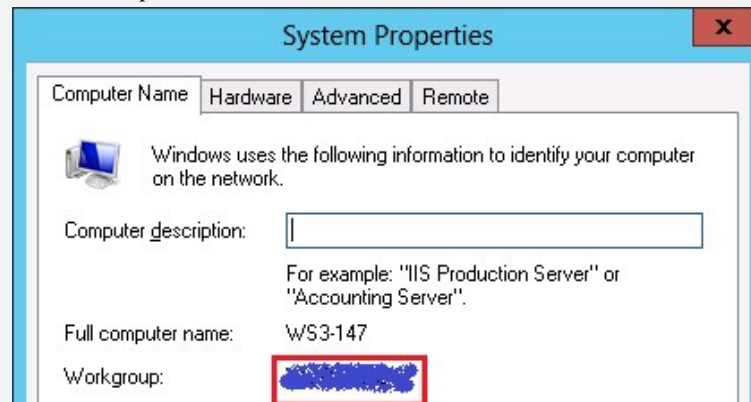
Test 16 What is the File System Type as masked in the screen below?

1. Click “Computer” of the WebSAMS server.
Path: Start -> Computer
2. Right click “Local Disk (C:)” and select “Properties”.



Test 17 What is the Workgroup as masked in the screen below?

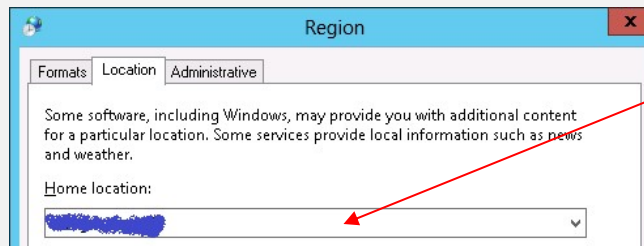
1. Right click “Computer” and select “Properties” in the WebSAMS server.
Path: Start -> Computer
2. Click “Advanced system settings” in the ‘System’ window.
3. Select “Computer Name” tab.



Annex: Acceptance Test Procedures

Test 18 Record the value of “Location” in the screen Region.

1. In WebSAMS server, open the “Region” window.
Path: Start > Control Panel > Region
2. Select “Location” tab.



Record this sentence

1.7. Internet Connectivity

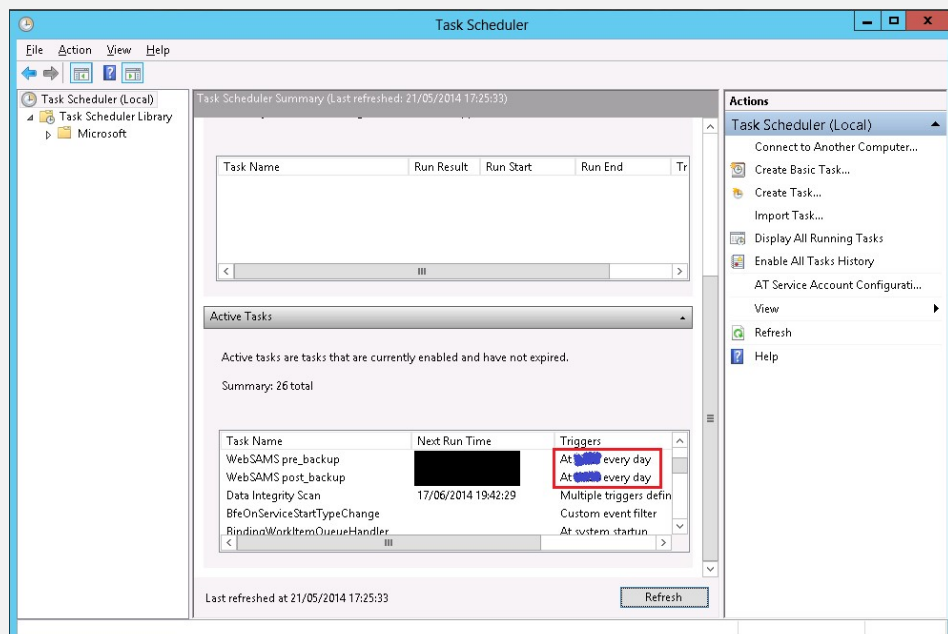
Test 19 Can the website be loaded successfully?

1. Open Internet Explorer in the WebSAMS server and go to the EDB website.
URL: <https://www.edb.gov.hk/>

1.8. Scheduled Backup Job

Test 20 Record the pre-backup and post-backup time.

1. Open the “Task Scheduler” window in WebSAMS server.
Path: Start > Administrative Tools > Task Scheduler



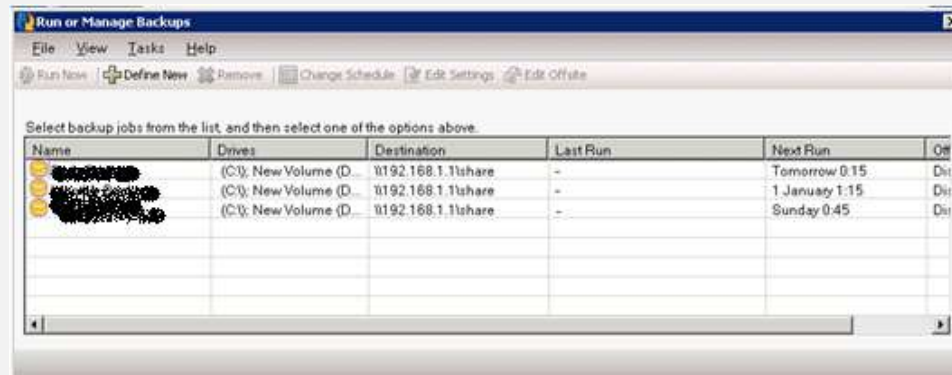
Test 21 Record the name of the 3 scheduled tasks (daily backup, weekly backup and monthly backup) for backing up the system to the NAS/DAS.

1. Launch the application for system backup in WebSAMS server.

Annex: Acceptance Test Procedures

2. Open the summary that listed all scheduled backup tasks and record the name of the required tasks:

An example screen is shown for reference as follows:



2. HTTP Server

2.1. Environment of the HTTP Server

Test 22 Record the message as masked in the screen below

1. Reboot the HTTP server.
2. Enter the pass phrase.

```
Starting httpd2 (worker) Apache/2.2.3 mod_ssl/2.2.3 (Pass Phrase Dialog)
Some of your private key files are encrypted for security reasons.
In order to read them you have to provide the pass phrases.

Server websanst.school.edu.hk:443 (RSA)
Enter pass phrase:
OK: [Redacted]
```

Test 23 Record the version number of the services of apache2 and apache2-worker.

1. Enter the HTTP server Administrator account and password.

```
Welcome to SUSE Linux Enterprise Server 10 SP1 (i586) - Kernel 2.6.16.46-0.12-default (tty1).

-- WebSAMS HTTP Server v.081015 --

HTTP login: root
Password:
Last login: Wed Oct 22 10:34:48 HKT 2008 on tty1
HTTP:~ #
```

2. Type in this command for apache version:
rpm -qa | grep apache2

Test 24 Does the message "running" display on the screen?

1. Type in this command for apache version
rcapache2 status

2.2. Anti-Virus Software of the HTTP Server

Test 25 Record the result of Trend Micro Server Protect 3.0
(e.g. SProtectLinux-3.0-xxxx)


1. Type in this command
rpm -qa | grep SProtectLinux-3.0

3. ITED Workstation

Annex: Acceptance Test Procedures

3.1. Accessing WebSAMS Website

Test 26	Can you access the WebSAMS website?
1.	Select a workstation within the ITED segment.
2.	Open an Internet Explorer and go to the WebSAMS Website by entering the URL for the WebSAMS of the school.



3.2. DNS Test

Test 27	Record the nslookup result. (For checking whether the WebSAMS domain name is able to be resolved to the private IP address of the HTTP server)
1.	In an ITED workstation, open the DOS command window. Path: Start > run > type "cmd"
2.	Type the command: nslookup <websams domain name>> e.g.: nslookup websams.abc.edu.hk

3.3. WebSAMS System Login

Test 28	Can you successfully login to the WebSAMS System?
1.	Open an Internet Explorer and go to the WebSAMS website.
2.	Log into the "sysadmin" account.

3.4. Training System Login

Test 29	Can you log into the Training System successfully?
1.	Open an Internet Explorer and go to the Training System website. Note: If the URL of your webSAMS System is "http://websams.xxx.edu.hk", then the URL

Annex: Acceptance Test Procedures

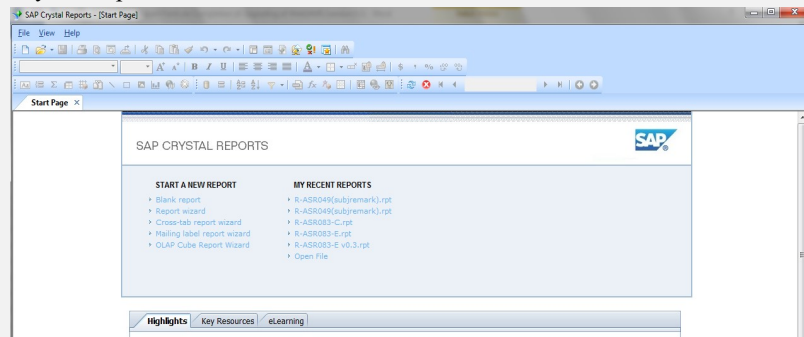
- for the Training System should be “https://websams.xxx.edu.hk:7010”.
- Log into the “sysadmin” account.

4. WebSAMS Workstation

4.1. SAP Crystal Report 2013

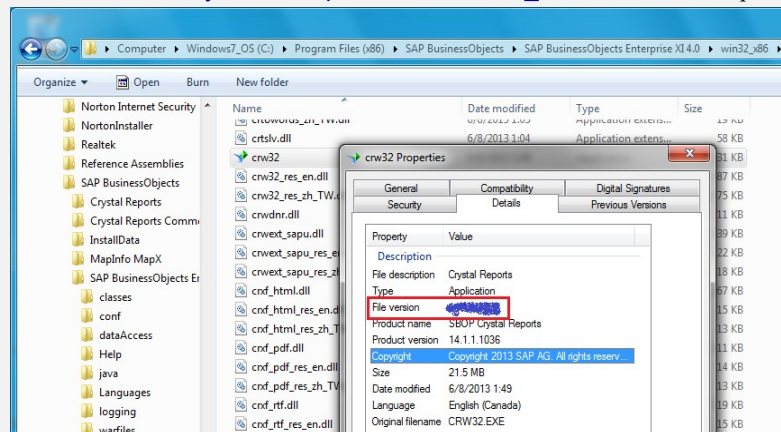
Test 30 Can you see the application interface as shown in the screen below?

- Select a workstation within the WebSAMS segment.
- Open the Crystal Reports.
Path: Start > All Programs > SAP Business Intelligence > SAP Crystal Reports 2013 > SAP Crystal Reports 2013



Test 31 What is the file version of the Crystal Report Designer file “crw32.exe”?

- Open the window “crw32.exe Properties” in workstation.
Path: Right click on the file “C:\Program Files (x86)\SAP BusinessObjects\SAP BusinessObjects Enterprise XI 4.0\win32_x86” and click “Properties” > “Details”



4.2. ODBC Test

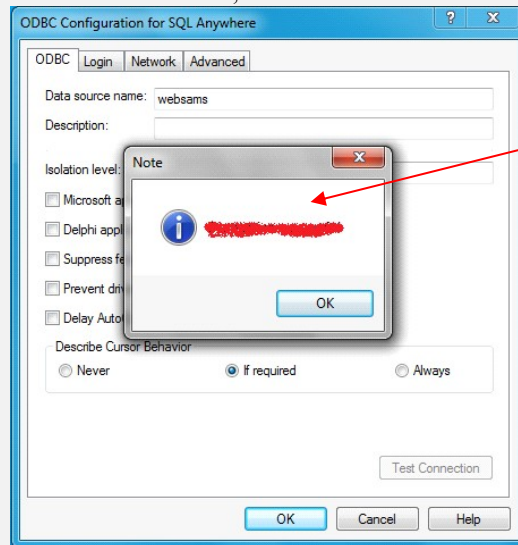
Test 32 What is the message as masked in screen below?

(All the three accounts of **genuser**, **fmpuser** and **stfuser** should be tested one by one. **fmpuser** account is not applicable to government school.)

- Open the ODBC Configuration window of **websams** in **System DSN** tab.
Path: Start > Control Panel > Administrative Tools > Data Source

Annex: Acceptance Test Procedures

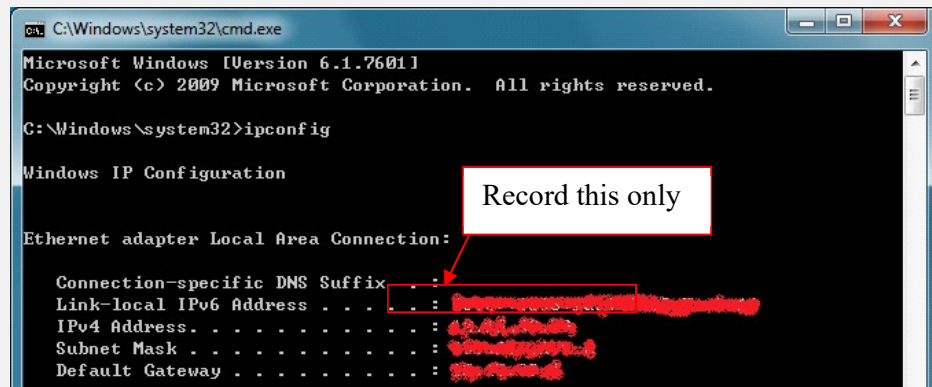
2. In Login tab, input the user name (e.g. “genuser”) with the password given.
3. Go back to ODBC tab, click “Test Connection”.



4.3. DHCP Test

Test 33 What is the IP address as masked in the screen below?

1. Select a workstation within the WebSAMS segment and reboot it.
2. After rebooting, open the DOS command window.
Path: Start > run > type “cmd”
3. Type “ipconfig” and press enter.



4.4. Accessing WebSAMS Website

Test 34 Can you access the WebSAMS website successfully?

1. Select a workstation within the WebSAMS segment.
2. Open an Internet Explorer and go to the WebSAMS website by entering the URL for the WebSAMS of the school.

Annex: Acceptance Test Procedures



4.5. WebSAMS System Login



Test 35	Can you successfully log into the WebSAMS System?
1.	In a workstation in WebSAMS segment, open an Internet Explorer and go to the WebSAMS website.
2.	Log into the “sysadmin” account.

4.6. Training System Login



Test 36	Can you log into the Training System successfully?
1.	In a workstation in WebSAMS segment, open an Internet Explorer and go to the Training System website. Note: If the URL of your WebSAMS System is “https://websams.xxx.edu.hk”, then the URL for the Training System should be “https://websams.xxx.edu.hk:7010”.
2.	Log into the “sysadmin” account.

5. **Communication and Delivery System (CDS)**



Test 37	Can you send CDS message successfully?
1.	Log into the WebSAMS System in any workstation.
2.	Go to “Send WebSAMS Version Number” screen. Click “Start” to send Version Number. Path: CDS > Send WebSAMS Version

Annex: Acceptance Test Procedures

3. Go to “Outgoing Message” screen. Click the link and then encrypt the message.

Path: CDS > Outgoing Message > Maintain Message

Note: If an alert message reminding you to register the CDS is shown, you can simply ignore it.

[S-CDS01-01] CDS > Outgoing Message > Maintain Message

The system registration is revoked, transmission for general message is not allowed. Please go to [CDS > Registration] to register a

Maintain Message Process Message Upload Data

Page 1 of 18 Bottom

Message Status	Description	Creation Time	Ack Time	Subject (Code)	Type (Code)	Party	Priority	School Reference	Owner
Ready	SCRN, WebSAMS Version	22/05/2014 10:30 AM		SAMS version setup (AI)	Data (DAT)	EDB	Normal		sysadmin

View Outgoing Message - Internet Explorer

http://10.15.35.147/cds/viewOutgoingMsg.do?msgID=7807

[S-CDS01-03] CDS > Outgoing Message > Maintain Message

View Outgoing Message

Description
SCRN, WebSAMS Version
Subject (Code)
Type (Code)
Message Status
Owner
Creation Time
Acknowledge Receipt
Party
Priority
School Reference
CDSVERS1.DAT
SCRN

Encrypt Delete

View Outgoing Message - Internet Explorer

about:blank

[S-CDS01-05] CDS > Outgoing Message > Encryption

Encryption

Please input the school key.
Effective Period : 05/12/2013 - 23/06/2014

School Key

Encrypt Close

Remarks:
Please allow a few minutes interval between each batch or individual encryption of messages.

1. Click “Encrypt” button

2. Input the key password (Please ask the school user to input the key password)

3. Click “Encrypt” to send this

4. The message status should become “Processing”.

[S-CDS01-01] CDS > Outgoing Message > Maintain Message

Encryption is successful!! Message(s) is sending at backend.

Maintain Message Process Message Upload Data

Page 1 of 12 Bottom

Message Status	Description	Creation Time	Ack Time	Subject (Code)	Type (Code)	Party	Priority	School Reference	Owner
Processing	SCRN, WebSAMS Version	22/05/2014 10:50 AM		SAMS version setup (AI)	Data (DAT)	EDB	Normal		sysadmin

5. Refresh the screen by clicking “CDS > Outgoing Msg”, until the status has become “Sent”.

Annex: Acceptance Test Procedures

- Student Info E
- School Management
- Student
- Attendance
- Student Activities
- Award & Punishment
- Assessment
- SLP
- Special Assessment
- Staff Deployment
- CDS
 - Registration
 - Outgoing Message

[S-CDS01-01] CDS > Outgoing Message > Maintain Message

Maintain Message

Process Message

Upload Data

Page 1

of 12

Bottom

		Message Status	Description	Creation Time	Ack Time	Subject (Code)	Type (Code)	Party	Priority	School Reference	Owner
		<input type="checkbox"/> Sent	SCRN_WebsAMS Version	22/05/2014 10:50 AM		SAMS version setup (AI)	Data (DAT)	EDB	Normal		sysadmin
		<input type="checkbox"/> Received	RESEND:SCRN_WebsAMS Version	16/05/2014 12:04 PM	16/05/2014 12:05 PM	SAMS version setup (AI)	Data (DAT)	EDB	Normal		sysadmin
		<input type="checkbox"/> Send Fail	SCRN_WebsAMS Version	16/05/2014 07:25 AM		SAMS version setup (AI)	Data (DAT)	EDB	Normal		sysadmin

6. Generation of Reports

Test 38 Can you generate and preview the report successfully?

- Log into the WebSAMS System in any workstation.
- Select "Report" in Student module or in other modules which support "Report" function.
- Select the appropriate Category and Language.
- Click the "Search" button to view the list of reports under the Category selected.
- Click on the Report name to view the corresponding templates.
- Click on the appropriate template for producing the report.

[S-STU08-01] Student > Report

Category	Class List								
Language	<input checked="" type="radio"/> English <input type="radio"/> Chinese								
<input type="button" value="Search"/> <input type="button" value="Reset"/>									
Report Name (ID) <ul style="list-style-type: none"> Class List (with Age and Guardian English Name) (R-STU007-E) Class List (with English Name and Sex) (R-STU004-E) Class List (with English Name, Chinese Name and Sex) (R-STU005-E) Class List (with English Name, Chinese Name, Sex, Nationality, Ethnicity and Spoken Language at Home) (R-STU076-E) Class List (with English Name, Sex and School House) (R-STU006-E) Class List (with Father and Mother Contact) (R-STU010-E) Class List (with STRN, DOB and Guardian Chinese Name) (R-STU009-E) Class List (with STRN, DOB and Guardian English Name) (R-STU008-E) 									
	<table> <tr> <th>Template Description</th> <th>Type</th> <th>Creator</th> <th>Creation Time</th> </tr> <tr> <td>Built-in Template</td> <td>Built-In</td> <td>---</td> <td>---</td> </tr> </table>	Template Description	Type	Creator	Creation Time	Built-in Template	Built-In	---	---
Template Description	Type	Creator	Creation Time						
Built-in Template	Built-In	---	---						

- Click "Preview & Print".

[S-STU08-08] Student > Report

Class List (with STRN, DOB and Guardian English Name) (R-STU008-E) :-
Built-in Template

Please input the print criteria.

School Year	2013
School Level	Secondary
School Session	Whole Day
Class Level	Secondary 1
Class Name	1A
Subject Group	All
Print Departed Students	Include "Printing in Report" indicators are checked
Format	PDF
<input type="button" value="Preview & Print"/> <input type="button" value="To File"/> <input type="button" value="Reset"/> <input type="button" value="Back"/>	

- The report will be shown.

Annex: Acceptance Test Procedures

R-STU008-E

LUI KEE GOVERNMENT SECONDARY SCHOOL

Date: 22/05/2014

Class List (with STSN, DOB and Guardian English Name)

School Year: 2013/2014

page: 1 of 1

School Level: Secondary

School Session: Whole Day

Class Teacher: STAFF FIVE THREE ZERO

Class Level: Secondary 1

Class Name: 1A

No	English Name	Chinese Name	Sex	Subject Group	STSN	DOB	House	Phone No	Guardian	Emergency Telephone
40	gfjygd		M		J598*****	11/09/2001				

7. Special Chinese Characters

Test 39

Can you print the report with the Chinese characters displayed correctly?

(This test is to verify the successful installation of the Dynafont font set in WebSAMS)

1. Log into the WebSAMS in any workstation.
2. Go to "Create Individual Account" screen.
Path: 'Security > Access Control > User Account > Create Individual Account'
3. Enter the two special Chinese characters 冰傑 as "Chinese User Name", either by
i) copy the two words directly from the file [Test39\(Chinese Char\).RTF](#), OR
ii) enter the word by (倉頡: EE) and (倉頡: OYQD).
After that, fill in relevant fields and save the record.

[S-SEC03-01] Security > Access Control > User Account > Create Individual Account

User Group(s) selected successfully. To save the Group information of this user, please click on the "Save" button.

Search User Account **Create Individual Account** **Create Student/Parent Account**

School Level/Session (* For data access control for Staff and Others accounts only)
 School Level: All School Session: All
 User Type: ☐ Staff ☐ Student ☐ Parent ☒ Others
 User Code:

* "Staff Code" for "Staff" User Type, "Student Registration No." for "Student / Parent" User Type
 and Not Applicable for "Others" User Type
 User ID (* For login use):

Password

Password Expiry
☐ Never Expire ☒ Password Expiry Date: 30/05/2014 (DD/MM/YYYY)

English User Name

Chinese User Name

Login Language

User Account Access Time
 *Actual access time is also subject to "System Access Time" setting.
 Monday - Saturday: ☒ 06:00 To 23:00 ☐ 24 Hours
 Sunday: ☒ 06:00 To 18:00 ☐ 24 Hours

Account Expiry
☒ Never Expire ☐ Account Expiry Date: (DD/MM/YYYY)

User Group Attached
☐ SYSTEM_ADMIN

Internet Access Time Profile Attached
☐ STAFF_OR_OTHERS

4. Go to "Security > Report & Log > Report". Choose "Chinese" and click Search.
Select "R-SEC002-C" report to view the characters.
Note: The report should be previewed in PDF format.

Annex: Acceptance Test Procedures

[S-SEC09-01] Security > Report & Log > Report

Category: All Categories
Language: ☐ English ☒ Chinese

Report Name (ID)

- >不成功登入系統紀錄 (R-SEC005-C)
- >個別用戶在「校管系統網絡」以外擁有使用權限的功能清單 (R-SEC008-C)
- >個別用戶組別在「校管系統網絡」以外擁有使用權限的功能清單 (R-SEC009-C)
- >在「校管系統網絡」以外可使用的功能清單 (R-SEC007-C)
- >存取時間表內用戶名單 (R-SEC011-C)
- >成功登入系統紀錄 (R-SEC004-C)
- >用戶組別內用戶名單 (R-SEC001-C)
- >用戶組別存取權限 (R-SEC002-C)
- >用戶資料報告 (R-SEC002-C)

Template Description	Type	C
系統提供範本	Built-In	---

[S-SEC09-04] Security > Report & Log > Report

用戶資料報告 (R-SEC002-C):-
系統提供範本

Please input the print criteria.

User Type: ☒ Staff/Others ☐ Student/Parent

School Level / Session (* For data access control for Staff and Others accounts)

School Level: All School Session

User ID: Tester

User Code:

User Name (English or Chinese):

User Group:

Account Status: ☒ All ☐ Active ☐ Expired

Format: PDF

R-SEC002-C 呂祺一條龍學校 日期: 22/05/2014
用戶資料報告

學年: 2013/2014 第 1 頁/共 1 頁

用戶名稱: tester 最後登入時間: 17/01/2011 21:48
用戶姓名: 泳傑 使用語言: 中文
用戶代碼: A123 戶口到期日: 永不到期
用戶類別: 教職員 密碼到期日: 30/05/2014

教職員及其他用戶 一用於「資料層面控制」的級別及授課制資料

8. Application User Manual (AUM)

Test 40 Can you open and view the Application User Manual (AUM) successfully?

- Log into the WebSAMS in any workstation.
- Click "Help".

Lui Kee Through Train School User: sysadmin Login Time: 22/05/2014 12:00 Logout Help 中文版本

Current School Year: 2013 22 May 2014 12:14

Primary - AM Primary - PM Secondary - Whole Day

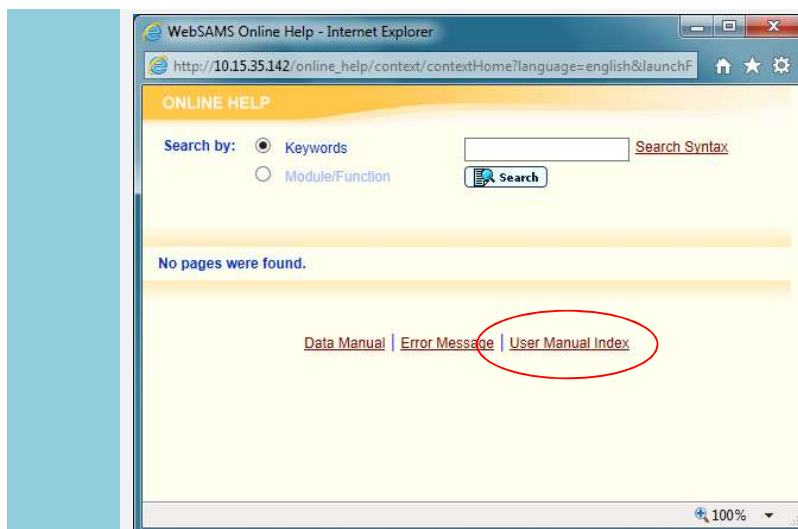
May 2014

Sun	Mon	Tue	Wed	Thu	Fri	Sat
				1	2	3 L
4	5	6	7	8	9	10 L
11	12	13	14	15	16	17 L
18	19	20	21	22	23	24 L
25	26	27	28	29	30	31 L

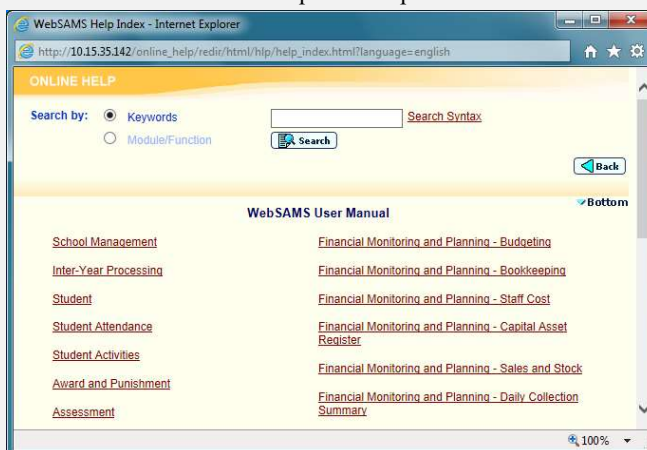
Customized day sequence is indicated in bracket ().
L - Long Week

- The following screen will be shown. Click "User Manual Index"

Annex: Acceptance Test Procedures



4. The following screen will be shown. Click on any manual link to read the manual. Please note that Acrobat Reader is required to open the manual



9. Pre-loaded Data in Training System

9.1. Pre-loaded User Accounts

Test 41	Can you log into the system successfully with those 3 accounts?
1.	Log into the WebSAMS Training System on any workstation by using the preloaded user accounts with the user ID of “user01”, “user02” and “user03” one by one.

9.2. Generate Report

Test 42	Can you preview the report successfully?
1.	Log into the WebSAMS Training System on any workstation.
2.	Select “Report” in Student module or in other modules, which support “Report” function.
3.	Select the appropriate Category and Language.
4.	Click the “Search” button to view the list of reports under the Category selected.

Annex: Acceptance Test Procedures

5. Click on the Report name to view the corresponding templates.

6. Click on the appropriate template for producing the report.

[S-STU08-01] [Student > Report](#)

Category

Language ☒ English ☐ Chinese

Search Reset

Report Name (ID)

- > [Class List \(with Age and Guardian English Name\) \(R-STU007-E\)](#)
- > [Class List \(with English Name and Sex\) \(R-STU004-E\)](#)
- > [Class List \(with English Name, Chinese Name and Sex\) \(R-STU005-E\)](#)
- > [Class List \(with English Name, Chinese Name, Sex, Nationality, Ethnicity and Spoken Language at Home\) \(R-STU076-E\)](#)
- > [Class List \(with English Name, Sex and School House\) \(R-STU006-E\)](#)
- > [Class List \(with Father and Mother Contact\) \(R-STU010-E\)](#)
- > [Class List \(with STRN, DOB and Guardian Chinese Name\) \(R-STU009-E\)](#)
- > [Class List \(with STRN, DOB and Guardian English Name\) \(R-STU008-E\)](#)

Template Description	Type	Creator	Creation Time
Built-in Template	Built-In	---	---

7. Click “Preview & Print”

[S-STU08-08] [Student > Report](#)

Class List (with STRN, DOB and Guardian English Name) (R-STU008-E) :-
Built-in Template

Please input the print criteria.

School Year

School Level

School Session

Class Level

Class Name

Subject Group

Print Departed Students

Format

Preview & Print To File Reset Back

8. The report will be shown.

R-STU008-E

LOI SEE GOVERNMENT SECONDARY SCHOOL

Date: 08/11/2019

Class List (with STRN, DOB and Guardian English Name)

School Year: 2019/2020

School Level: Secondary School Session: Whole Day Class Teacher: STAFF SIX ZERO ZERO

Class Level: Secondary 1 Class Name: 1A HARRY JAMES POTTER

page: 1 of 1

No	English Name	Chinese Name	Sex	Subject Group	STRN	DOB	House	Phone No	Guardian	Emergency Telephone
55	Chan		F		2100*****	20/09/2000				

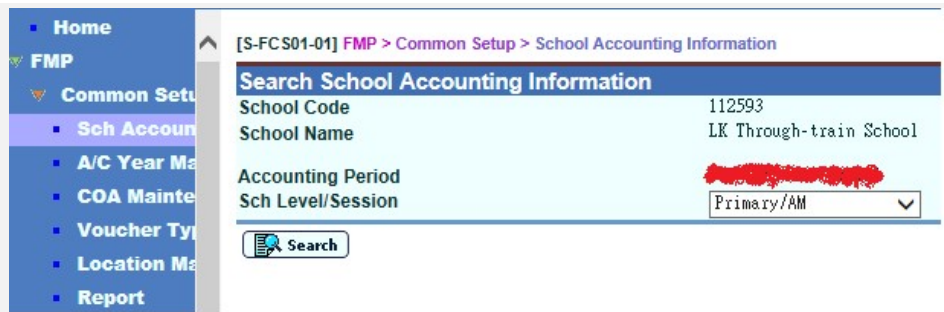
9.3. FMP Accounting Period

Test 43

What is the accounting period as masked in screen below?

1. Log into the WebSAMS Training System on any workstation with the preload account “fmpuser01”.
2. Go to “FMP > Common Setup > School Accounting Information”.

Annex: Acceptance Test Procedures

3. 

The correct accounting period will be displayed on the main screen.

- End -

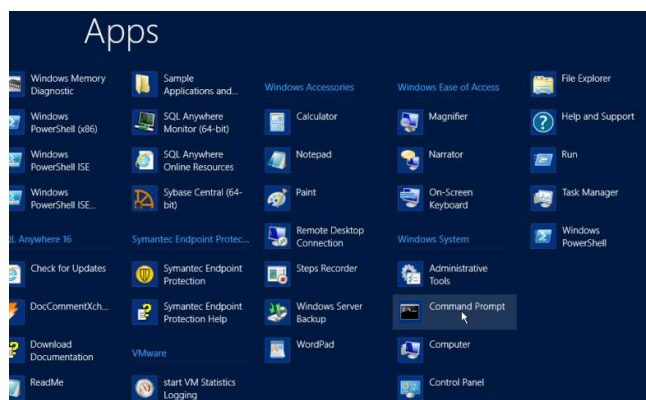
Appendix 6: Troubleshooting

Troubleshooting

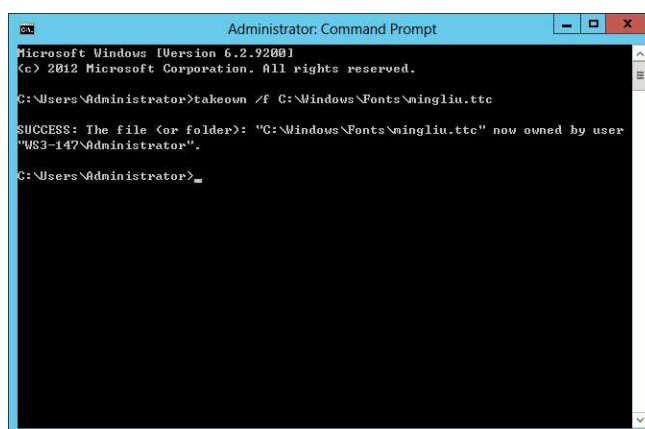
1. Special Chinese characters cannot be displayed correctly in PDF report.

The new Dynafont font set is not able to take effect in the Server. You may need to perform following steps to let the Dynafont font set effective.

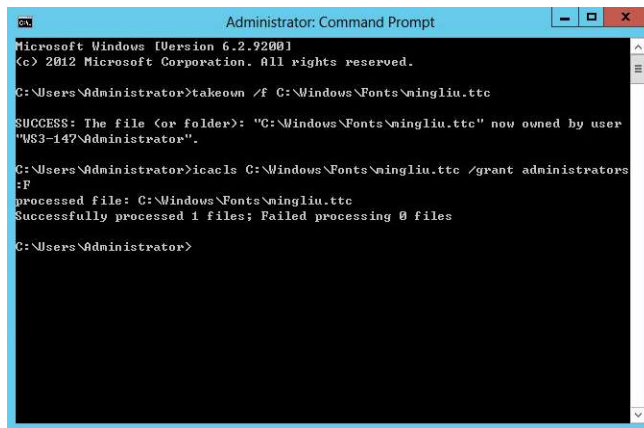
- i. Reboot the server and press F8 during startup to enter Safe Mode
- ii. Open the DOS command window. Path: Search > Command Prompt;



- iii. Type the command: “takeown /f C:\Windows\Fonts\mingliu.ttc”



- iv. Type the command: “`icacls C:\Windows\Fonts\mingliu.ttc /grant administrators:F`”



```
Administrator: Command Prompt
Microsoft Windows [Version 6.2.9200]
(c) 2012 Microsoft Corporation. All rights reserved.

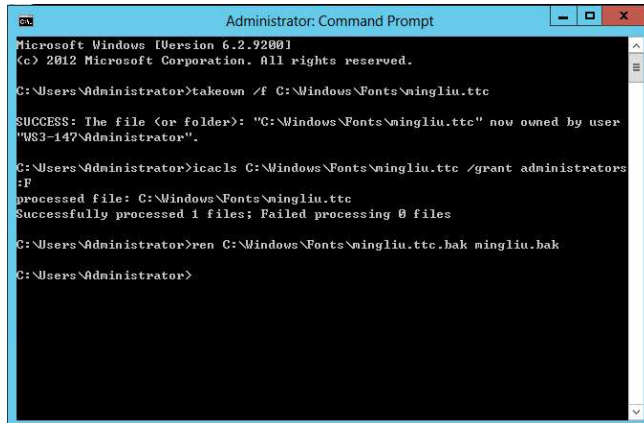
C:\Users\Administrator>takeown /f C:\Windows\Fonts\mingliu.ttc

SUCCESS: The file (or folder): "C:\Windows\Fonts\mingliu.ttc" now owned by user
"WS3-147\Administrator".

C:\Users\Administrator>icacls C:\Windows\Fonts\mingliu.ttc /grant administrators
:F
processed file: C:\Windows\Fonts\mingliu.ttc
Successfully processed 1 files; Failed processing 0 files

C:\Users\Administrator>
```

- v. Type the command: “`ren C:\Windows\Fonts\mingliu.ttc.bak mingliu.bak`”



```
Administrator: Command Prompt
Microsoft Windows [Version 6.2.9200]
(c) 2012 Microsoft Corporation. All rights reserved.

C:\Users\Administrator>takeown /f C:\Windows\Fonts\mingliu.ttc

SUCCESS: The file (or folder): "C:\Windows\Fonts\mingliu.ttc" now owned by user
"WS3-147\Administrator".

C:\Users\Administrator>icacls C:\Windows\Fonts\mingliu.ttc /grant administrators
:F
processed file: C:\Windows\Fonts\mingliu.ttc
Successfully processed 1 files; Failed processing 0 files

C:\Users\Administrator>ren C:\Windows\Fonts\mingliu.ttc.bak mingliu.bak

C:\Users\Administrator>
```

- vi. Reboot the server to Normal Mode.

Windows Server 2012 R2 - OS Hardening Guide

A. Local Security Policy

Go to Control Panel > Administrative Tools > Local Security Policy

A.1 Account Policy

A.1.1 Password Policy

Policy	Security Setting
Enforce password history	5 password remember
Maximum password age	30 days
Minimum password age	3 days
Minimum password length	8 characters
Password must meet complexity requirement	Enable
Store password using reversible encryption for all users in the domain	Disable

A.1.2 Account Lockout Policy

Policy	Security Setting
Account lockout duration	30 minutes
Account lockout threshold	3 invalid logon attempt
Reset account lockout counter after	30 minutes

A.2 Local Policy

A.2.1 Audit Policy

Policy	Security Setting
Audit account logon events	Failure, Success
Audit account management	Failure, Success
Audit directory service access	No Audit
Audit logon events	Failure, Success
Audit object access	No Audit
Audit policy change	Failure, Success
Audit privilege use	Failure
Audit process tracking	No Audit
Audit system events	Failure

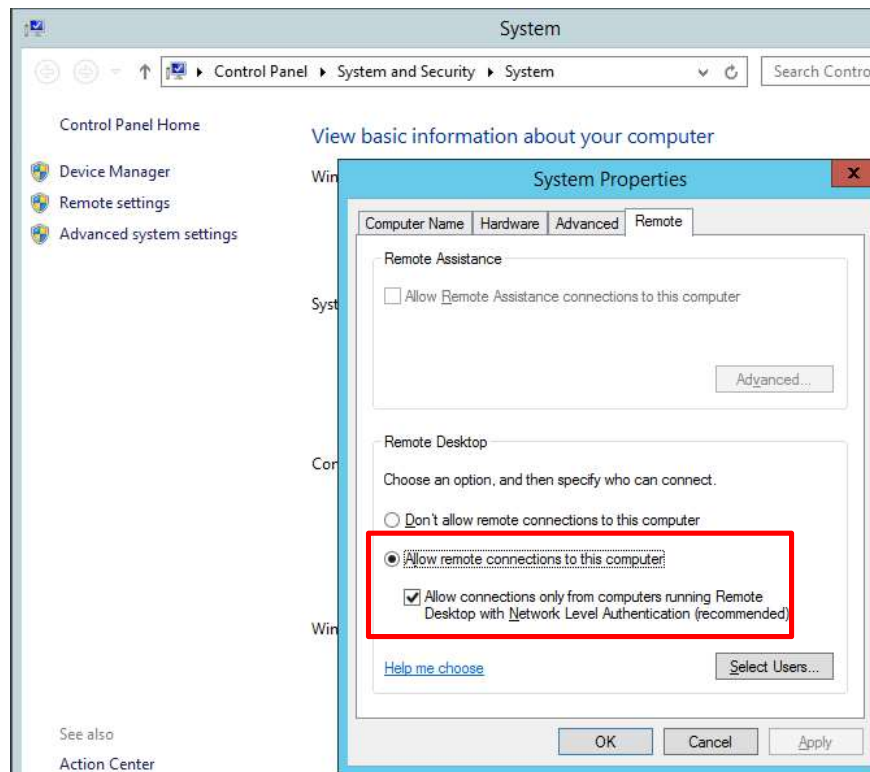
A.2.2 Security Options

Policy	Security Setting
Accounts: Guest account status	Disabled
Accounts: Rename guest account	<i>Assign any name other than the default one. For example: abc123</i>
Audit: Shut down system immediately if unable to log security audits	Disabled
Domain member: Digitally encrypt or sign secure channel data (always)	Enabled
Domain member: Digitally encrypt secure channel data (when possible)	Enabled
Domain member: Digitally sign secure channel data (when possible)	Enabled
Interactive logon: Do not display last user name	Enabled
Interactive logon: Message text for users attempting to log on	“Authenticated User Only”
Interactive logon: Message title for users attempting to log on	“WebSAMS”
Interactive logon: Number of previous logons to cache (in case domain controller is not available)	0 logons
Interactive logon: Prompt user to change password before expiration	5 days
Microsoft network server: Digitally sign communications (always)	Enabled
Microsoft network server: Digitally sign communications (if client agrees)	Enabled
Recovery console: Allow automatic administrative logon	Disabled
Recovery console: Allow floppy copy and access to all drives and all folders	Disabled
System cryptography: Use FIPS compliant algorithms for encryption, hashing, and signing	Not Defined

Note: A full list of the security options and the corresponding default values are shown in Appendix 8.

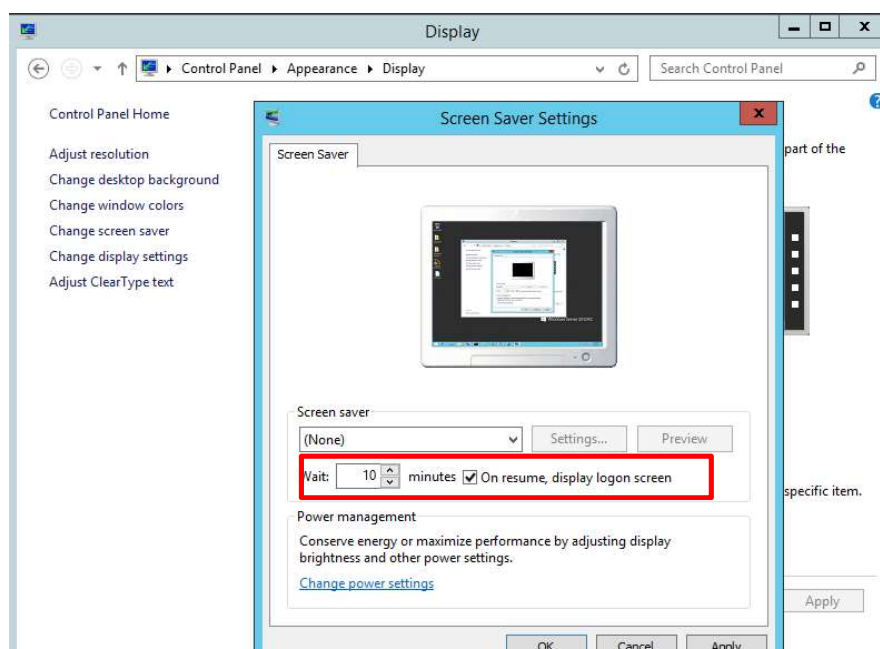
B. Set Remote Desktop with Network Level Authentication

Go to the “System Properties” screen and check the option as shown to allow connect remote desktop by NLA.



C. Enable Screen Saver Timeout

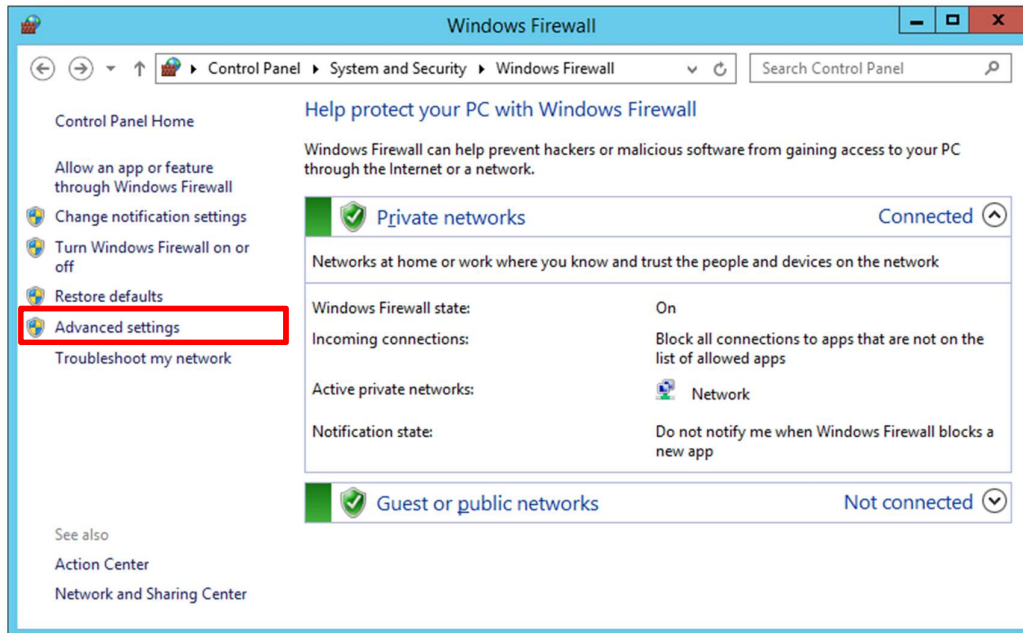
Go to Start > Control Panel > Appearance > Display > Change screen saver”. Select Wait: “10 minutes” and Check “On resume, display logon screen”



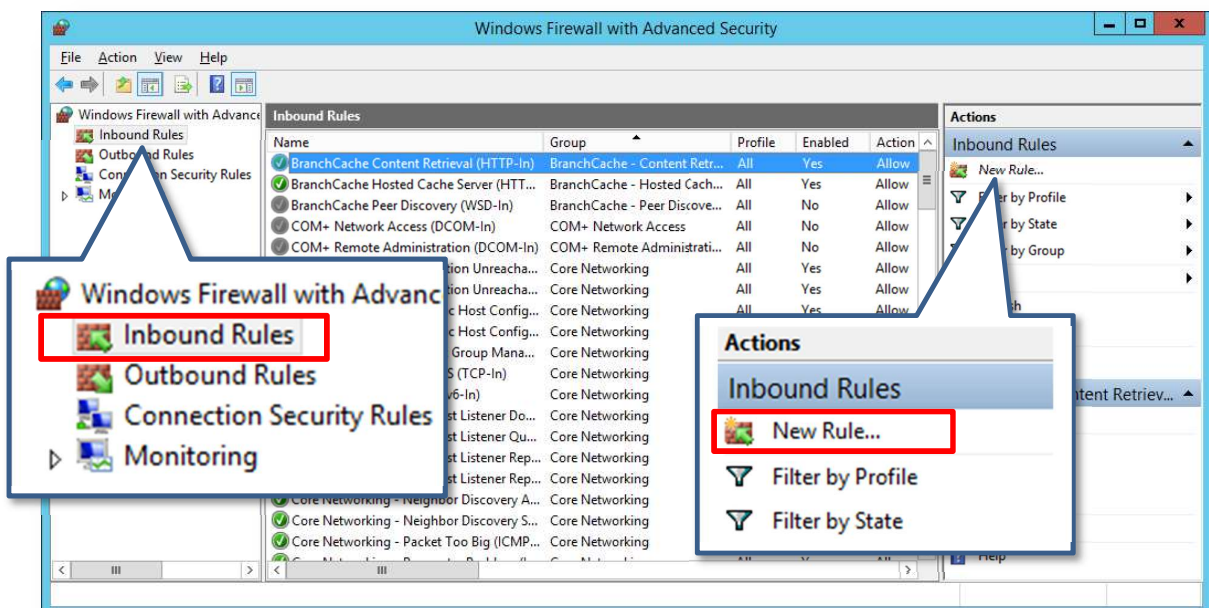
D. Enable Windows Firewall

To provide better security protection, the firewall is recommended to be enabled in order to restrict the inbound ports that go into WebSAMS server. An example using “Windows Firewall” is as shown:

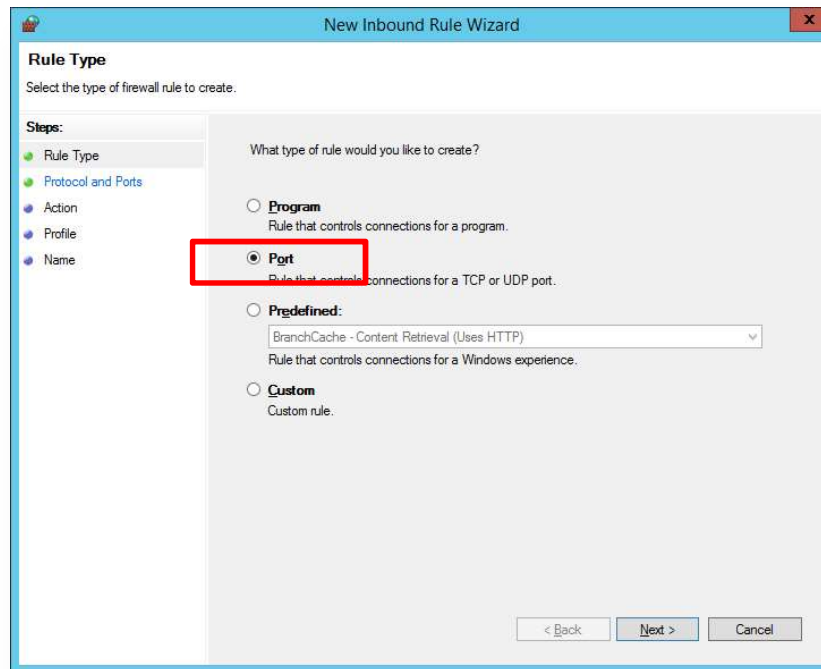
- (1) Go to “Control Panel > System and Security > Windows Firewall” and click “Advanced settings” at left menu.



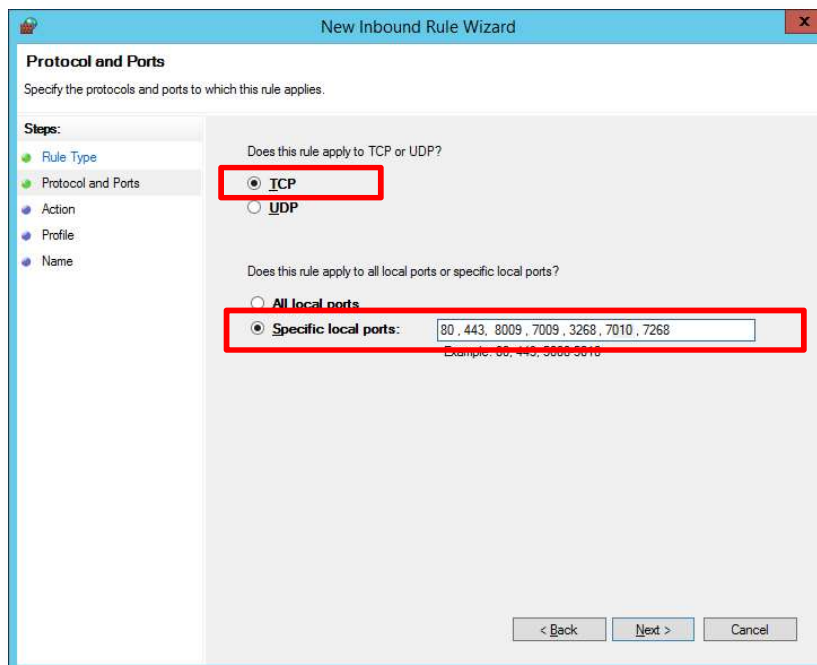
- (2) Click “Inbound Rules” at left menu. Then click “New Rule” at the right menu to create a firewall rule for WebSAMS Server.



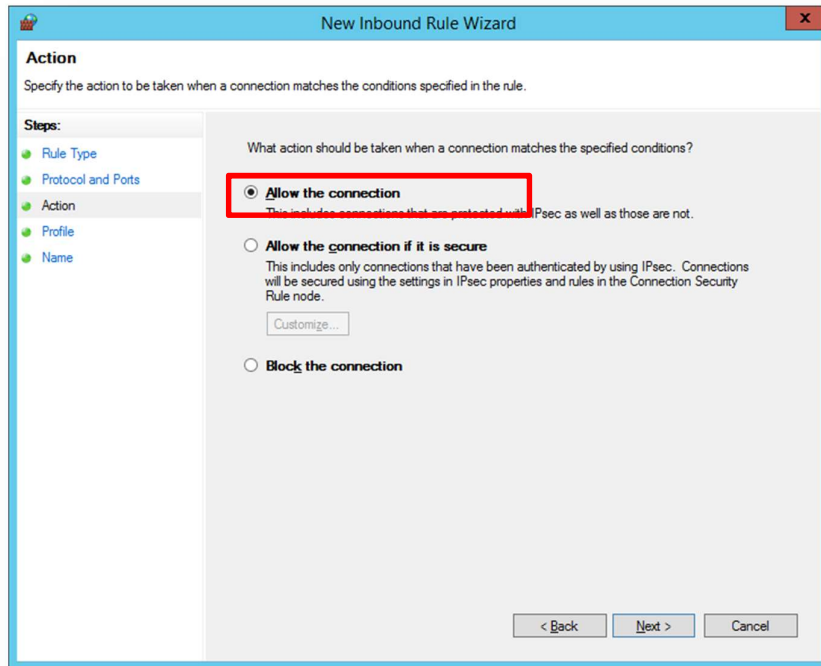
- (3) At the “New Inbound Rule Wizard” and you will see the “Rule Type” page. Click the option “Port” and then click “Next”.



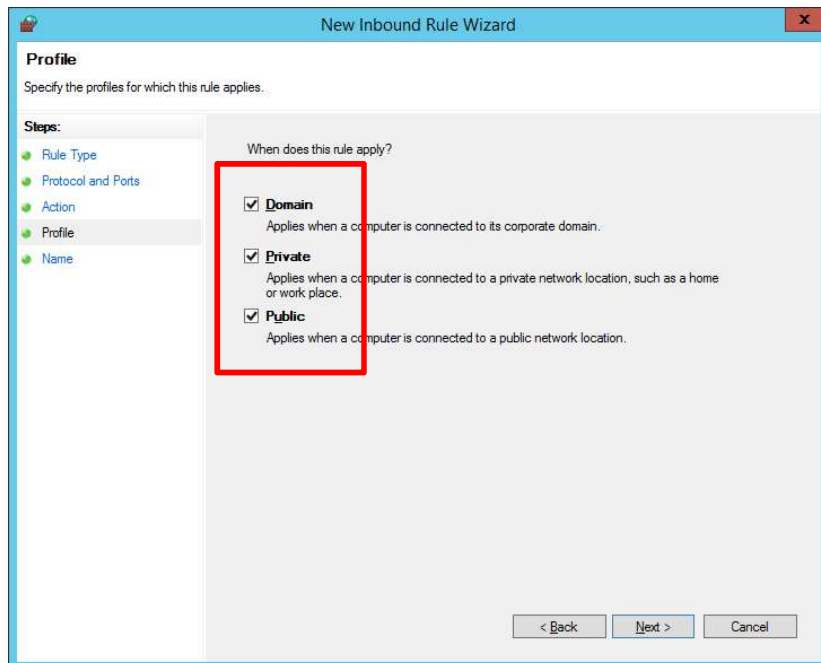
- (4) At the “Protocol and Ports” page, select “TCP” and “Specific local ports”.
At the “Specific local ports:”, type in the inbound ports that WebSAMS Server allow, including **80, 443, 8009, 7009, 3268, 7010, 7268** and separate them by comma.



(5) At the “Action” page, select “Allow the connection” and click “Next”.



(6) At the “Profile” page, check all options and click “Next”.



(7) Finally, define the name as “websams” and all are done!

Appendix 8: Windows Server 2012 R2 – Default Value of Security Options

Windows Server 2012 R2 – Default Value of Security Options

Default value of security options of Windows Server 2012 R2

	Policy	Security Setting
(1)	Accounts: Administrator account status	Enabled
(2)	Accounts: Block Microsoft accounts	Not Defined
(3)	Accounts: Guest account status	Disabled
(4)	Accounts: Limit local account use of blank passwords to console logon only	Enabled
(5)	Accounts: Rename administrator account	Administrator
(6)	Accounts: Rename guest account	Guest
(7)	Audit: Audit the access of global system objects	Disabled
(8)	Audit: Audit the use of Backup and Restore privilege	Disabled
(9)	Audit: Force audit policy subcategory settings (Windows Vista or later) to override audit policy category settings	Not Defined
(10)	Audit: Shut down system immediately if unable to log security audits	Disabled
(11)	DCOM: Machine Access Restrictions in Security Descriptor Definition Language (SDDL) syntax	Not Defined
(12)	DCOM: Machine Launch Restrictions in Security Descriptor Definition Language (SDDL) syntax	Not Defined
(13)	Devices: Allow undock without having to log on	Enabled
(14)	Devices: Allowed to format and eject removable media	Not Defined
(15)	Devices: Prevent users from installing printer drivers	Enabled
(16)	Devices: Restrict CD-ROM access to locally logged-on user only	Not Defined
(17)	Devices: Restrict floppy access to locally logged-on user only	Not Defined
(18)	Domain controller: Allow server operators to schedule tasks	Not Defined
(19)	Domain controller: LDAP server signing requirements	Not Defined
(20)	Domain controller: Refuse machine account password changes	Not Defined
(21)	Domain member: Digitally encrypt or sign secure channel data (always)	Enabled
(22)	Domain member: Digitally encrypt secure channel data (when possible)	Enabled
(23)	Domain member: Digitally sign secure channel data (when possible)	Enabled
(24)	Domain member: Disable machine account password changes	Disabled
(25)	Domain member: Maximum machine account password age	30 days
(26)	Domain member: Require strong (Windows 2000 or later) session key	Enabled
(27)	Interactive logon: Display user information when the session is locked	Not Defined
(28)	Interactive logon: Do not display last user name	Disabled
(29)	Interactive logon: Do not require CTRL+ALT+DEL	Disabled
(30)	Interactive logon: Machine account lockout threshold	Not Defined
(31)	Interactive logon: Machine inactivity limit	Not Defined
(32)	Interactive logon: Message text for users attempting to log on	
(33)	Interactive logon: Message title for users attempting to log on	

	Policy	Security Setting
(34)	Interactive logon: Number of previous logons to cache (in case domain controller is not available)	10 logons
(35)	Interactive logon: Prompt user to change password before expiration	5 days
(36)	Interactive logon: Require Domain Controller authentication to unlock workstation	Disabled
(37)	Interactive logon: Require smart card	Disabled
(38)	Interactive logon: Smart card removal behavior	No Action
(39)	Microsoft network client: Digitally sign communications (always)	Disabled
(40)	Microsoft network client: Digitally sign communications (if server agrees)	Enabled
(41)	Microsoft network client: Send unencrypted password to third-party SMB servers	Disabled
(42)	Microsoft network server: Amount of idle time required before suspending session	15 minutes
(43)	Microsoft network server: Attempt S4U2Self to obtain claim information	Not Defined
(44)	Microsoft network server: Digitally sign communications (always)	Enabled
(45)	Microsoft network server: Digitally sign communications (if client agrees)	Enabled
(46)	Microsoft network server: Disconnect clients when logon hours expire	Enabled
(47)	Microsoft network server: Server SPN target name validation level	Not Defined
(48)	Network access: Allow anonymous SID/Name translation	Disabled
(49)	Network access: Do not allow anonymous enumeration of SAM accounts	Enabled
(50)	Network access: Do not allow anonymous enumeration of SAM accounts and shares	Disabled
(51)	Network access: Do not allow storage of passwords and credentials for network authentication	Disabled
(52)	Network access: Let Everyone permissions apply to anonymous users	Disabled
(53)	Network access: Named Pipes that can be accessed anonymously	

(54)	Network access: Remotely accessible registry paths	System\CurrentControlSet\Control\ProductOptions, System\CurrentControlSet\Control\Server Applications, Software\Microsoft\Windows NT\CurrentVersion
(55)	Network access: Remotely accessible registry paths and sub-paths	System\CurrentControlSet\Control\Print\Printers, System\CurrentControlSet\Services\Eventlog, Software\Microsoft\OLAP Server, Software\Microsoft\Windows NT\CurrentVersion\Print, Software\Microsoft\Windows NT\CurrentVersion\Windows, System\CurrentControlSet\Control\ContentIndex, System\CurrentControlSet\Control\Terminal Server, System\CurrentControlSet\Control\Terminal Server\UserConfig, System\CurrentControlSet\Control\Terminal Server\DefaultUserConfiguration, Software\Microsoft\Windows NT\CurrentVersion\Perflib, System\CurrentControlSet\Services\SysmonLog

(56)	Network access: Restrict anonymous access to Named Pipes and Shares	Enabled
(57)	Network access: Shares that can be accessed anonymously	Not Defined
(58)	Network access: Sharing and security model for local accounts	Classic - local users authenticate as themselves
(59)	Network security: Allow Local System to use computer identity for NTLM	Not Defined
(60)	Network security: Allow LocalSystem NULL session fallback	Not Defined
(61)	Network security: Allow PKU2U authentication requests to this computer to use online identities.	Not Defined
(62)	Network security: Configure encryption types allowed for Kerberos	Not Defined

(63)	Network security: Do not store LAN Manager hash value on next password change	Enabled
(64)	Network security: Force logoff when logon hours expire	Disabled
(65)	Network security: LAN Manager authentication level	Not Defined
(66)	Network security: LDAP client signing requirements	Negotiate signing
(67)	Network security: Minimum session security for NTLM SSP based (including secure RPC) clients	Require 128-bit encryption
(68)	Network security: Minimum session security for NTLM SSP based (including secure RPC) servers	Require 128-bit encryption
(69)	Network security: Restrict NTLM: Add remote server exceptions for NTLM authentication	Not Defined
(70)	Network security: Restrict NTLM: Add server exceptions in this domain	Not Defined
(71)	Network security: Restrict NTLM: Audit Incoming NTLM Traffic	Not Defined
(72)	Network security: Restrict NTLM: Audit NTLM authentication in this domain	Not Defined
(73)	Network security: Restrict NTLM: Incoming NTLM traffic	Not Defined
(74)	Network security: Restrict NTLM: NTLM authentication in this domain	Not Defined
(75)	Network security: Restrict NTLM: Outgoing NTLM traffic to remote servers	Not Defined
(76)	Recovery console: Allow automatic administrative logon	Disabled
(77)	Recovery console: Allow floppy copy and access to all drives and all folders	Disabled
(78)	Shutdown: Allow system to be shut down without having to log on	Disabled
(79)	Shutdown: Clear virtual memory pagefile	Disabled
(80)	System cryptography: Force strong key protection for user keys stored on the computer	Not Defined
(81)	System cryptography: Use FIPS compliant algorithms for encryption, hashing, and signing	Enabled
(82)	System objects: Require case insensitivity for non-Windows subsystems	Enabled
(83)	System objects: Strengthen default permissions of internal system objects (e.g. Symbolic Links)	Enabled
(84)	System settings: Optional subsystems	Posix
(85)	System settings: Use Certificate Rules on Windows Executables for Software Restriction Policies	Disabled
(86)	User Account Control: Admin Approval Mode for the Built-in Administrator account	Disabled
(87)	User Account Control: Allow UIAccess applications to prompt for elevation without using the secure desktop	Disabled
(88)	User Account Control: Behavior of the elevation prompt for administrators in Admin Approval Mode	Prompt for consent for non-Windows binaries
(89)	User Account Control: Behavior of the elevation prompt for standard users	Prompt for credentials
(90)	User Account Control: Detect application installations and prompt for elevation	Enabled
(91)	User Account Control: Only elevate executables that are signed and validated	Disabled
(92)	User Account Control: Only elevate UIAccess applications that are installed in secure locations	Enabled
(93)	User Account Control: Run all administrators in Admin Approval Mode	Enabled
(94)	User Account Control: Switch to the secure desktop when prompting for elevation	Enabled
(95)	User Account Control: Virtualize file and registry write failures to per-user locations	Enabled

Install WebSAMS Root Certificate on Workstations

This section describes how to import WebSAMS Root Certificate into your browser. The purpose of importing the certificate is to trust the WebSAMS website of your school, so that your browser would not prompt you for warning messages.



The following steps use Microsoft Internet Explorer as an example:

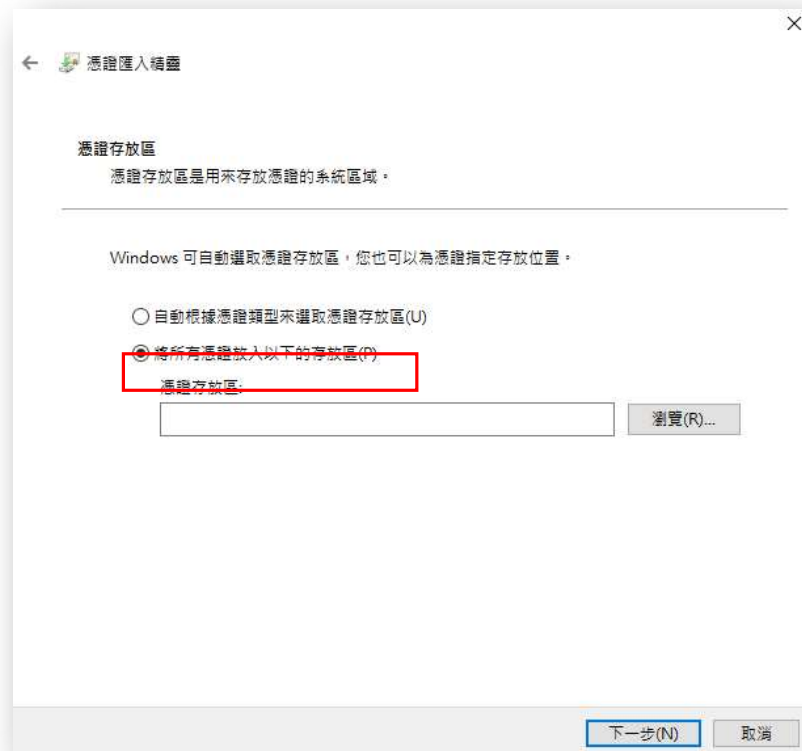
- (1) Download the certificate on the following url
https://cdr.websams.edb.gov.hk/Files/Sys_sec/Sys_operation/edbcacert.cer
- (2) Double click the downloaded file and the following screen will pop up. Clicks the “Install Certificate...” button.



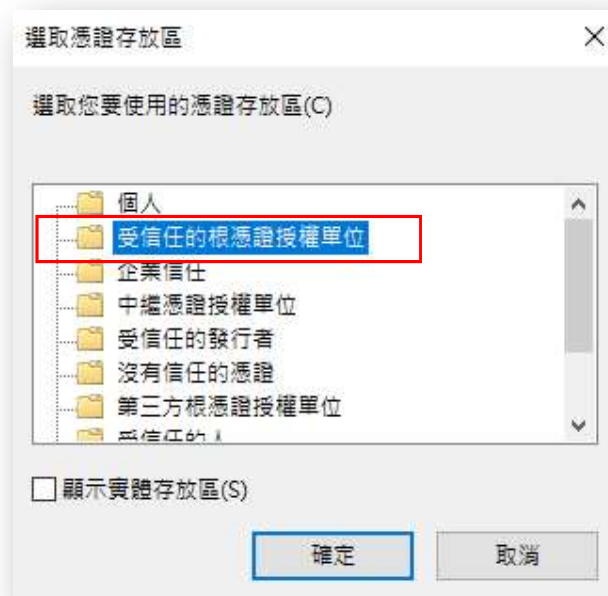
(3) The following screen will be shown. Click the “Next” button.



(4) The following screen will be shown. Choose the option “Place all certificates in the following store” and click “Browse” button.



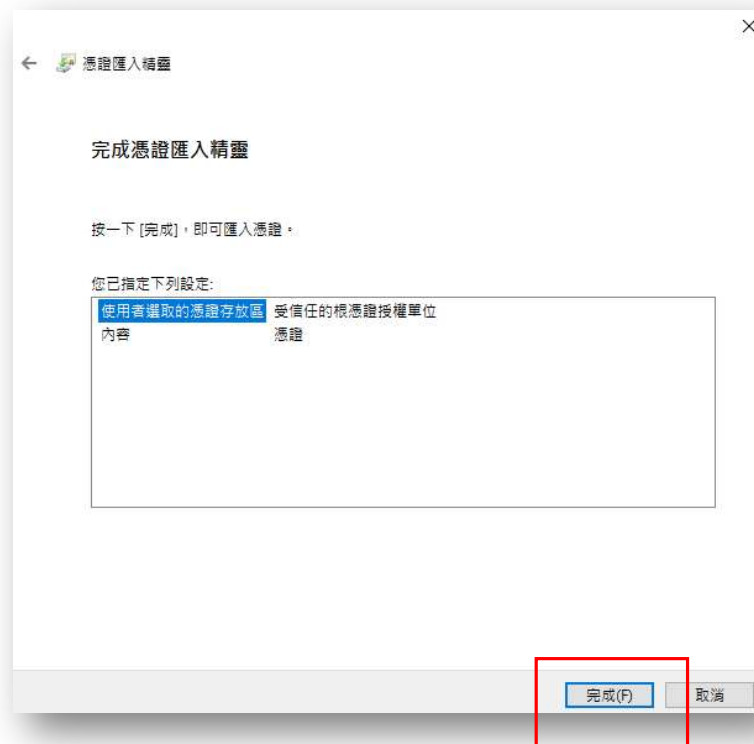
(5) Select “Trusted Root Certification Authorities” and click “OK”.



(6) Click the “Next” button to continue.



(7) The following screen will be shown. Clicks “Finish” button.



(8) Click “Yes” button in the following screen.



(9) “The import was successful” message should be shown.

