



**USER GUIDE FOR MIGRATION TOOLKIT**

**CLOUD SERVICE FOR**

**WEB-BASED SCHOOL ADMINISTRATION AND MANAGEMENT SYSTEM**

**(WEBSAMS)**

Version 4

July 2021

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# 1 Overview

The Migration Toolkit is used to pack the WebSAMS data and files and migrate them to the new WebSAMS server on the Cloud (Cloud Server). The Migration Toolkit has to be executed on school's existing WebSAMS server.

## DATA AND FILES THAT WILL BE MIGRATED INCLUDE:

- Current WebSAMS data under E:\data, including WebSAMS database, CDS messages and attachments, built-in and uploaded customized report templates, and all files uploaded from all **Import/Upload** functions of WebSAMS
- Current WebSAMS Training Instance data (if any)

## DATA AND FILES THAT WILL NOT BE MIGRATED ARE:

- Files manually copied into the WebSAMS server
- Any backup files created during WebSAMS build upgrade
- Any backup files created by the WebSAMS server backup software saved into the WebSAMS Network Attached Storage (NAS)
- Other sets of Training Instance data used in the past (if any)

## WHAT WILL BE CHANGED AFTER MIGRATION:

- **System Configuration** under the **Security Module** of WebSAMS. The following items will be reset to a default setting if the school's original setting does not fall within the recommended range:

[S-SEC01-01] Security > Configuration > System Configuration

General Settings <span>Bottom</span>		
Maximum number of fault login attempts allowed (Min: 3, Max: 10, default value: 5)	5	
Auto-unlock period of locked accounts (Min: 12 minutes, Max: 120 minutes, default value: 60 minutes)	60	minutes
Automatic logout period (inside VPN Segment) (Min: 5 minutes, Max: 120 minutes, default value: 15 minutes)	15	minutes
Automatic logout period (outside VPN Segment) (Min: 5 minutes, Max: 60 minutes, default value: 5 minutes)	15	minutes
Password expiry period (Min: 30 days, Max: 365 days, default value: 100 days)	100	days
Number of passwords stored in password History (Min: 1, Max: 5, default value: 1)	1	

- CDS Registration
  - CDS Registration will be revoked after migration. School needs to perform CDS Registration again

when the WebSAMS on Cloud is ready for production use.

#### **ADDITIONAL INFORMATION COLLECTED BY THE MIGRATION TOOLKIT**

The following information will be collected. They are necessary for initialization of the Cloud Server.

- Windows Administrator password of the Cloud Server; and
- Windows BitLocker encryption password of the Cloud Server.

**Note:**

1. *These passwords are new passwords for the Cloud Server, not the existing passwords of school's existing WebSAMS server.*
2. *School can change these passwords again after migration, through the new "Cloud Service Management" page in WebSAMS.*

## 2 Preparation before migration

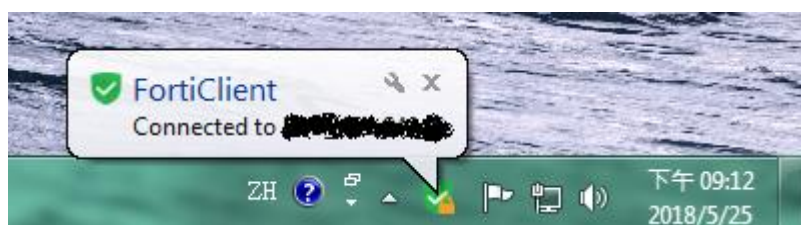
In order to have a smooth migration process, a list of preparation tasks before migration is recommended.

*The checklist below is for school use only. Schools are not required to submit it to the EDB.*

Preparation Tasks	Done?
Test if the WebSAMS server can connect VPN to the Cloud, and	
Test if the workstation installed with SAP Crystal Reports 2013 (i.e. Crystal Reports workstation) can connect VPN to the Cloud #	
Confirm if all the workstation(s) that need to use WebSAMS can access Internet	
Upgrade WebSAMS to the latest build version.	
Remove all files irrelevant to the WebSAMS that were manually copied into E:\Data folder of the WebSAMS server	
Check if E: drive of the WebSAMS server has sufficient space for migration work (at least 1.5 times the folder size of the entire E:\Data folder)	
Schedule a full malware/virus scan on all drives of the WebSAMS server before the migration	
Confirm that all WebSAMS built-in accounts are NOT using the default passwords	
Print some reports/data records for checking of data after migration	

**Note:**

# Sample screen of successful VPN connection can be found below. For detailed procedures of VPN connection, please refer to the VPN Connection Guide. Please also be reminded to disconnect VPN when it is not in use.



### 3 Pre-requisites for running the Migration Toolkit

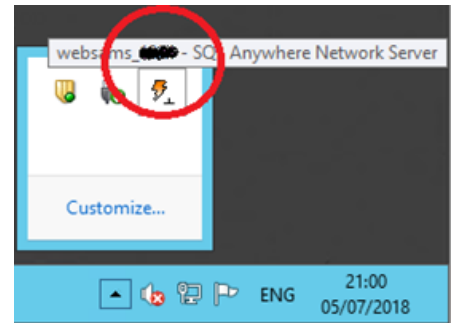
On the migration day before the migration procedures begin, school should have done the followings.

*The checklist below is for school use only. Schools are not required to submit it to the EDB.*

Pre-requisite Tasks	Done?
Perform full backup of the WebSAMS server	
Confirm that no outstanding process is running in the WebSAMS server (e.g. Windows Updates, malware scan, backup job, etc.). Please note that these processes may slow down the migration process	
<p>Confirm that the following can be provided during migration:</p> <ul style="list-style-type: none"> <li>● Windows Administrator account password of the existing WebSAMS server</li> <li>● The 4-digit SUID of the school's WebSAMS #</li> <li>● VPN username, password and token</li> <li>● New WebSAMS URL on the Cloud Server</li> <li>● WebSAMS account <b>sysadmin</b> password</li> <li>● CDS school key</li> <li>● Windows account password of the Crystal Reports workstation (The Windows account should have Windows administrator rights) [optional]  <u>This Windows account is NOT required if the school does not have Crystal Reports workstation</u></li> <li>● The passwords of the following accounts for connecting the WebSAMS database via ODBC [optional] <ul style="list-style-type: none"> <li>■ genuser</li> <li>■ fmpuser</li> <li>■ stfuser</li> </ul> <u>These 3 accounts are NOT required if school needs not directly connect the WebSAMS database (e.g. when previewing report template after editing in Crystal Reports workstation).</u>            (If the above 3 accounts are required but the passwords are forgotten, please call WebSAMS helpdesk at 3125 8510 for password reset ) </li> </ul>	
Confirm that the Internet IP address(es) of the school campus assigned by the Internet Service Provider (ISP) can be provided during migration	
<p>Define the following new passwords for the Cloud Server:</p> <ul style="list-style-type: none"> <li>● Windows Administrator account password of the Cloud Server</li> <li>● WebSAMS BitLocker encryption password of the Cloud Server</li> </ul>	

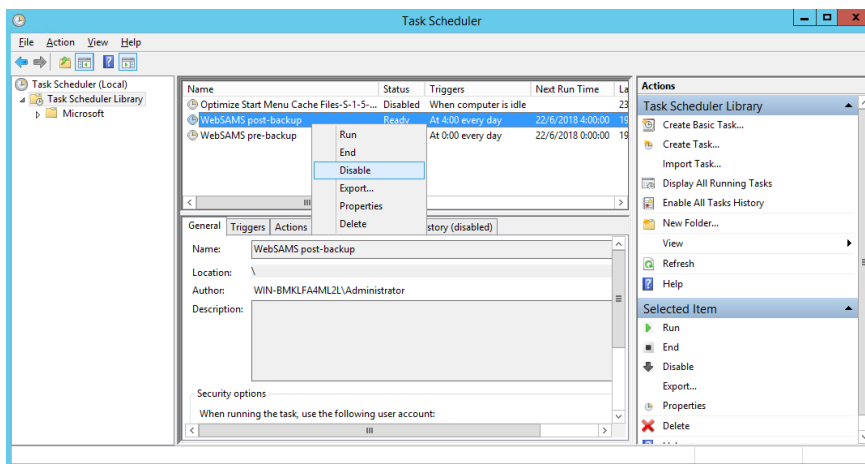
**Note:**

**# SUID is the 4-digit number that appears when mouse cursor is placed over the SQL Anywhere database icon on the WebSAMS server.**



## 4 Run the Migration Toolkit

- a Login school's WebSAMS server as Windows Administrator account with local access. Please note that the migration process cannot be performed through remote access.
- b Download the Migration Toolkit zip file from the following URL, and save it to a temporary folder **D:\cloudtemp** on the WebSAMS server  
<https://cdr.websams.edb.gov.hk/Files/PilotCloud/Reference/CloudMigrationToolkit2021.zip>
- c Extract the zip file under **D:\cloudtemp**. The decrypt password of the zip file can be found in CDS message sent to school.
- d Shutdown the WebSAMS as usual. i.e. Shutdown Sybase SQL Anywhere, Wildfly and Apache. Please refer to Section 6.4.1 of the Computer Operating Procedures Manual (COPM) of WebSAMS for School for relevant procedures.
- e Disable the Windows Scheduler Task that startup WebSAMS every night
  - **Windows Start menu > Administrative Tools > Task Scheduler**
  - **Right-click **WebSAMS post-backup** > Disable**



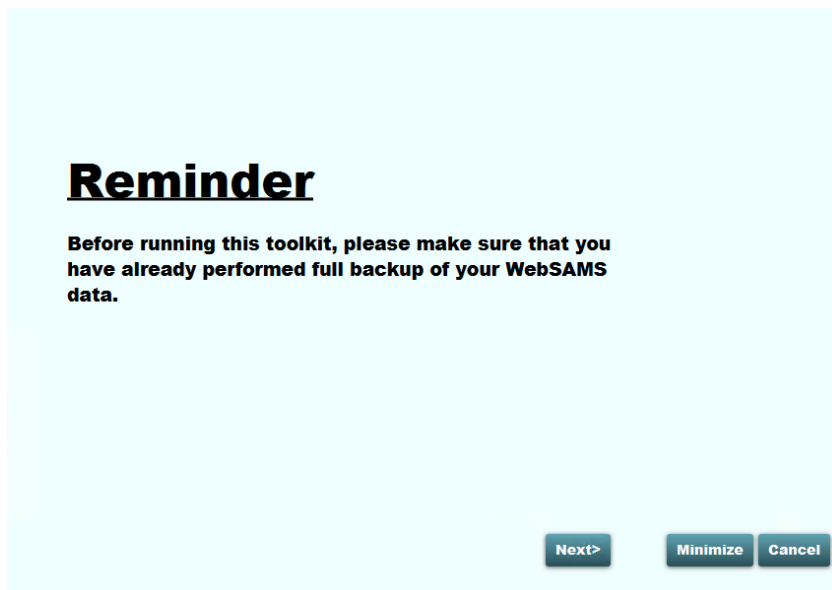
- f Execute the Migration Toolkit.

**Path :** D:\cloudtemp\startApp.bat

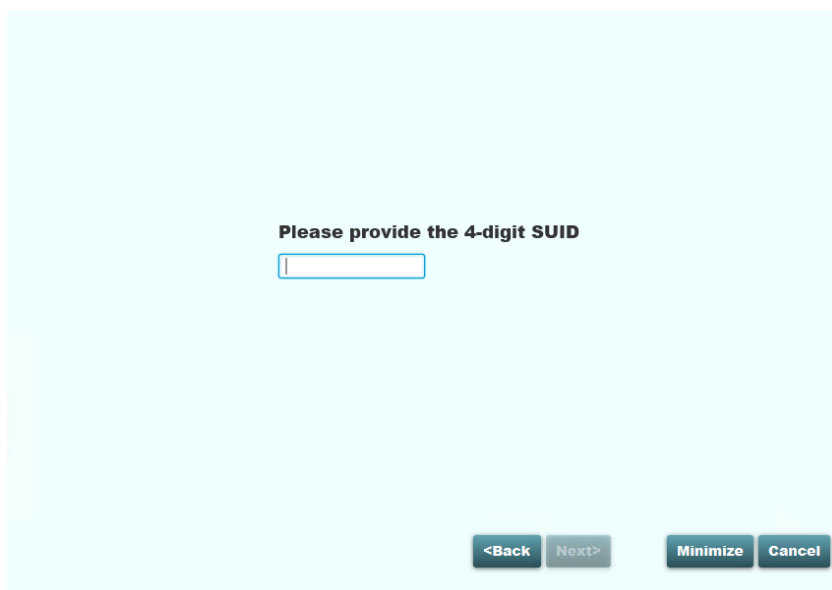
**Note:** Make sure all windows explorers are closed.



- g In below **Reminder** screen, click **Next**.

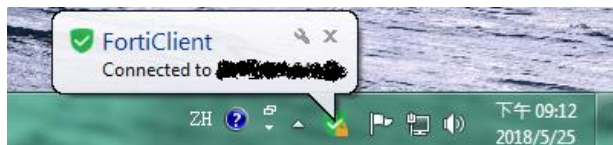


- h Input the 4-digit SUID of school's WebSAMS and click **Next**.



i Perform VPN connection.

Please refer to VPN Connection Guide and ensure the VPN is connected as shown in below.



j In the screen below, click **Check** button of task 1. The Migration Toolkit will check the total file size of E:\Data and check if sufficient disk space is available in E: drive for migration (at least 1.5 times the folder size of the entire E:\Data folder).

Preparation Tasks	Action
1. Click to check migration file size and available HDD space	<b>Check</b>
2. Click to check for weak passwords among existing WebSAMS accounts	Check
3. Click to check for inactive WebSAMS accounts	Check
4. Configure Windows Administrator password for the Cloud Server <input type="text"/>	Configure
5. Configure Windows BitLocker encryption password for the Cloud Server <input type="text"/>	Configure
6. Click to check WebSAMS build version	Check
7. Click to prepare the data files	Prepare

**Complete the above processes to start the upload**

<Back   Next>   Minimize   Cancel

- k Click **Check** button of task 2. The Migration Toolkit will check for weak passwords among existing WebSAMS accounts.

### Preparation Tasks

File size of E:\data(data to be migrated to cloud): **1967MB**

Total free size of E drive : **8427MB**

- Click to check for weak passwords among existing WebSAMS accounts
- Click to check for inactive WebSAMS accounts
- Configure Windows Administrator password for the Cloud Server
- Configure Windows BitLocker encryption password for the Cloud Server
- Click to check WebSAMS build version
- Click to prepare the data files

Complete the above processes to start the upload

### Action

Check

Done

Check

Check

Configure

Configure

Check

Prepare

<Back

Next>

Minimize

Cancel

If any WebSAMS account with weak password is found, it will be shown in the screen on the right.

### WebSAMS password review

The following WebSAMS users were found using weak passwords such as "password" or "123456".

It is strongly recommended to strengthen their passwords as soon as possible.

WebSAMS User ID	SUID	Issue
superman	8401	Weak password was found.
sysadmin	8401	Weak password was found.

Cancel

If any default password is found on sysadmin / asysadmin, it will be shown in the screen on the right.

### WebSAMS password review

Noted that default password was used by sysadmin/asyadmin.

Please close the migration toolkit and change the password before migration.

WebSAMS User ID	SUID	Issue
superman	8401	Weak password was found.
sysadmin	8401	Default password was found.

< >

Exit Migration Program

If any default password is found on sysadmin / asysadmin under another SUID, it will be shown in the screen on the right.

### WebSAMS password review

Noted that default password was used by sysadmin/asyadmin under another SUID.

Please contact NCS helpdesk to reset password.

WebSAMS User ID	SUID	Issue
superman	8401	Weak password was found.
sysadmin	8401	Default password was found.
sysadmin	8402	Default password was found (another SUID).

< >

Exit Migration Program

It is a **pre-requisite** for school to change the default passwords of sysadmin / asysadmin before migration. If default password of them is found, please exit the migration program and change them by the change password function in the WebSAMS. If any default password is found on sysadmin / asysadmin under another SUID, please call WebSAMS helpdesk at 3125 8510 for password reset.

It is **NOT** a pre-requisite for school to change the weak password before migration. However, school is required to change any weak password as soon as possible to reduce security risk. The new password should meet the minimum complexity requirements as follows:

- *The password should fulfill all below criteria:*
  - *contain English character(s) a-z (lower case)*
  - *contain English character(s) A-Z (upper case)*
  - *contain digit(s) 0-9*
  - *contain special character(s) ("Space" is not allowed)*
  - *contain 8-40 characters*
- *User ID cannot be used as password*

## I Click **Check** button of task 3.

### Preparation Tasks

File size of E:\data(data to be migrated to cloud): **1967MB**  
Total free size of E drive : **8427MB**

2. Click to check for weak passwords among existing WebSAMS accounts
3. Click to check for inactive WebSAMS accounts
4. Configure Windows Administrator password for the Cloud Server
5. Configure Windows BitLocker encryption password for the Cloud Server
6. Click to check WebSAMS build version
7. Click to prepare the data files

Complete the above processes to start the upload

### Action

Check Done

Check Done

Check

Configure

Configure

Check

Prepare

<Back

Next>

Minimize

Cancel

If there is any WebSAMS account that has been inactive for more than one year, it will be shown in the screen below. To disable these accounts, tick the check box **Disable Now?** and click **Disable**.

### WebSAMS inactive user review

The following WebSAMS users were not used for more than a year.

It is strongly recommended to disable them (i.e. configure them as "Expired") to restrict their access.

You should review the following list, select obsolete users and disable them by ticking the checkboxes next to the users and clicking the "Disable" button.

Alternatively you can disable them in the WebSAMS application as usual.

(P.S. You can always re-enable them in the WebSAMS application.)

WebSAMS User ID	Last logon time on WebSAMS	Disable Now?
130002	2014-08-04 00:00:00.0	<input type="checkbox"/>
4aclass	2013-10-03 00:00:00.0	<input type="checkbox"/>
6bclass	2014-08-05 00:00:00.0	<input type="checkbox"/>
AAAAAA	2014-02-19 00:00:00.0	<input type="checkbox"/>
abc123	2014-03-07 00:00:00.0	<input type="checkbox"/>
abcbac	2014-02-26 00:00:00.0	<input type="checkbox"/>
abcdchiu	2004-12-13 00:00:00.0	<input type="checkbox"/>
abcdef	2003-11-22 00:00:00.0	<input type="checkbox"/>
aeosis10	2012-01-20 00:00:00.0	<input type="checkbox"/>
agneswong	2006-09-15 00:00:00.0	<input type="checkbox"/>
alicehui	2005-07-06 00:00:00.0	<input type="checkbox"/>
andrew	2007-10-11 00:00:00.0	<input type="checkbox"/>
annatsang	2008-07-25 00:00:00.0	<input type="checkbox"/>
annellis	2014-01-28 00:00:00.0	<input type="checkbox"/>
anp_admin	2003-04-25 00:00:00.0	<input type="checkbox"/>
anthony	2007-03-29 00:00:00.0	<input type="checkbox"/>
aplsection	2008-07-04 00:00:00.0	<input type="checkbox"/>
aposisim	2006-12-15 00:00:00.0	<input type="checkbox"/>

Disable

Cancel

It is **NOT** a pre-requisite for school to disable these accounts before migration. However, school **is strongly recommended** to disable any account that is not in use anymore.

- m Assign a new password for the Windows Administrator account of the Cloud Server, and click **Configure** button of task 4.

**Preparation Tasks**

File size of E:\data(data to be migrated to cloud): **1967MB**  
Total free size of E drive : **8427MB**

2. Click to check for weak passwords among existing WebSAMS accounts

3. Click to check for inactive WebSAMS accounts

**1** 4. Configure Windows Administrator password for the Cloud Server

5. Configure Windows BitLocker

6. Click to check WebSAMS accounts

7. Click to prepare the data files

**Action**

Check Done

Check Done

Check Done

**2** Configure

Configure

Check

Prepare

**Password Format**

- contain English character(s) a-z (lower case)
- contain English character(s) A-Z (upper case)
- contain digit(s) 0-9
- contain special character(s) ("Space" is not allowed)
- contain 8-40 characters

The password should fulfill all above criteria.

Complete the above processes to start the upload

<Back Next> Minimize Cancel

The password must meet the minimum complexity requirements as follows:

- The password should fulfill all below criteria:
  - contain English character(s) a-z (lower case)
  - contain English character(s) A-Z (upper case)
  - contain digit(s) 0-9
  - contain special character(s) ("Space" is not allowed)
  - contain 8-40 characters

- n Assign a new password for the Windows BitLocker encryption password of the Cloud Server, and click **Configure** button of task 5. The password must meet the same complexity requirements as specified in the previous step.

**Preparation Tasks**

File size of E:\data(data to be migrated to cloud): **1967MB**  
Total free size of E drive : **8427MB**

Task	Action	Status
1. Click to check for weak passwords among existing WebSAMS accounts	Check	Done
2. Click to check for inactive WebSAMS accounts	Check	Done
3. Click to check for inactive WebSAMS accounts	Check	Done
4. Configure Windows Administrator password for the Cloud Server	Configure	Done
5. Configure Windows BitLocker encryption password for the Cloud Server	Configure	Done
6. Click to check WebSAMS build version	Check	Done
7. Click to prepare the data files	Prepare	Done

**Password Format**

- contain English character(s) a-z (lower case)
- contain English character(s) A-Z (upper case)
- contain digit(s) 0-9
- contain special character(s) ("Space" is not allowed)
- contain 8-40 characters

The password should fulfill all above criteria.

<Back Next> Minimize Cancel

- o Click **Check** button of task 6. The Migration Toolkit will check if the WebSAMS has been updated to the latest build.

**Note:** The build number in below sample screens are only example. It is not the required build for migration.

**Preparation Tasks**

File size of E:\data(data to be migrated to cloud): **1967MB**  
Total free size of E drive : **8427MB**

Task	Action	Status
1. Click to check for weak passwords among existing WebSAMS accounts	Check	Done
2. Click to check for inactive WebSAMS accounts	Check	Done
3. Click to check for inactive WebSAMS accounts	Check	Done
4. Configure Windows Administrator password for the Cloud Server	Configure	Done
5. Configure Windows BitLocker encryption password for the Cloud Server	Configure	Done
6. Click to check WebSAMS build version	Check	Done
7. Click to prepare the data files	Prepare	Done

**Complete the above processes to start the upload**

<Back Next> Minimize Cancel

If below error message is shown, please check if VPN connection is made. Detailed steps are listed in the VPN Connection Guide on the CDR page.

6. Click to check WebSAMS build version

Check

Cannot access remote server. Please connect to VPN and retry.

For technical matters related to VPN connection, please contact the Cloud Helpdesk. For other questions, please contact your School Liaison Officer of our WebSAMS Team

<https://cdr.websams.edb.gov.hk/聯絡我們/>

- p Click **Prepare** button of task 7. The Migration Toolkit will start packing the data for migration. A number of .7z file(s) will be produced in E:\CloudDataFile.

Preparation Tasks	Action
File size of E:\data(data to be migrated to cloud): <b>1967MB</b> Total free size of E drive : <b>8427MB</b>	Check <span>✓ Done</span>
2. Click to check for weak passwords among existing WebSAMS accounts	Check <span>✓ Done</span>
3. Click to check for inactive WebSAMS accounts	Check <span>✓ Done</span>
4. Configure Windows Administrator password for the Cloud Server <input type="text" value="1234@Abcd"/>	Configure <span>✓ Done</span>
5. Configure Windows BitLocker encryption password for the Cloud Server <input type="text" value="1234@Abcd"/>	Configure <span>✓ Done</span>
WebSAMS Build Version: <b>3.0.0.26112020</b>	Check <span>✓ Done</span>
7. Click to prepare the data files	<b>Prepare</b> <span>⬢</span>

Complete the above processes to start the upload

<Back Next> Minimize Cancel

The in-process icon will be displayed besides the button and the current compression progress will be shown in the next line. (Approximately 30 minutes will be required for every 10 GB of data)

7. Click to prepare the data files

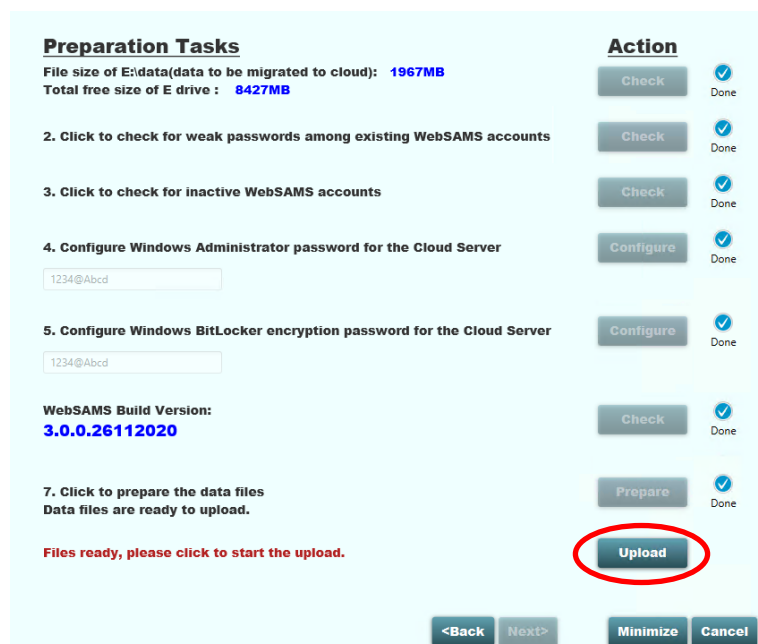
Current progress: 30% - Compressed 2,936 out of 9,628 files.

Prepare





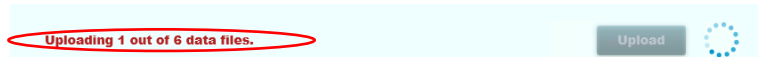
- q When the data packing is completed, the **Upload** button will appear as shown in the screen below.



Preparation Tasks	Action
File size of E:\data(data to be migrated to cloud): <b>1967MB</b> Total free size of E drive : <b>8427MB</b>	Check <span>✓ Done</span>
2. Click to check for weak passwords among existing WebSAMS accounts	Check <span>✓ Done</span>
3. Click to check for inactive WebSAMS accounts	Check <span>✓ Done</span>
4. Configure Windows Administrator password for the Cloud Server <input type="text" value="1234@Abcd"/>	Configure <span>✓ Done</span>
5. Configure Windows BitLocker encryption password for the Cloud Server <input type="text" value="1234@Abcd"/>	Configure <span>✓ Done</span>
WebSAMS Build Version: <b>3.0.0.26112020</b>	Check <span>✓ Done</span>
7. Click to prepare the data files Data files are ready to upload.	Prepare <span>✓ Done</span>
<b>Files ready, please click to start the upload.</b>	<b>Upload</b> <span>✓ Done</span>

<Back Next> Minimize Cancel

- r Click **Upload** button. The in-process icon will be displayed besides the button and the upload progress will be shown. (Approximately 10 minutes will be required for every 1GB of data. But this may vary depending on school's Internet connection bandwidth)



Uploading 1 out of 6 data files.

Upload ⬢

- s When the data upload is completed, the **Next** button will be enabled. Click **Next**.

Preparation Tasks	Action	Status
File size of E\data(data to be migrated to cloud): <b>1967MB</b> Total free size of E drive : <b>8427MB</b>	Check	Done
2. Click to check for weak passwords among existing WebSAMS accounts	Check	Done
3. Click to check for inactive WebSAMS accounts	Check	Done
4. Configure Windows Administrator password for the Cloud Server 1234@Abcd	Configure	Done
5. Configure Windows BitLocker encryption password for the Cloud Server 1234@Abcd	Configure	Done
WebSAMS Build Version: <b>3.0.0.26112020</b>	Check	Done
7. Click to prepare the data files Data files are ready to upload.	Prepare	Done
Upload is completed	Upload	Done

<Back **Next>** Minimize Cancel

- t Click **Finish** to close the Migration Toolkit. The data migration is completed.

Migration of WebSAMS data to the cloud is completed.

Minimize **Finish**

Note : If restart of Migration Toolkit is required, school can simply restart from step 4(f). If data file has already prepared in last run, the Migration Toolkit will automatically skip 4(j) - (p) and proceed to step 4(q) for the upload process.

However, if school would like to re-prepare the data, please remove the folder **E:\CloudDataFile** first, then restart from step 4(f). The Migration Toolkit will then not skip any step.

## 5 Post Migration Tasks

After around 10 minutes or longer (depending on school's data size), the WebSAMS on Cloud Server should be automatically startup. Open Internet Explorer (IE) /Chrome browser and input the new URL of the WebSAMS and the login page will be shown. The new URL can be found in CDS message sent to school.

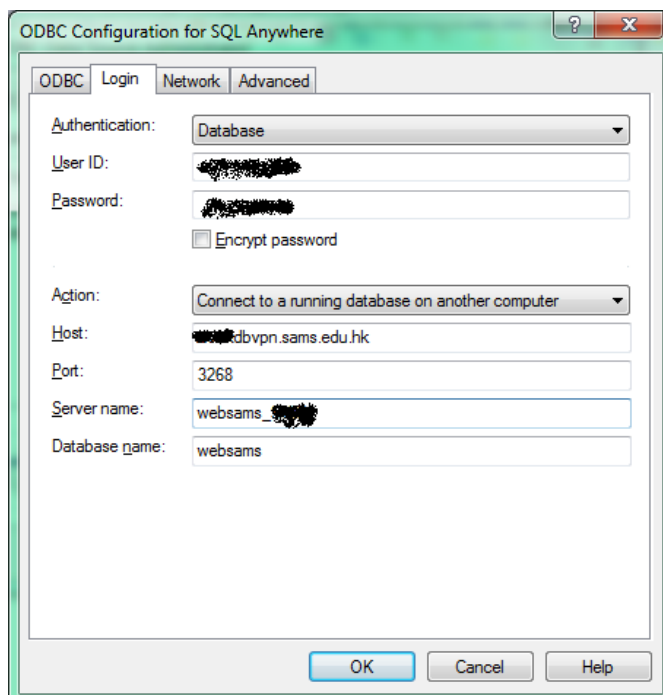
After the Cloud Server is installed, the following tasks should be performed:

### a. RECONFIGURE ODBC SETTING FOR THE CRYSTAL REPORTS WORKSTATION (OPTIONAL)

1. Login the Crystal Reports workstation (the workstation installed with SAP Crystal Reports 2013 software) by a Windows account with administrator rights.
2. Connect VPN to the Cloud.
3. Go to Windows Start menu and type **odbc** to search for **ODBC Data Sources Administrator (32-bit)**.
4. Click **System DSN** tab> click **websams** of SQL Anywhere 16 > click **configure**.
5. Under **Login** tab in ODBC Configuration, change the **Host** value to be as follows:

xxxxxxdbvpn.sams.edu.hk

where xxxxxx is the same school name abbreviation in the new WebSAMS URL.



6. Under the **ODBC** tab, click **Test Connection**. Enter any database user name (e.g. genuser, stfuser) and password.  
(Expected result: Connection successful)
7. Click **OK**.

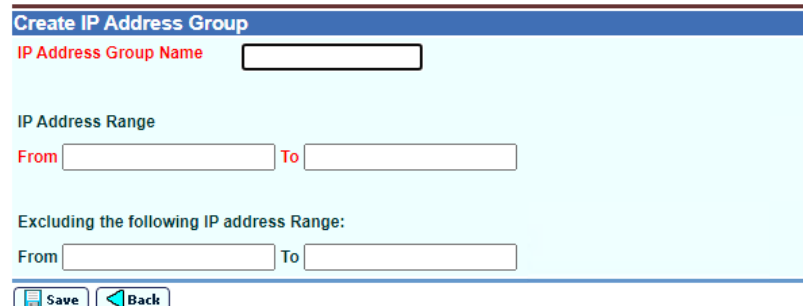
**Note:** This setting is **NOT** required if school does not have Crystal Reports workstation, or needs not preview report template after editing.

## b. INPUT SCHOOL CAMPUS INTERNET IP ADDRESS INTO WebSAMS

1. On a workstation, connect VPN to the Cloud.
2. Open WebSAMS by IE/Chrome browser and login with **sysadmin** account.
3. Go to **Security > Configuration > System Config**, check **Enable School Campus Access**.
4. Go to **Security > Configuration > IP Config**, click **Add**.
5. Enter a group name and the Internet IP addresses assigned to school campus by the Internet Service Provider (ISP).



[S-SEC06-02] Security > Configuration > IP Address Configuration



\* Example of IP address: 123.456.789.0

6. Click **Save**.

### c. CONFIGURE SMTP SETTINGS FOR WEBSAMS (OPTIONAL)

1. On the Crystal Reports workstation connected VPN to the Cloud, with WebSAMS opened and logged in as **sysadmin**.
2. Go to **Security > Configuration > System Config**.
3. If school is using the Email module, the option **Enable E-mail Function** should be checked.

For the field **SMTP Server of ISP subscribed by School**, change the value to **cloudsmtp.sams.edu.hk**.

For the field **E-Mail Account provided by ISP subscribed** and **Password of the E-Mail Account provided by ISP**, remove the original value (if any) and leave the fields blank.

The screenshot shows the WebSAMS interface for 'Lui Kee Through Train School'. The user is 'super1' and the login time is '19/09/2019 14:33'. The current school year is '2013' and the date is '19 September 2019 14:36'. The left sidebar shows the navigation menu with 'Security' expanded, and 'System Config' selected under 'Configuration'. The main content area is titled 'E-Mail' and contains the following settings:

Enable E-Mail Function	<input checked="" type="checkbox"/>
(Default: enabled)	
School's E-Mail Address for Return of E-Mail by Recipients	[Redacted]
(Mandatory if e-Cert. is not available)	
*If e-Cert. has been installed and Location Path & Password have been entered, E-Mail Address of the e-Cert. will be used as School's E-Mail Address.	
SMTP Server of ISP subscribed by School	cloudsmtp.sams.edu.hk
E-Mail Account provided by ISP subscribed	
Password of the E-Mail Account provided by ISP	

4. Click **Save**.

**Note:** This setting is **NOT** required if school does not use email functions in WebSAMS.

## 6 User Acceptance Test

### 1. VPN WORKSTATION (I.E. ANY WORKSTATION THAT HAS CONNECTED VPN TO THE CLOUD)

#### 1.1 Connecting VPN

Can connect to VPN successfully?

(For detailed procedures of VPN connection, please refer to the VPN Connection Guide.)

1. Select a workstation, connect VPN with a VPN account.
2. Disconnect the VPN connection.
3. Connect VPN with another VPN account. [Please ignore this step for schools joining PILOT CLOUD SERVICE FOR WebSAMS 2018.]

#### 1.2 Accessing WebSAMS Website

Can access the WebSAMS website successfully?

1. Select a workstation, connect VPN.
2. Open IE/Chrome browser and go to the WebSAMS website by entering the URL for the WebSAMS of the school.



### 1.3 WebSAMS build version

Is WebSAMS version shown in the position as masked below same as before migration?

1. Check the WebSAMS version.

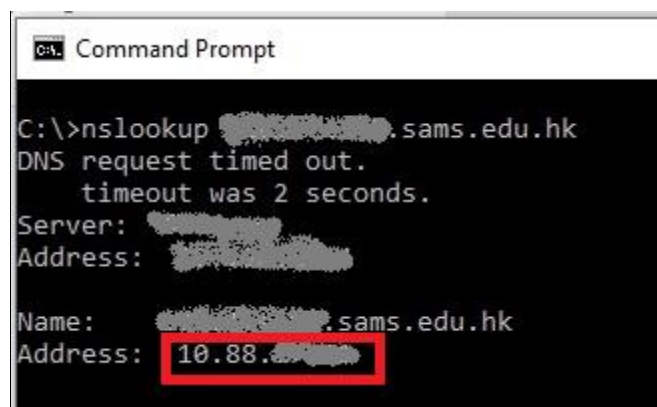


### 1.4 DNS Test

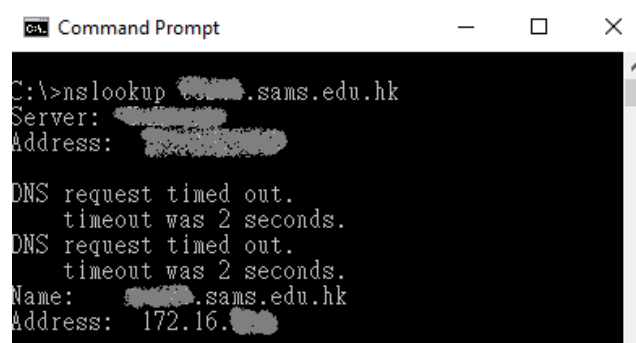
Record the nslookup result.

(For checking whether the WebSAMS domain name is able to be resolved to the Cloud IP address )

1. Open the DOS command window.  
Path: **Windows Start menu > run, type cmd**
2. Type the command: **nslookup <websams domain name>**  
e.g.: nslookup xxxxxx.sams.edu.hk  
(Expected result: IP address 10.88.XXX.XXX should be shown)



*Note : For schools joining PILOT CLOUD SERVICE FOR WebSAMS 2018, PILOT CLOUD SERVICE FOR WebSAMS 2019 or PILOT CLOUD SERVICE FOR WebSAMS 2020, the expected result : IP address **172.16.XXX.XXX** should be shown.*



```

C:\>nslookup [redacted].sams.edu.hk
Server: [redacted]
Address: [redacted]

DNS request timed out.
        timeout was 2 seconds.
DNS request timed out.
        timeout was 2 seconds.
Name: [redacted].sams.edu.hk
Address: 172.16.[redacted].[redacted]
    
```

## 1.5 WebSAMS Login

Can successfully login the WebSAMS?

1. Login WebSAMS with the **sysadmin** account.

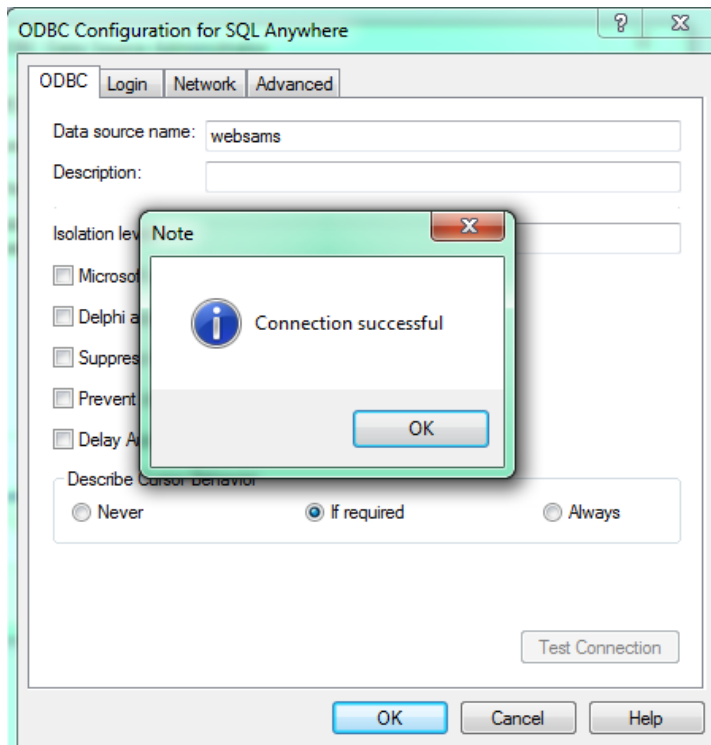
## 1.6 ODBC test (Optional)

Can ODBC be connected?

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

1. On the Crystal Reports workstation (the workstation that has installed SAP Crystal Reports 2013).
2. Connect VPN.
3. Open the ODBC Data Sources window of **websams** in **System DSN** tab.  
Path: **Windows Start menu > Control Panel > Administrative Tools > ODBC Data Sources (32-bit)**.
4. In Login tab, input the user name (e.g. **genuser** ) with its corresponding password.
5. Go back to **ODBC** tab, click **Test Connection**.  
(Expected result: Connection successful)





**Note:** This setting is **NOT** required if school needs not directly connect the WebSAMS database (e.g. when previewing report template after editing in Crystal Reports workstation).

## 2. SCHOOL CAMPUS WORKSTATION

### 2.1 Accessing WebSAMS Website

Can access the WebSAMS website?

1. Select a workstation within the school campus without connecting VPN (i.e. School Campus workstation).
2. Open IE/Chrome browser and go to the WebSAMS website.

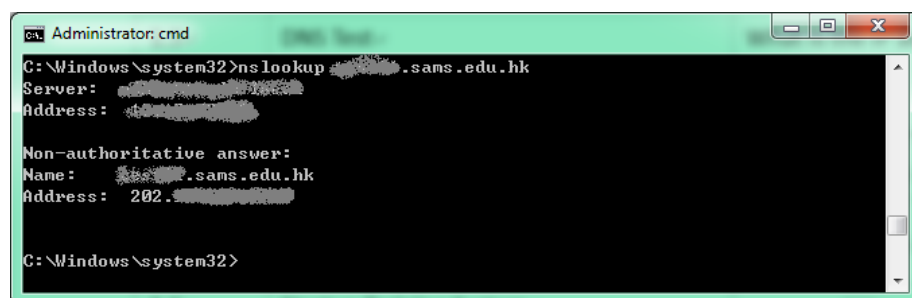


## 2.2 DNS Test

Record the nslookup result.

(For checking whether the WebSAMS domain name is able to be resolved to the Cloud IP address )

1. Open the DOS command window.  
Path: **Windows Start menu > run, type cmd**
2. Type the command: **nslookup <websams domain name>**  
e.g.: nslookup xxxxxx.sams.edu.hk  
(Expected result: IP address 202.XXX.XXX.XXX should be shown)



## 2.3 WebSAMS Login

Can successfully login the WebSAMS?

1. Open IE/Chrome browser and go to the WebSAMS website.
2. Login WebSAMS with the **sysadmin** account.

## 2.4 Access right verification

Can WebSAMS identify that the login is from a School Campus workstation?

1. Use a VPN workstation, login WebSAMS with **sysadmin**.
2. Go to **Security > Configuration > System Config**, uncheck **Enable School Campus Access**, save the change.

Access Control		
Configuration		
System Config		
IP Config		
System Custom		
Report & Log		
Cloud Service Mgmt		
E-Mail		
System Config	Password expiry period <small>(Min: 30 days, Max: 365 days, default value: 100 days)</small> Number of passwords stored in password History <small>(Min: 1, Max: 5, default value: 1)</small> Enable Multiple Login <small>(Default: disabled)</small> Enable Internet Access <small>(Default: disabled)</small> Enable School Campus Access <small>(Default: disabled)</small>	100 days 5 <input checked="" type="checkbox"/> <input checked="" type="checkbox"/> <input type="checkbox"/>

3. Use a School Campus workstation (without connecting VPN), login WebSAMS.  
(Expected result: Error message should be shown, saying that login from School Campus workstation is not allowed)
4. After this test, for convenience of remaining tests, please re-enable School Campus access by checking **Enable School Campus Access** in **Security > Configuration > System Config**, and save the change again.

## 3. INTERNET WORKSTATION

For tests in this section, please arrange a workstation that can access Internet but is not connected to the school campus network, e.g. a notebook directly connecting to Internet through mobile phone 4G/5G.

### 3.1 Accessing WebSAMS Website

Can access the WebSAMS website?

1. Select a workstation that can access Internet but is not connected to the school campus network (i.e. Internet workstation).
2. Open IE/Chrome browser and go to the WebSAMS website.



### 3.2 WebSAMS login

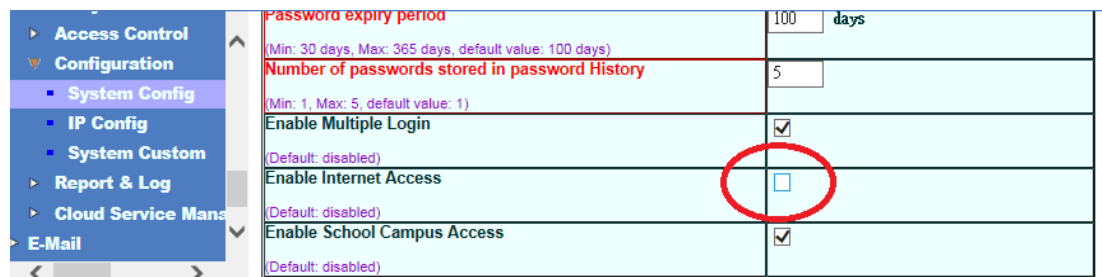
Can successfully login the WebSAMS?

1. Login WebSAMS with the **sysadmin** account.

### 3.3 Access right verification

Can WebSAMS identify that the login is from an Internet workstation?

1. Use a VPN workstation, login WebSAMS with **sysadmin**.
2. Go to **Security > Configuration > System Config**, uncheck **Enable Internet Access**.



Password expiry period	100 days
(Min: 30 days, Max: 365 days, default value: 100 days)	
Number of passwords stored in password History	5
(Min: 1, Max: 5, default value: 1)	
Enable Multiple Login	<input checked="" type="checkbox"/>
(Default: disabled)	
Enable Internet Access	<input type="checkbox"/>
(Default: disabled)	
Enable School Campus Access	<input checked="" type="checkbox"/>
(Default: disabled)	

3. Use an Internet workstation, login WebSAMS.  
(Expected result: Error message should be shown, saying that login from Internet workstation is not allowed)
4. After this test, school can determine on its own whether or not to re-enable Internet access. If yes, please re-check **Enable Internet Access** in **Security > Configuration > System Config**, and save the change again.

## 4. OTHER FUNCTIONAL TEST

School should test the normal functions of WebSAMS.

### 4.1 School Data Checking

School data same as before migration?

1. On any workstation, login WebSAMS.
2. Random check some school data in WebSAMS to see if there is any irregularities after migration. Users may refer to the reports printed during preparation before migration (see Section 2).

### 4.2 Report Function Test

Can generate report?

1. Try to generate any report school used to generate before migration.  
Note that the generated report could be blocked by browser's popup blocker, because the WebSAMS URL has changed. If this happens, school needs to configure the browser to allow the new WebSAMS URL to show popup.  
(Expected result: Report should be generated)  
e.g.

R-CDS009-E

Date: 09/10/2019

Hong Kong School  
Key Change History List

Page: 1 of 1

Key Effective Date	Submission Date	Initiated By
12/12/2013		EDB
05/01/2015		EDB
05/01/2016		EDB
05/01/2017		EDB
26/08/2017		EDB
05/01/2018		EDB
05/01/2019		EDB

\*\*\*End of Report\*\*\*

## 5. FINAL ACCEPTANCE – CDS REGISTRATION AND CONNECTION TEST

If no problem after migration is found, school should perform CDS Registration, such that the Cloud Server can begin sending/receiving CDS message to/from EDB, while the CDS transmission feature in the original server in school campus will be disabled.

### 5.1 CDS Registration

Can successfully perform CDS Registration?

1. Select a workstation that can access CDS module.
2. Login WebSAMS with **sysadmin** account and go to **CDS > Registration**, click **Start**.

Updated Time	Status
19/08/2019 03:34 PM	Registered
06/06/2019 12:55 PM	Registered

3. Input the correct CDS School Key and click **Encrypt**.

[S-CDS21-02] **CDS > Registration > Encryption**

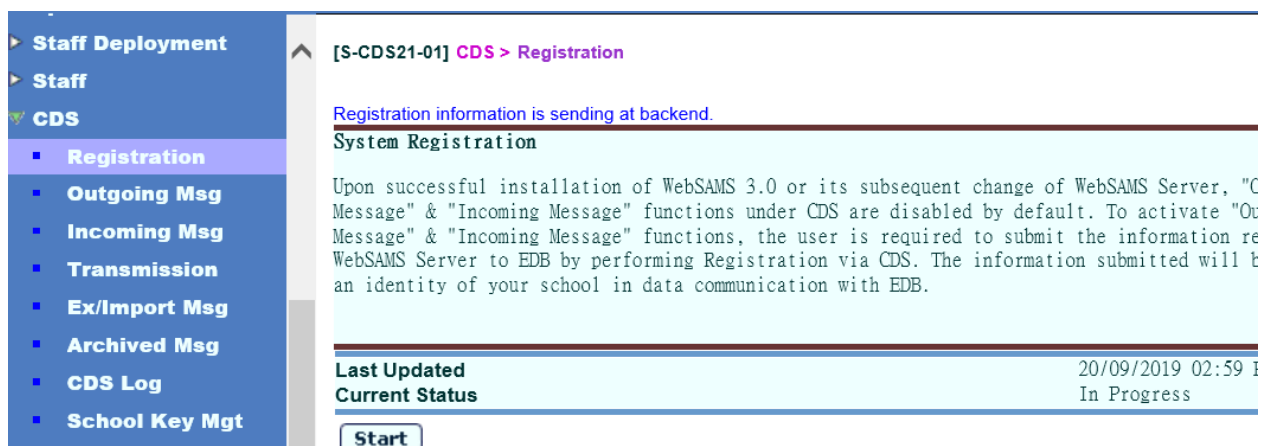
### Encryption

Please input the school key.

Effective Period : 05/01/2019 - 05/01/2020

School Key

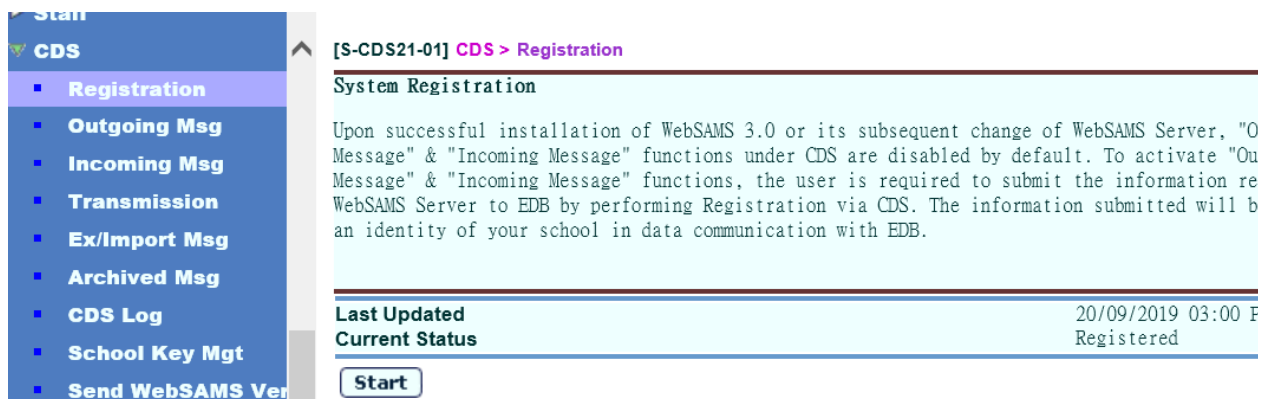
4. The **Current Status** should be changed to **In Progress**.



The screenshot shows the left-hand navigation menu with 'CDS' expanded and 'Registration' selected. The main content area displays the title '[S-CDS21-01] CDS > Registration' and a message: 'Registration information is sending at backend.' Below this is a section titled 'System Registration' with a paragraph explaining that upon successful installation of WebSAMS 3.0, certain functions are disabled by default and require registration via CDS. At the bottom, a table shows the 'Last Updated' date as 20/09/2019 02:59 and the 'Current Status' as 'In Progress'. A 'Start' button is located at the bottom left of the main content area.

<b>Last Updated</b>	20/09/2019 02:59
<b>Current Status</b>	In Progress

5. Wait a few minutes and go to **CDS > Registration** again, the **Current Status** should be changed to **Registered**.



This screenshot is similar to the previous one, showing the same navigation menu and system registration information. However, the 'Current Status' in the bottom table has changed to 'Registered'. The 'Last Updated' date is now 20/09/2019 03:00. The 'Start' button remains at the bottom left.

<b>Last Updated</b>	20/09/2019 03:00
<b>Current Status</b>	Registered



## 5.2 CDS Connection Test

Send WebSAMS version successful?

1. Select a workstation that can access CDS module.  
Login WebSAMS as **sysadmin**.
2. Go to **CDS > Send WebSAMS version**.
3. Click **Start**.

The screenshot shows the 'Send WebSAMS Version Number' form. The left sidebar has a tree view with 'CDS' expanded, showing options like Registration, Outgoing Msg, Incoming Msg, Transmission, Ex/Import Msg, Archived Msg, CDS Log, School Key M, Send WebSAMS, and Report. The main area has a title bar '[S-CDS13-01] CDS > Send WebSAMS Version Number'. Below it, there are three input fields: 'Current WebSAMS Version Number' with value '3.0.0.', 'CDS Destination ID' with value 'XXXXXXXXXX', and 'SCRN' with value 'XXXXXXXXXX'. At the bottom, there is a text prompt 'Click "Start" to send Version Number' and a 'Start' button.

4. Go to **CDS > Outgoing Message**, and click the new outgoing message **SCRN, WebSAMS Version**.

The screenshot shows the 'Outgoing Message' table. The left sidebar has a tree view with 'CDS' expanded, showing options like Registration, Outgoing Msg, Incoming Msg, Transmission, Ex/Import Msg, and Archived Msg. The main area has a title bar '[S-CDS01-01] CDS > Outgoing Message > Maintain Message' and three buttons: 'Maintain Message', 'Process Message', and 'Upload Data'. Below the buttons is a table with columns: Message Status, Description, Creation Time, Ack Time, Subject (Code), Type (Code), Party, Priority, School Reference, and Owner. The table has one row with the following data: Message Status is 'Ready', Description is 'SCRN, WebSAMS Version', Creation Time is '20/09/2019 02:47 PM', Ack Time is empty, Subject (Code) is 'SAMS version setup (AI)', Type (Code) is 'Data (DAT)', Party is 'EDB', Priority is 'Normal', School Reference is empty, and Owner is 'superl'.

5. Click **Encrypt**.

The screenshot shows the 'View Outgoing Message' form. The left sidebar has a tree view with 'CDS' expanded, showing options like Registration, Outgoing Msg, Incoming Msg, Transmission, Ex/Import Msg, and Archived Msg. The main area has a title bar '[S-CDS01-03] CDS > Outgoing Message > Maintain Message' and a 'View Outgoing Message' button. Below the button is a form with the following fields: Description (SCRN, WebSAMS Version), Subject (Code) (SAMS version setup (AI)), Type (Code) (Data (DAT)), Message Status (Ready), Owner (superl), Creation Time (20/09/2019 02:47 PM), Acknowledge Receipt, Party (EDB), Priority (Normal), and School Reference. Below the form is a 'File Attachment' section with two rows: 'CDSVERS1.DAT' and 'SCRN', each with a 'View' button. At the bottom, there are four buttons: 'Encrypt', 'Delete', 'Edit', and 'Close'.

6. Enter CDS School Key, and click **Encrypt**.

[S-CDS01-05] CDS &gt; Outgoing Message &gt; Encryption

**Encryption**

Please input the school key.

Effective Period : 05/01/2019 - 05/01/2020

School Key

**Encrypt** **Close**

Remarks:


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

7. The message **Encryption is successful!! Message(s) is sending at backend** should appear.



Special Assessment
Staff Deployment
Staff
CDS
Registration
Outgoing Msg
Incoming Msg
Transmission

[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 3 Bottom

	Message Status	Description	Creation Time	Ack Time	Subject (Code)	Type (Code)	Party	Priority	School Reference	Owner
	<input type="checkbox"/> Processing	SCRN_WebSAMS Version	20/09/2019 02:47 PM		SAMS version setup (AI)	Data (DAT)	EDB	Normal		superl

8. Wait for a while and click CDS > Outgoing Msg of the left menu a few times to refresh the page, the message status will be changed to **Sent**, and then **Received**.

	Message Status	Description
	<input type="checkbox"/> Sent	SCRN_WebSAMS Version
	<input type="checkbox"/> Received	SCRN_WebSAMS Version

## Annex I: User Acceptance Checklist for school

School should perform the following tests after migration:

**Note: The checklist below is for school use only. Schools are not required to submit this checklist to the EDB and they are advised to properly keep the completed checklist for record purpose.**

New WebSAMS URL: \_\_\_\_\_

WebSAMS Migration Date: \_\_\_\_\_

Please refer to section 6 - User Acceptance Test for the details of each item.

Item No.	Questions	Results / Answers
1. VPN Workstation		
1.1	Connecting VPN	Can connect to VPN by each VPN account? <input type="checkbox"/> Yes <input type="checkbox"/> No
1.2	Accessing WebSAMS website	Can see the WebSAMS login page? <input type="checkbox"/> Yes <input type="checkbox"/> No
1.3	WebSAMS build version	Build version same as before migration? <input type="checkbox"/> Yes <input type="checkbox"/> No
1.4	DNS Test	What is the IP address of the WebSAMS domain name? _____
1.5	WebSAMS Login	Login successful? <input type="checkbox"/> Yes <input type="checkbox"/> No
1.6	ODBC test (Optional)	Can ODBC be connected with the following accounts? <input type="checkbox"/> genuser <input type="checkbox"/> stfuser <input type="checkbox"/> fmpuser (Not applicable for government school)
2. School Campus Workstation		
2.1	Accessing WebSAMS website	Can see the WebSAMS login page? <input type="checkbox"/> Yes <input type="checkbox"/> No
2.2	DNS Test	What is the IP address of the WebSAMS domain name? _____
2.3	WebSAMS Login	Login successful? <input type="checkbox"/> Yes <input type="checkbox"/> No
2.4	Access right verification	<input type="checkbox"/> Yes <input type="checkbox"/> No
3. Internet Workstation		

3.1	Accessing WebSAMS Website	Can see the WebSAMS login page? <input type="checkbox"/> Yes <input type="checkbox"/> No
3.2	WebSAMS Login	Login successful? <input type="checkbox"/> Yes <input type="checkbox"/> No
3.3	Access right verification	<input type="checkbox"/> Yes <input type="checkbox"/> No
4. Other Functional Test		
4.1	School Data Checking	School's data same as before migration? <input type="checkbox"/> Yes <input type="checkbox"/> No
4.2	Report Function Test	Report generation successful? <input type="checkbox"/> Yes <input type="checkbox"/> No
5. Final Acceptance – CDS Registration and Connection Test		
5.1	CDS Registration	Registration successful? <input type="checkbox"/> Yes <input type="checkbox"/> No
5.2	CDS Connection Test	Send WebSAMS version successful? <input type="checkbox"/> Yes <input type="checkbox"/> No

UAT conducted by:

Name &amp; Designation

Signature \_\_\_\_\_

Date \_\_\_\_\_

## Annex II: New features of Cloud Service Management page

To use the following features, the user account should be,

- in the user group **School Head**; or
- assigned with the new user group **Cloud Service Administrator** at **Security > Access Control > User Group > Add Account to Group**

### 1. ACCESS THE CLOUD SERVICE MANAGEMENT PAGE

You can access the new **Cloud Service Management** Page by:

1. Login WebSAMS with a VPN workstation
2. Go to the new **Cloud Service Management** page.

Path: **Security > Cloud Service Management**.

There should be 3 sub menus under **Cloud Service Management** to perform different tasks:

➤ **OS Administration**

- Change/ Reset Windows Administrator Password
- Change/ Reset BitLocker Password
- Download BitLocker Recovery Key

➤ **Reboot Windows OS**

- Reboot Windows OS

➤ **WebSAMS Management**

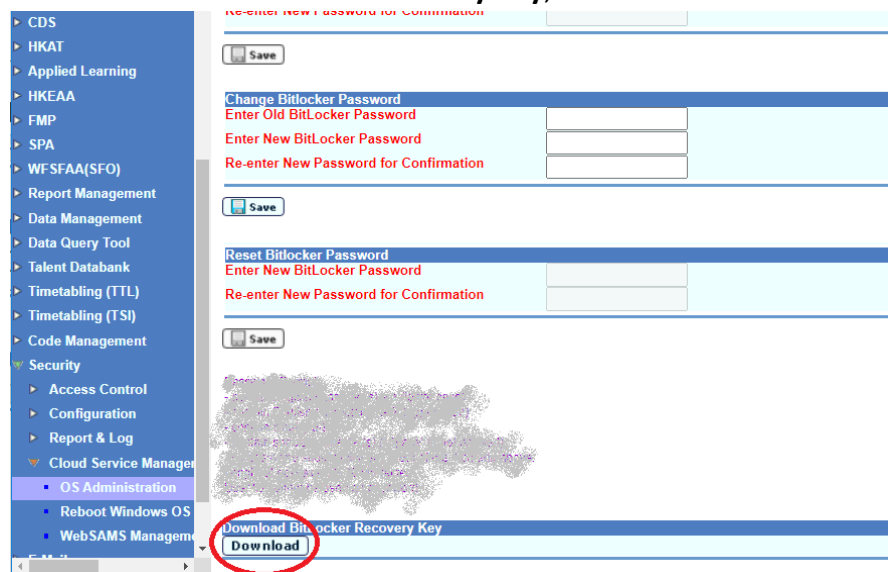
- Download Database Backup
- JBoss Debug Mode
- Training Instance
- WebSAMS Log
- WebSAMS Upgrade
- Execute Data Patch

### 2. DOWNLOAD BITLOCKER RECOVERY KEY

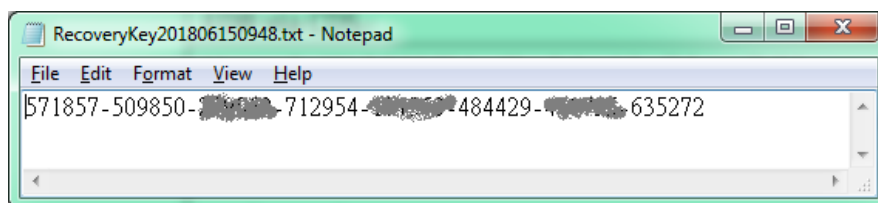
You can download BitLocker Recovery Key by:

1. Login WebSAMS with a VPN workstation
2. Go to **Security > Cloud Service Management > OS Administration**.

3. Under **Download BitLocker Recovery Key**, click **Download**



4. A file named **RecoveryKey.7z** should be downloaded.
5. Extract the 7z file content.  
The 7zip software is required. Installation file can be downloaded from <https://7-zip.org/>
6. It should prompt for entering the decryption password of the 7z file, which is the BitLocker password school input during migration.
7. The extracted file should be a txt file with a file name **RecoveryKeyYYYYMMDDHhmm.txt**. The file content should be a series of meaningless characters in one line, e.g.



This recovery key is used to recover the E: drive of the Cloud Server during recovery if the BitLocker password is lost. School is required to download the recovery key after each change of the BitLocker password, and properly keep it for use during recovery.

### 3. STARTUP AND ACCESS TRAINING INSTANCE (IF ANY)

You can access the Training Instance by:

1. Go to the new **Cloud Service Management** page, check the status of the Training Instance.

Path: **Security > Cloud Service Management > WebSAMS Management**

Training Instance Status	
Training Instance Status	Started
Start Training Instance	<input type="radio"/>
Stop Training Instance	<input type="radio"/>
Backup Training snapshot	<input type="radio"/>
Restore Training snapshot	<input type="radio"/>

2. If the status is **Stopped**, choose **Start Training Instance** and click **Execute**.
3. Wait a few minutes for the Training Instance to startup. Open a new browser window or tab, go to the Training Instance website  
*Note: If the URL of WebSAMS is <https://xxxxxx.sams.edu.hk>, then the URL of the Training Instance should be <https://xxxxxx.sams.edu.hk:7011>*
4. Login Training Instance.

Checklist on new features	Done?
Access the new <b>Cloud Service Management</b> Page	
➤ OS Administration	
➤ Reboot Windows OS	
➤ WebSAMS Management	
Download BitLocker Recovery Key	
Startup and access Training Instance	