

Understanding CAYIN's Products

How CMS and SMP Incorporate for Group Content Management

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1. Introduction

Group Content Management is an important topic for operating a larger deployment of Digital Signage networks or narrowcasting channels. A “group” represents a set of SMP players which playback the same content. If we refer to the traditional TV broadcast world, an SMP group is comparable to a TV program channel. Therefore, “group content management” of digital signage is associable to the channel content management in the TV world.

CAYIN's digital signage has a simple but powerful management philosophy and tools for SMP group content management. Incorporating SMP players and CMS servers, system administrators can remotely implement SMP player's group content management. This document aims to introduce how administrators implement group content management with “Group”, “Media Folder”, and “User Account” on SMP player and CMS server.

The content of this document is applied to the following product versions:

- ✓ CMS server: V3.5, V4.0 and above
- ✓ SMP-WEBPLUS/WEBPLUS-T: V2.5, V3.0 and above
- ✓ SMP-WEBDUO: V1.0
- ✓ SMP-WEB3/WEB3N: V1.0 and above
- ✓ SMP-PROPLUS: V1.0
- ✓ SMP-PRO3/PRO3N: V1.0 and above

This document is useful for CAYIN CMS/SMP users who have basic knowledge about login and operation on Web Manager, and want to familiarize themselves with the operations of “Group Content Management” and “Media Folder”.

2. Terminologies

The following terminologies are frequently used in the operations of SMP and CMS products. It is important to understand the exact definitions of these terminologies.

A. Media Folder

Media Folder is the folder that SMP or CMS stores media files and later plays them back.

SMP player

Media Folder in SMP player also usually indicates the internal hard disk drive in this player. After you install a hard disk in an SMP player correctly and format it through operations on SMP, the SMP player will use the hard disk space to store media files for playback. Users have three ways to upload files to the Media Folder of an SMP player:

- I. By using Network Neighborhood's file sharing on SMP, users can copy and paste files from their PC to its (SMP) Media Folder.
- II. You can choose your familiar FTP client software in your PC and update/delete files in Media Folder(s).
- III. Through CMS server, files will be automatically distributed to the correspondent SMP Media Folder(s).

CMS server

In a CMS server, there can be one or multiple Media Folders. By the function "**Access Control→Folder Management**" on the CMS's Web Manager, users can add or delete Media Folder(s).

The screenshot shows the 'Web Manager CMS (Content Management Server)' interface. The left sidebar contains a navigation menu with 'ACCESS CONTROL' expanded to show 'FOLDER MANAGEMENT'. The main content area is titled 'Media Folder Access Management' and contains a table of existing media folders. Below the table is a form to add a new folder.

Media Folder Name	Command
F-SHOWROOM	Rename Delete
Folder1	Rename Delete
Folder2	Rename Delete
default	Rename Delete

Add a new folder:
Media Folder Name:

Each Media Folder in a CMS is independent from the others. Through the synchronization settings on SMP and CMS, the Media Folder of SMP can synchronize its files with the correspondent Media Folder of the CMS.

Users have two ways to upload files to a Media Folder(s) of a CMS:

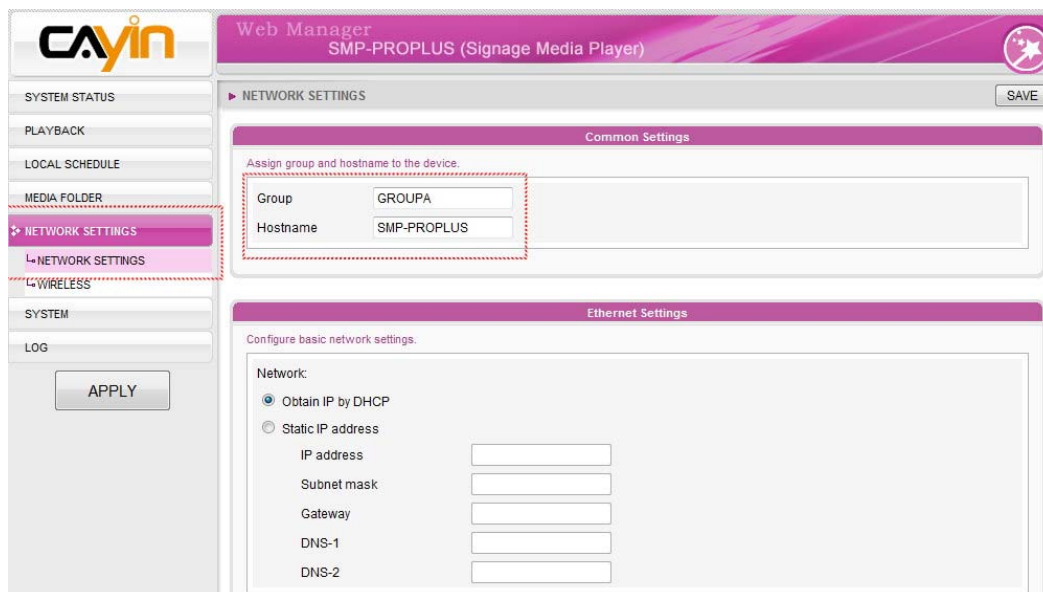
- I. By using Network Neighborhood's file sharing on CMS, users can copy and paste files from their PC to its (CMS) Media Folder(s).
- II. By using FTP server on CMS, users can use FTP client software in a PC to upload files into its (CMS) Media Folder(s).

B. Group

The concept of Group is to manage those players which will playback the same contents and also apply the same schedule all together. SMP players in the same group will synchronize contents from the same Media Folder in CMS, and thus playback the same multimedia files. For advanced usages, SMP players in the same group can download the same schedule and play identical playlist at the same time.¹

SMP player

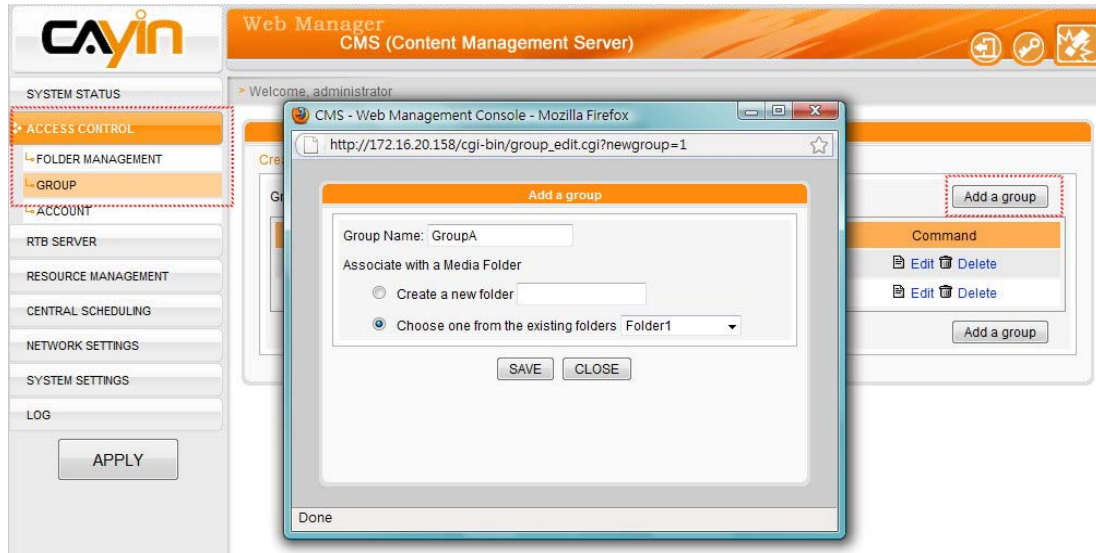
You can configure the settings of SMP player's Group in either of these two pages: MEDIA FOLDER or NETWORK SETTINGS. Players with the same Group name will belong to the same group. Please note that the Group name should be in English and is case-sensitive.



¹ When executing schedule, multiple SMP players will not play exactly simultaneously, because there might be tens of seconds of difference between the execution time of each player.

CMS server

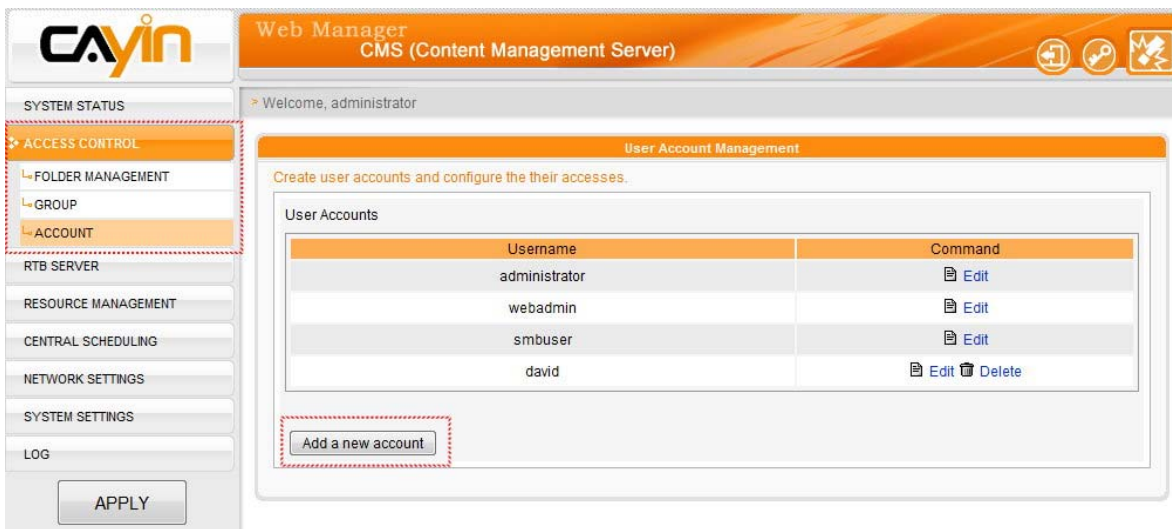
You can create or delete groups on CMS at the page: **ACCESS CONTROL → GROUP**. When creating a new group on CMS, you must assign a Media Folder to this group. Then, this group will be associated with that Media Folder.



For example, you assign SMP1 to **“GROUPA”** and associate **“GROUPA”** with Media Folder **“Folder1”**. When SMP1 player synchronizes multimedia files from CMS server, CMS will distribute files in Media Folder **“Folder1”** to all media players in **“GROUPA”**, including SMP1.

3. User Account

User Account is a new function developed for **CMS v3.5 and above**. Administrators can create accounts for different users and assign appropriate management authority to each account. You can create and configure settings of accounts at the page: **ACCESS CONTROL → ACCOUNT**.



NOTE

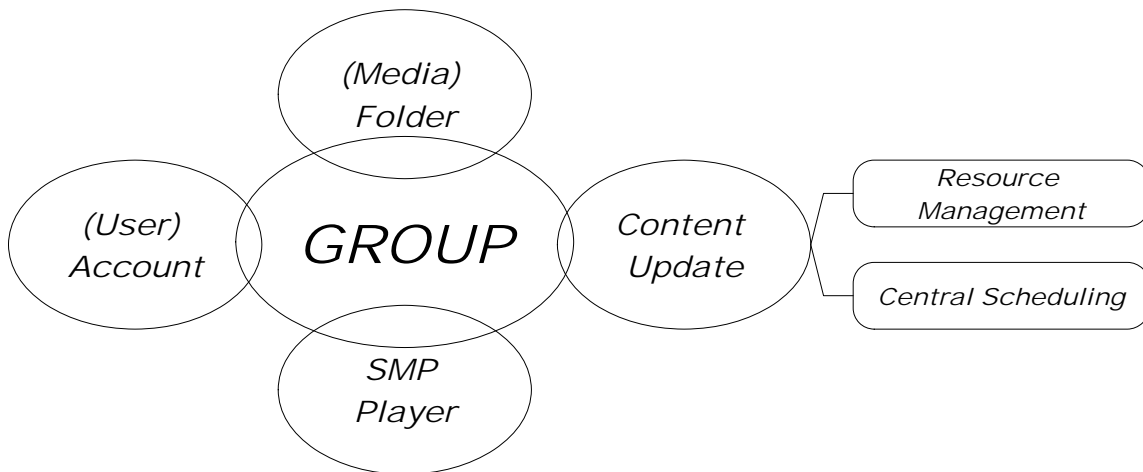
If you have a simple managerial requirement, we do not suggest you using this function, which might increase the complexity of your management. You can always login with the default account "**administrator**" to access all functions whenever a username and password are requested.

User Account provides the following two major functions:

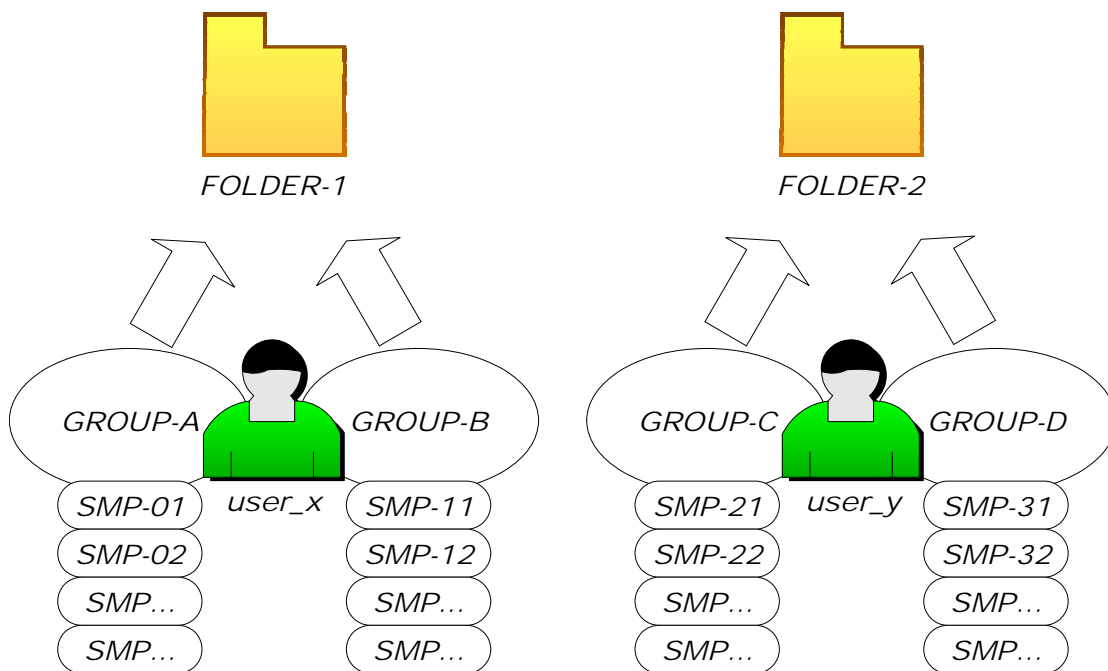
1. Authorize the access right of Group and Media Folder. The system will verify the username and password when you upload files to CMS Media Folder or when SMP and CMS synchronize contents.
2. Authorize the functionalities of CMS Web Manager. Administrators can confine the users to use only part of the functions in Web Manager.

3. Operation Principles

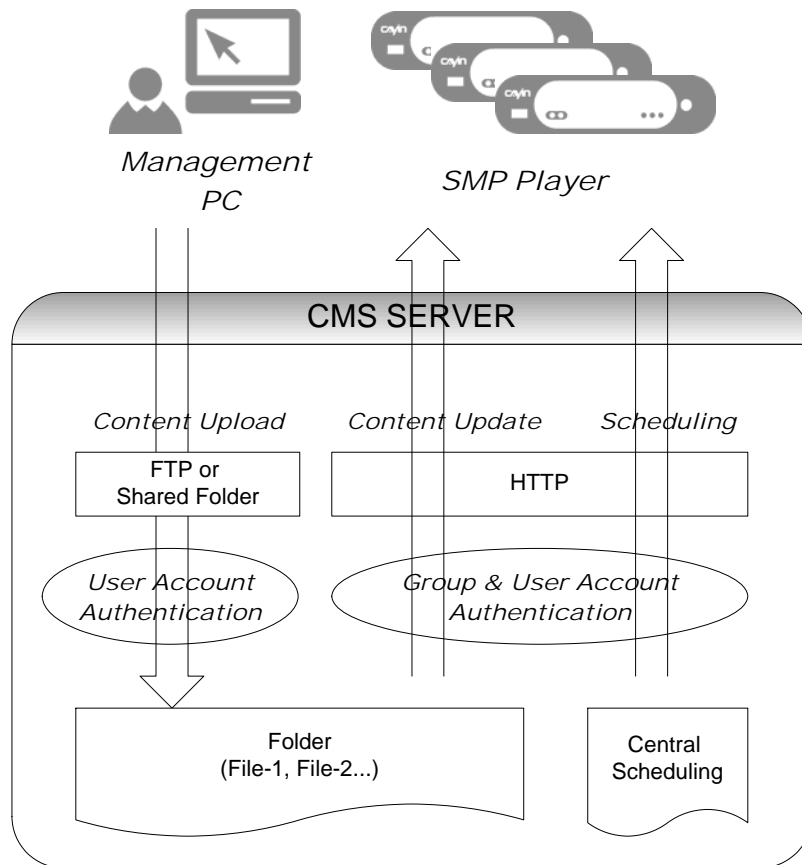
Content management of CMS and SMP is on a per-group basis. The system uses groups to combine **Media Folder**, **User Account**, **SMP Player**, and **Content Update** to manage contents easily.



You can let a user (e.g. user_x) manage one (e.g. GROUP-A) or multiple groups. You can also associate a group with a folder (e.g. Folder-1), so that all SMP players (e.g. SMP-01, SMP-02...) in Group-A can synchronize contents with Folder-1 of CMS.



Administrators can upload multimedia files to CMS server by **FTP** or **Network Neighborhood** (Shared Folder). SMP player will download files based on its settings of **Group** and **Media Folder**. After verifying the **username** and **password**, CMS will distribute multimedia **files** and **playlists** to corresponsive players.



CMS server combines SMB Server, FTP Server, and HTTP Server, and provide the following functions:

- ✓ **SMP Server:** provide shared folder service for Media Folder through Network Neighborhood. Users can easily upload and download files in CMS server via SMB Server and Windows Network Neighborhood.
- ✓ **FTP Server:** provide users with the FTP service. Users will face more difficulties when they use Network Neighborhood to upload or download files via the Internet. It's not easy to configure settings under a firewall. Therefore, users can use FTP protocol to transmit data over the Internet or through a firewall.
- ✓ **HTTP Server:** provide many functions in CMS, including Web Manager, content updating of Media Folder, delivering playlists of central scheduling, etc.

4. Operation Steps (Basic)

If this is your first time to use CMS server, please follow below steps to set up the connection between CMS and SMP and start to synchronize the files in Media Folder.

A. CMS Server

1. Now, we can start to configure the settings of CMS. Open CMS SERVER's Web Manager. Login with the account "administrator".

Default username: **administrator**

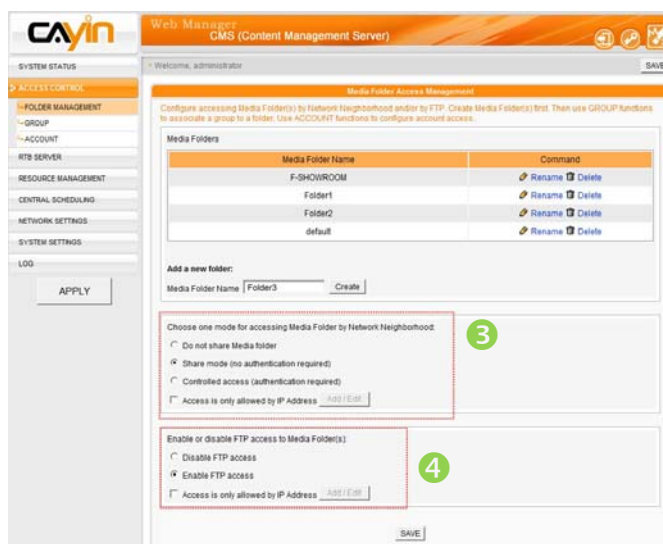
Default password: **admin**

2. Go to "ACCESS CONTROL" → "FOLDER MANAGEMENT".

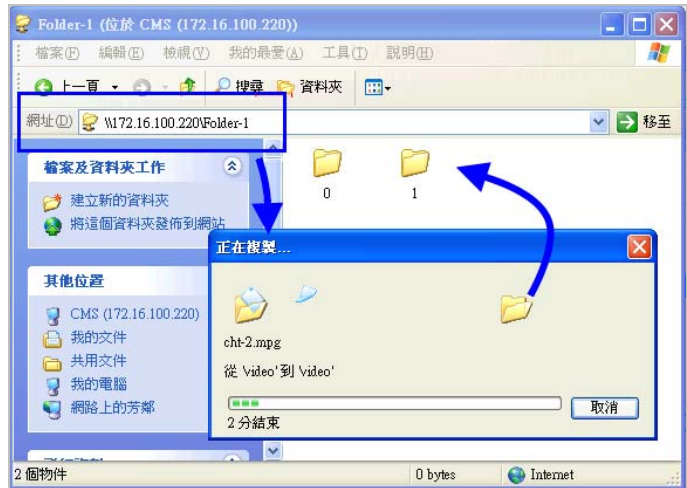
Enter a name (e.g. Folder3) in the "Media Folder Name" and click [Create]. Then, this folder will be created in the hard disk of the server.

3. If you want to update content from Network Neighborhood, please select an access mode of all folders in CMS, so that users can access folders with suitable authorization. If you want to use "Controlled access", please refer to the user manual for details before you use it.

4. If you want to update content from FTP, please enable FTP access here.



5. Then, you can add contents into the folder by Network Neighborhood or FTP. (Contents can be added at any time.)
 - **FTP:** You can choose your familiar FTP client software in your PC.
 - **Network Neighborhood:** You can open the CMS's shared folder by "File Explorer" or "Network Neighborhood" in your Windows PC. Then, you will see the folder (ex. Folder1) which you create in step 2 and copy files to this folder.



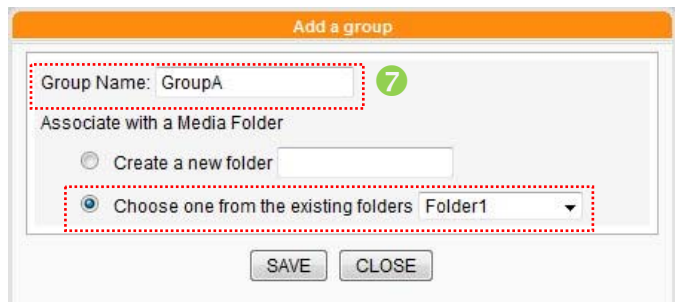
5 Network Neighborhood

NOTE
 You can also click **[Open Folder]** in **CAYIN Device Seeker** to open the CMS's Media Folder.

6. Go to "ACCESS CONTROL" → "GROUP".
7. Click **[Add a group]**. In the pop-up window, you can edit a group name (e.g. GROUPA) which the player belongs to, and associate the group name to the folder (e.g. Folder1) you just create in step 2.



NOTE
 You have to enter the exact group name as the one you configure in the player's Web Manager (see *PLAYER side: step 4*). Be aware that the system is case sensitive.



8. Once linked, each time you add contents in the CMS's folder, they will be distributed to every player in the group which is associated to the folder.

B. SMP Player

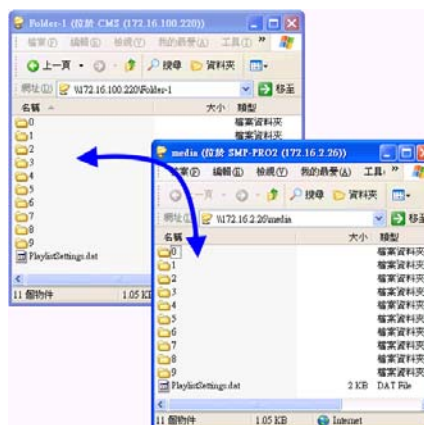
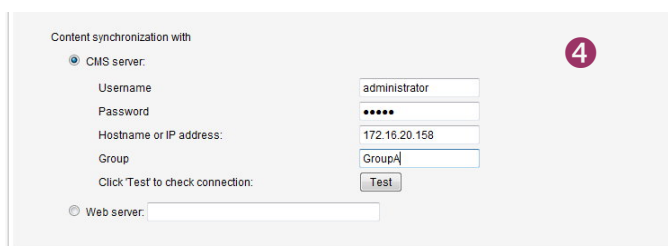
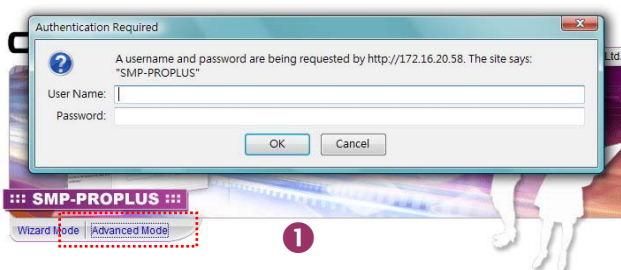
1. Open SMP PLAYER's Web Manager and login. (Settings will be the same for both SMP-PRO series and SMP-WEB series)

Default username: **webadmin**

Default password: **admin**

2. Go to "**MEDIA FOLDER**" → "**MEDIA FOLDER**" and tick "**Enable Media Folder content synchronization**"
3. Select the option you want in "**Check content**" – you can ask the player to get the content from the server at a specific frequency or at daily specific time.
4. In the same page, set "**CMS server**" as the content source in "**Content synchronization with**" and enter the "**Group**" name of this SMP. Set the Username as "**administrator**" and the default password is "**admin**". Then, enter the IP address of the CMS. You can click [**Test**] to check if you type the correct uername and password to access the CMS server. If all settings are correct, click [**SAVE**] and then [**APPLY**].
5. Now you can open the Media Folder of this SMP player. You should be able to see that the SMP player is downloading files in the CMS server.

NOTE
Media Folder can contain at most 2048 files.



NOTE

- Each time you changed a setting in any page, please press first **[SAVE]** and then **[APPLY]**.
- To make sure the players are well linked to the server, please go to "**SYSTEM STATUS**" --> "**CLIENT LIST**". From here you should be able to see all players connected to this CMS server.
- In order to increase the number of players of any given group, you just need to give the same group name to another player. But the added player must have a different hostname.

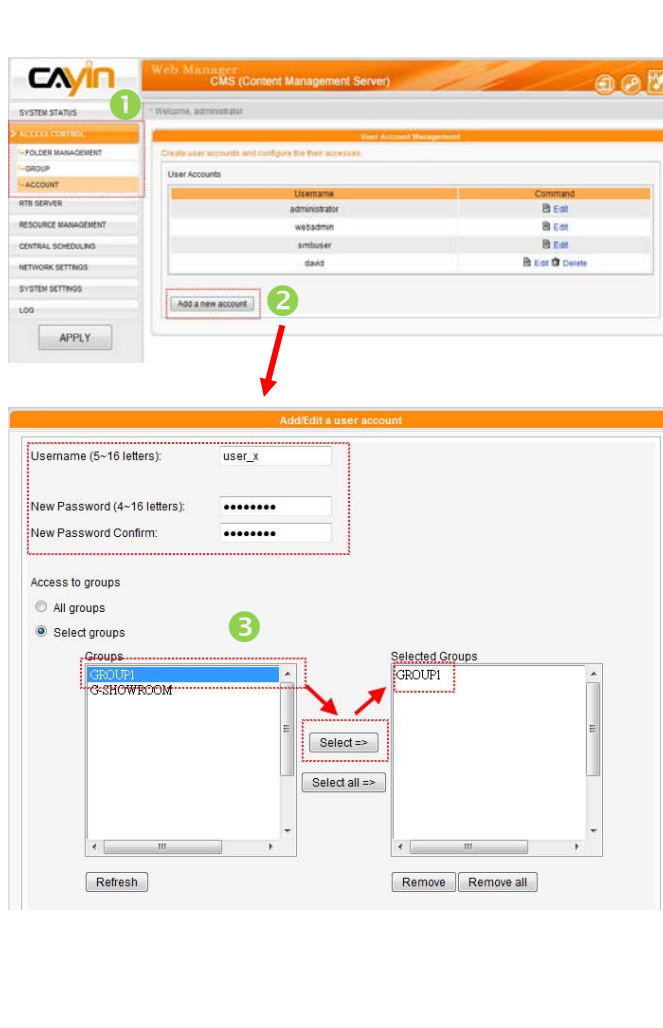
5. Operation Steps (Advanced)

If you don't want to use the account "administrator" to manage SMP, you can create more than one account to do different managerial jobs.

Below are the consecutive steps followed by Chapter 3. After completing the settings in Chapter 3, you can continue adding the function "Account".

A. CMS Server

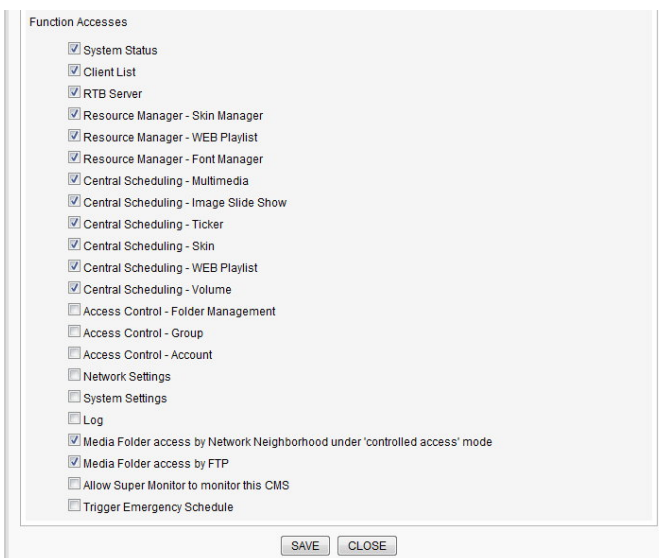
1. After adding a new group (e.g. GROUPA) in CMS, go to "ACCESS CONTROL" → "ACCOUNT".
2. Click **[Add a new account]** and you will see a pop-up window. Enter an account name (e.g. user_x) and a password. Enter the password again to confirm it.
3. In the "Access to groups" area, you can select groups. Select "GROUP1" in the left-hand side, and click **[Select=>]**. Then, **GROUP1** will be duplicated to the right-hand side. In this case, **user_x** can only manage and use **GROUP1**.



- At the lower part of the same window, you can authorize users (**user_x**) to perform certain management activities of CMS.

You can select each function in Web Manager, media folder access by Network Neighborhood under “**control access**” mode, media folder access by FTP, and allow SuperMonitor to monitor this CMS.

Click [**SAVE**] and a new account will be created.

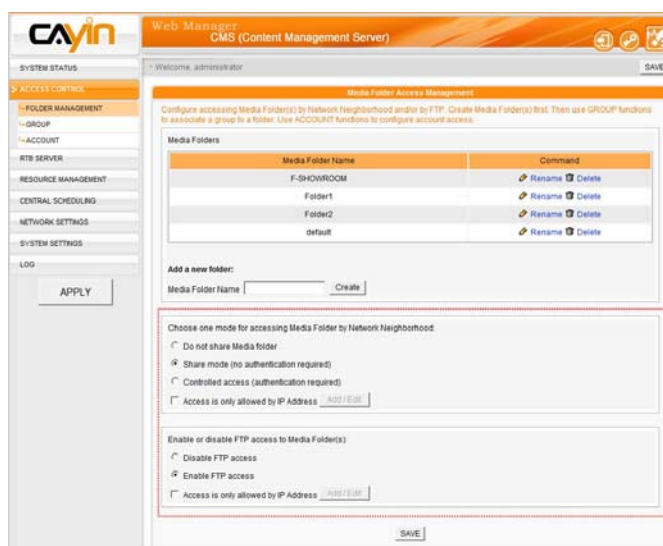


- Go to “**ACCESS CONTROL**” → “**FOLDER MANAGEMENT**”. Choose one mode for accessing Media Folder by Network Neighborhood or FTP.

- ✓ **Network Neighborhood**: select “Controlled access” mode.
- ✓ **FTP**: enable FTP access.

Then, click [**SAVE**].

You will need to enter username and password whenever you want to open CMS’s Media Folder or upload files by FTP software. If you enter the username as “**user_x**”, you can only access those Media Folders which are authorized to **user_x**.



B. SMP Player

Now we start to configure settings on the SMP player.

1. Open SMP PLAYER's Web Manager and login. (Settings will be the same for both SMP-PRO series and SMP-WEB series)

Default username: **webadmin**

Default password: **admin**

2. Go to "**MEDIA FOLDER**" → "**Media Folder Content Synchronization**" and make sure you tick "**Enable Media Folder content synchronization**"

3. Now you can use different username and password for CMS server, other than the account "**administrator**". For example, you can enter the username "**user_x**" and its password which you create in step 2 in CMS server.

In this case, SMP player can still successfully download files from CMS, as long as user_x has the access right to manage GROUPA.

