



Digital Signage Station

User's Manual

For V1.01.04 Version

Legal Notice

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Introduction

Product Overview

The **Digital Signage Station** software (hereafter referred to as **DSS**) is a Windows-based software designed to help companies or organizations with a large number of locations to manage numerous display devices across your network. With **DSS-1000** video decoder, you can make a display not only a screen showing live streams from surveillance cameras but a powerful digital signage board that delivers dynamic visual content.

It allows you to:

- **Secure Your Business while Leveraging the Hardware Investment**

Turn you existing video surveillance system into a 2-in-1 solution without extra hardware investment.

- **Manage Hundreds of Display Stations with Ease**

As DSS supports device-grouping in a hierarchical fashion, you can easily manage **UNLIMITED** stations located everywhere through Internet.

- **Tailor the Media Content to Your Needs**

Whatever image or video you have on your computer can directly be displayed on multiple screens at the same time. You can arrange the channels into a suitable layout and edit the playlist for each channel.

- **Update the Content as Frequently as You Want**

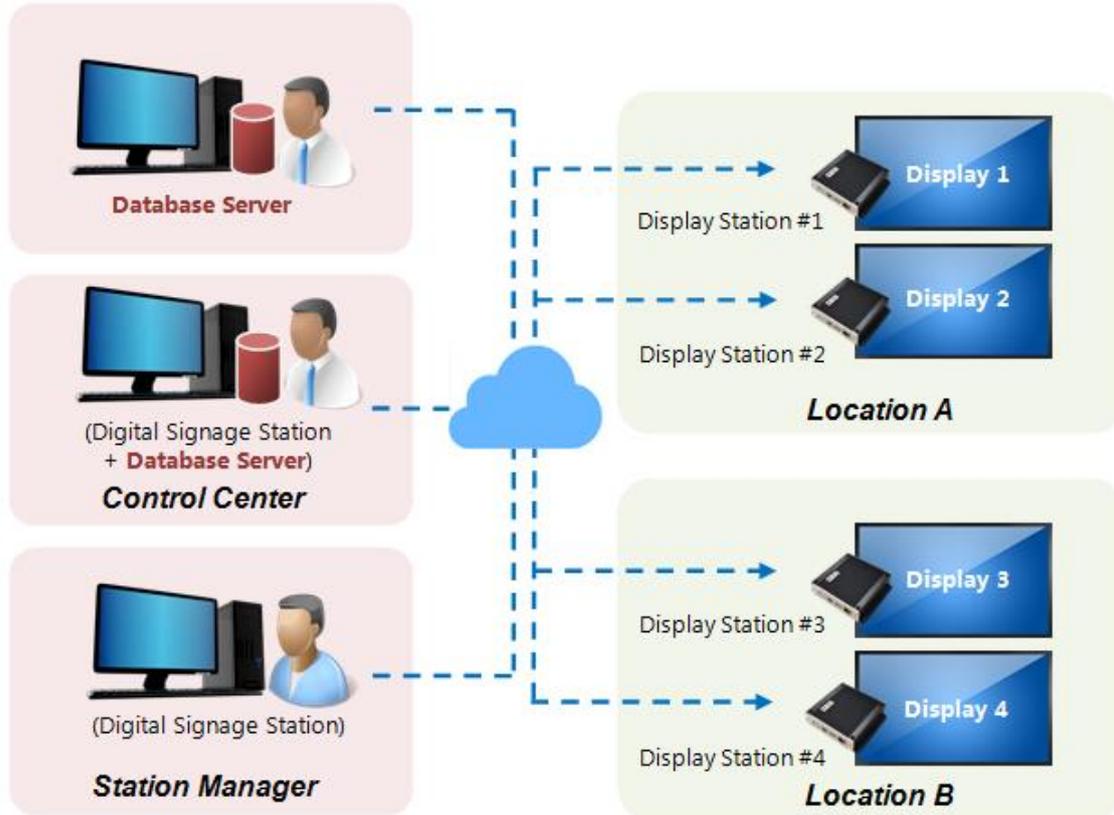
You can roll out the digital content at once or schedule the update at a specific time, without any concern about the printing costs and the labor required to put up the real posters.

- **Monitor the Stations**

The current status of each **Display Station** and its update history is all at a glance on DSS dashboard, where you can get the real-time screenshot of a display with one click.

System Architecture

The typical architecture of DSS solution is shown below:



Display Station

A display and an DSS-1000 device make a Display Station, which can concurrently display the live stream from surveillance cameras and the digital content.

Digital Signage Station

As this solution allows multiple users at different locations to collaborate on the signage management, any computer installed with DSS can be a Digital Signage Station. Through DSS interface, the user can access the Database to acquire the data and current status of all Display Stations of your organization, and update the media content to desired Display Stations.

Database Server

The Database Server hosted by the system administrator centrally holds the data of all the Display Stations. Each Digital Signage Station manager will have to access this database using an exclusive user profile (which will be created as you first launch DSS program or on **System** tab).

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System Requirements

In general use, the performance of DSS does not rely largely on the system hardware; however, it is recommended that the database server PC (refer to Product Overview on page 5 for the role of Database Server) have enough hard disk space to keep the media content and sufficient network bandwidth for mass data uploading.

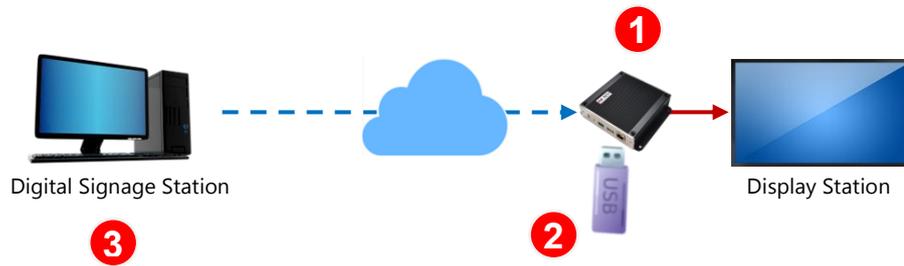
The table below is a recommended spec for the station computer:

PC Spec	Minimum
CPU	Intel Core 2 Quad 2.4 GHz
RAM	4GB (*1)
Operation System(*2)	Windows 7 (32 / 64 Bit), Windows 8 (32 / 64 Bit), Windows Server 2012 (64 Bit)
Hard Disk Space	100 GB
Network	Ethernet 1000 Base-T

***1** Please use 64-bit Windows operation system if your client computer has more than 4GB RAM.

***2** Please make sure your operation system is fully patched with the latest service packs.

Before Installation



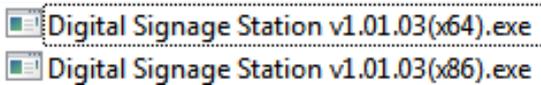
Before you can start arrange the media content and scheduling the publishing, the following steps are prerequisite:

1. Upgrade the DSS-1000 firmware to V1.03.04 version or later.
2. Insert a USB disk into DSS-1000 as the storage of media content. This USB disk will be connected with DSS-1000 at all times; the recommended storage size of the USB disk is four and half times the total file size of the media content contained in a single task.
3. Install DSS main program on the computer.

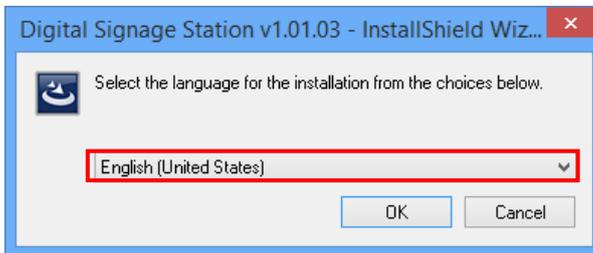
Installation

The installation wizard will install DB server and then DSS main program on the computer in a roll. Depending on what role this computer will serve, you can install both or either. For general DSS station computers, please follow the instruction in step 5 to skip the installation of database server; for a pure database server, please skip the installation of database.

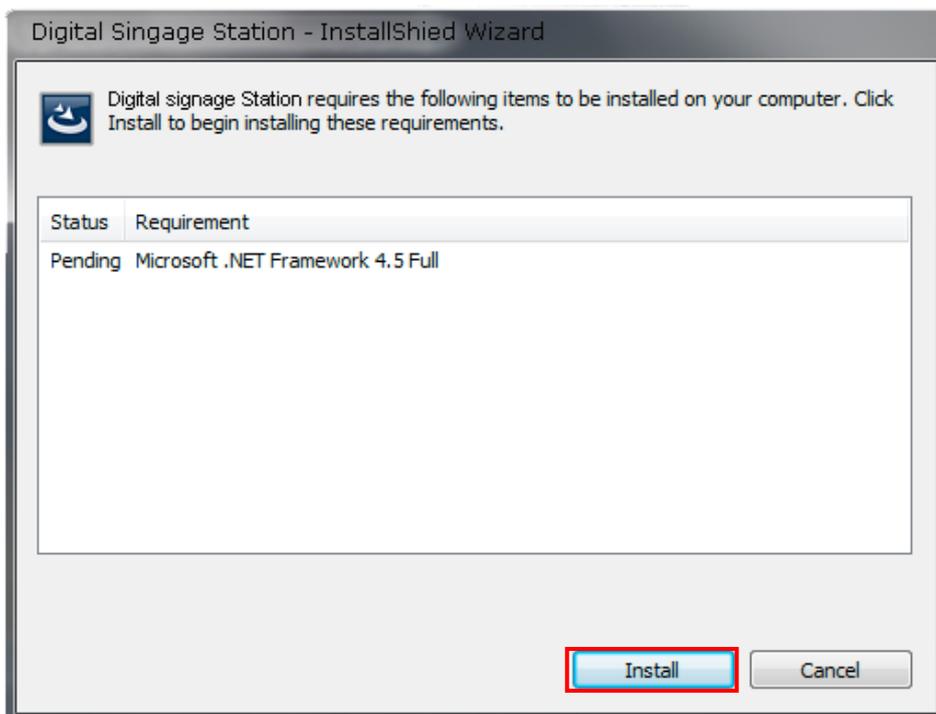
1. Unzip **DSS V1.01.03.rar**. Enter "**Installer**" folder and choose an installer to execute.



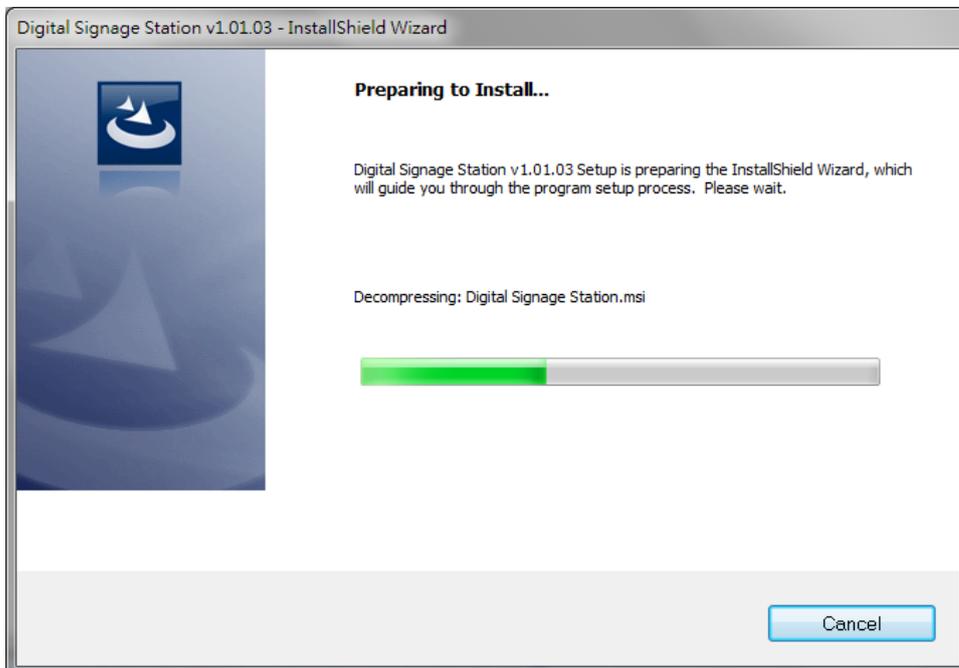
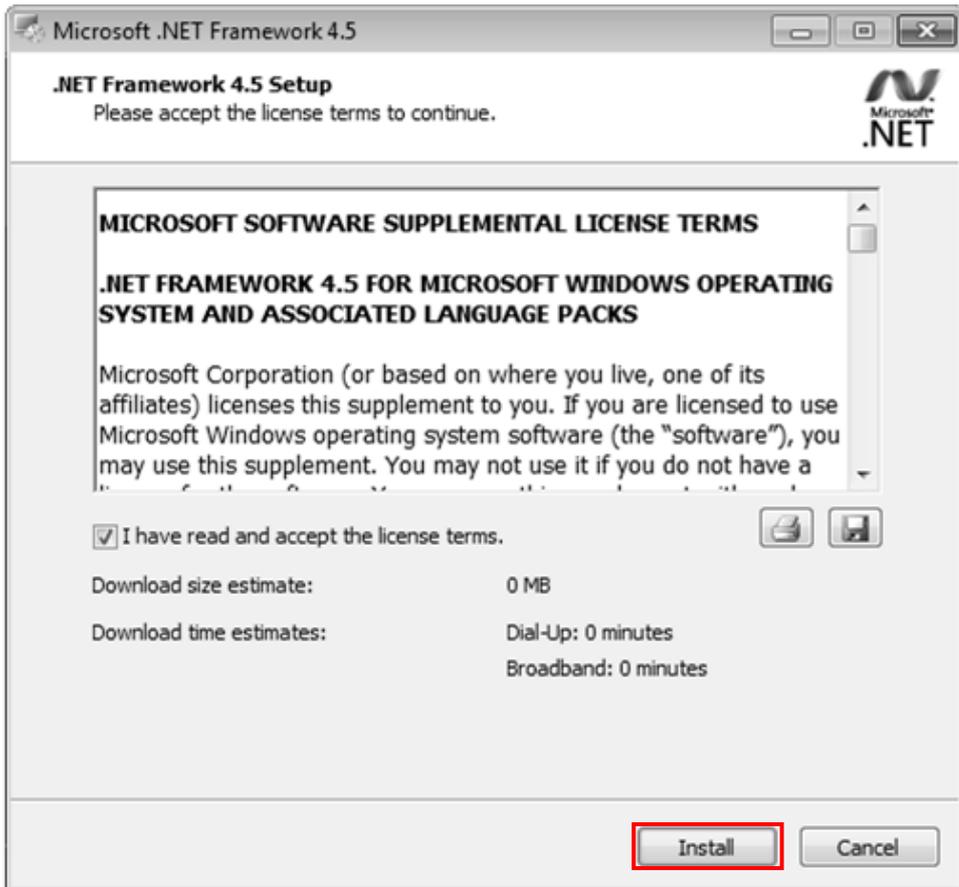
2. Select "**English**" from the list for English interface and click "**OK**".



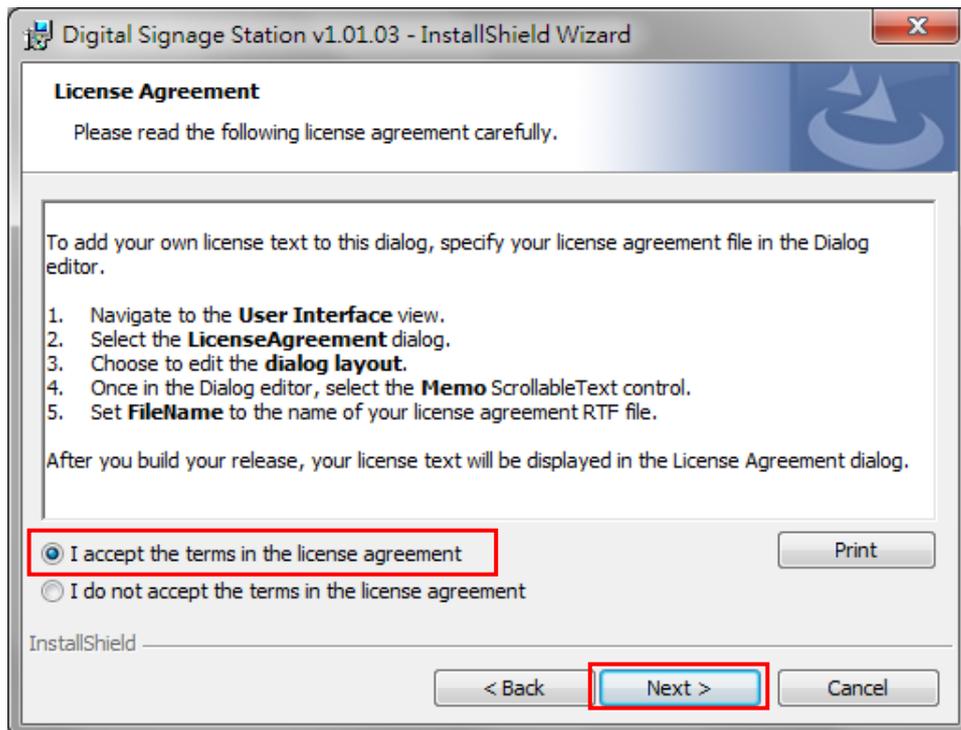
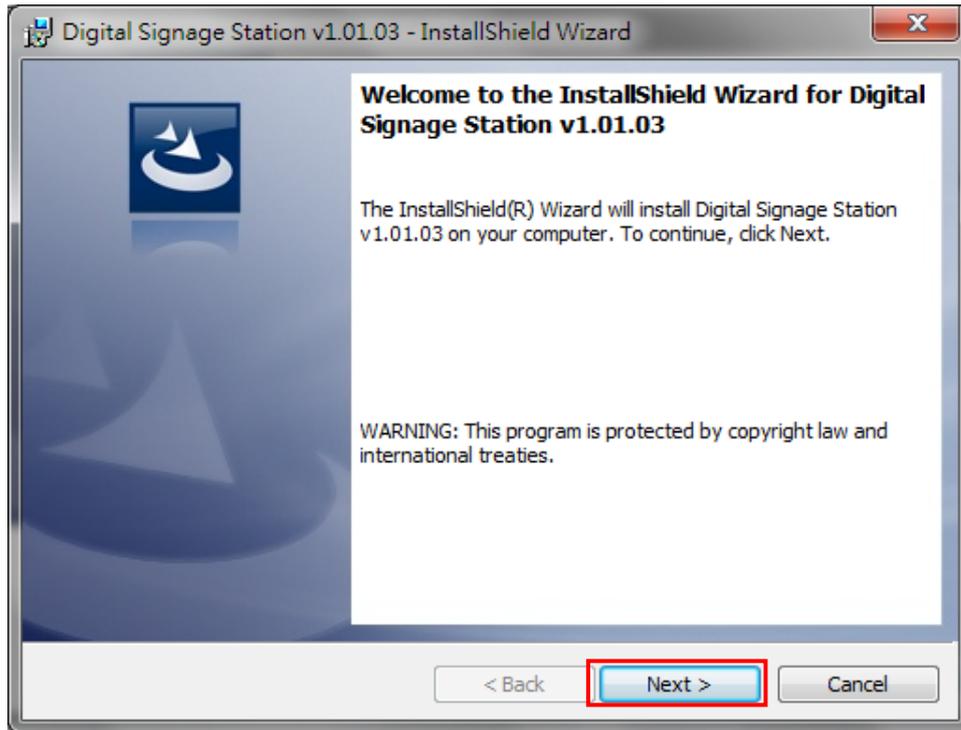
3. The **Microsoft .NET Framework 4.5** installer will be launched if your Microsoft .NET Framework version is earlier than the required one. Click "**Install**" to install it.



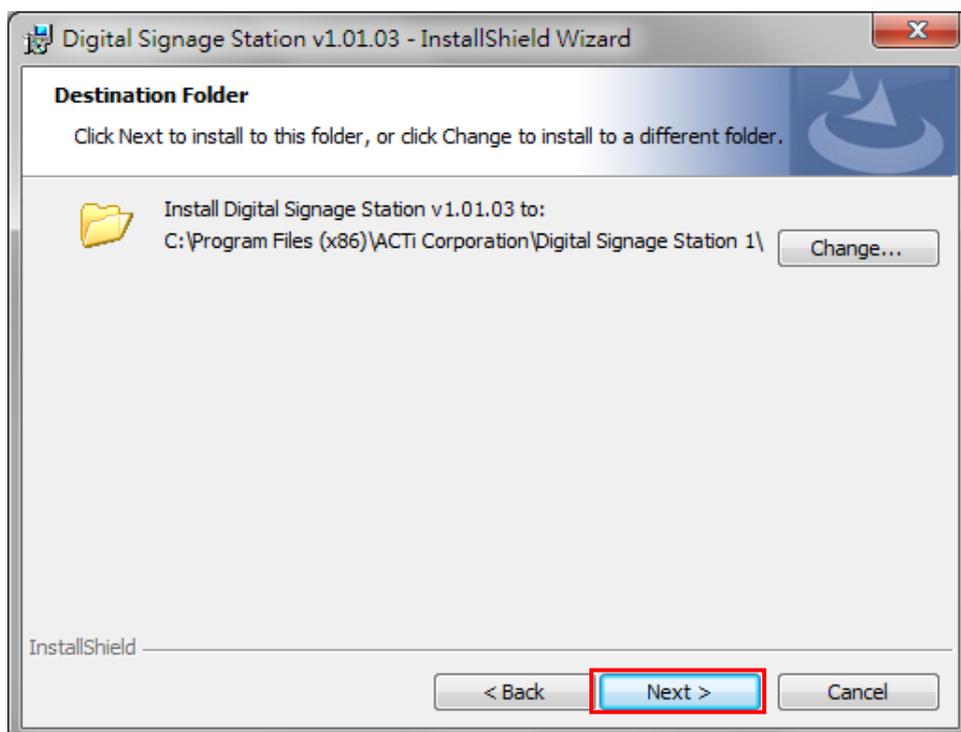
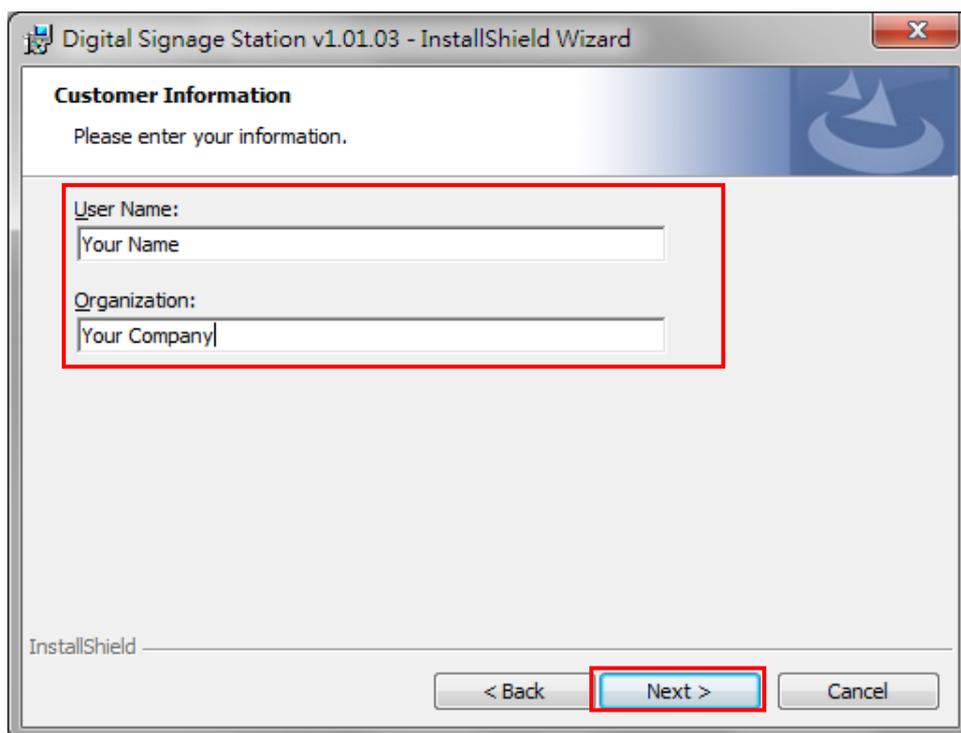
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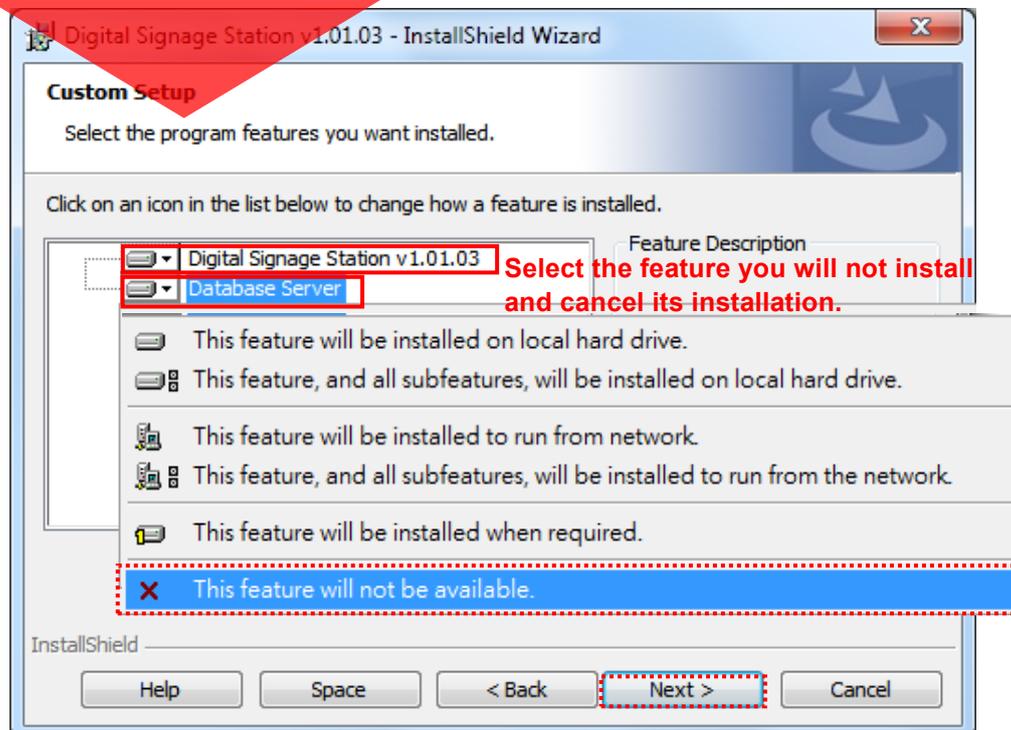
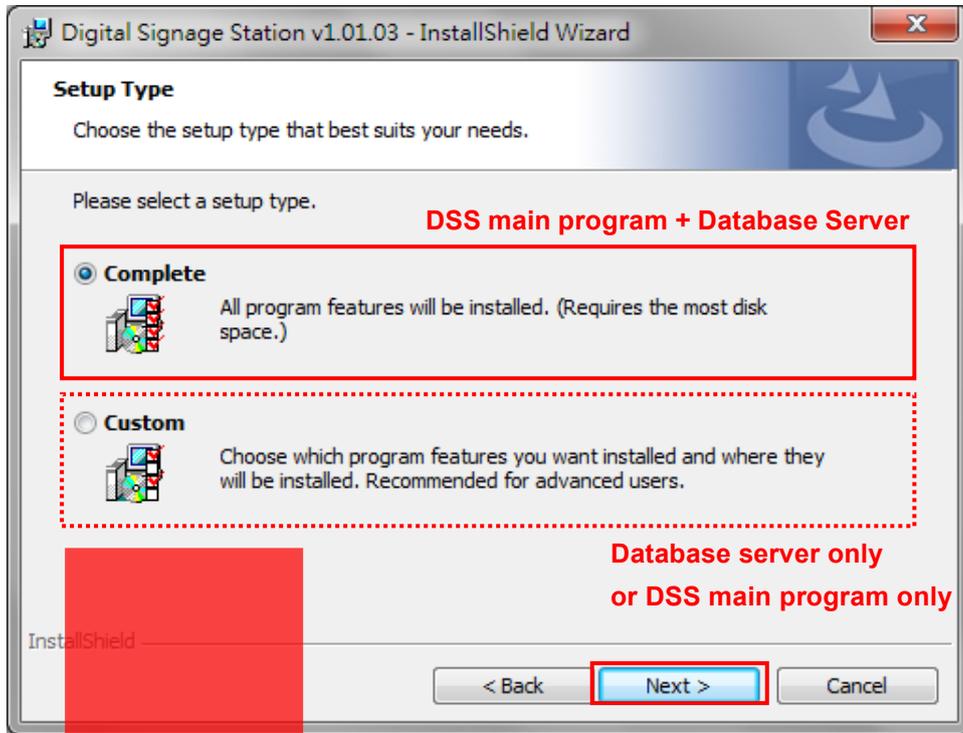


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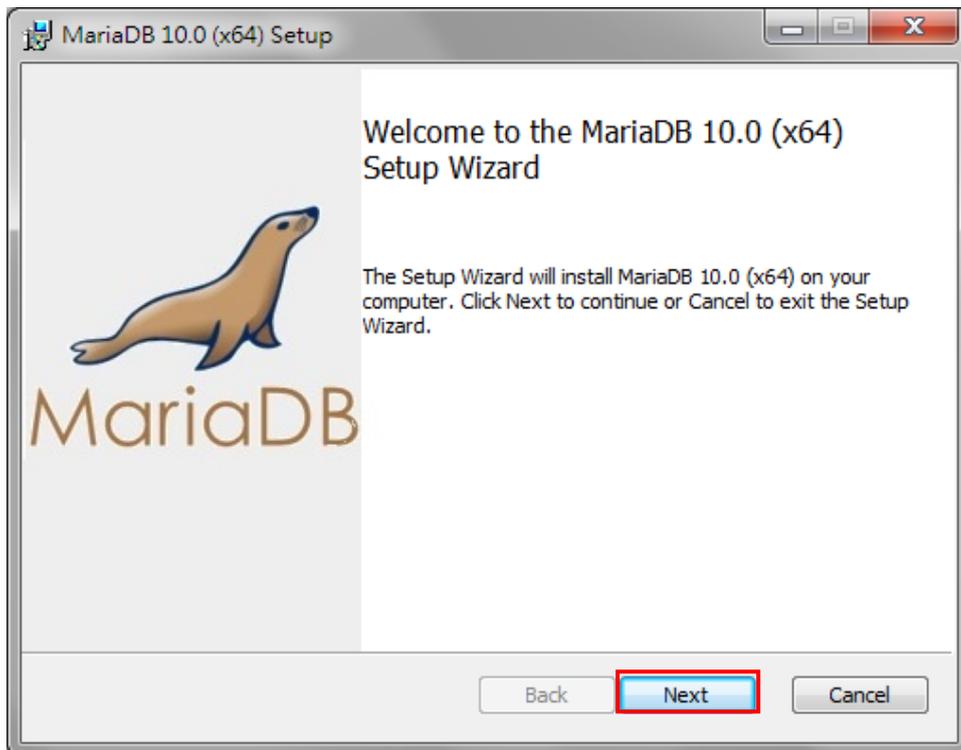
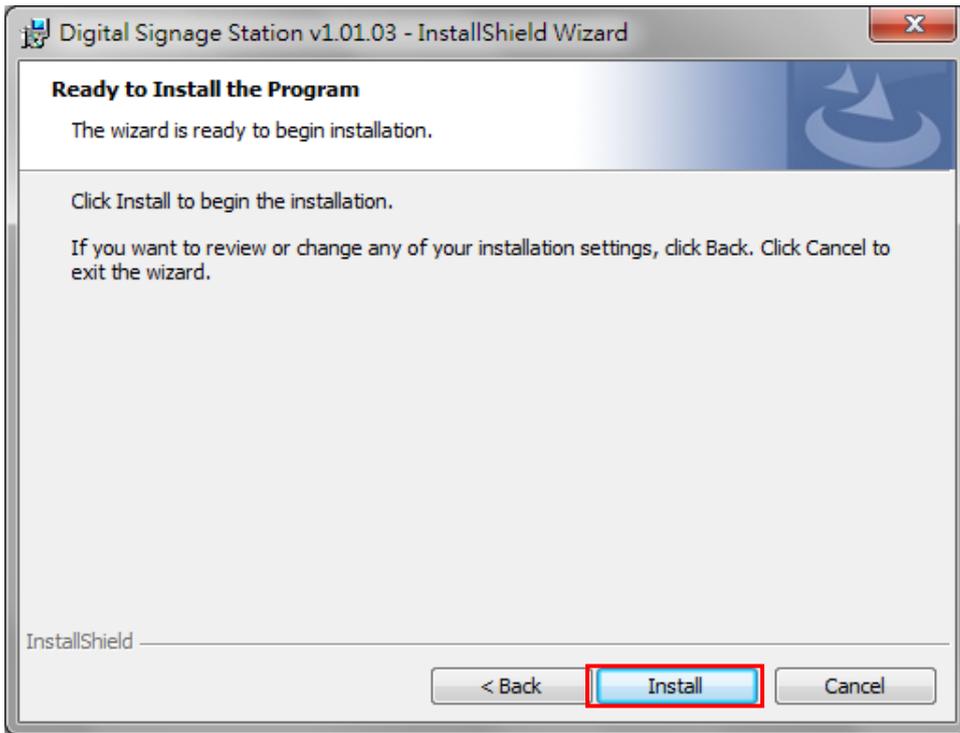
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4. Select the **Setup Type** as **“Complete”** in order to install both DSS
5. main program and the database server program; if you will only install either of them, please select **“Custom”** and proceed.

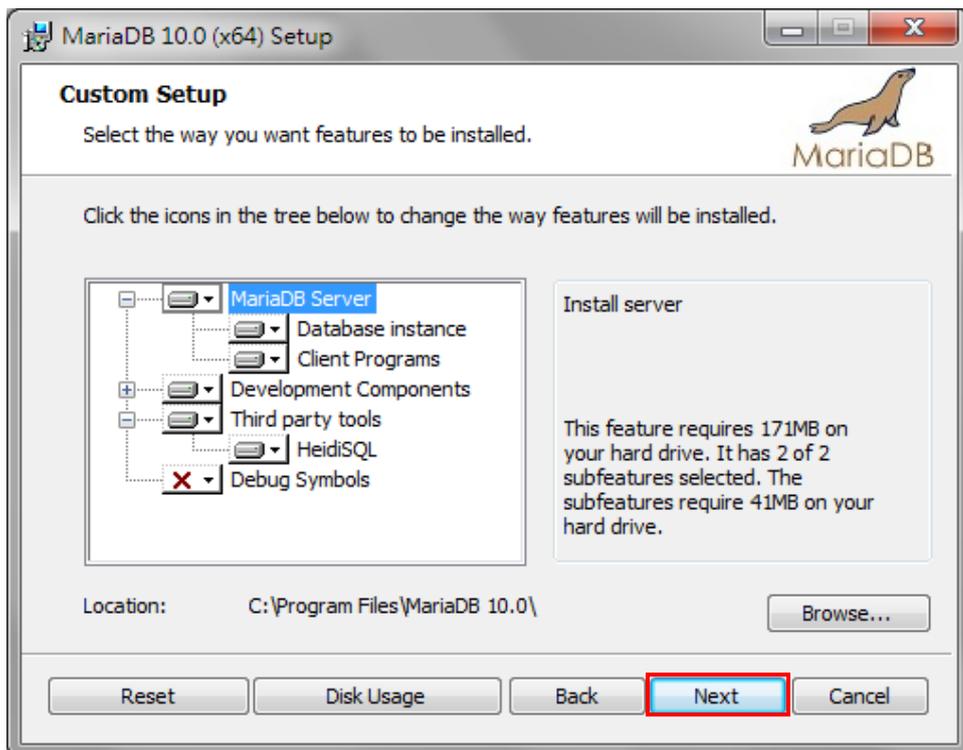
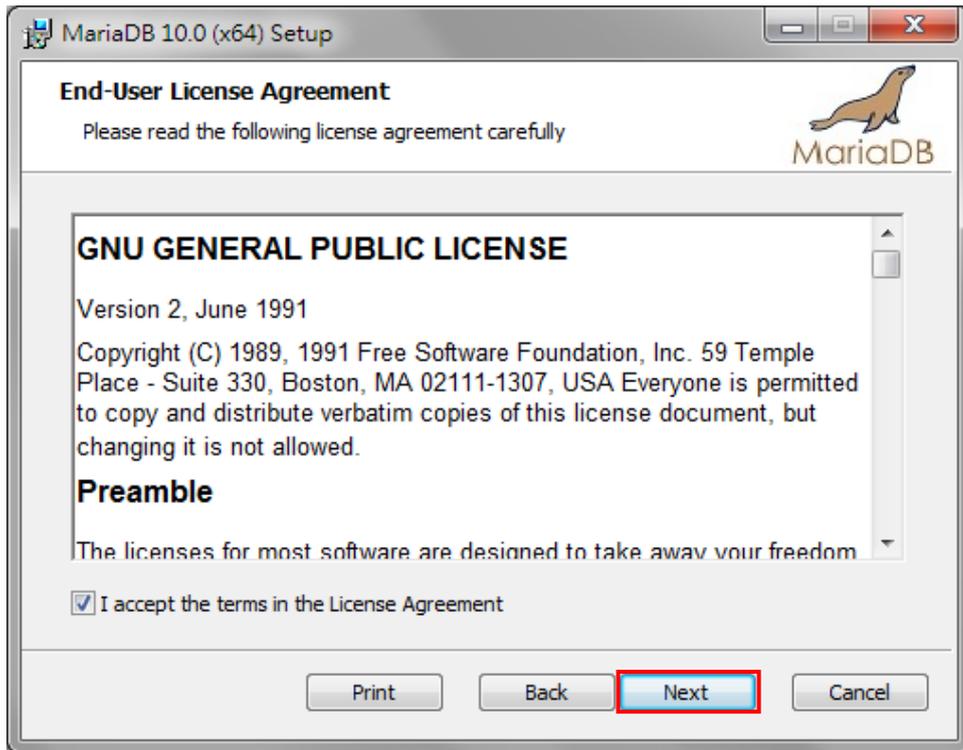


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6. Start installing database server program.

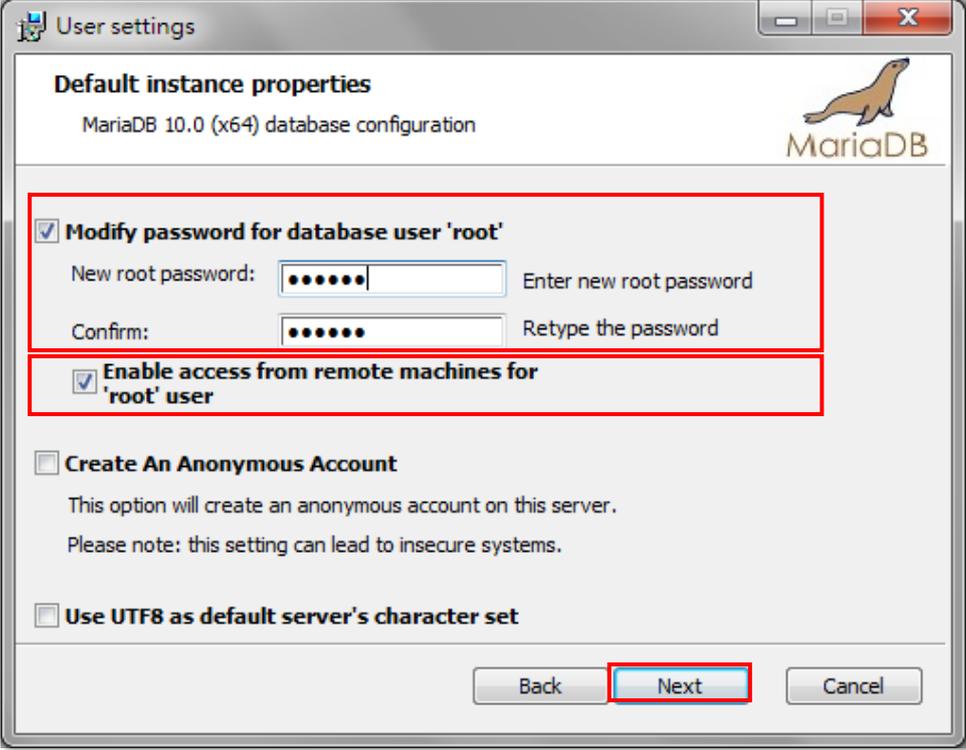


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On **User settings** window, type in the password for other DSS station users to access the database. Please also check **“Enable access for remote machines for ‘root’ user”**.



User settings

Default instance properties
MariaDB 10.0 (x64) database configuration

Modify password for database user 'root'

New root password: Enter new root password

Confirm: Retype the password

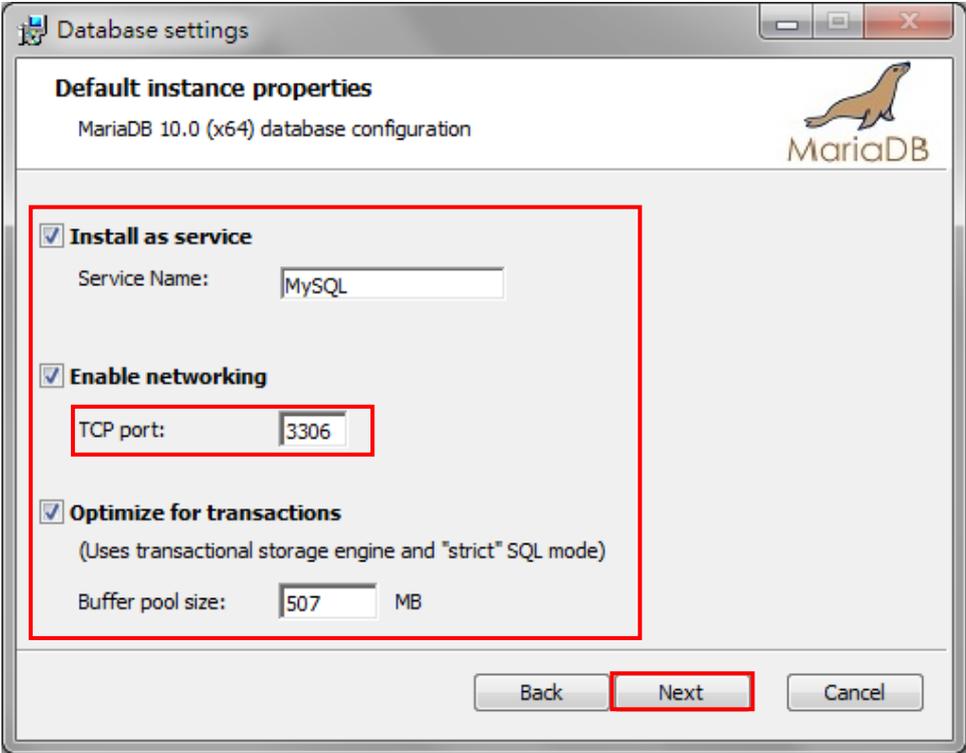
Enable access from remote machines for 'root' user

Create An Anonymous Account
This option will create an anonymous account on this server.
Please note: this setting can lead to insecure systems.

Use UTF8 as default server's character set

Back Next Cancel

On **Database settings** window, set the TCP port and enable all the items.



Database settings

Default instance properties
MariaDB 10.0 (x64) database configuration

Install as service

Service Name:

Enable networking

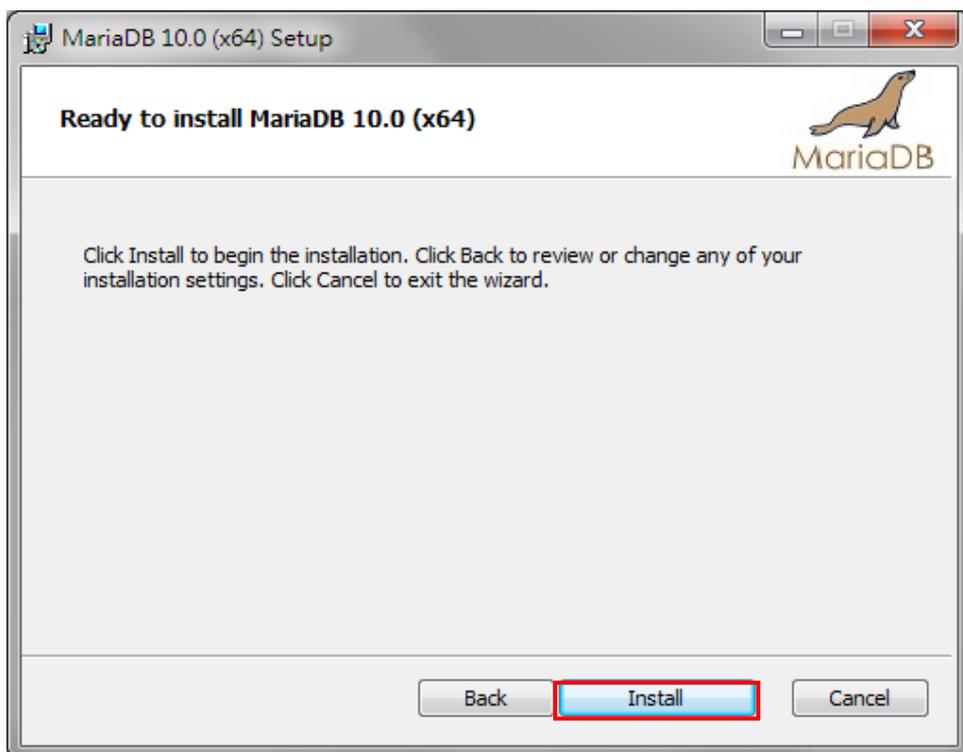
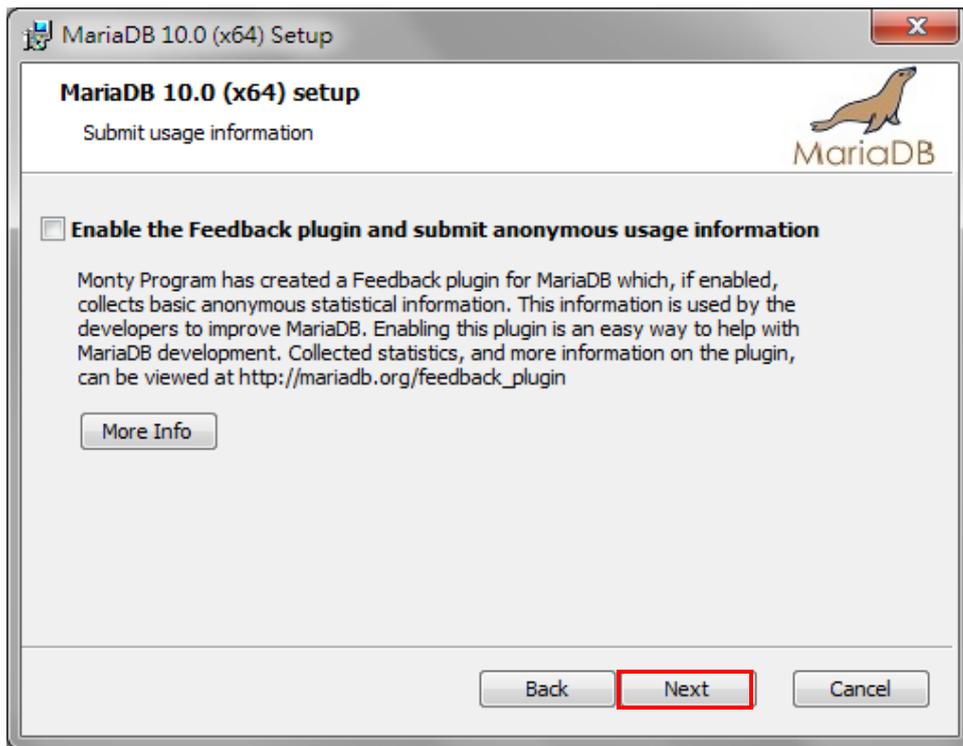
TCP port:

Optimize for transactions
(Uses transactional storage engine and "strict" SQL mode)

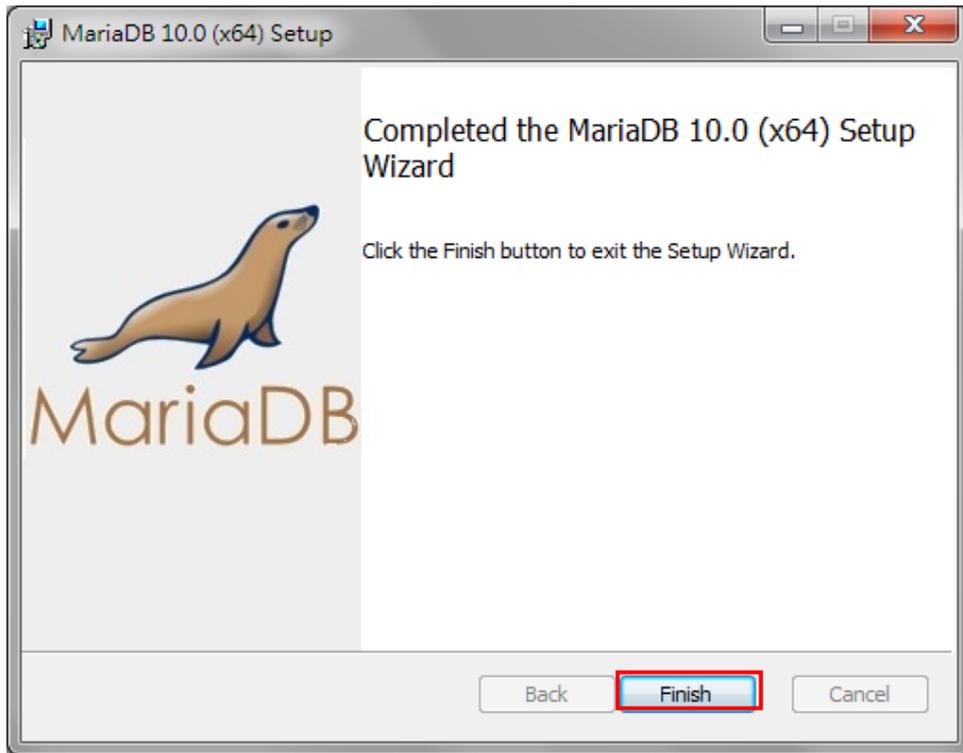
Buffer pool size: MB

Back Next Cancel

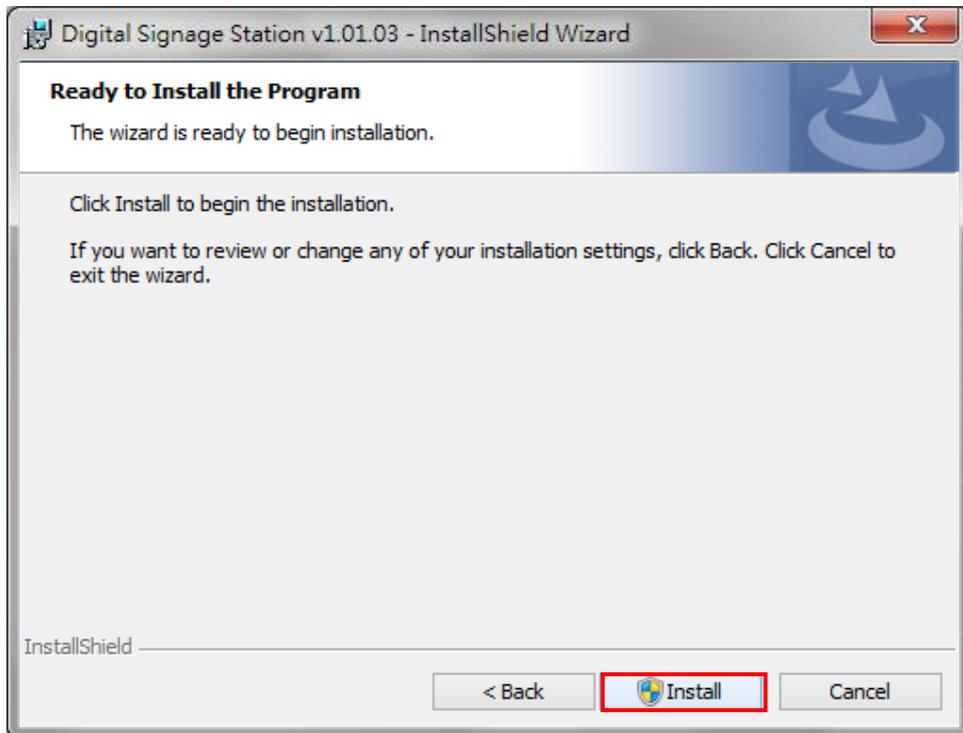
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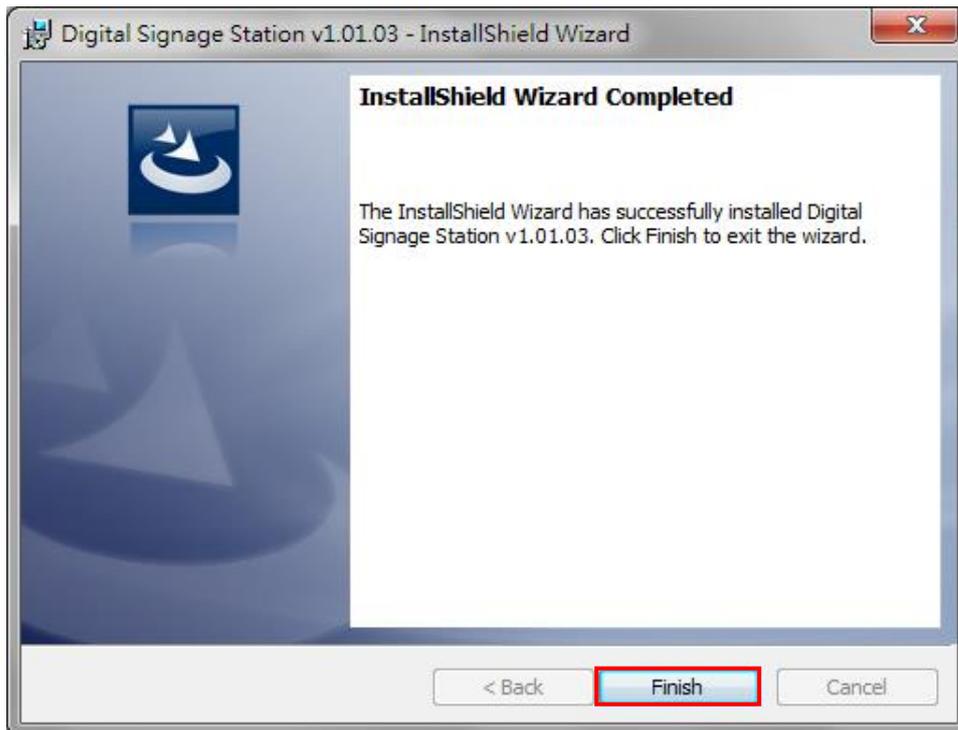
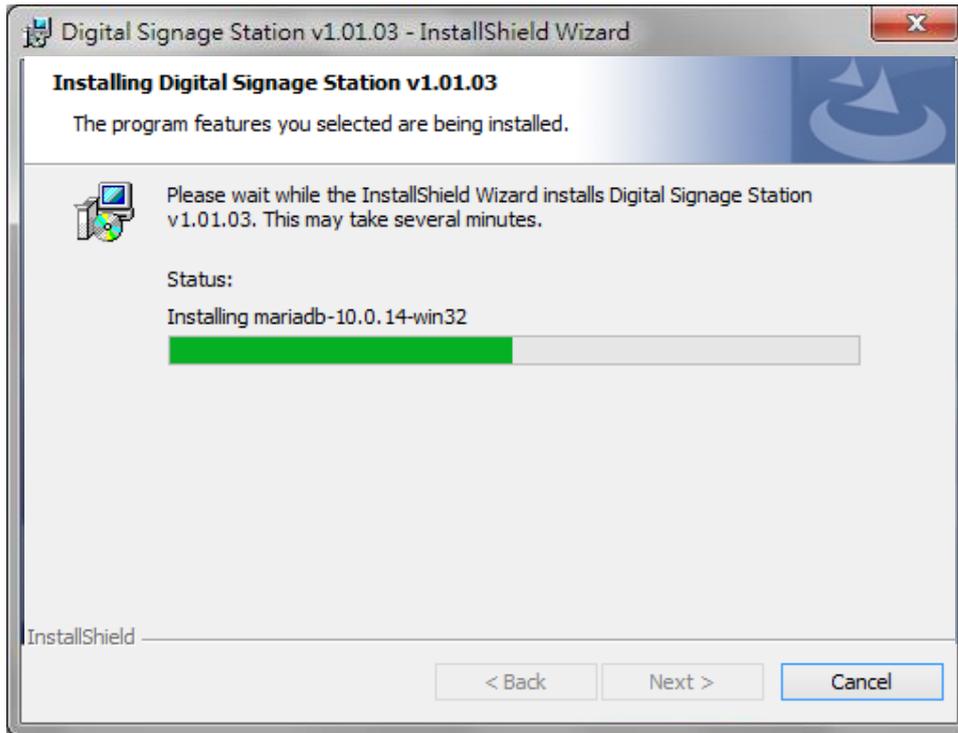
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7. Start installing DSS main program.



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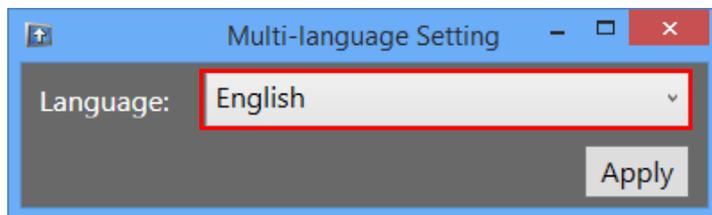
System Setup

Launch DSS for the First Time



After the installation is complete, an icon “**Digital Signage Station 1**” will appear on your Desktop, double-click on it to enter DSS program.

1. Using DSS for the first time, you will have to select the display language from the list. Select “**English**” and then click “**Apply**”



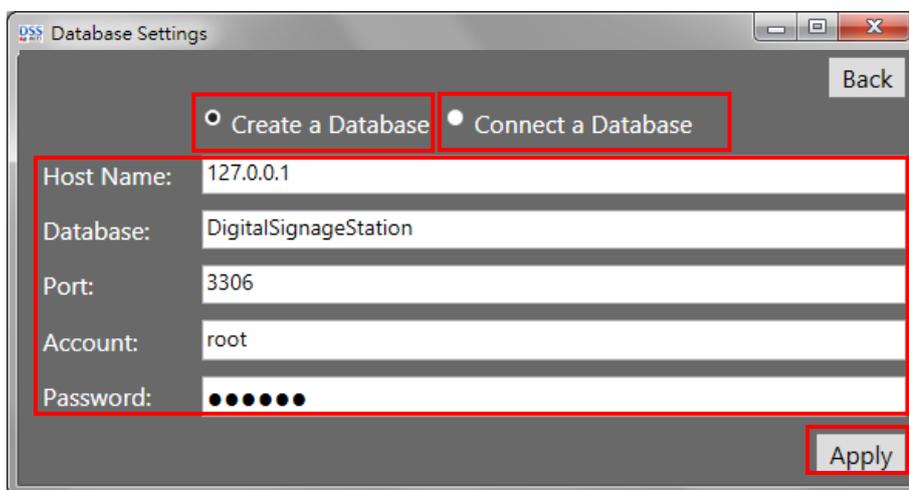
2. On **Database Settings** window, enter the database properties to access it.

- **Create a Database**

If a database server has been installed on the computer, select “**Create a Database**” and input the password you entered for **Database User Settings** during the installation.

- **Connect a Database**

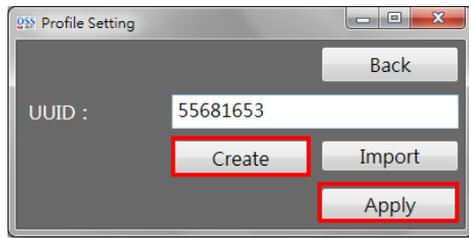
To connect to a database server, select “**Connect a Database**” and input the database properties. Please note that the **Account “root”** is the default account used to access the database. No other account name is allowed.



Click “**Apply**” to complete the database settings. This database will be saved as your default database.

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3. Create a user profile on **Profile Setting** window by clicking on **“Create”** and then **“Apply”**. This profile will be saved as the default user of DSS program.



4. After applying this setting, a text file containing the user information will pop up, please save it for future reference.

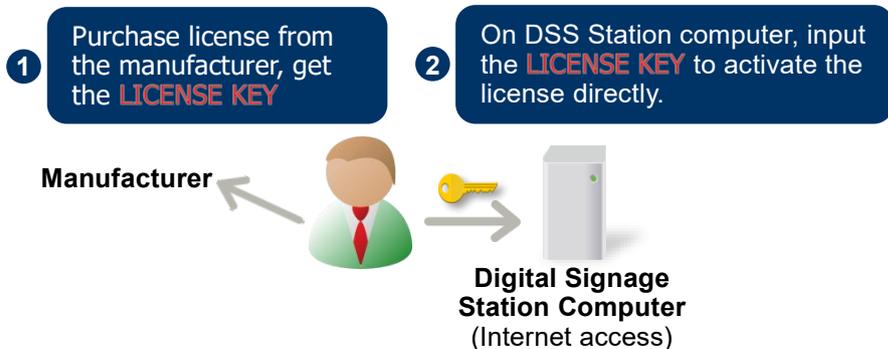


License Registration

A free license for **one** Display Station is already activated. To make sure you have enough license to manage the media content for the desired Display Stations, please purchase the license from the sales representative and obtain the license key.

During license activation, your **License Key** is matched against the MAC address of the Network Interface Card (NIC), Wi-Fi module on the computer or external Bluetooth Wi-Fi adapter . Once this license key is used by the computer with given MAC, it cannot be activated with another MAC. This matching record will be stored on the license data server.

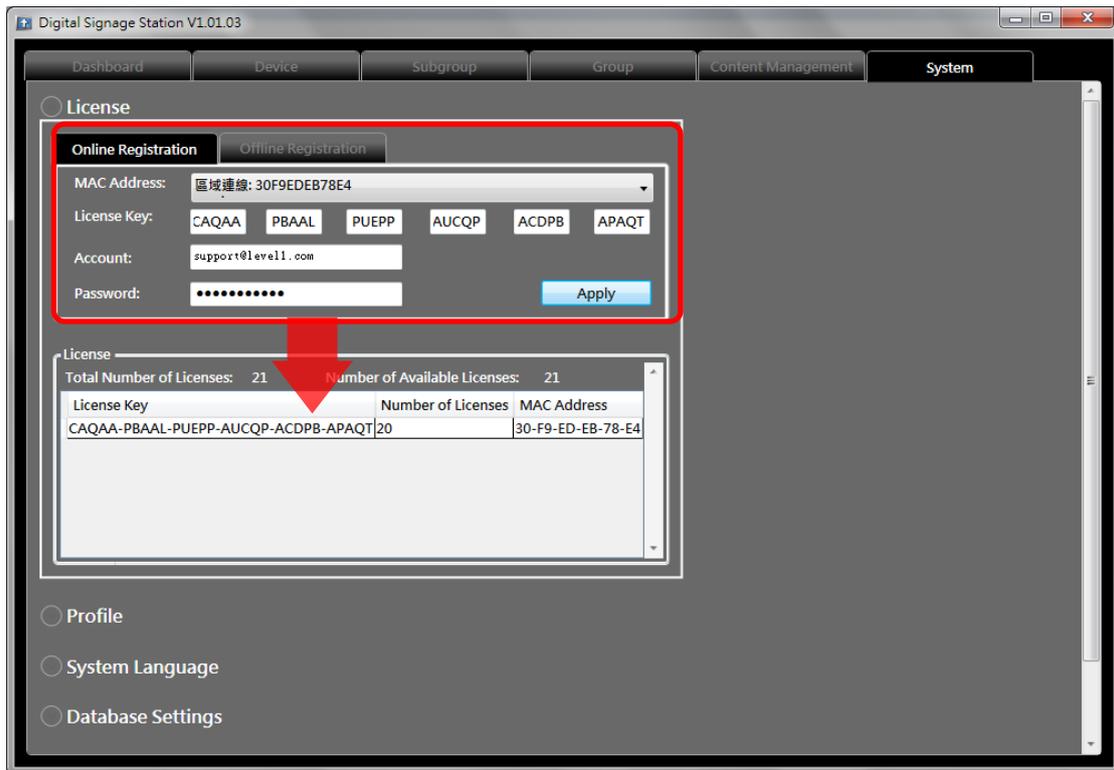
The online activation requires the Internet access of this computer..



1. Membership ID is required for activation. Register one for free in the website.
2. Enter DSS, go to **System** tab→click “**License**”→ “**Online Registration**”. Select the **MAC Address**, enter your **License Key**, member **Account** and **Password**, and then click “**Apply**”. DSS program will connect to the license data server via Internet to register the license key, and unlock the access for more DSS-1000 devices. By default, a free license of one device is already existing.

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After you click “Apply”, DSS will immediately load the license



Important

The license data will be erased once DSS program is uninstalled. Be sure to retain your license key information in a safe place because you may need to reinstall the software. After the software is uninstalled, you should contact the **Customer Help Desk** to clear the original registration data in our data server, and then you may activate the license again.

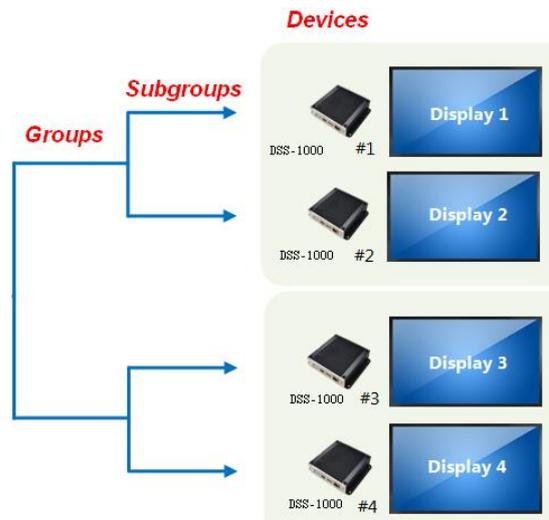
Tip

How to find MAC Address

1. Click **Windows Start**, in the run box on **Start** menu, input “cmd”.
2. Execute the **cmd** program, and input the command “**ipconfig /all**” or “**getmac**”
3. The MAC address will be referred to as the **Physical Address**, made up of 12 characters
e.g. **00-1E-65-FE-8E-98**

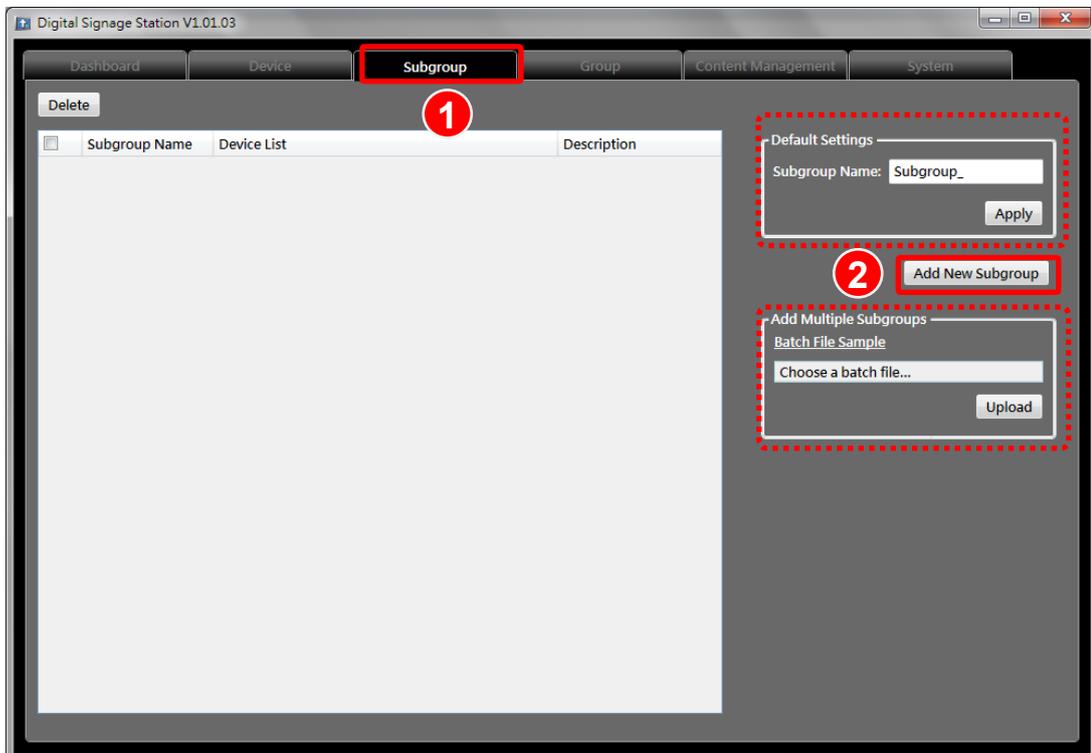
Add Device Groups

To make it easy for you to manage a large number of media display stations, DSS supports groups in a hierarchical fashion. Each child group (**Subgroup**) is a subgroup of a parent group (**Group**), and its grouped members (**DSS-1000 Devices**) will be a subset of its parent group. It is recommended to start from creating **Subgroups**, and then **Groups**, and finally the **Devices**.



Create Subgroups

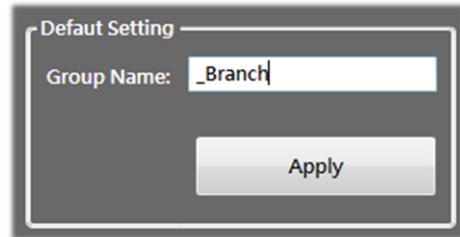
1. To start, please first create the parent groups on **Subgroup** tab.



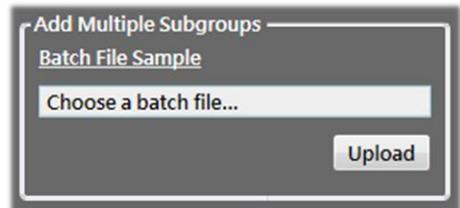
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To make adding subgroups more efficient, you can:

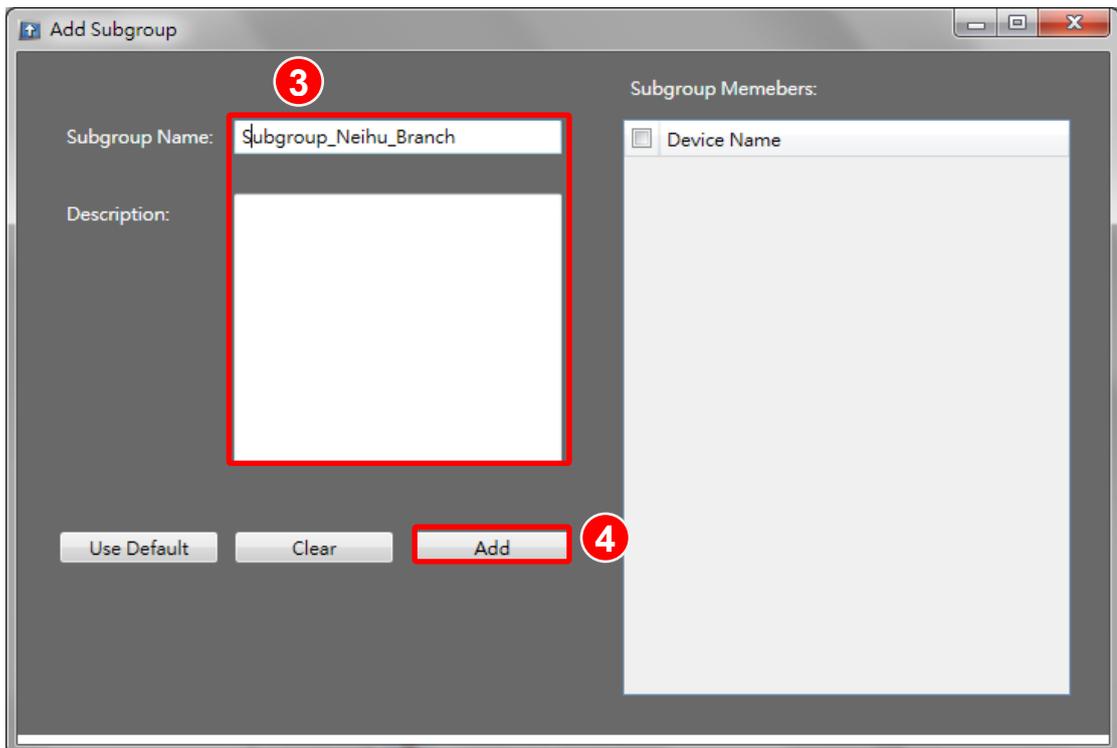
- Make use of the template if there is any certain word constantly used in the subgroup names. You can input the preset name in **Default Setting** section and click **Apply**. This setting will become the default of a new subgroup.



- Upload the subgroups at one time using the batch text file in **Add Multiple Subgroups** section. You can edit a subgroup list in a text file following the format of **Batch File Sample**. Click **Choose a batch file** to locate the file, and then click **Upload**.

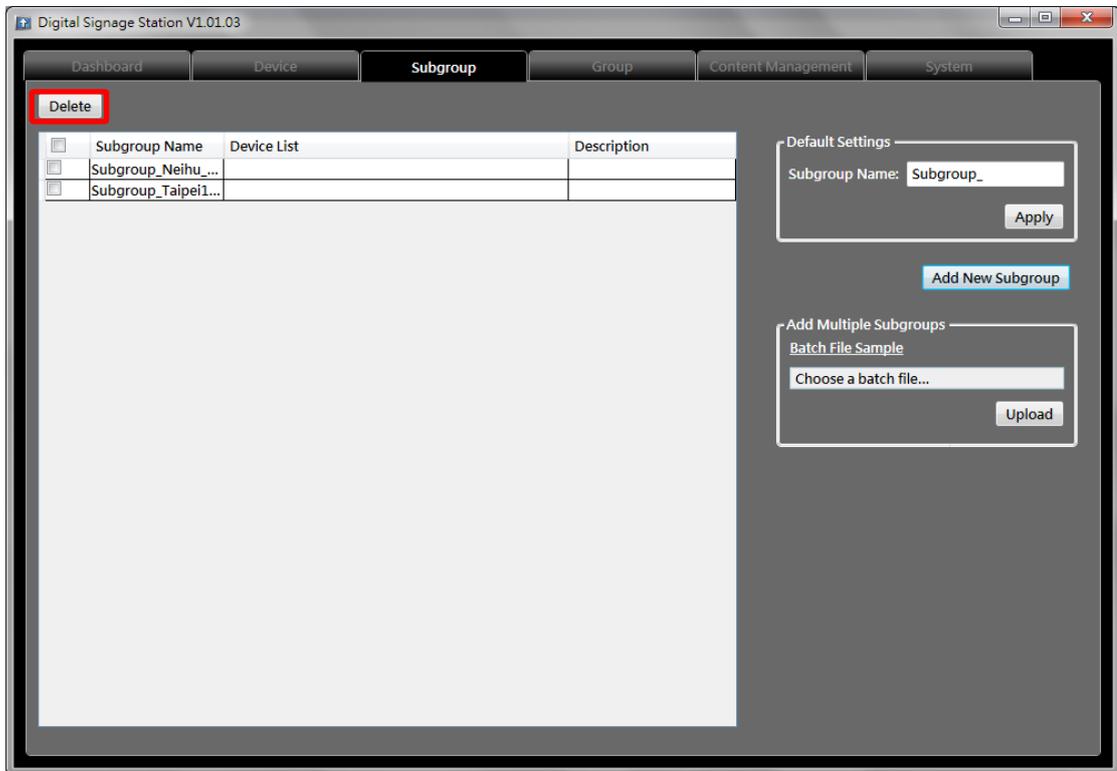


2. Click **Add New Subgroup**.
3. On **Add Subgroup** window, input the subgroup name and its description (optional).
4. Click **Add** to save this subgroup. You can click on **Use Default** to reset to the default value or **Clear** to empty all the fields.



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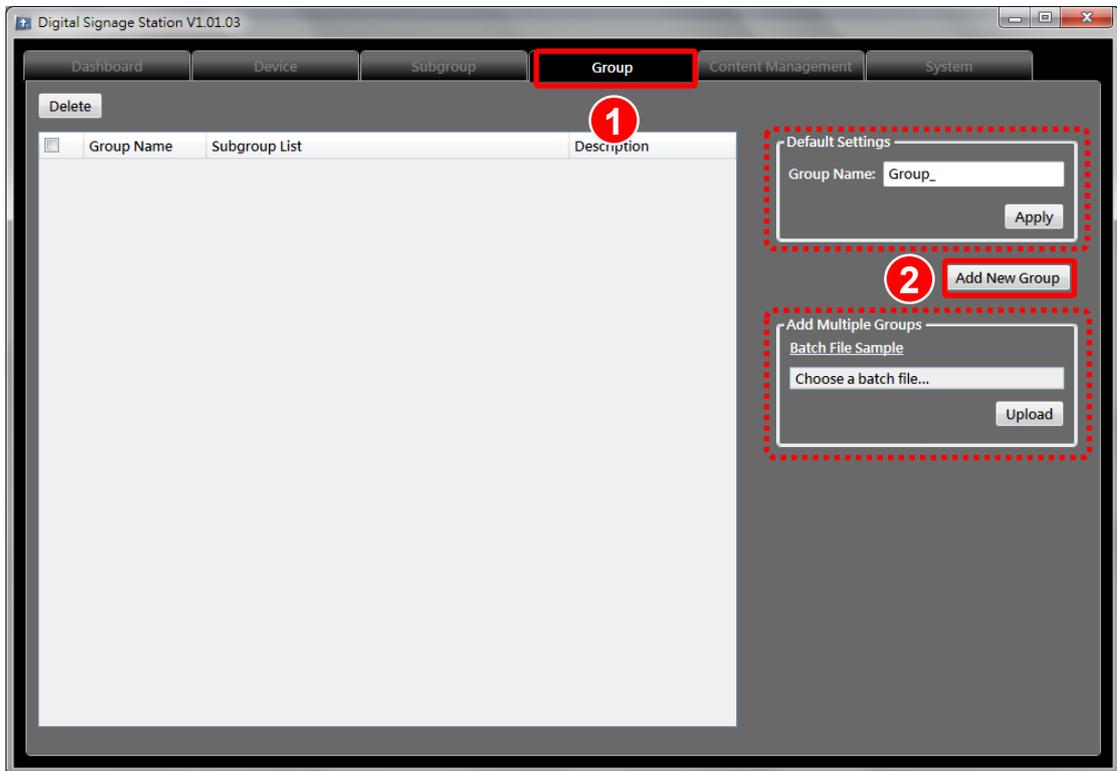
The newly added subgroups will appear on **Subgroup** tab. You can double-click on an entry to edit the subgroup properties, or delete certain ones by selecting them and clicking on **“Delete”**.



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Create Groups

1. As the subgroups are already created, you can add new parent groups while assigning their subsets to them. Click **Group** tab.

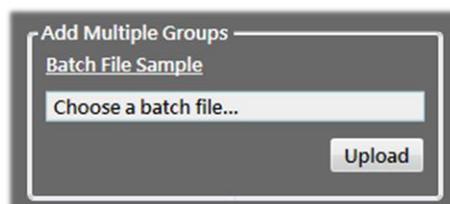


To make adding groups more efficient, you can:

- Make use of the template if there is any certain word constantly used in the group names. You can input the preset name in **Default Setting** section and click **Apply**. This setting will become the default of a new group.

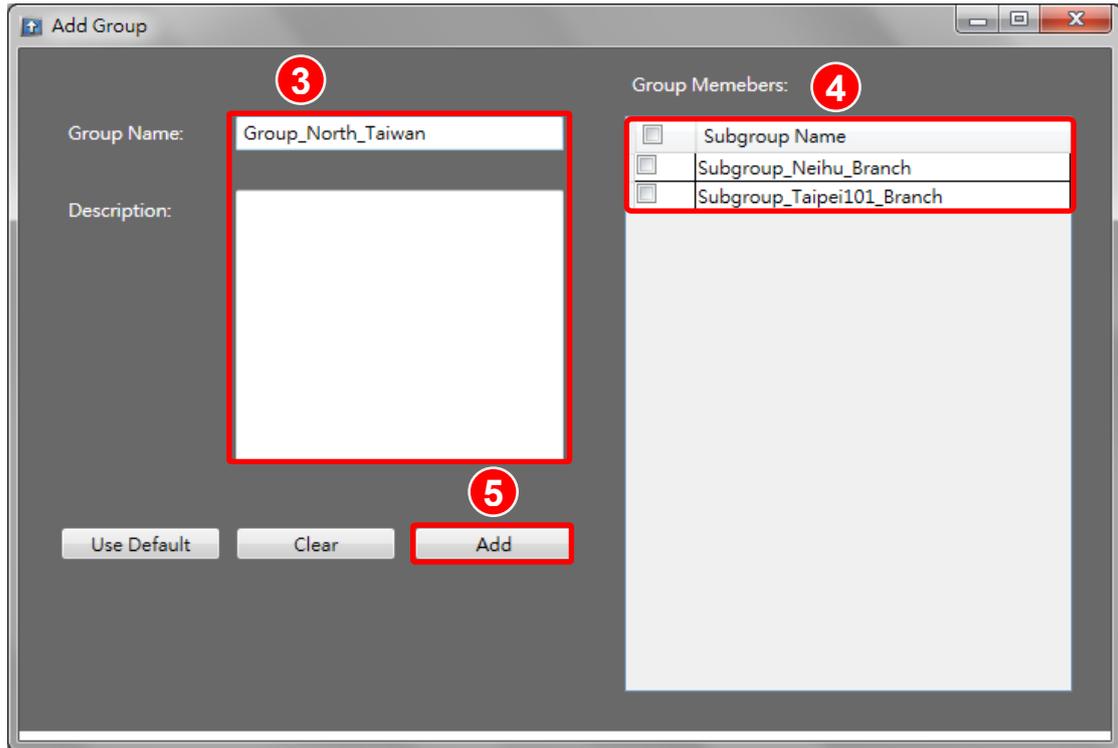


- Upload the groups at one time using the batch text file in **Add Multiple Groups** section. You can edit a group list in a text file following the format of **Batch File Sample**. Click **Choose a batch file** to locate the file, and then click **Upload**.

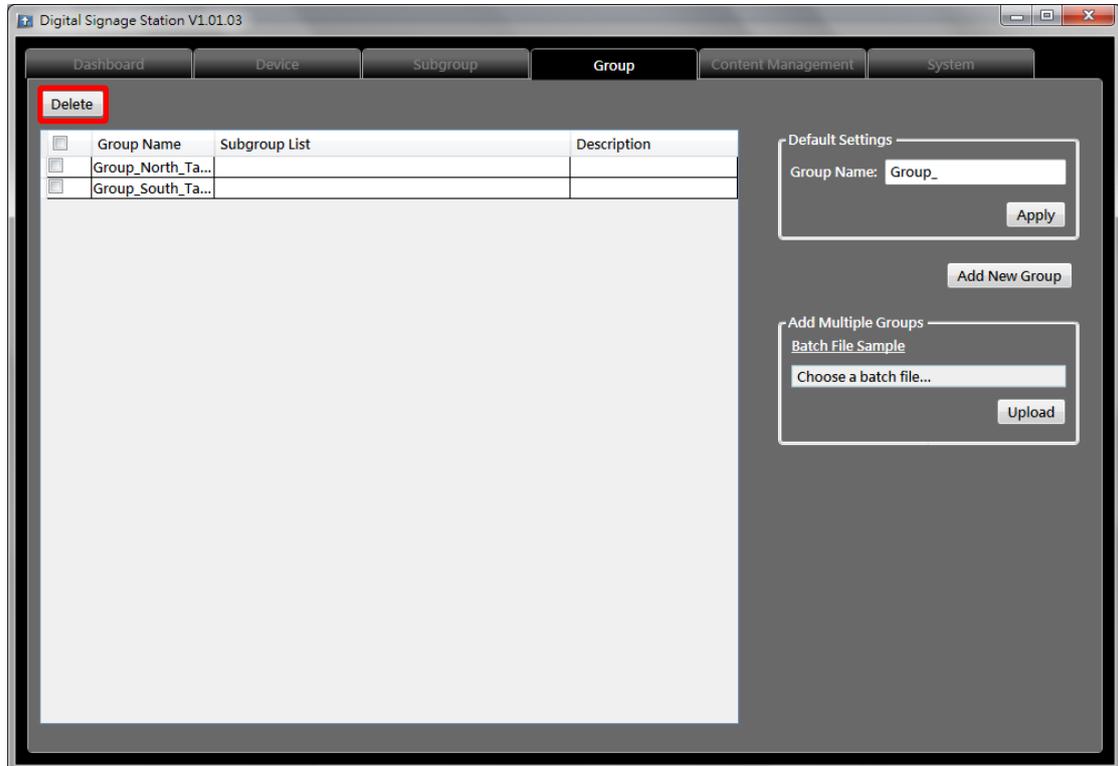


2. Click **Add New Group**.
3. On **Add Group** window, input the group name and its description (optional). On **Group Members** list, check the subgroups that belong to this group.
4. Click **Add** to save this group. You can click on **Use Default** to reset to the default value or **Clear** to empty all the fields.

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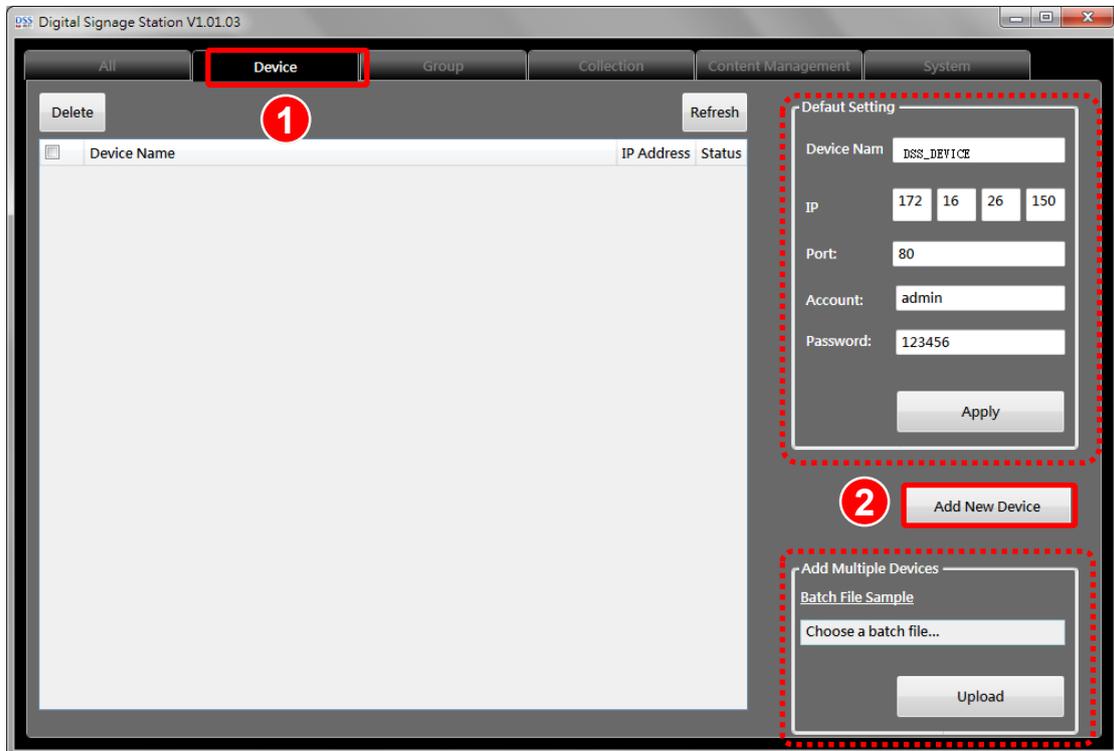
The newly added groups will appear on **Group** tab. You can double-click on an entry to edit the group properties, or delete certain ones by selecting them and clicking on “**Delete**”.



Add Devices

Before you add the devices, make sure they are connected to the network.

1. To start, go to **Device** tab,

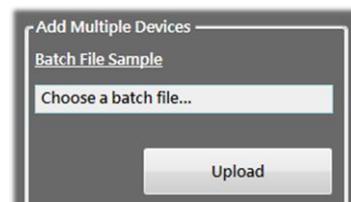


To make adding devices more efficient, you can:

- Make use of the template if the same settings are used by most devices, such as the same subnet mask in the IP address. You can input the preset value in the fields in **Default Setting** section and click **Apply**. This setting will become the default of a new device.

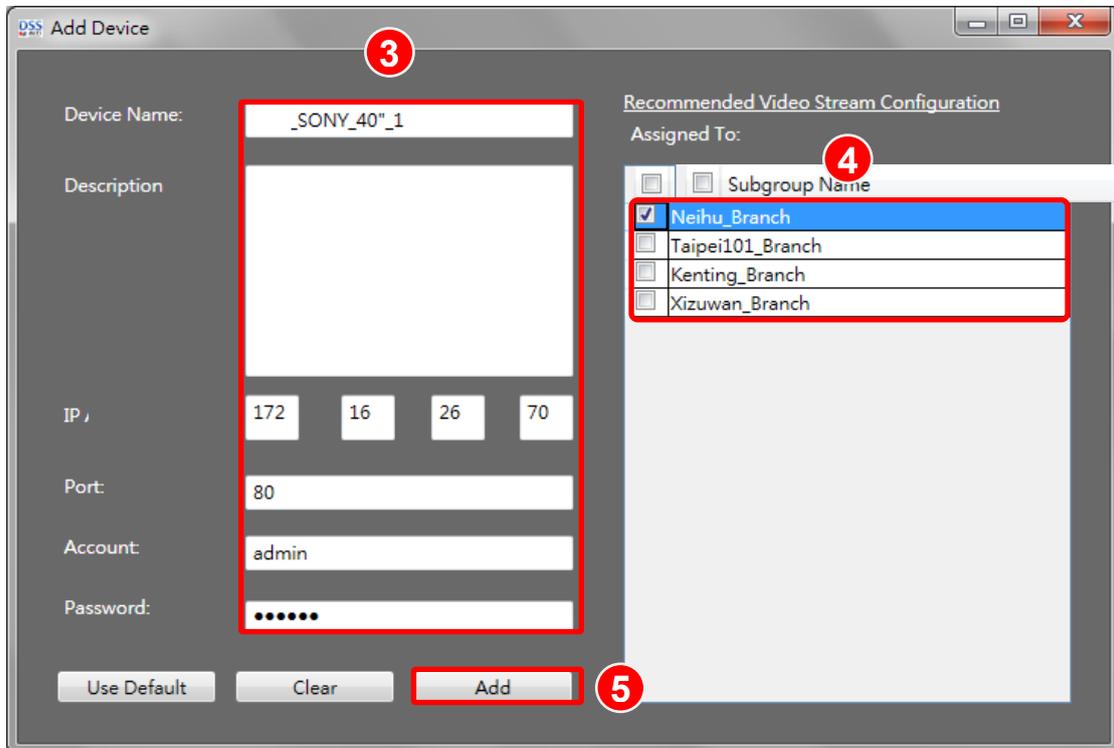


- Upload the devices at one time using the batch text file in **Add Multiple Devices** section. You can edit a device list in a text file following the format of **Batch File Sample**. Click **Choose a batch file** to locate the file, and then click **Upload**.

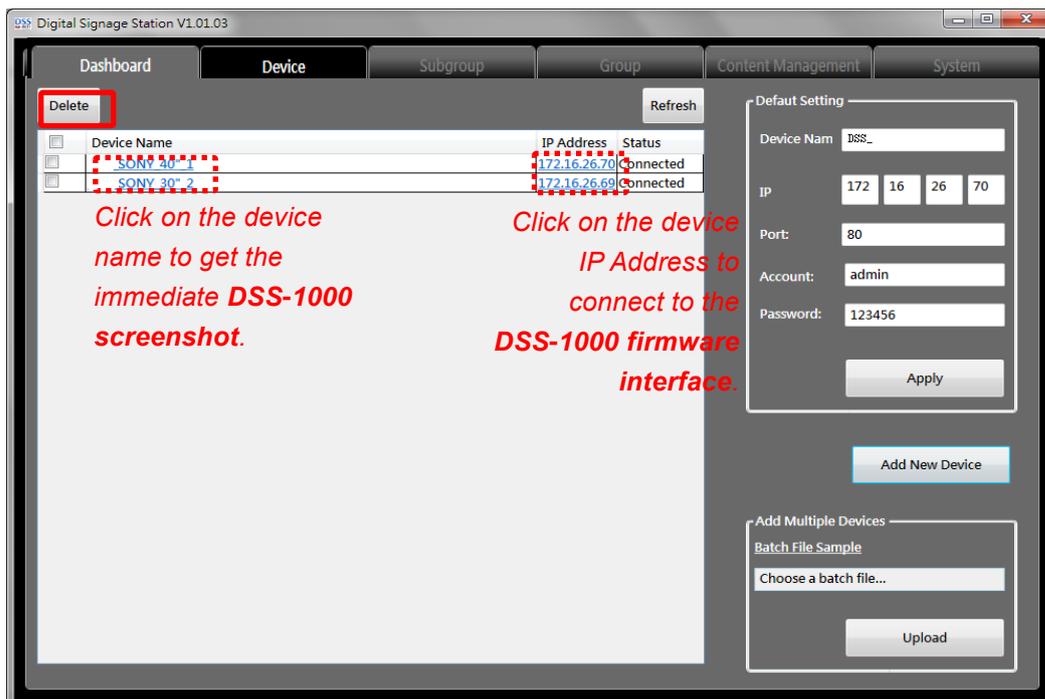


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2. Click “Add New Device”.
3. On **Add Device** window, input the device properties.
4. On **Subgroup List**, check the subgroup that this device belongs to.
5. Click “Add” to save this device. You can click on “Use Default” to reset to the default value or “Clear” to empty all the fields.



The newly added device will appear on **Device** tab. You can double-click on an entry to edit the device properties, or delete certain ones by selecting them and clicking on “Delete”.



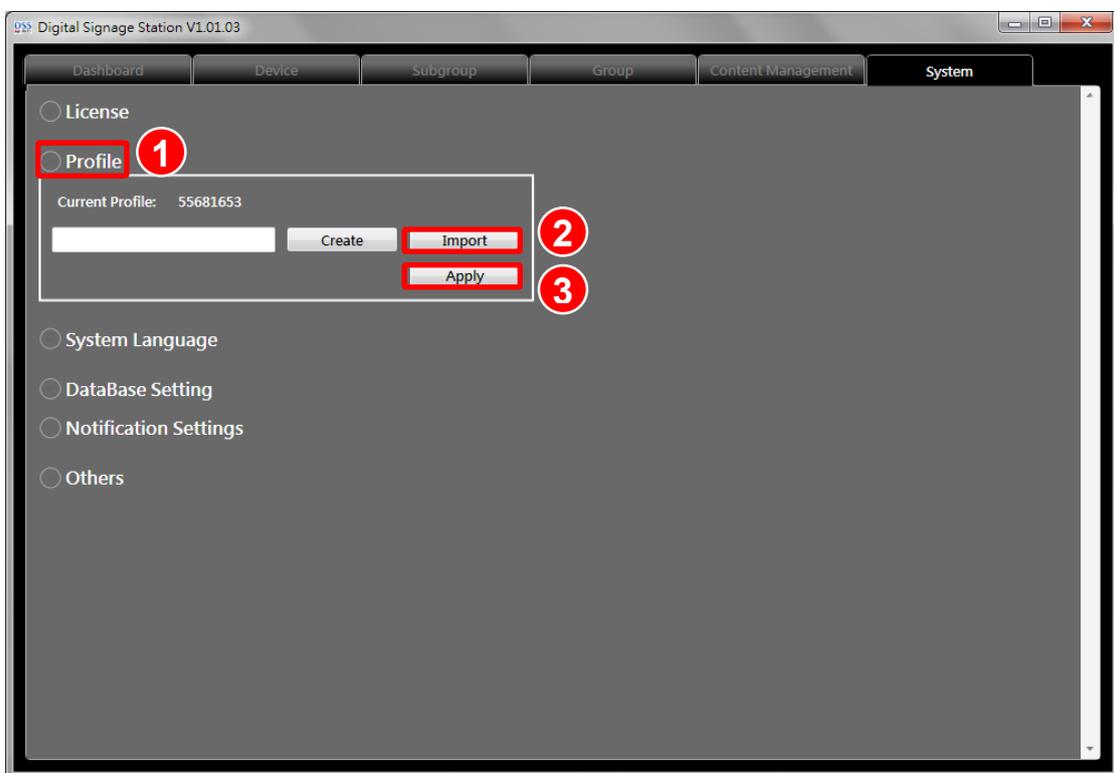
Configure System Settings

On **System** tab, you can configure fundamental system wise settings

User Profile

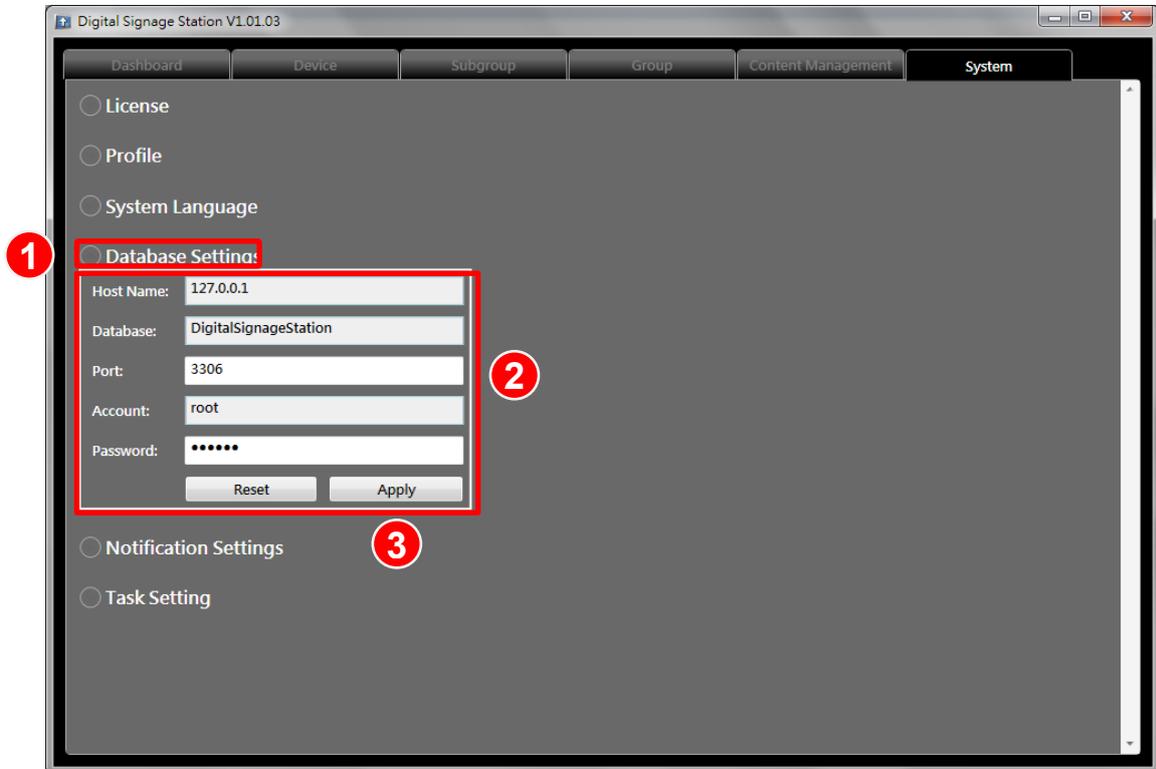
Whenever you want switch to another user profile in order to connect to another database, click **Profile** and then "**Import**" to import the profile (UUID_XXXXXXXXXX.txt), and click "**Apply**".

To create a new user profile, simply click "**Create**" and then "**Apply**".



Database Settings

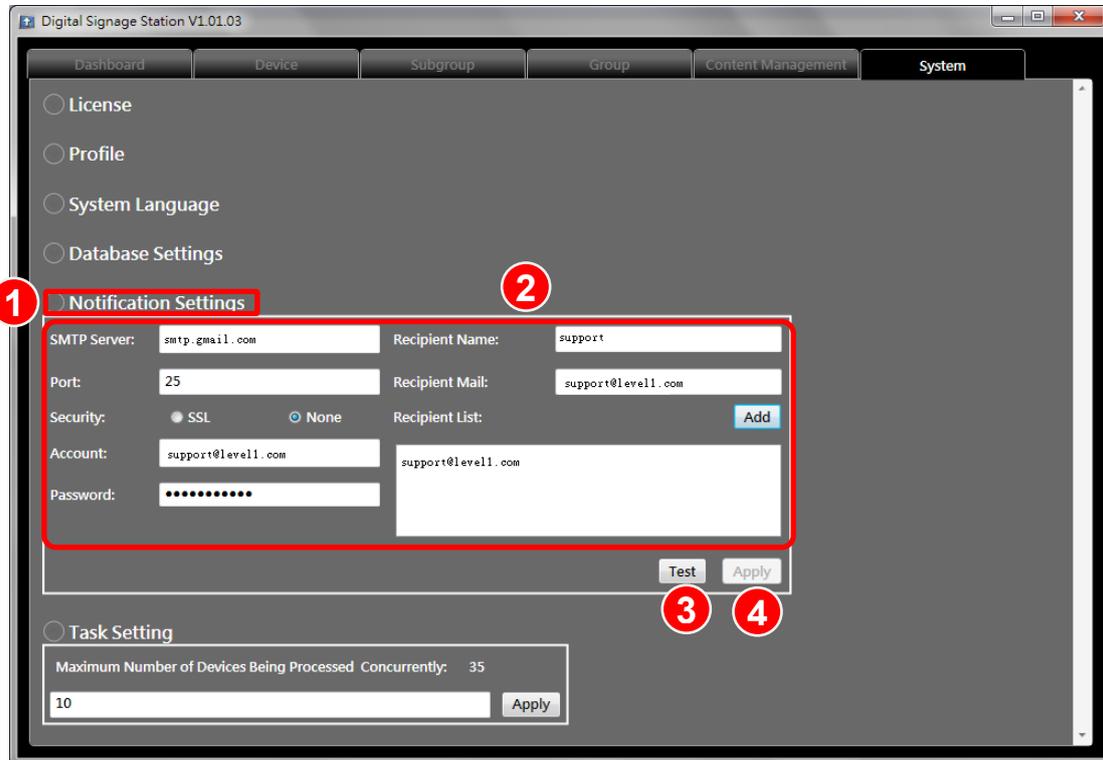
To connect to another database server, click **Database Setting** to reveal the database properties. Input the value and then click **Apply** to use this setting or **Reset** to restore the previous setting.



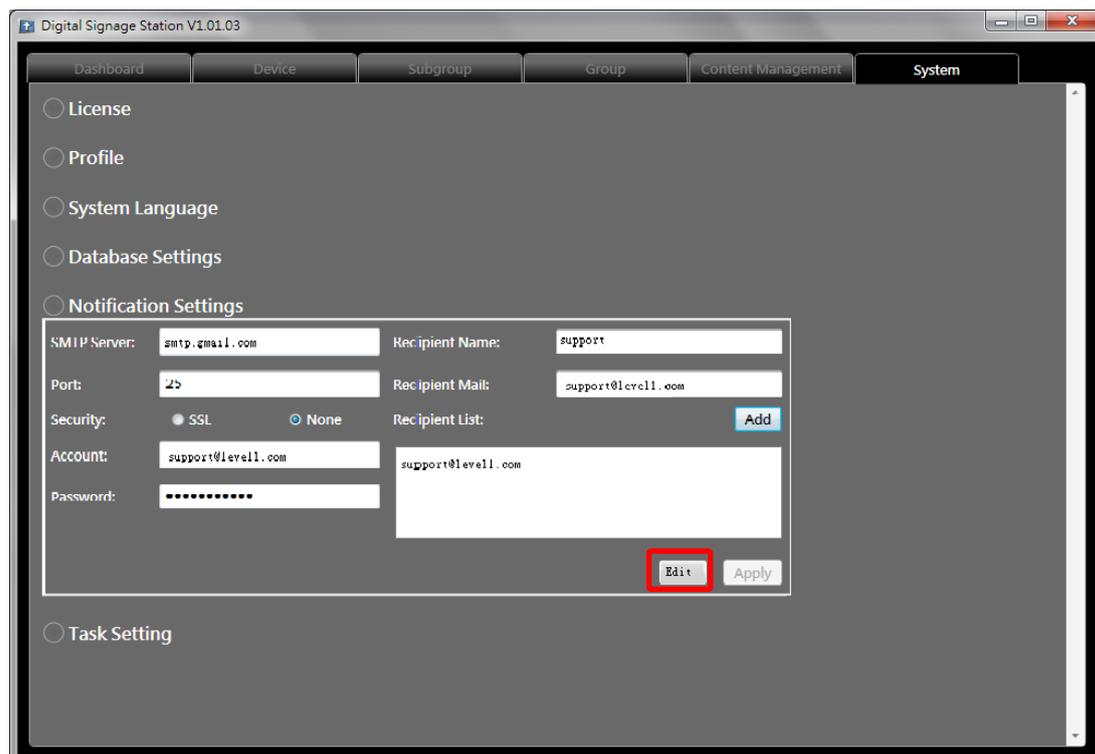
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Notification Settings

DSS station automatically sends notifications through the email right after a task was executed. Click **Notification Settings** and then fill in all the fields. Click **Test** to send a test mail to the recipients, and the click **Apply**.



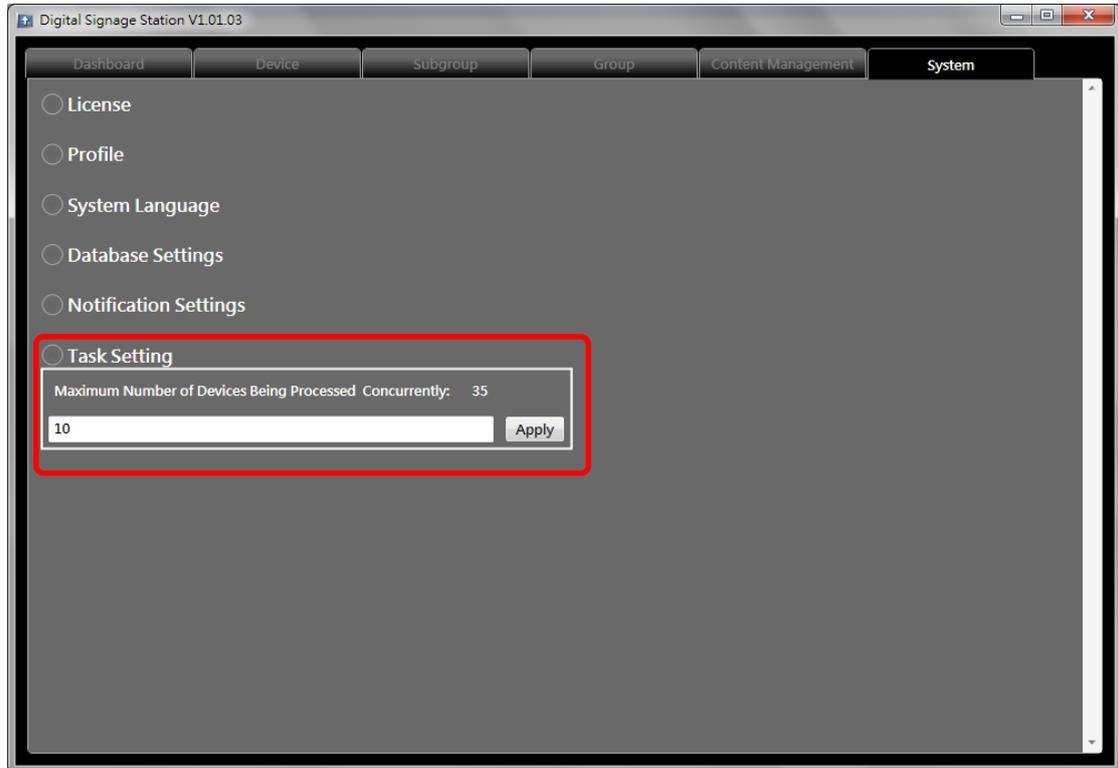
The settings will be save and the **Test** button will change to **Edit**. You settings later by clicking on **Edit** to have these fields become editable.



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Task Setting

You can adjust the maximum number of DSS-1000 devices being processed at the same time during the uploading, which will speed up the publishing progress; on the other hand, uploading data to more devices concurrently will consume more CPU loading and bandwidth and memory usage. Input the number in the field and click “**Apply**” to change it. (Default is **35**; the range of allowed values is 1-999).

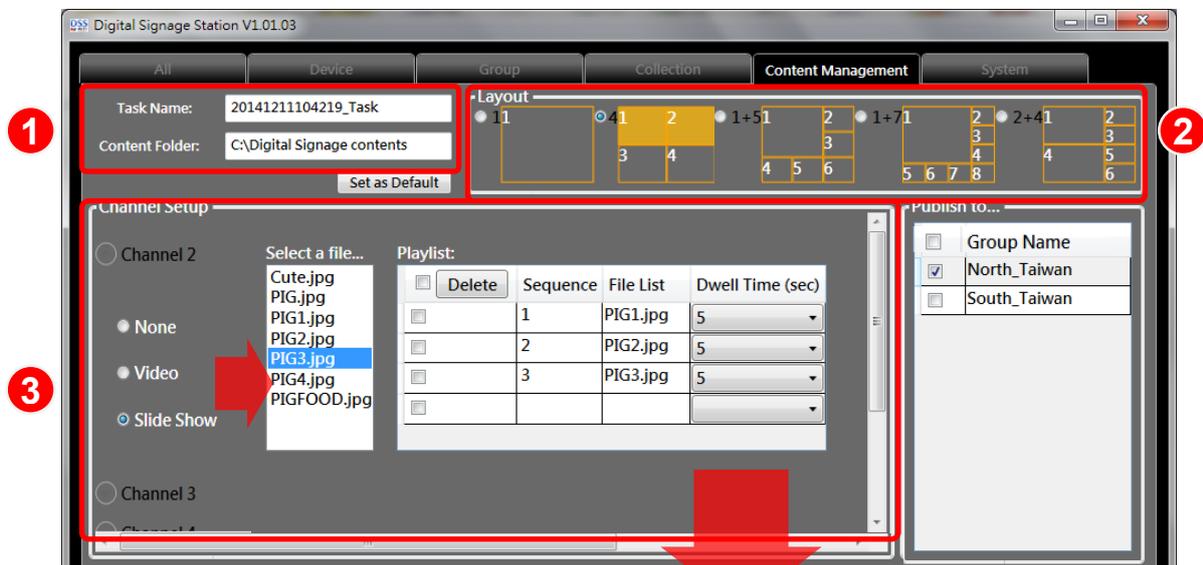


Upload Media Content

On **Content Management** tab, you can compose the media content and schedule the publishing. Please make sure that each DSS-1000 device being updated is connected with a USB disk.

The maximum number of tasks DSS can manage concurrently is **five**, which are the latest edited ones (published or scheduled). In a single **Task**, one layout can be applied to up to multiple devices, the layout of which can contain up to **four** channels displaying the media files.

1. Edit the task name and choose the content folder location (please make sure the available disk space of the content folder is at least three and half the file size of the total media content), and put all the media files (*.avi or *.jpg) into this folder. (Make sure the filenames of the media files in this folder are in English)
2. Choose a layout; this selection will overwrite the original layout on DSS-1000
3. In **Channel Setup** section, select the channel, the type of display media for this channel: **Video** or **Slideshow**, and then double-click on the files to be uploaded. If you select **Slideshow** as the media type, only JPG images can be displayed on this channel; the same to a video channel. For a slideshow channel, you can select the dwell time of individual image from the **Dwell Time** list.



<input type="checkbox"/> Del	Sequence	File List
<input checked="" type="checkbox"/>	1	C:\Digital Signage contents\BMW.avi
<input checked="" type="checkbox"/>	2	C:\Digital Signage contents\HEINEKEN.avi
<input checked="" type="checkbox"/>	3	C:\Digital Signage contents\NIKE.avi
<input type="checkbox"/>		

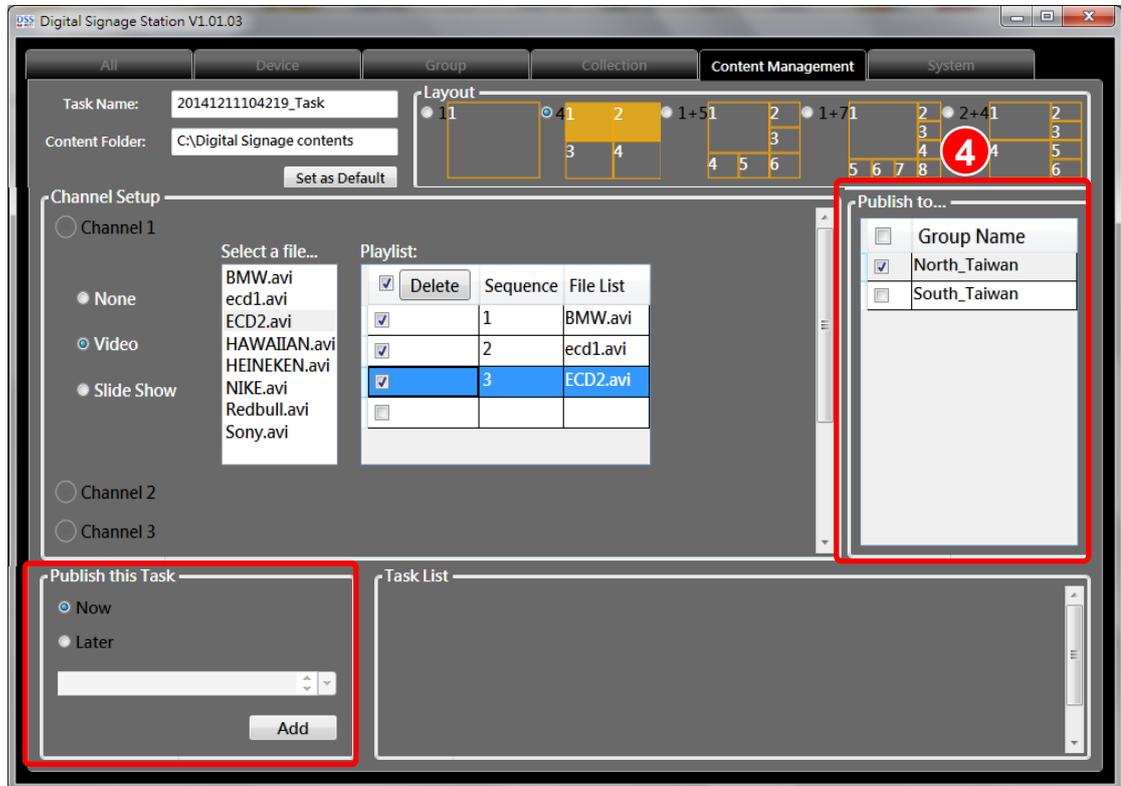
Playlist of Video Channel

<input type="checkbox"/> Del	Sequence	File List	Dwell Time (sec)
<input type="checkbox"/>	1	C:\Digital Signage contents\PIG1.jpg	10
<input type="checkbox"/>	2	C:\Digital Signage contents\PIG2.jpg	5
<input type="checkbox"/>	3	C:\Digital Signage contents\PIG3.jpg	7
<input type="checkbox"/>			

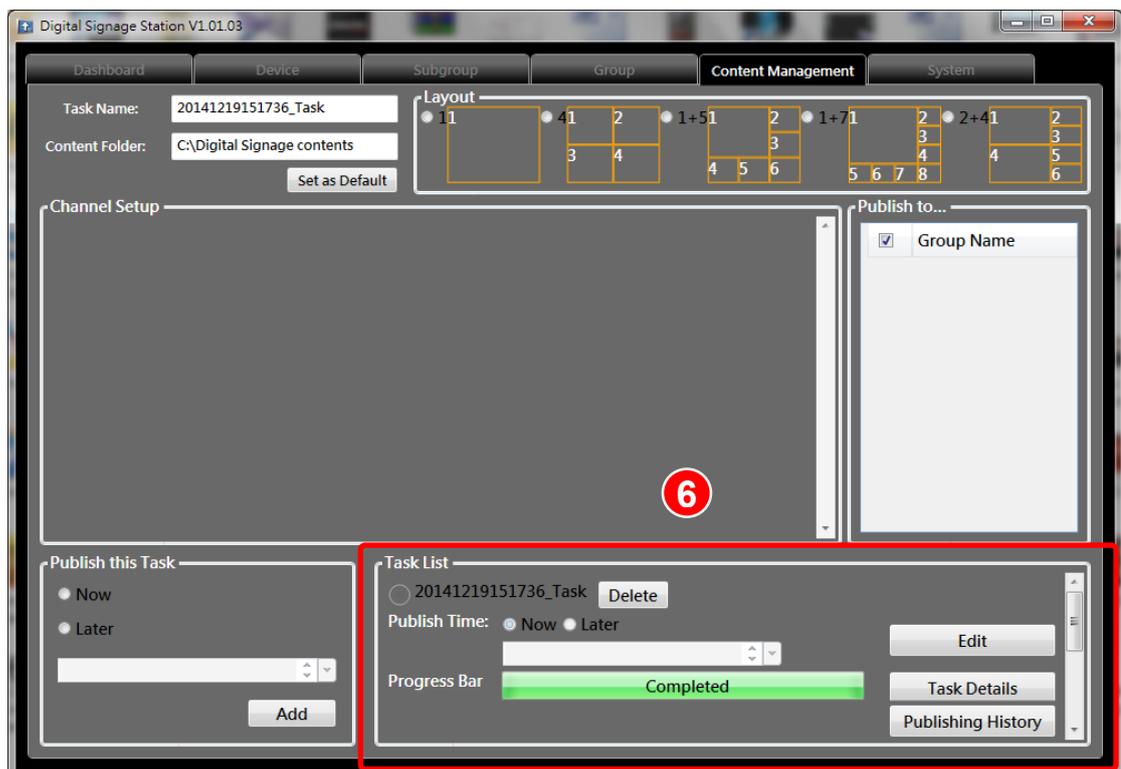
Playlist of Snapshot Channel

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4. In **Publish to...** section, choose the groups the devices of which will all apply the content setting.
5. In **Publish this Task** section, choose **Now** to upload this content or **Later** to schedule the publishing on another day.

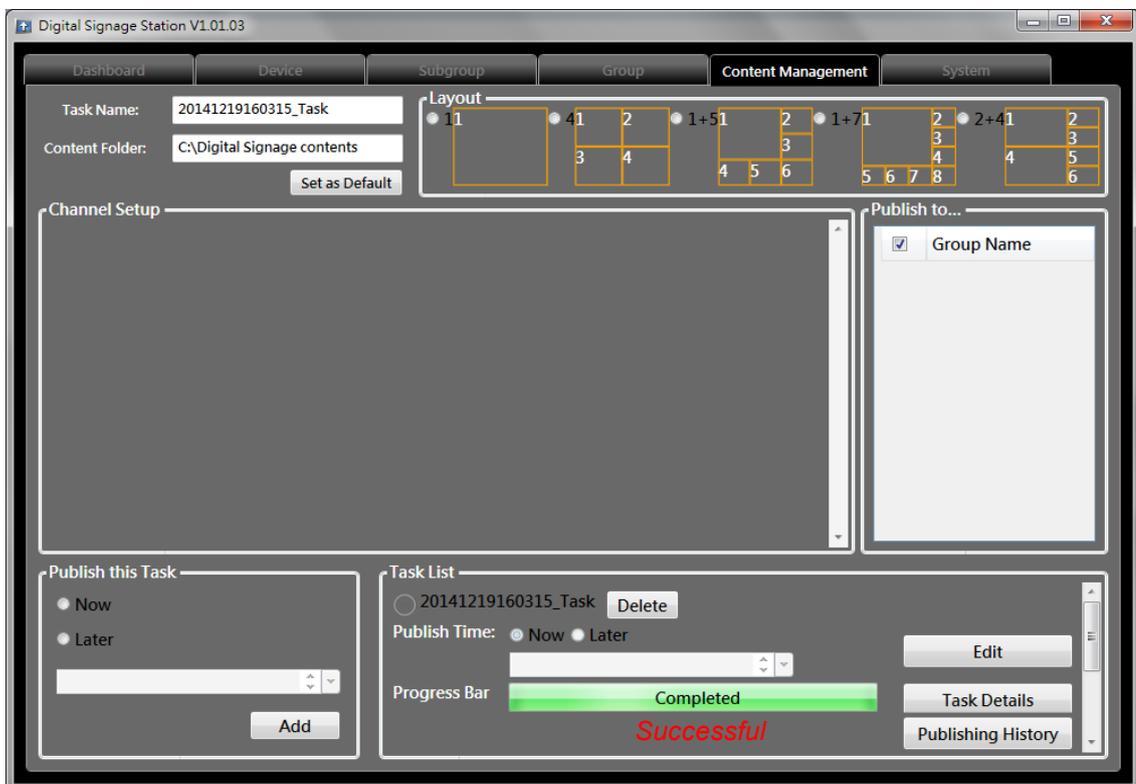
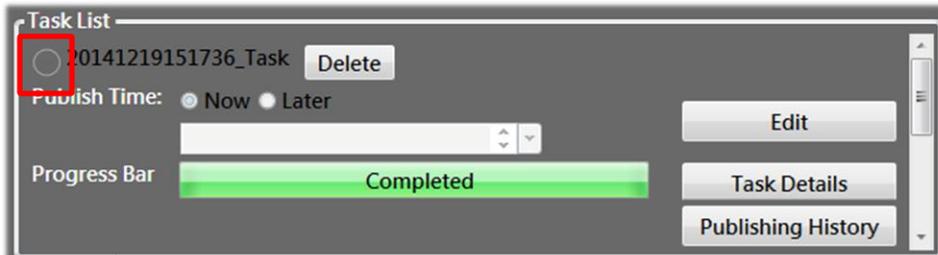


6. The published tasks will be shown on **Task List**.



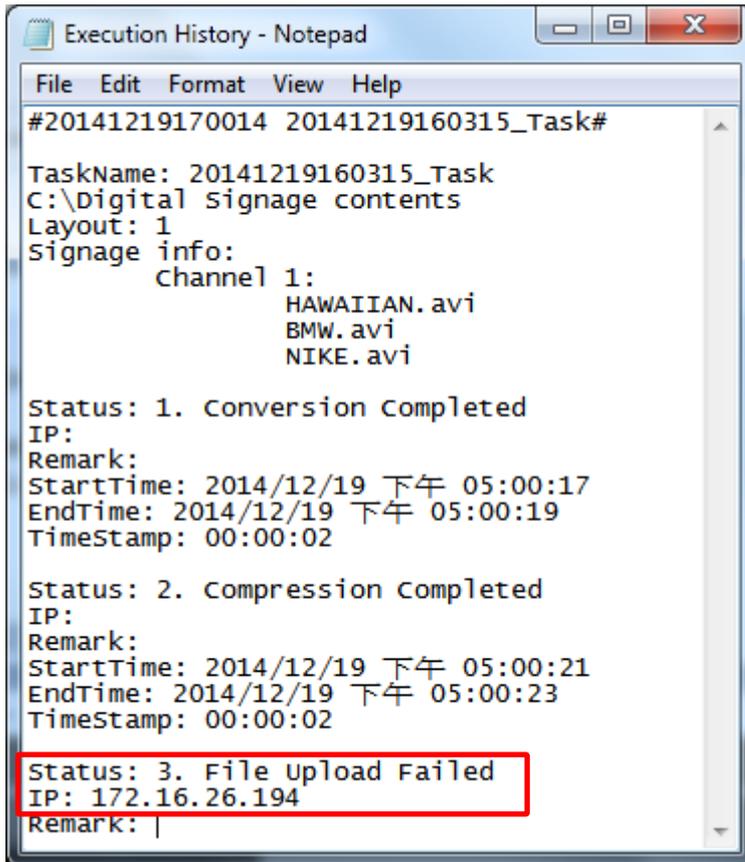
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The **Task List** will display the latest five tasks. Scroll down the list to locate the task by its name. Click on the task button to reveal its status. As this task has been successfully uploaded to DSS-1000, the progress status will appear "**Completed**", and the DSS-1000 device will restart to apply the new layout.



Failed

If this task failed, you can click on **Task Details** for the report of the uploading progress. The example report on next page shows that DSS failed to upload the data to DSS-1000 device, which might result from the disconnection of internet or the USB disk. After you fix the possible problems, click "**Restart**" to update this task again.



```
Execution History - Notepad
File Edit Format View Help
#20141219170014 20141219160315_Task#
TaskName: 20141219160315_Task
C:\Digital Signage contents
Layout: 1
Signage info:
    Channel 1:
        HAWAIIAN.avi
        BMW.avi
        NIKE.avi
Status: 1. Conversion Completed
IP:
Remark:
StartTime: 2014/12/19 下午 05:00:17
EndTime: 2014/12/19 下午 05:00:19
TimeStamp: 00:00:02
Status: 2. Compression Completed
IP:
Remark:
StartTime: 2014/12/19 下午 05:00:21
EndTime: 2014/12/19 下午 05:00:23
TimeStamp: 00:00:02
Status: 3. File upload Failed
IP: 172.16.26.194
Remark: |
```

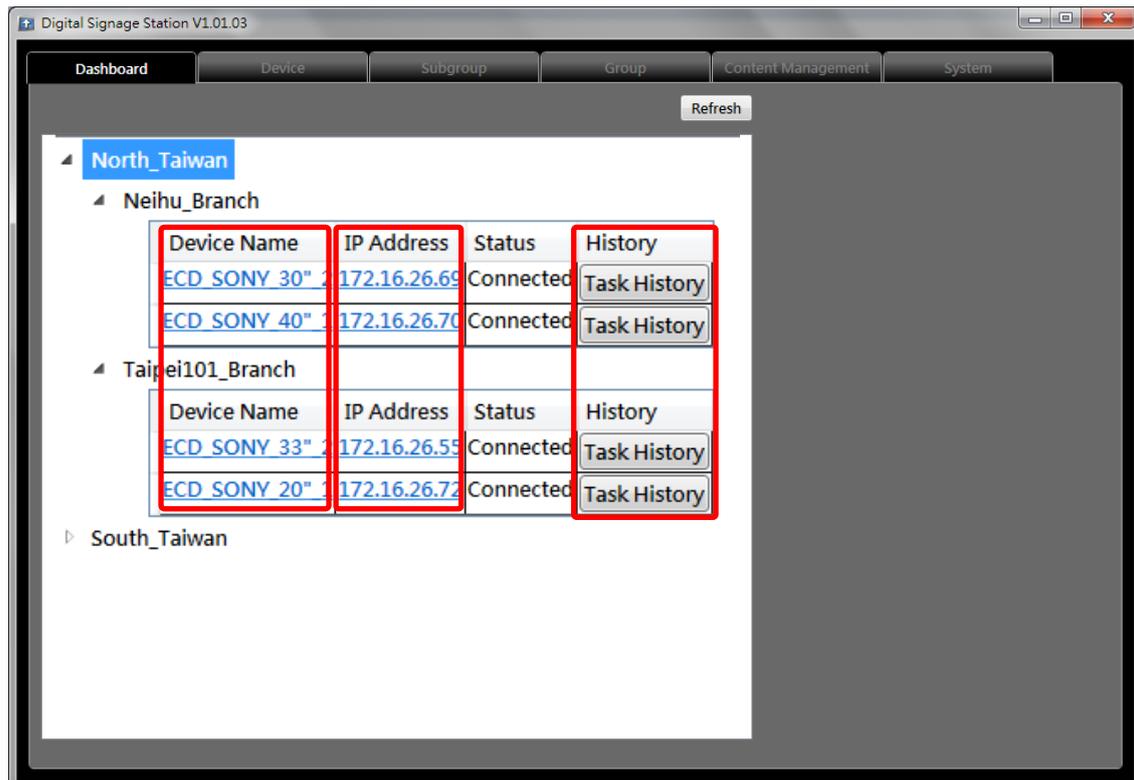
Note

As the task is applied successfully, the media content will overwrite the selected channel whether or not it is displaying camera live view. It is strongly suggested that you empty the original camera channel (which you want to replace with a digital content channel) in case that the camera stream will still consume the network bandwidth, even though it is not seen on the live view.

Monitor Display Station Status

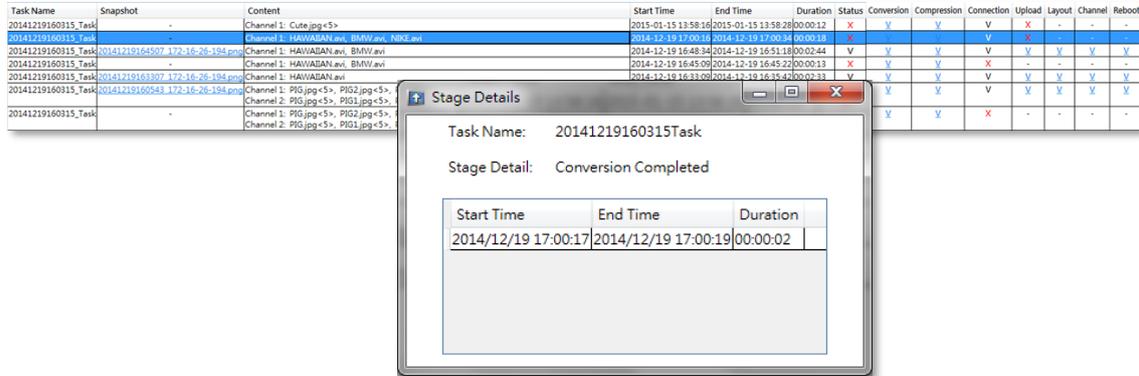
The status of all Display Stations in your organization is shown on **Dashboard** tab, you can:

1. Click on the **IP Address** to directly connect to the DSS-1000 web interface
2. Click on device name to get the real-time screenshot of this Display Station.
3. Click on "**Task History**" to check the upload history of this station.



Check Task History

You can access the details of any previous task from **Dashboard** tab → **Task History**.



You can click on certain fields that display “V” to bring up the **Stage Details** window to see the exact time this stage started and ended.

Item	Value	Description
Task Name	User defined	The Task Name
Snapshot	YYYYMMDDHHMMSS_IP	DSS automatically takes a snapshot of the DSS-1000 view after the task is applied. Click on this filename to check this image.
IP	IP	The IP of DSS-1000 device.
Start Time	YYYY/MM/DD Am or PM HH:MM:SS	The execution time of this task.
End time	YYYY/MM/DD AM or PM HH:MM:SS	The End time might vary among DSS-1000 devices due to the various upload sequence (The maximum number of DSS-1000 devices that DSS can concurrently process is based on the value you define on System tab → Task Setting), network status, etc.
Duration	HH:MM:SS	The length of time taken to upload the signage content included in this task to the DSS-1000 device.
Status	“X” or “V”	If the task has been uploaded to all DSS-1000 devices successfully, the status will show “V”; otherwise “X” will be shown.
Connection	“X” or “V”	If DSS connects to the DSS-1000 device successfully, the status will show “V”; otherwise,

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		"X" will be shown.
Upload	"X" or "V"	If DSS has uploaded the signage content to the DSS-1000 device successfully, the status will show "V"; otherwise, "X" will be shown.
Layout	"X" or "V"	If DSS has updated the layout setting to the DSS-1000 device successfully, the status will show "V"; otherwise, "X" will be shown.
Channel	"X" or "V"	If DSS has updated the channel deployment setting to the DSS-1000 device successfully the status will show "V"; otherwise, "X" will be shown.