

# MagicInfo Server User Guide

**MagicInfo Server** is a web-based tool used to manage content files and devices. It also creates and distributes content file schedules.



# Contents

---

## Before getting started

- 6**    **User guide rules**
  - Opening a menu
  - Software names
- 7**    **Key functions**
- 10**   **System requirements**
- 11**   **Restrictions**
- 15**   **Structure of MagicInfo Server**
  - MagicInfo Server general administrator
  - Organization
  - Group
  - Comparison between general administrator and organization administrator
- 16**   **Installing/uninstalling the software**
  - Before Installation
  - Installation
  - Uninstallation
- 24**   **MagicInfo Server backup and restore**
  - Backup
  - Restore
- 26**   **Activating a product license**
  - Registering a full license
  - Registering a trial license

## Signing in/Main page

- 29**   **Connecting to MagicInfo Server**
- 30**   **Sign Up**
- 31**   **Main page**
- 33**   **Customizing the dashboard layout**
  - Dashboard items

## Content files

- 36**   **Content menu**
  - Viewing content
  - Recycle Bin
- 40**   **Adding content**
  - Adding local content files
  - Adding content files from a remote location
  - Adding streaming content files
- 44**   **Making content**
  - Creating content
  - About Web Author
  - Setting templates
  - Adding elements
  - Editing elements
  - Editing pages
  - Saving content
  - Configuring DataLink
- 62**   **Managing content**
  - Approving content
  - Viewing content details
  - Deleting content files
  - Downloading content files
  - Adding content files to a playlist
  - Changing content file groups
  - Exporting a list of content files

## Playlists

- 66**   **Playlist menu**
  - Viewing playlists
  - Recycle Bin
- 69**   **Creating playlists**
  - Creating common playlists
  - Creating audience-specific playlists
  - Creating synced playlists
  - Creating ad playlists
  - Creating VideoWall playlists

**88 Managing playlists**

- Viewing playlist details
- Editing playlists
- Deleting playlists
- Copying playlists
- Changing playlist groups
- Exporting a list of playlists

## Schedule

**91 Schedule menu**

**92 Content schedules**

- Viewing content schedules
- Recycle Bin

**96 Creating content schedules**

- Creating common schedules
- Creating VideoWall schedules
- Creating synced playback schedules
- Creating ad schedules

**118 Managing content schedules**

- Viewing content file details
- Editing content schedules
- Deleting content schedules
- Changing content schedule groups
- Copying content schedules
- Re-distributing content schedules to devices
- Quickly editing content schedules

**122 Message schedules**

- Viewing message schedules
- Recycle Bin

**126 Creating message schedules**

**128 Managing message schedules**

- Viewing message schedule details
- Editing message schedules
- Deleting message schedules
- Changing message schedule groups
- Mapping message schedules to devices

**130 Event schedules**

- Creating events
- Managing events
- Viewing event schedules
- Recycle Bin

**137 Creating event schedules**

**139 Managing event schedules**

- Viewing event schedule details
- Editing event schedules
- Deleting event schedules
- Sending event conditions
- Stopping event schedules

## Devices

**141 Device menu**

- Viewing devices
- Viewing device details
- Editing device information

**157 Errors and Alarms**

- Viewing Software Errors
- Viewing Device Errors
- Viewing alarm details

**160 Device approval**

- Authorizing devices

**161 Viewing the status of multiple devices**

- Checking devices with no specified time zone
- Checking devices with insufficient space
- Checking devices with no distributed schedule
- Checking devices that failed to receive a schedule
- Checking devices with no distributed content

**164 Software Update**

- Registering software
- Distributing software
- Editing software
- Deleting software
- Viewing the software deployment status

**169 Remote Job**

- Adding a remote task
- Reusing remote tasks
- Editing remote tasks
- Canceling remote tasks

**173 Backup Play (redundant playback)**

**175 Using videowall layouts**

- Configuring videowall layouts
- Managing videowall layouts

**179 Using Layout Editor**

- About Layout Editor
- Making a videowall layout

**Statistics**

**190 Statistics Menu**

**190 Viewing summary statistics**

**191 Viewing statistics on devices**

- Viewing statistics for errors
- Viewing statistics for connection status
- Viewing statistics for connection records
- Viewing statistics for approved devices

**195 Viewing statistics on content**

- Content Type
- Play Frequency
- Detail Statistics Report

**197 Viewing statistics on audience**

- Audience Measurement
- Detail Statistics Report

**Users**

**199 User Menu**

- Viewing users
- Adding users
- Deleting users
- Viewing users awaiting approval
- Viewing users with canceled accounts

**208 Managing user information**

- Viewing detailed user information
- Changing a user group
- Changing a user role
- Issuing temporary passwords

**213 Creating an organization**

**215 User role management**

- Adding a user role
- Editing a user role
- Deleting a user role
- Exporting a list of roles

**219 Device management**

- Assigning Device Privileges

**Settings**

**221 Setting Menu**

**221 Managing my account**

- Managing My Information
- Canceling Account

**223 Managing MagicInfo Server**

- Setting MagicInfo Server

**227 Device Info Summary**

**228 Viewing system information**

**230 Viewing logs**

**231 Managing external servers**

DataLink server management  
Managing the download server  
Managing a MagicInfo Player S remote server

**236 Managing SLM licenses**

Additional License Activation  
Returning Licenses  
Checking the history of issued licenses

**238 Managing tags**

Viewing Tags  
Adding Tags

**239 Diagnostic management**

Diagnosing MagicInfo Server  
Diagnosing MagicInfo Player I.  
Deleting examination results

**240 Using External Links****269 Using Backup Play**

Setting MagicInfo Server  
Device settings  
Creating a playlist for redundant playback  
Creating a schedule

## Licenses

## Guide for content playback

**241 Adding content**

Adding local content files  
Adding content files from a remote location  
Adding streaming content files

**246 Adding devices****247 Adding a schedule**

Creating MagicInfo schedules

**252 LFD settings**

Viewing device details  
Editing device information

**261 Using tags**

Example of using tags  
Using multiple tags

# Before getting started

## User guide rules

Instructions in this user guide follow the rules below.

### Opening a menu

---

Instruction to open a menu is shown as follows.

Click **Create Schedule > Content**.

→ In other words, select **Content** from the **Create Schedule** menu.

### Software names

---

The software names featured in this User Guide are abbreviated as follows.

- MagicInfo VideoWall i Player → VideoWall i Player
- MagicInfo Layout Editor → Layout Editor
- Samsung MagicInfo Web Author → Web Author
- MagicInfo Player refers to all device types, including MagicInfo Player I and MagicInfo Player S.

# Key functions

MagicInfo Server is a web-based tool used to manage content files and devices. It also creates and distributes content file schedules.

Connect to MagicInfo Server via a web browser to remotely control devices, manage user information, and schedule the playback of content files using a variety of extra effects.

## Media content file management

- Add and manage LFD content files created using MagicInfo Author and media files (photo, video, music, VideoWall, document, Flash and PDF files) saved on your computer.
- Schedule the playback of added content files and distribute the scheduled files to devices.
- Download content files to your computer.
- Edit or delete content file information.
- Search content by using keyword(s).
- Create groups to conveniently manage content files by the group.
- Search content file logs to view content file events (add, delete and edit) on MagicInfo Server.
- Save content file information as an Excel or PDF file to your computer.
- Preview the selected content files from the content file list page.

## Playlist for sequential playback

- Add a variety of content files saved on MagicInfo Server to a playlist for sequential or random playback.
- Apply screen transition effects when playing content files.
- Create groups to conveniently manage playlists by the group.

## Remote device monitoring

- View device information (device name, playing content files and current schedule) and device on/off status in real-time.
- Delete devices if required.
- Use the device status indicator images to monitor devices in real time.

### Remote display control

- View LFD device information and network/system settings. Remotely adjust detailed system settings (on timer, monitoring interval and system restart interval) and display settings (volume, mute, brightness and power).
- Establish a remote connection via an LFD VNC terminal.
- Send remote task commands (send/import files, delete files/folders, restart, manage services, execute commands, end processes, close windows) to devices connected to MagicInfo Server.

### Remote software update

- Automatic update for alarm generation rule file is supported. This file updates applications installed on the device and sends alarms/errors to MagicInfo Server.
- Distribute software registered on MagicInfo Server to devices at a specified time.
- MagicInfo Server can be used to add and manage MagicInfo Player update software files.

### Content file schedule creation and management

- Create schedules to play content files at a desired time.
- Daily, weekly and monthly schedules can be created.
- Assigning several channels to a schedule allows you to play various programs of your choice from the single schedule.
- Organize playlists and VideoWall content files into a single content file.
- Configure background music for scheduled content files.
- View and manage the status of using scheduled content files.
- Split the screen of an LFD device and play different content files on the divided sections.
- Distribute schedules to the selected devices or device groups.
- Check the distribution status of a schedule or cancel the distribution.
- Create groups to conveniently manage content file schedules by the group.
- Search content file schedule logs to view all content file schedule events (add, delete and edit) on MagicInfo Server.

### Message schedule creation and management

- Create and play a message immediately or at a specified time on the selected device or device group.
- Specify the message font, size and color.
- Configure the message settings: background image, position on the screen, scroll on/off, and scroll speed.
- Create groups to conveniently manage message schedules by the group.
- Preview messages.

### Event schedule creation and management

- Creating an event allows you to play desired content/messages or change device channels when the event conditions are satisfied.
- Configure a detailed event schedule by adding several conditions to the event.
- Create groups to conveniently manage event schedules by the group.
- Configure message settings, such as the background image, position on the screen, scroll on/off, and scroll speed. Preview messages in advance.

### User information and role management

- View and manage all users on MagicInfo Server.
- Create organizations and groups to conveniently manage users by the group.
- Using the user menu, create and apply organizations to the content, schedule, device and user menus.
- An administrator can create roles to access menus on MagicInfo Server and assign those roles to users.

### Statistics

- Statistics are provided for disconnected/connected devices, the panel on/off status on connected devices, authorized/unauthorized devices and the number of added content files per type.
- Statistics on device errors, connection status, connection records and approved devices are provided.
- Statistics are provided for the types of content files played on MagicInfo Player and the playback count.

# System requirements

## Hardware

- CPU: Dual Core 2.5 GHz or greater
- RAM: 2048 MB or greater
- HDD: 200 GB or greater

## Software

- Internet Explorer 10/11
- Chrome

## System

- Windows 7 Professional
- Windows Server 2008
- Windows 8 Professional
- Windows Server 2012
- Windows 10 Professional

### Note

Windows 7 Home Edition and Windows 8 Home Edition, Windows 10 Home Edition are not supported.

## VideoWall network requirements

- A 1 Gbit network is recommended
- 1 Gbit Ethernet Layer 2 Switch Hub (with IGMP snooping supported)
- UTP Cat. 5e or higher specification LAN cable support (UTP or STP Cat.6 is recommended.)
- More than one uplink port is recommended (optional) if you plan to extend the VideoWall at some other time.

# Restrictions

## Sign In

- MagicInfo Server URL consists of HTTP://(MagicInfo Server IP):(Port)/MagicInfo. MagicInfo Server IP is the IP address where MagicInfo Server is installed. The "port" value is the port number selected at the time of MagicInfo Server installation. The "MagicInfo" at the end of the address is case-sensitive.
- Internet Explorer is the optimal environment for connecting to MagicInfo Server.
- MagicInfo Server creates one general administrator ID when it is installed for the first time. Each organization has at least one organization administrator.
- Approval by the administrator is required for users to sign in after sign-up.

## Content file management

- The following media files can be added: Photo, video, music, LFD, VideoWall, document, Flash and PDF files.
- A playlist can be edited by clicking the edit button when only one checkbox is selected.
- It is not possible to delete a playlist that is included in a schedule. Delete the schedule first before deleting the playlist.
- Deleted content files and playlists are moved to Recycle Bin. Content files and playlists in Recycle Bin can be restored. Deleting files in Recycle Bin will delete them permanently.
- A thumbnail image may not be displayed for Korean-language files being uploaded. If this is the case, enable **Send UTF-8 URLs** from Internet Options of the web browser.
- If the computer attempting to upload a file has a built-in Intel graphics card, a black blank image may be displayed as the file thumbnail image.
- Files with a name that cannot be read by the locale of the operating system where MagicInfo Server is installed may not be uploaded. For example, Korean-language files cannot be uploaded if MagicInfo Server is installed on English-language Windows.
- Content files can be downloaded irrespective of the locale of the operating system installed on a device.
- If a content file download to a device fails (due to connection issues or for other reasons), the download can be resumed from the last point it was disconnected.

## Schedule management

- The device must be powered on and connected to MagicInfo Server in order to receive distributed schedule(s). Offline devices (powered off) will automatically receive distributed schedule(s) when turned on.
- The frame of a created schedule can be split into a maximum of four sections.
- Schedules cannot be added to a time slot that has been restricted from scheduling.
- When creating schedules, VideoWall content files cannot be used along with other content files. Other content files do not contain the coordinate information of a VideoWall device.

## Device management

- To connect to VNC, make sure to install Java Web Start (serves as VNC Viewer) on the computer MagicInfo Server is installed on. Ensure the VNC Server program is installed on the device to connect. The VNC program is installed on a computer when a remote connection is established if not already installed.
- Remote VNC connection may not be established in some network environments.
- Devices that are powered on but not connected to MagicInfo Server are displayed as Power OFF on the monitoring page.
- It is not possible to change the display and system settings of a powered off device.
- Panel On time (**Device > Edit > Display > Panel On Time**) is the total time an LFD panel has been on since factory release. This function is only provided on products released after MXn. Contact a Customer Service Center for details.
- Added devices can only be discovered if it is on the MagicInfo Server network.
- The **On** function that remotely switches on an LFD is only available for devices that share the same subnet as MagicInfo Server.
- If the time set for a scheduled alarm rule/software distribution precedes the current time, distribution takes place immediately upon scheduling.
- New device authorization can only be performed by the general administrator (user ID: admin) or a user belonging to an administrator group allowed to authorize devices. If only one organization exists, the organization administrator can also authorize devices.
- Some device types may not fully support MagicInfo Server features. Specific information can be found in relevant feature sections in this document.

## User management

- Organization administrators and general users cannot view and edit organizations. Only the general administrator (user ID: **admin**) can view, create, edit or delete organizations.
- Organizations can be created, edited or deleted by using the **User** menu on the main menu bar. Changes to an organization are applied to menus related to content, schedules, devices and users.
- Canceled user accounts cannot be restored by the administrators. Re-registration is required. A password confirmation pop-up window appears if a canceled user ID is entered during sign-up. If you enter the correct password, you can sign up again with the canceled account.
- Functions that your user role is not authorized to access are not displayed.
- Users with the privileges to access all MagicInfo Server functions belong to the Administrators group, together with the general administrator.
- Only users with privileges to create users, such as general administrators, organization administrators and user managers, can create users that have privileges to access all MagicInfo Server functions.

## Personal info management and MagicInfo Server settings

- Change your password in **Setting > My Account > My Information** on the main menu bar. Your new password must be different from your previous password. Make sure the password is a combination of 8-50 alphanumeric characters. Repeating a letter more than three times or using more than three consecutive numbers are not allowed.
- Canceling a user account does not delete content created by the user.
- It is not possible to terminate a general administrator account from MagicInfo Server. For an organization administrator to terminate their account, they must first transfer their organization administrator privileges to another user in the same organization.
- To issue a temporary password to a user, select **Setup > Server management > Server Settings > SMTP Server** on the main menu bar, and make sure the SMTP server settings are configured.

## VideoWall restrictions

- Messages can be distributed when the VideoWall device layout is set to formal mode.
- To sync VideoWall effects between connected VideoWall devices, make sure that the devices use the same playback settings and have the necessary content.
- To play streaming content on a VideoWall display using MagicInfo Player I, make sure to install the MPEG2 and WMV codecs on the devices.
- When playing content on a computer using the ICON codec, FPS may degrade or playback may be choppy. This can happen if the device that runs the ICON Encoder and ICON Decoder does not meet the following requirements.
  - VideoWall Live Caster (ICON Encoder)
    - Required resolution and frame rate: 1920x1080, 25 fps
    - Requirements: A computer with an x86 CPU (Intel Core i5 2.7 GHz or higher)

- VideoWall i Player (ICON Decoder)  
 Required resolution and frame rate: 1920x1080, 25 fps  
 Requirements: AMD A8-3510M 1.8 GHz or greater

- A maximum of ten computer screens can be played from Live Caster, depending on the system resources and VideoWall configuration. To play ten or more computer screens simultaneously, lower the resolution or frame rate (FPS) to ensure proper playback.

### VideoWall content compatibility

- Video: Make sure an appropriate codec is installed to play video on the display devices.  
 Up to full HD (1920X1080) video files are supported.

<b>File format</b>	WMV	MPEG2 (MPEG-TS)
<b>Resolution</b>	FHD	FHD
<b>Frame rate (fps)</b>	30 fps	30 fps
<b>Bit rate</b>	10 M	20-25 M
<b>Bit rate type</b>	Constant	Constant
<b>Codec</b>	Codec is not required	Elecard Codec (Codec for MPEG2 only)

- Image: the bmp, jpeg, gif, png and tif formats are supported.  
 If the layout is set to irregular mode using different device models, the time it takes to load a high-resolution image can vary from device to device.
- Stream data: IP camera (Samsung products only)/computer screen
- Stream server: VideoLAN Client - VLC versions (v.2.0.1-2.0.3) are supported.

Visit <https://v3.samsunggsbn.com> to find a list of compatible products.

# Structure of MagicInfo Server

MagicInfo Server has a three-tier structure.

## MagicInfo Server general administrator

---

A general administrator account is created when MagicInfo Server is installed.

- The general administrator can create organizations on MagicInfo Server, as well as access and edit all user and content file information.
- The general administrator can authorize, delete and rearrange all devices added to MagicInfo Server.



### Note

The general administrator account ID is "admin" and cannot be changed. The password entered at the time of MagicInfo Server installation is used as the password.

## Organization

---

Organizations are the largest user category units created by MagicInfo Server's general administrator. One administrator account is created per organization. This administrator is referred to as an organization administrator.

- An organization administrator can add or edit groups, users and content files in their organization.
- Organization administrators cannot access information not pertaining to their own organization.

## Group

---

Groups are sub-units of organizations. No administrator has been specified. Group users are assigned roles by the organization administrator.

- Group users can access menu items authorized by the organization administrator.
- Group users cannot access information not pertaining to their own groups.

## Comparison between general administrator and organization administrator

Privileges	General administrator	Organization administrator
Organization management	O	X
Group management	O	O
Approval	O	X
User management	Authorized to edit organizations, groups and roles of all users	Authorized to edit groups and roles of users under an organization where an administrator has privileges.
Remote Job	Authorized to control all devices	Authorized to control devices under on organization where an administrator has privileges.
Information access	All information provided in the program	Information of an organization where an administrator has privileges

## Installing/uninstalling the software

### Precautions when installing the software

MagicInfo Server can only be installed using a Windows administrator account.

## Before Installation

Select either PostgreSQL or Microsoft SQL Server as the database and install MagicInfo Server.

### Installing the software for PostgreSQL

Please read the following if you plan to install PostgreSQL database before installing MagicInfo Server.

- The Secondary Logon service must be enabled on your computer to successfully install PostgreSQL.
- Before installing PostgreSQL, click **Control Panel > User Accounts > Change User Account Control settings** from the Start menu. Select "Never notify" for "Choose when to be notified about changes to your computer" for proper installation.
- The PostgreSQL port and administrator account password set during PostgreSQL installation are also required for MagicInfo Server installation. Remember these for future use.

## Installing the software for Microsoft SQL Server

To install MagicInfo Server, you must first configure the MicroSoft SQL Server network and authentication settings.

### Configuring the SQL Server network

- 1 Run **SQL Server Configuration Manager**.
- 2 Set **Named Pipe** and **TCP/IP** under SQLEXPRESS to **enable**.
- 3 Delete the **TCP Dynamic Ports** values from IP1~IP7 and IP All. (Default value: 0)
- 4 Set **TCP port** for IP1~IP7 and IP All to 1433.
- 5 After configuring the network, make sure to restart the SQL Server.

### SQL Server authentication

- 1 Run **SQL Server Management Studio**.
- 2 Set the authentication mode for SQL Server to **SQL Server and Windows Authentication mode**.
- 3 After specifying the authentication mode, make sure to restart the SQL Server.

## Installation

---

There are two options to install the software: Express for automatic setup and Advanced for manual setup. You can select either PostgreSQL or Microsoft SQL Server database to install MagicInfo Server.

### Note

- The installation process may vary, depending on the selected setup type and database.
- This user guide assumes that you install the software on PostgreSQL database.

## Quick installation (Express)

- 1 On the screen, specify the installation language and click **OK**.
- 2 Read installation messages and click **Next**.
- 3 Agree to the license agreement and click **Next**.
- 4 Choose the location to install MagicInfo Server and click **Next**.
- 5 Select **Express** for Setup Type and set the DB and SSL port. Click **Next**.

### Note

- The installation process varies depending on the selected setup type.
- Selecting Express for Setup Type automatically configures installation settings to simplify the installation process and installs all the features (FULL).
- Selecting Advanced for Setup Type allows you to select a range of features to install from FULL, WAS and DB and manually customize installation settings.
- Select HTTP or HTTPS for SSL. One of the two options must be selected.

- 6 Enter the PostgreSQL administrator password created when installing PostgreSQL, and click **Next**.

### Note

This step does not appear when the selected DB is MSSQL.

- 7 When MagicInfo Server installation information appears, click **Save** to save the information as a file and click **Next**.

### Note

- Installing MagicInfo Server for the first time creates a general administrator, an organization and the organization's administrator. For details on the MagicInfo Server structure, refer to [► Structure of MagicInfo Server](#)
- Note down the database user, general administrator and organization administrator account details. These are needed to use MagicInfo Server.

- 8 Select the Start Menu folder for MagicInfo Server and click **Install**.

- 9 When installation is complete, click **Next**.

- 10 Click **Finish**.

### Note

Change Microsoft Internet Explorer settings as follows after installing the MagicInfo Server.

- Select **Tools > Internet options > Browsing history > Settings > Temporary Internet Files > Every time I visit the webpage**.
- Select **Tools > Internet options > Advanced > International > Send UTF-8 URLs**.

## Custom installation (Advanced)

### Installing all features (FULL)

- 1 On the screen, specify the installation language and click **OK**.
- 2 Read installation messages and click **Next**.
- 3 Agree to the license agreement and click **Next**.
- 4 Choose the location to install MagicInfo Server and click **Next**.
- 5 Select **Advanced** for Setup Type and **FULL** for Select Features. Set the DB and SSL port and click **Next**.

 **Note**

The installation process varies depending on the selected setup type.

- Selecting Express for Setup Type automatically configures installation settings to simplify the installation process and installs all the features (FULL).
- Selecting Advanced for Setup Type allows you to select a range of features to install from FULL, WAS and DB and manually customize installation settings.
- Select HTTP or HTTPS for SSL. One of the two options must be selected.

- 6 Enter the PostgreSQL administrator password created when installing PostgreSQL, and click **Next**.

 **Note**

This step does not appear when the selected DB is MSSQL.

- 7 Configure settings for the database to create, such as the database name, database user ID and password. Click **Next**.
- 8 Enter FTP server information and click **Next**.
- 9 Set the general administrator password and click **Next**.

 **Note**

Installing MagicInfo Server for the first time creates a general administrator account (ID: admin).

10 Enter an organization name to use in MagicInfo Server and information on the organization administrator. Click **Next**.

11 Enable or disable the email notification feature for device alarms and click **Next**.

– To send email notifications to a MagicInfo Server user, select **Enable** and enter an IP address for the SMTP server.

 **Note**

To send email notifications for device alarms to users, first configure SMTP server settings.

12 When MagicInfo Server installation information appears, click **Save** to save the information as a file and click **Next**.

 **Note**

Note down the database user account details. These are needed to use MagicInfo Server.

13 Select the Start Menu folder for MagicInfo Server and click **Install**.

14 When installation is complete, click **Next**.

15 Click **Finish**.

 **Note**

Change Microsoft Internet Explorer settings as follows after installing the MagicInfo Server.

- Select **Tools > Internet options > Browsing history > Settings > Temporary Internet Files > Every time I visit the webpage**.
- Select **Tools > Internet options > Advanced > International > Send UTF-8 URLs**.

## Installing WAS only

- 1 On the screen, specify the installation language and click **OK**.
- 2 Read installation messages and click **Next**.
- 3 Agree to the license agreement and click **Next**.
- 4 Choose the location to install MagicInfo Server and click **Next**.
- 5 Select **Advanced** for Setup Type and **WAS** for Select Features. Set the DB and SSL port and click **Next**.

### Note

- The installation process varies depending on the selected setup type.
  - Selecting Express for Setup Type automatically configures installation settings to simplify the installation process and installs all the features (FULL).
  - Selecting Advanced for Setup Type allows you to select a range of features to install from FULL, WAS and DB and manually customize installation settings.
  - Select HTTP or HTTPS for SSL. One of the two options must be selected.
- 6 Enter details of the database and the server where the database is installed, and then click **Next**.
  - 7 Enter FTP server information and click **Next**.
  - 8 Enable or disable the email notification feature for device alarms and click **Next**.
    - To send email notifications to a MagicInfo Server user, select **Enable** and enter an IP address for the SMTP server.

### Note

To send email notifications for device alarms to users, first configure SMTP server settings.

- 9 When MagicInfo Server installation information appears, click **Save** to save the information as a file and click **Next**.

### Note

Note down the database user account details. These are needed to use MagicInfo Server.

- 10 Select the Start Menu folder for MagicInfo Server and click **Install**.
- 11 When installation is complete, click **Next**.
- 12 Click **Finish**.

### Note

Change Microsoft Internet Explorer settings as follows after installing the MagicInfo Server.

- Select **Tools > Internet options > Browsing history > Settings > Temporary Internet Files > Every time I visit the webpage**.
- Select **Tools > Internet options > Advanced > International > Send UTF-8 URLs**.

## Installing DB only

- 1 On the screen, specify the installation language and click **OK**.
- 2 Read installation messages and click **Next**.
- 3 Agree to the license agreement and click **Next**.
- 4 Choose the location to install MagicInfo Server and click **Next**.
- 5 Select **Advanced** for Setup Type and **DB** for Select Features. Set the DB and SSL port and click **Next**.

### Note

- The installation process varies depending on the selected setup type.
- Selecting Express for Setup Type automatically configures installation settings to simplify the installation process and installs all the features (FULL).
- Selecting Advanced for Setup Type allows you to select a range of features to install from FULL, WAS and DB and manually customize installation settings.
- Select HTTP or HTTPS for SSL. One of the two options must be selected.

- 6 Enter the PostgreSQL administrator password created when installing PostgreSQL, and click **Next**.

### Note

This step does not appear when the selected DB is MSSQL.

- 7 Configure settings for the database to create, such as the database name, database user ID and password. Click **Next**.
- 8 Enter the IP address for WAS server and click **Next**.
- 9 Set the general administrator password and click **Next**.

### Note

Installing MagicInfo Server for the first time creates a general administrator account (ID: admin).

- 10 Enter an organization name to use in MagicInfo Server and information on the organization administrator. Click **Next**.
- 11 When MagicInfo Server installation information appears, click **Save** to save the information as a file and click **Next**.

### Note

- For information on the MagicInfo Server structure such as the general administrator and organization administrator, refer to [▶ Structure of MagicInfo Server](#)
- Note down the database user, general administrator and organization administrator account details. These are needed to use MagicInfo Server.

12 Select the Start Menu folder for MagicInfo Server and click **Install**.

13 When installation is complete, click **Next**.

14 Click **Finish**.



#### Note

Change Microsoft Internet Explorer settings as follows after installing the MagicInfo Server.

- Select **Tools > Internet options > Browsing history > Settings > Temporary Internet Files > Every time I visit the webpage**.
- Select **Tools > Internet options > Advanced > International > Send UTF-8 URLs**.

## Uninstallation

---

1 Click **Control Panel > Programs and Features**.

2 Double click **MagicInfo** from the list of programs installed on the computer.

3 Click **Yes** in the confirmation message.

4 Click **Finish** when the process is complete.



#### Note

- Close all Internet web browser windows and applications before uninstalling the software.
- Uninstalling the software only removes MagicInfo Server. Java and PostgreSQL are not removed.
- The software can also be uninstalled by selecting **Start > All Programs > MagicInfo Premium > Uninstall MagicInfo**. Uninstalling the software does not remove the database. Reinstalling MagicInfo Server will overwrite the database under the same name.

# MagicInfo Server backup and restore

MagicInfo Server provides backup and restore features.

On windows, select **Start > All Programs > MagicInfo Premium** and use the backup or restore icon to back up or restore software.

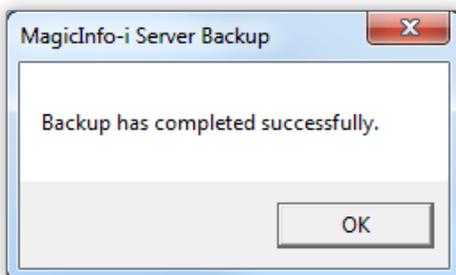
## Note

An alternative way to back up and restore is to use the MagicInfo-i Server Backup and MagicInfo-i Server Restore menu options in the bin folder under the folder where MagicInfo Server is installed.

## Backup



- 1 Choose a drive, enter the MagicInfo database password set during MagicInfo Server installation, and then click **Backup**.

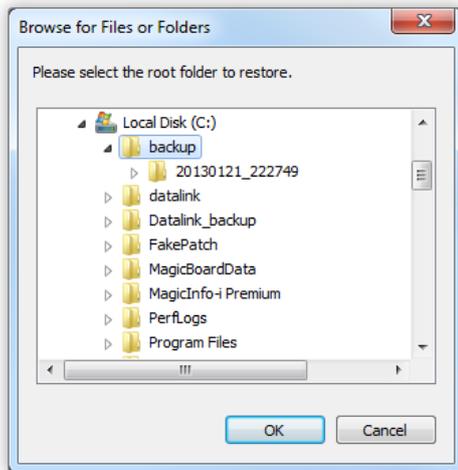


- 2 Click **OK** when backup is complete.
  - A backup folder is created at the location specified in previous steps. This folder contains a backup of the current MagicInfo Server settings and data under dated folders.

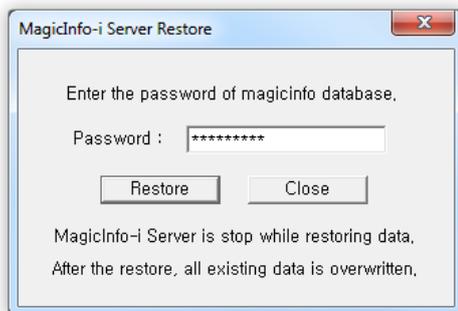
## Periodic backup using the Windows task scheduler feature

Perform regular backups using the Windows task scheduler feature. Refer to MS Windows Help or the user guide for details on how to use the task scheduler function.

## Restore



- 1 Select a backup data folder at the point in time to restore and click **OK**.
  - Backup data can be found under the dated backup folders created during the backup process.



- 2 Enter the MagicInfo database password set during MagicInfo Server installation, and then click **Restore**.

# Activating a product license

To use MagicInfo Server, license activation is required after software installation.

Click  in the main menu bar and select **License Info**.

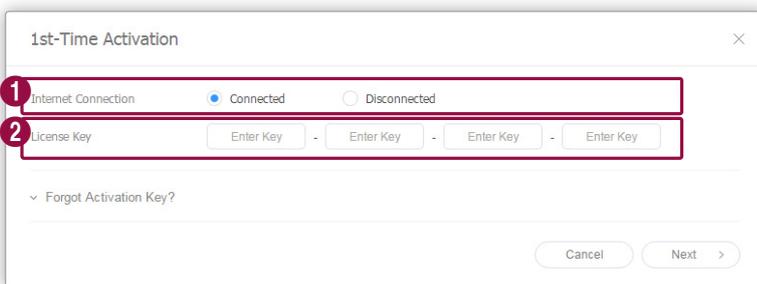
## Note

For details on returning or registering a license, refer to the following: [▶ Managing SLM licenses](#)

## Registering a full license

To use the software with a full license, register the license that came with the product. Users can register a license when running the software for the first time or when using it with a trial license.

- 1 Click **First Time Activation**.
- 2 Enter details for a full license in the registration window.



Select an Internet connection status.

## Note

1

- If not connected to the Internet, select **Disconnected** and then activate the license according to the on-screen instructions.
- To register a license offline, access the license server (<https://v3.samsungsbn.com>) and obtain an activation key.

---

2 Enter the new product license key.

---

3 Click **Next** to proceed.

4 Fill in the input fields required to activate a license and select **Agree to provide information**.

– Click **Terms and Conditions** if you want to view the terms and conditions of use.

5 Click **OK**.

6 Click **OK** from the activation complete notification window.

– To obtain access to all the functions in MagicInfo Server, sign out and then sign in again.

## Registering a trial license

---

If you have not purchased a full license, use the software by obtaining a trial license for free.

1 Click **Free License**.

2 Enter details for a free license when the registration window appears.

The screenshot shows a 'Free License' registration window with the following fields and options:

- 1 Product: A dropdown menu with 'Select' as the current value.
- 2 Internet Connection: Radio buttons for 'Connected' (selected) and 'Disconnected'.
- 3 License Key: A text input field with a hyphen separator.
- 4 Company Name: A text input field.
- Division: A text input field.
- Address: A text input field.
- E-mail: A text input field.
- Phone Number: A text input field.
- I agree to provide this information to Samsung
- Read Activation Key: A search icon and a text input field.
- Terms and Conditions: A dropdown arrow.

At the bottom right, there are 'Save' and 'Cancel' buttons.

---

1 Select a desired product from the dropdown list.

---

---

Select an Internet connection status.



2

- If not connected to the Internet, select **Disconnected** and then activate the license according to the on-screen instructions.
- To register a license offline, access the license server (<https://v3.samsunggsbn.com>) and obtain an activation key.

---

3

A trial license key that can be used for free is displayed.

---

4

Fill in the input fields required to activate a license and select **Agree to provide information**.

- Click **Terms and Conditions** if you want to view the terms and conditions of use.
- 

3 Click **Save**.

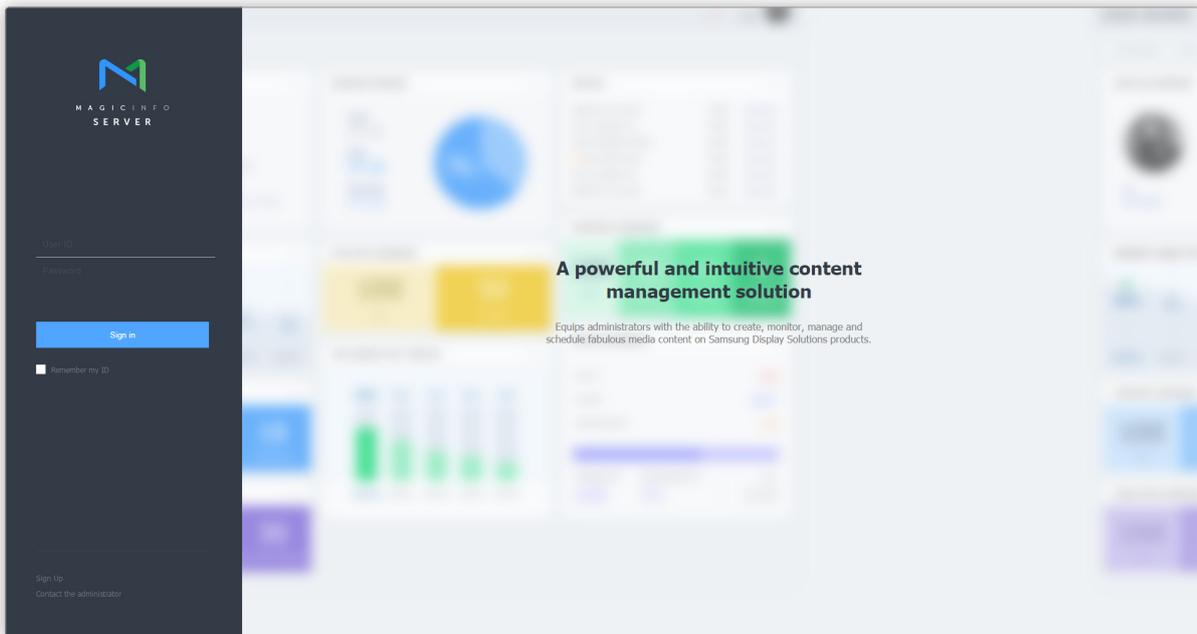
4 Click **OK** from the activation complete notification window.

- To obtain access to all the functions in MagicInfo Server, sign out and then sign in again.

# Signing in/Main page

## Connecting to MagicInfo Server

- 1 Enter `http://(MagicInfo Server IP):(Port)/MagicInfo` in the web browser address bar.
  - MagicInfo Server sign-in page appears.
- 2 Enter user ID and password, and click **Sign In**.



### Note

- The **MagicInfo** at the end of the address to MagicInfo Server is case-sensitive.
- Sign-up is required to use MagicInfo Server. Users that have signed up can sign into MagicInfo Server after approval by the administrator.

### ! Admin sign-in info

- To sign in as an organization administrator after the initial installation, enter the organization administrator ID and password created during the installation file setup.
- To ensure security, select **Setting > My Account > My Information** on the main menu bar and change your password. A password can be a combination of alphanumeric characters.
- Samsung Electronics shall not be held responsible for any losses that incur due to a failure to change the password.

## Sign Up

- 1 Click **Sign Up** from the sign-in page. The sign-up page appears.
- 2 Enter the basic user information, ID and password in the sign-up page.
- 3 Click **Save** to save the information entered. Sign-up is complete.  
Users that have signed up can sign into MagicInfo Server after approval by the administrator.

The screenshot displays a 'Sign Up' form with two main sections: 'Basic Information' and 'Organization Information'. The 'Basic Information' section includes fields for User ID, Password, Confirm Password, User Name, Email (with the example 'example@email.com'), Mobile Phone Number, and Home/Work Phone. The 'Organization Information' section includes a dropdown for Organization, and text boxes for Team and Position. At the bottom, there are two buttons: 'Sign Up' (highlighted in blue) and 'Cancel'.

**Sign Up**

**Basic Information** \* A required item. Please enter a value.

User ID \*

Password \*

Confirm Password \*

User Name \*

Email \*

Mobile Phone Number

Home/Work Phone

**Organization Information**

Organization \*

Team

Position

**Precautions when signing up**

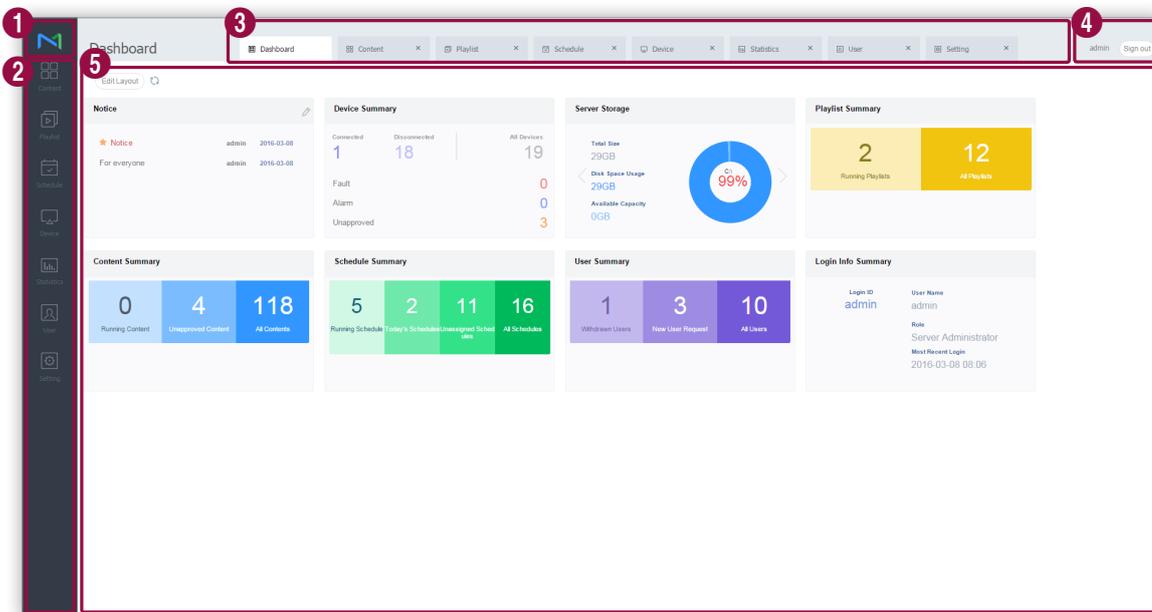
- A user ID can be 5 to 20 characters long.
- A user ID is case-sensitive and can only contain English alphanumeric characters.
- A password can be a combination of alphanumeric characters. You cannot use a password that consists of either letters or numbers alone.
- Do not use three or more consecutive of the same characters or numbers.
- A password can be 8 to 50 characters long.
- Fields with \* cannot be left blank.
- Select your organization correctly.

# Main page

If you sign in after product license activation, the MagicInfo Server Dashboard appears as the main page.

**Note**

- MagicInfo Server administrators (general administrator and organization administrators) can assign a role to each user. Available MagicInfo Server functions depend on the user role. For details on user roles, refer to [▶ Changing a user role](#)
- Displayed menu items vary, depending on the privileges of the user account signed into MagicInfo Server. The instructions provided below regarding the main page assume that you are signed in with general administrator privileges and can access any menu.

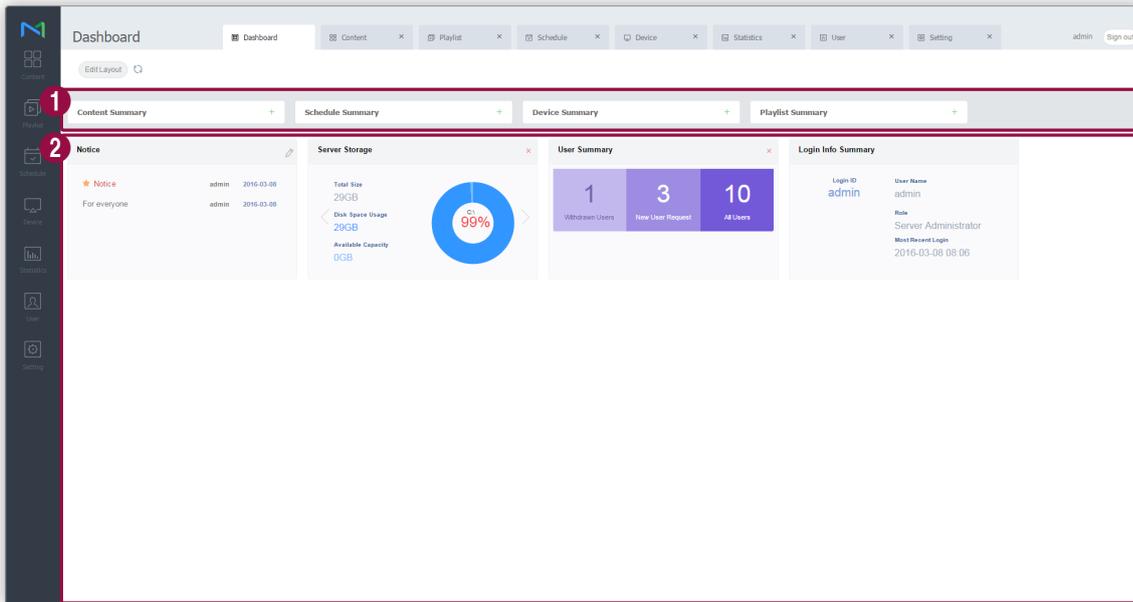


- 
- 1 Display the MagicInfo Server main page.
- 
- 2 View the MagicInfo Server main menu bar. Click a menu item to display the related menu page.  
Refer to each chapter for details on each menu.
- 
- Access main menu in tabs. Clicking on a different menu opens a new tab. This allows you to work with multiple menus at the same time.
- 3
    - To close a tab, click **X**.
    - It is not possible to close the Dashboard tab.
- 
- 4 View the currently logged in user ID. Click a user ID to open the user information management page.  
To sign out from MagicInfo Server, click **Sign Out**.
- 
- 5 Dashboard allows you to easily view information managed in MagicInfo Server by customizing the arrangement of notices, content summaries and other information. It is possible to customize the Dashboard layout. For details, refer to [▶ Customizing the dashboard layout](#)
-

# Customizing the dashboard layout

Add frequently used features to the dashboard.

- 1 Click **Edit Layout** on Dashboard tab.
  - Items that can be added to the dashboard appear.
- 2 Customize the dashboard layout.



- 1 View items that can be displayed on the main page of MagicInfo Server.
  - Click **+** next to a desired item. The item is displayed in the preview section.

Preview section

- 2
  - Drag and drop items to rearrange them.
  - To delete an added item from the preview section, click **×**.

- 3 Click **Edit Layout** to complete the setting.

## Dashboard items

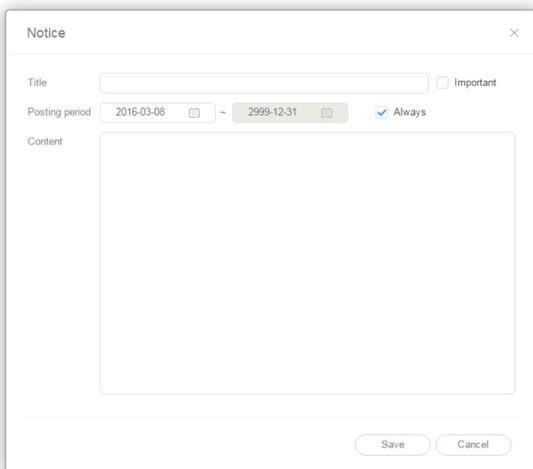
---

### Notice

View notice messages on MagicInfo Server. Select a notice to view the notice details.

#### Adding or removing notices

- 1 From Notice on the dashboard, click .
- 2 Write a notice and click **Save**.



<b>Title</b>	<p>Enter a notice title.</p> <ul style="list-style-type: none"> <li>▪ <b>Important:</b> Select this option if the notice is important and needs to be distinguished from other notices. The notice is highlighted in a different color from other notices on the list. It is placed on top of the list regardless of the sequence of creation.</li> </ul>
<b>Posting period</b>	<p>Specify the posting period.</p> <ul style="list-style-type: none"> <li>▪ <b>Always:</b> Display the notice continuously on the main page.</li> </ul>
<b>Content</b>	<p>Write details for the notice.</p>

## Login Info Summary

View the user ID, name, role, and last access date.

## User Summary

View the number of registered or canceled users and the number of new users that requested to sign up. Click **All** to open the User menu and view details.

## Device Summary

View a summary of information on added devices. Click **All** to open the Device menu and view details.

## Content Info Summary

View a summary of information on added content. Click **All** to open the Content menu and view details.

## Schedule Summary

View the number of schedules that are currently running or created today, all schedules, or schedules not assigned to devices. Click **All** to open the **Schedule** menu and view details.

## Server Storage

View a summary of information on the disk that contains MagicInfo Server data. Move the scroll bar up and down to view all information about the disk.

## Playlist Summary

View a summary of information on added playlists. Click **All** to open the Playlist menu and view details.

# Content files

## Content menu

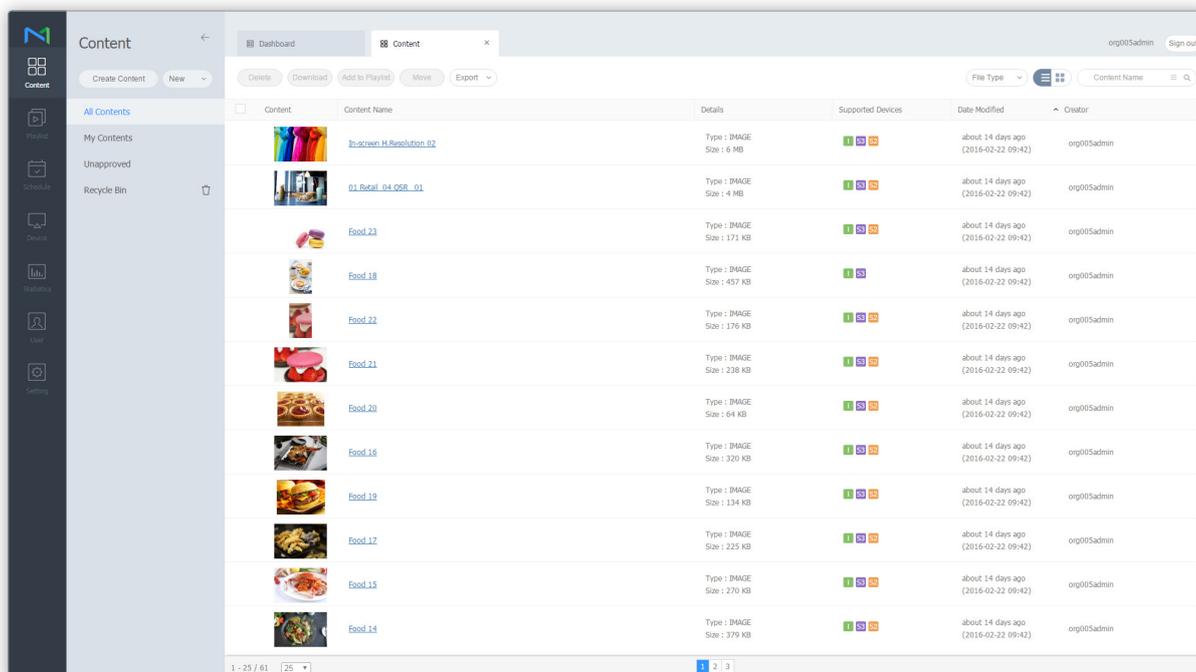
Add and manage content files in MagicInfo Server. Distribute content files to LFD devices.

If your account is authorized to manage content files, you can edit or delete content files added by other users in your organization.

Click  on the main menu bar.

 **Note**

- MagicInfo Server administrators (general administrator and organization administrators) can assign a role to each user. Available MagicInfo Server functions depend on the user role. For details on user roles, refer to [▶ Changing a user role](#)
- This chapter assumes that you are signed in with organization administrator privileges.



## Viewing content

Create user groups to manage content files by the group. Each account has a default group. Only files enabled to be shared can be shared. Users must belong to the same organization to share files.

- **All:** Retrieve all content files added by users.
- **My Contents:** View content files added with your own account. Create sub-groups under your own account.

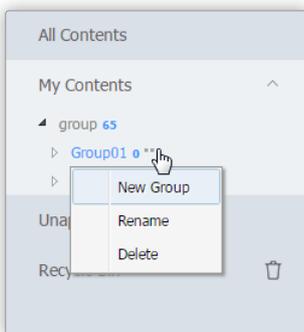
### Note

- Use the content info page to change content sharing options. For details on sharing content, refer to [▶ Viewing content details](#)
- It is possible to apply a rule that an approval by an authorized user must be obtained before content files added by users that have no privileges to manage content are distributed to MagicInfo Server. If this rule is applied, content files waiting for approval are shown in the Unapproved list. For details on content approval, refer to [▶ Approving content](#)

## Managing my content groups

Content you added can be managed in groups.

- 1 To manage groups, click **My Contents**.
- 2 Manage groups, using one of the following options:
  - Option 1** Select a group and right-click on the mouse.
  - Option 2** Place the mouse cursor on a group name and click **...**.



<b>New Group</b>	Create a sub-group under the selected group.
<b>Rename</b>	Rename the selected group.

**Delete**

Delete the selected group.

 **Note**

It is not possible to delete a root group.

 **Note**

- To move a group, drag the group from My Contents to a desired group. Sub-groups can be moved to root groups. It is not possible to move root groups to sub-groups. When moving a group that contains sub-groups, all the sub-groups will move together maintaining the group hierarchy.
- The number of content files that belong to a group is shown next to the group name.

## Content view menu

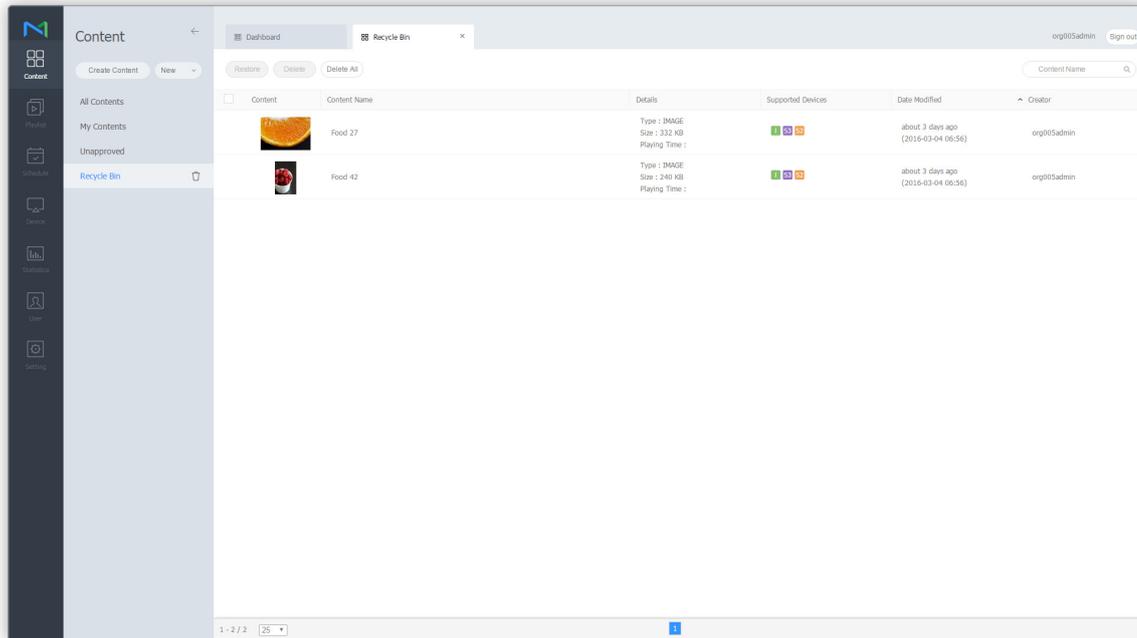
Change the content view mode or search for a content file.



- 1 Click  and select the checkboxes of desired file types. The screen displays only the selected types of files.
- 2 Change the content view mode. Select  for list view or select  for thumbnail view.
- 3 Search content files with keyword(s). Click  to search content files for different criteria, such as last modified date.

## Recycle Bin

Click **Recycle Bin** to view deleted content files.



- Click **Restore** to restore the selected content file to the default group.
- Click **Delete** to delete the selected content file permanently.
- Click **Delete All** or  next to **Recycle Bin** to delete all files in the recycle bin permanently.

### Note

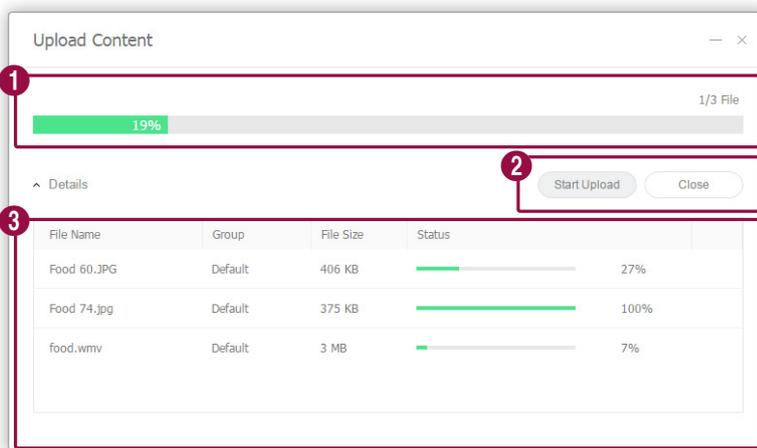
For details on deleting content, refer to [▶ Deleting content files](#)

# Adding content

## Adding local content files

Add content files saved on your computer.

- 1 Click **Upload Content > Upload Content**.
- 2 Select content files to upload, using one of the following options. Selected files are added to the upload window.
  - Option 1** Select and drag the content files from the computer to the upload window.
  - Option 2** Click on the upload window to select content files and click **Open**.
- 3 Click **Start Upload** in the upload window. Adding a content file is complete.



- 1 View upload progress.
- 2 Start or cancel uploading of content.
- 3 View detailed information of content file(s) to be uploaded.

### Note

Click **Details** to display or hide the content file information.

## Adding content files from a remote location

Add content files saved on a computer in a remote location. After a content file is added from a remote location, MagicInfo Server communicates with the source computer regularly to update the added content file.

### Adding content files via FTP

- 1 Click **Upload Content > FTP**.
- 2 Configure the FTP server to import a content file from.

<b>Content Name</b>	Enter the FTP content file name.
<b>FTP Server IP Address</b>	Enter the IP address or host name of the FTP server.
<b>FTP Port</b>	Enter the port number of the FTP server.
<b>Login ID</b>	Enter the ID used to connect to the FTP server.
<b>Password</b>	Enter the password used to connect to the FTP server.
<b>Remote Directory</b>	Enter the location of the FTP folder where the content file is located.
<b>Polling Interval</b>	Set the interval to download data from the remote directory.

- 3 After configuring the required settings, click **Save**. Adding a content file is complete.

## Adding content files via CIFS

- 1 Click **Upload Content > CIFS**.
- 2 Configure the CIFS server to import a content file from.

<b>Content Name</b>	Enter the CIFS content file name.
<b>CIFS Server IP Address</b>	Enter the IP address or host name of the CIFS server.
<b>Login ID</b>	Enter the ID used to connect to the CIFS server.
<b>Password</b>	Enter the password used to connect to the CIFS server.
<b>Remote Directory</b>	Enter the location of the CIFS folder where the content file is located.
<b>Polling Interval</b>	Set the interval to download data from the remote directory.

- 3 After configuring the required settings, click **Save**. Adding a content file is complete.

### CIFS

Common Internet File System (CIFS) is a standard protocol that requests a file or service on a computer from a remote location over the Internet. In the client-server model, the client initiates a file access or program message transfer request to the server of another computer. The server resolves the request and sends a response to the client.

## Adding streaming content files

Register details of the content you want to stream. This allows your LFD device to connect directly to the URL and play the content.

### Note

- Streaming content can be used in MagicInfo Player I and Player S3.
- Protocols compatible with MagicInfo Player I: MMS, RTP, RTSP, HTTP
- Protocols compatible with MagicInfo Player S3: MMS, RTP, HLS, HTTP

- 1 Click **Upload Content > Streaming**.
- 2 Configure information about the streaming content.

<b>Content Name</b>	Enter the name of the streaming content.
<b>Address</b>	Enter the server protocol and URL where the content is registered.

- 3 After configuring the required settings, click **Save**. Adding a content file is complete.

# Making content

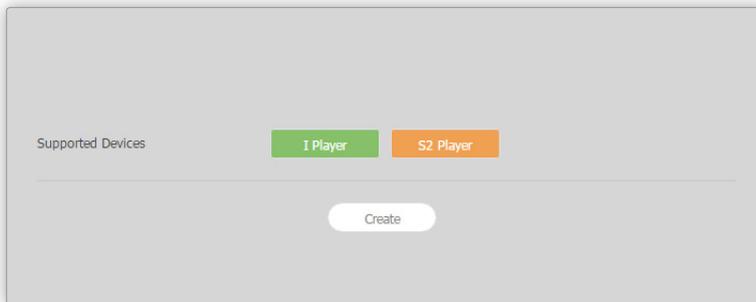
Web Author offers an easy way to create LFD content to play on a device.

Click **Create Contents** to launch Web Author.

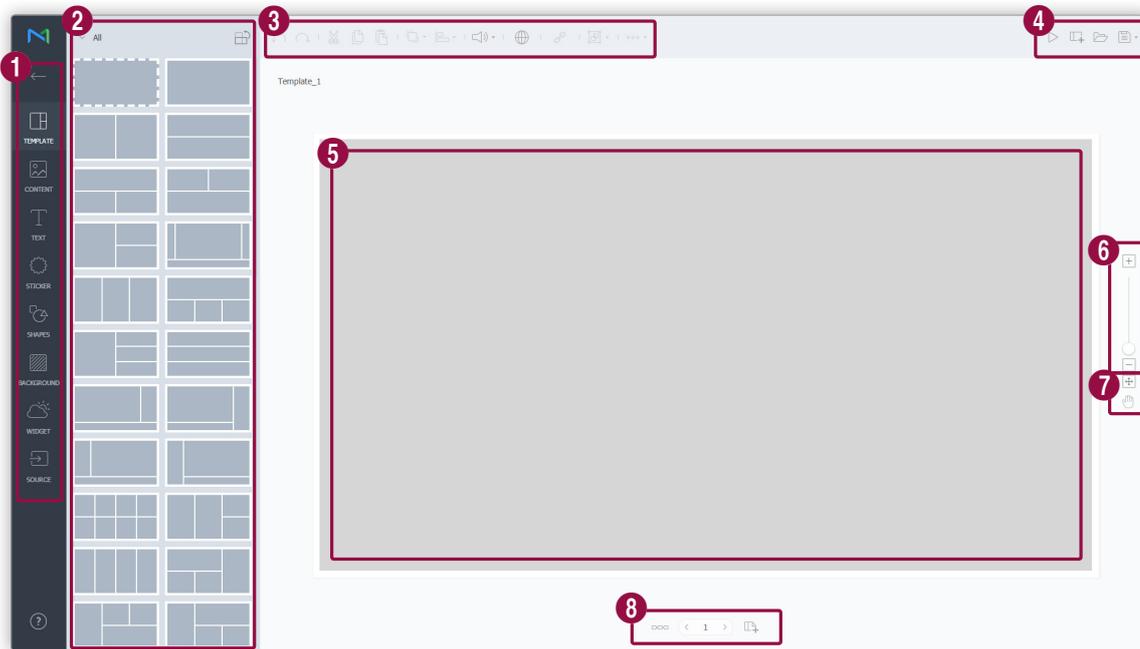
## Creating content

---

- 1 In the launched Web Author, configure initial settings and click **Create**.
- 2 Select a device type that will play content.



## About Web Author



This is the Web Author main tabs. Various elements that can be used to construct content are provided as icons.

-  / : Display or hide sub-menus under a main tab.
- : Select a template from a variety of options, such as a blank page and different split screen templates.
- : Add multimedia files (photo, video, music or document) from a computer.
- : Add text.
- : Add stickers.
- : Add shapes.
- : Set background.
- : Add widgets.
- : Add input sources.

1

2

This is the sub-menu section for the main tabs. Selecting an item in a main tab displays the item details.

3

Icons of edit tools that can be used to edit elements in a page are provided. For details on edit toolbar for elements, refer to [▶ Using the element edit toolbar](#)

---

Icons of features used to make content are provided.

- 4 : Preview created content before saving it.
- : Create a new content file.
- : Import and edit previously created content.
- : Save created content.

- 
- 5 This is the "edit content" section. View content and edit elements in the content.

- 
- 6 Zoom in/out the content view. Use the slide bar to adjust the zoom level.

- 
- 7 : Adjust the aspect ratio and position of content to fit to the window.
  - : Move content.

---

View and manage content pages being created.

- 8 : Open or close the page management window. For details on the page management window, refer to [▶ Managing pages](#)
  - : Add pages to content.
- 

## Setting templates

---

Click  from the main tabs and choose a template type.

- Click  or  to set the template to landscape or portrait mode according to the display device orientation.

## Adding elements

---

Construct content using a variety of elements.

- 1 Select an element type from the main tabs.
  - Available elements appear in the sub-menu.



Add multimedia files (photo, video, music or document).

- Click  to add multimedia files from the computer to the element list.



Add a text box and enter text.



Add stickers in different designs.



Add lines and shapes (circles, triangles or rectangles).



Add a background color or image.

- Click  to add a user-defined color or image to the element list.



Add widgets from sites that will be continually updated with information such as the time and weather.



Add an external input source that is connected to a display device.

---

- 2 Select an element from the list and drag to a desired position in the content edit section.

## Editing elements

---

### Using the element edit toolbar

Select an element from the content edit section and set detailed properties using the element edit toolbar at the top of the screen.



Undo the last command to revert back to the previous state.



Redo a command that has been undone.



Cut the selected element.



Copy the selected element.



Paste an element that has been copied or cut.



Arrange several elements in a desired order.



Align several elements based on desired alignment criteria.



View sound elements, such as audio, video and input source, added to content, and turn sound on or off for each element.



Insert web elements. In the "edit content" section, drag a rectangle to create a web element and enter a URL.



Configure DataLink settings.



Group or ungroup elements when configuring DataLink.



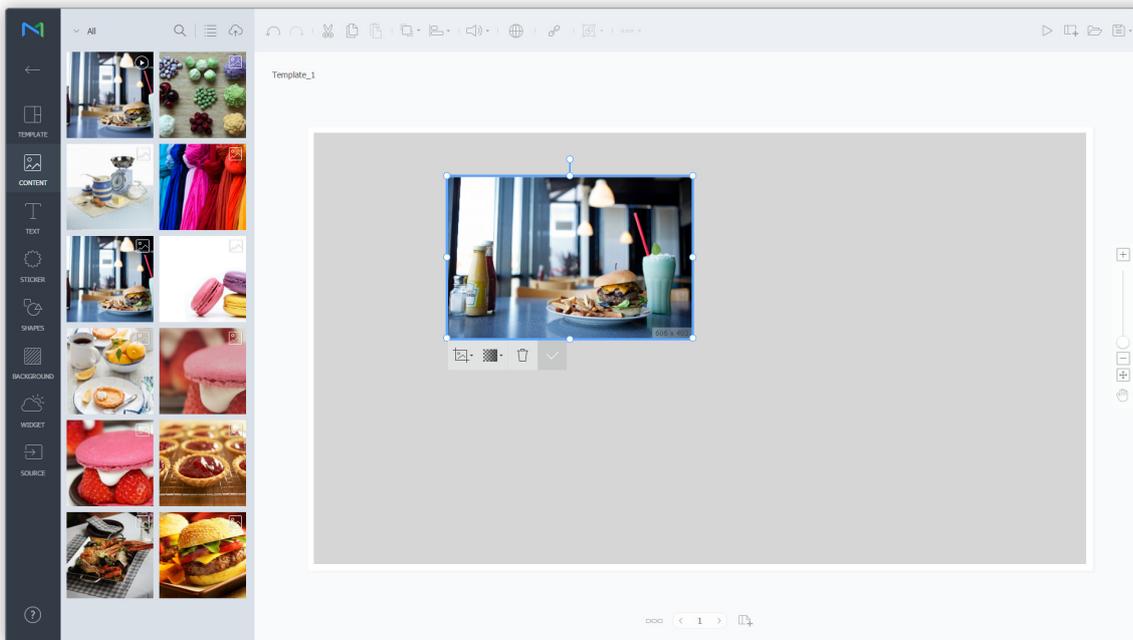
Set specific details when configuring DataLink.

## Configuring element properties

Use the element edit bar to configure detailed properties of an element. The element edit bar appears when an element is selected from the content edit section.

### Note

Displayed setting items may vary depending on the selected element type.



## Modifying elements

Customize the element size, position and other properties:

- To move an element, click inside the element and drag it to another position.
- To change the layout size for an element, click  around the element and drag to up, down, right or left.
- To rotate an element, select the element and then drag the rotation in the desired direction. The rotation axis only appears for images, texts and shapes.

## Editing pages

---

### Adding pages

Click  on the Web Author edit page.

### Managing pages

- 1 Click  on the Web Author edit page.
  - The page management window appears.
- 2 Manage the page.



View added pages as thumbnails.

- 1
  - To change the playback sequence of a page, click and drag the page to a desired position.
  - To delete a page, hover the mouse pointer over the page and click .
- 2 Add page transition effects. Select a transition effect.
- 3 Set playback time for each page. Set the time by selecting it from the list or by manually entering the time.

## Saving content

---

Save created content.

Click  and then save the content using a desired saving mode.

- To preview content before saving, click .
- Saved content is automatically added to the content list on MagicInfo Server.

## Configuring DataLink

---

Use the DataLink feature to create dynamic content containing elements that change in real time. Map general media files added to MagicInfo Server or external data collected on the DataLink server to this dynamic content.

### Note

DataLink is a web-based application that collects external data at a specified interval and sends data to MagicInfo Player so that the player can play dynamic content. Refer to the MagicInfo DataLink user guide for details on DataLink.

## Creating DataLink templates

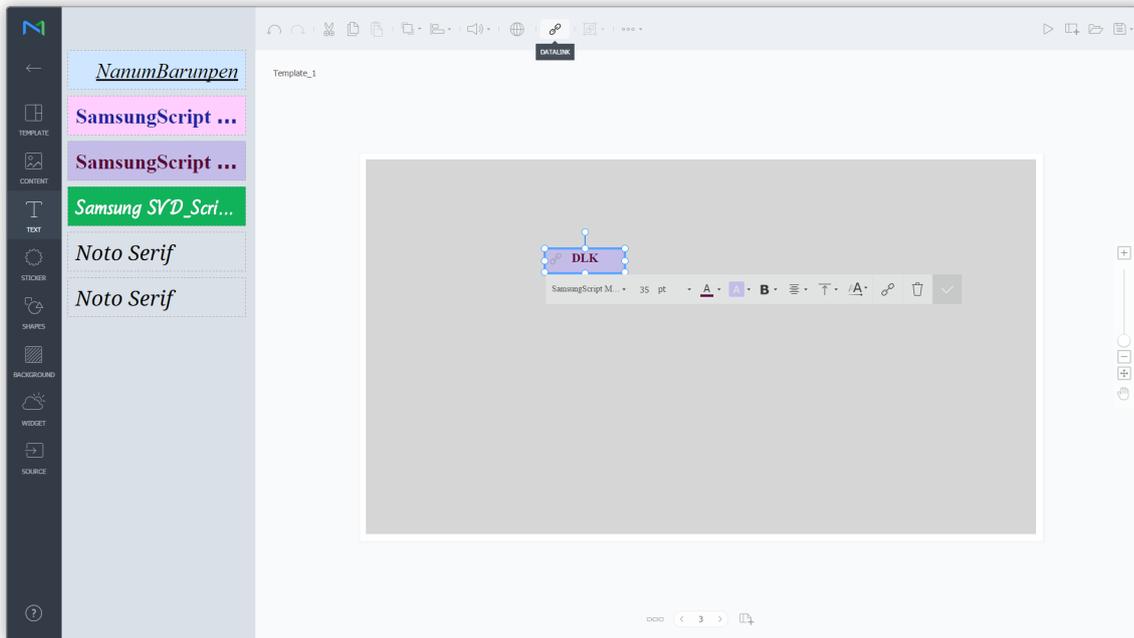
Use Web Author to create a DataLink template.

- 1 Add elements to a content page.

### Note

The DataLink feature is only compatible with image, video and text elements.

- 2 Select an element to which to apply the DataLink feature, and click  from the element editor toolbar. You can also select multiple elements at the same time.
  - The element displays the  icon.



- 3 With the element selected, configure specific settings.



Select multiple DataLink elements, and group or ungroup them.

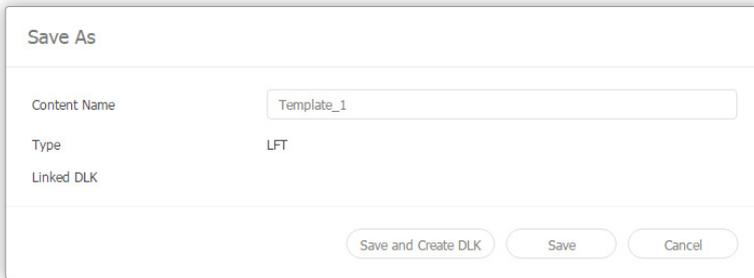
Configure DataLink setting.



- **Transition Duration:** Set intervals to update DataLink elements.
- **Sync Data:** Select whether to sync data.
- **Keep Previous Data:** Select whether to maintain previous data.

- 4 After configuring required settings, click .

- 5 Configure save details and click **Save and Create DLK**.
  - The content is saved as a DataLink template.



The 'Save As' dialog box shows the following details:

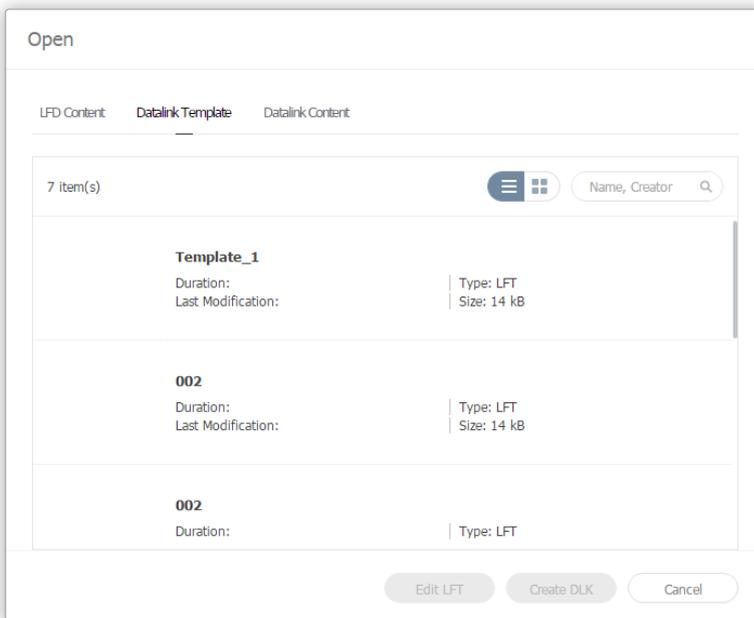
Content Name	Template_1
Type	LFT
Linked DLK	

Buttons at the bottom: Save and Create DLK, Save, Cancel.

## Editing DataLink templates

Import and edit a saved DataLink template.

- 1 Click  on the Web Author screen.
- 2 Click the **Datalink Template** tab.



The 'Open' dialog box shows the following details:

7 item(s) | Name, Creator

Item Name	Duration	Last Modification	Type	Size
Template_1			LFT	14 kB
002			LFT	14 kB
002			LFT	

Buttons at the bottom: Edit LFT, Create DLK, Cancel.

- 3 Select a template and click **Edit LFT**.
- 4 Edit the DataLink template, using the same method to create a DataLink template.

## Creating DLK content files

Use a DataLink template to create DLK content to distribute to MagicInfo Player. DLK content can be created either by adding a media file or text or by importing saved DataLink Server settings.

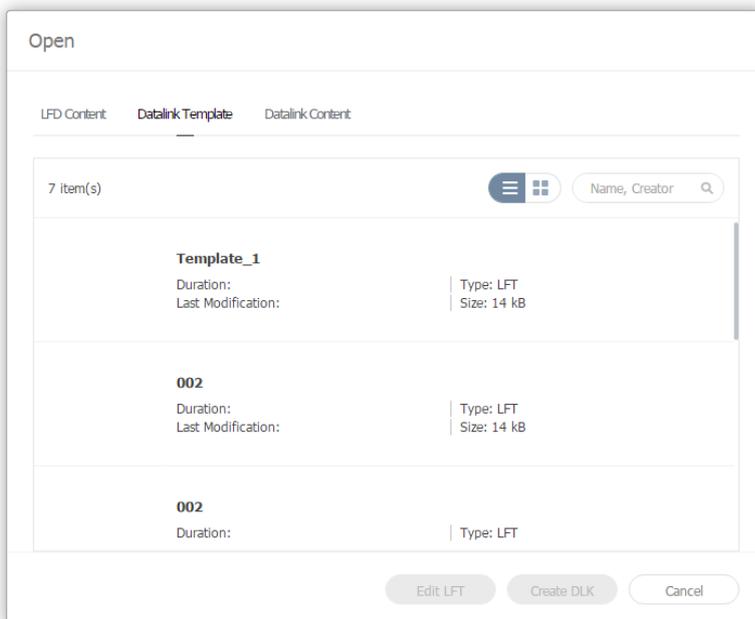
### Importing DataLink templates

Import a DataLink template in order to create DLK content.

#### Note

For details on how to create DataLink templates, refer to [Creating DataLink templates](#)

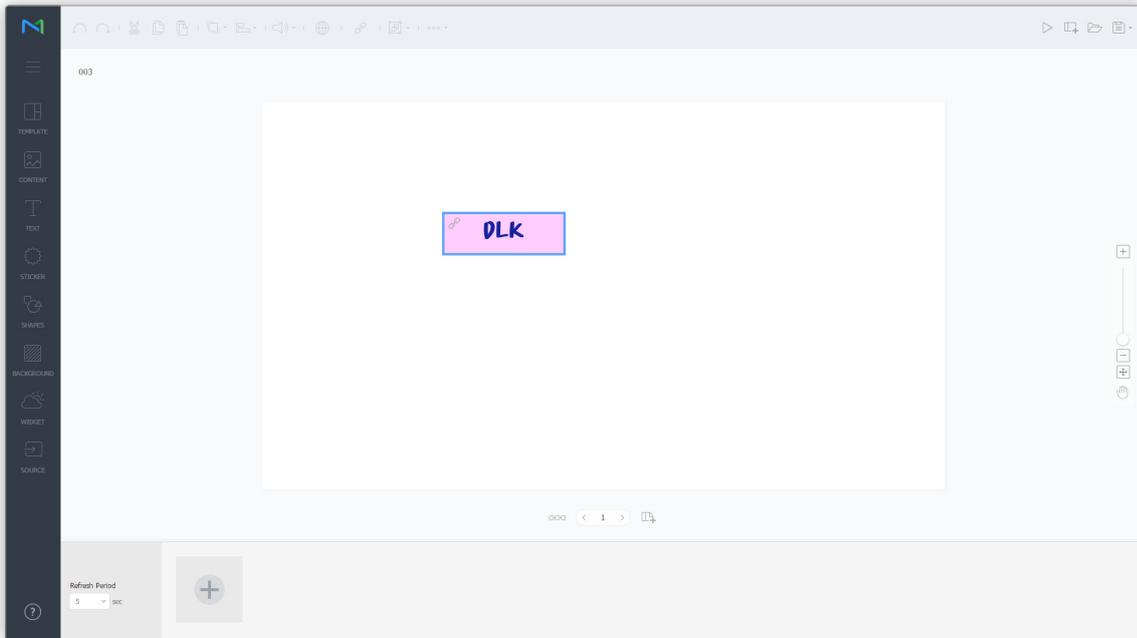
- 1 Click  on the Web Author screen.
- 2 Click the **Datalink Template** tab.



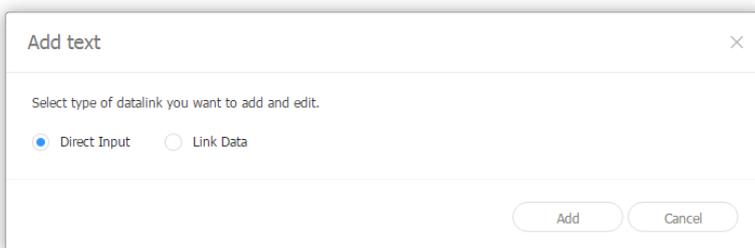
- 3 Select a template and click **Create DLK**.
  - The DLK content creation page appears.

## Creating DLK content by manually entering data

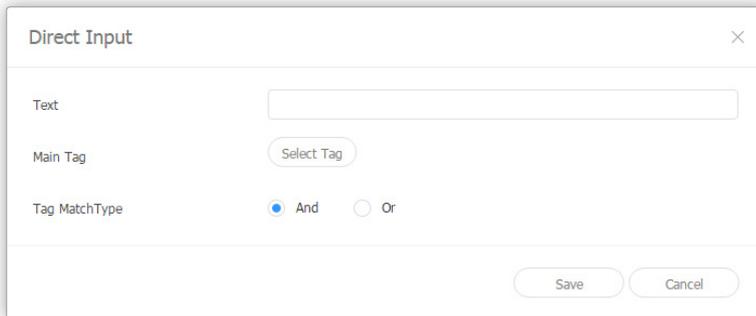
- 1 Import a DataLink template.
- 2 Select a DataLink element.
  - The DataLink management window appears.



- 3 To add data, click .
- 4 Select **Direct Input** and click **Add**.



5 Enter details and click **Save**.



The image shows a 'Direct Input' dialog box with the following fields and controls:

- Text:** A text input field.
- Main Tag:** A button labeled 'Select Tag'.
- Tag MatchType:** Two radio buttons, 'And' (selected) and 'Or'.
- Buttons:** 'Save' and 'Cancel' buttons at the bottom right.

<b>Text</b>	Enter text.
<b>Main Tag</b>	<p>Add a tag to the text, if required. Select a tag from the tag list and click <b>Save</b>. It is possible to select more than one tag.</p> <p> <b>Note</b></p> <ul style="list-style-type: none"> <li>• A content file with a tag plays only on a device that has the same tag.</li> <li>• To assign a tag to text, first make sure the tag is saved on the MagicInfo Server. For details on adding tags, refer to <a href="#">▶ Adding Tags</a></li> <li>• For details on using tags, refer to <a href="#">▶ DLK Content Tags</a></li> </ul>
<b>Tag MatchType</b>	Set matching conditions if more than one tag is assigned.

6 After configuring required settings, click .

7 Configure save details and click **Save**.

- The content is saved as DLK content.

## Creating a DLK file in conjunction with DataLink server

Create a DLK content file by mapping data, saved in DataLink Server, to a DLK template.

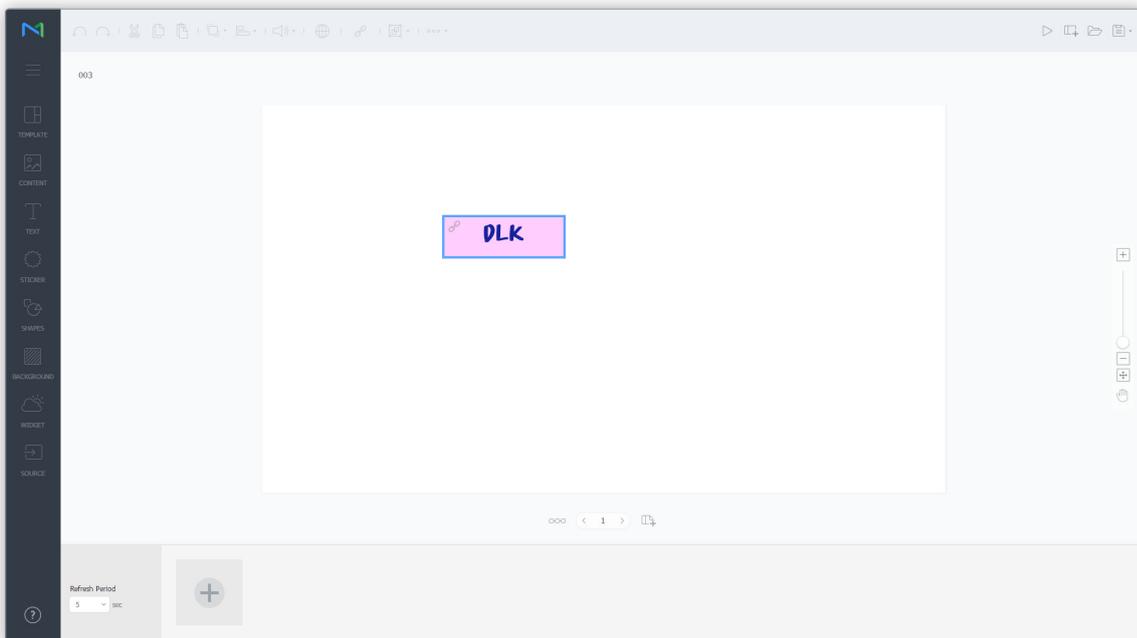
### Creating a DLK file in conjunction with DataLink Server

To create a DLK content file in conjunction with DataLink Server, make sure to connect MagicInfo Server to DataLink Server. For details, refer to [DataLink server management](#)

### Media slide elements

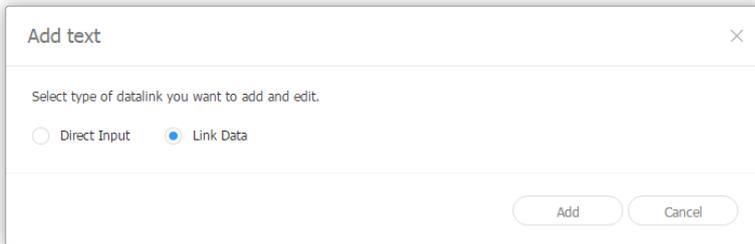
It is not possible to map DataLink Server data to media slide elements.

- 1 Import a DataLink template.
- 2 Select a DataLink element.
  - The DataLink management window appears.

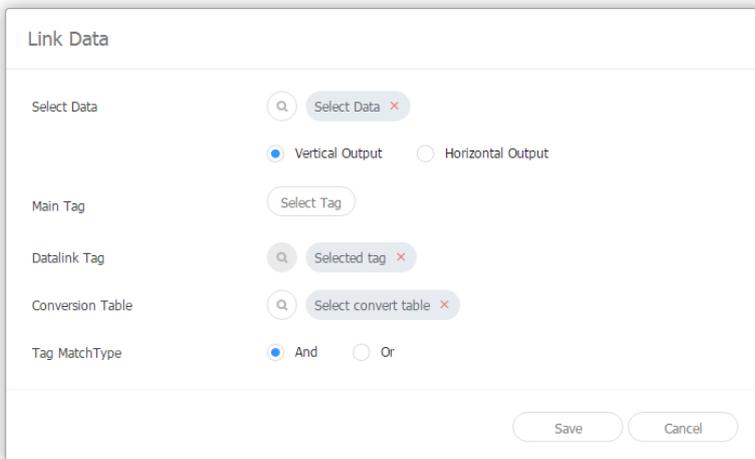


3 To add data, click .

4 Select **Link Data** and click **Add**.



5 Enter details and click **Save**.



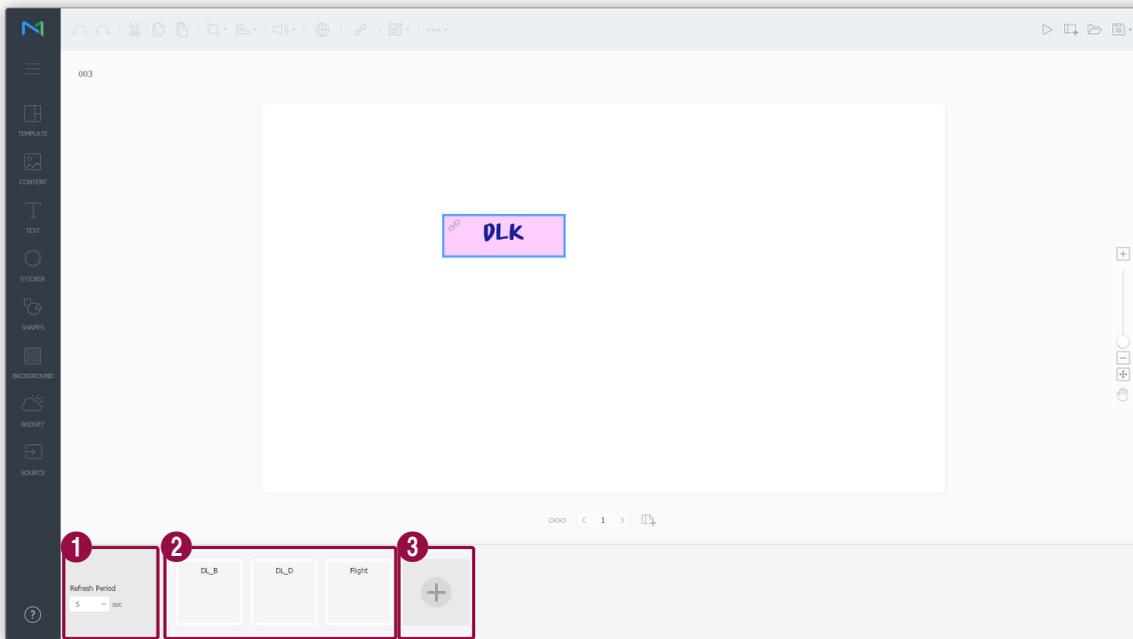
<b>Select Data</b>	Select a DataLink table saved in DataLink Server. In the DataLink table, select data items to use and click <b>Save</b> .
<b>Main Tag</b>	<p>Add tags to the data items, if required. Select a tag from the tag list and click <b>Save</b>. It is possible to select more than one tag.</p> <p> <b>Note</b></p> <ul style="list-style-type: none"> <li>• A content file with a tag plays only on a device that has the same tag.</li> <li>• To assign tags to data items, first make sure the tags are saved on the MagicInfo Server. For details on adding tags, refer to <a href="#">▶ Adding Tags</a></li> </ul>

<b>DataLink tags</b>	Add DataLink tags. To add a DataLink tag, select a column from the DataLink table and click <b>Save</b> . For details on using tags, refer to <a href="#">▶ DLK Content Tags</a>
<b>Conversion Table</b>	Using a data substitution table, replace any data in the DataLink table with text, images or videos. In the Select Conversion Table window, select a target for substitution and click <b>Save</b> .
<b>Tag MatchType</b>	Set matching conditions if more than one tag is assigned.

- 6 After configuring required settings, click .
- 7 Configure save details and click **Save**.
  - The content is saved as DLK content.

## Managing DataLink

- 1 Import a DataLink template or DLK content.
- 2 Select a DataLink element.
  - The DataLink management window appears.
- 3 Manage DataLink, using the following menu items:



- 1 Set intervals to update DataLink elements.

View added data.

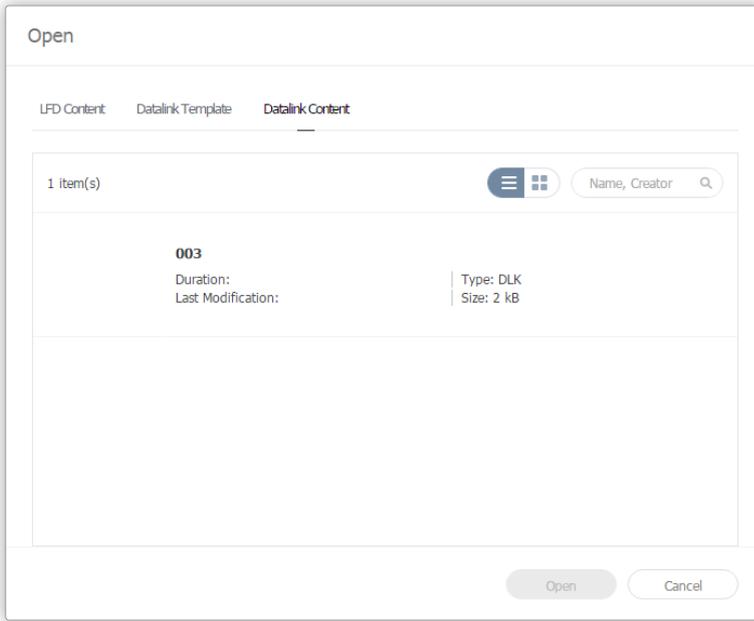
- 2
  - To delete added data, hover the mouse pointer over the data item to delete and click .
  - To edit added data, hover the mouse pointer over the data item to edit and click .

- 3 Add data.

## Editing DLK content

Import and edit saved DLK content.

- 1 Click  on the Web Author screen.
- 2 Click the **Datalink Content** tab.



- 3 Select a content file and click **Open**.
- 4 Edit the DLK content, using the same method to create DLK content.

# Managing content

## Approving content

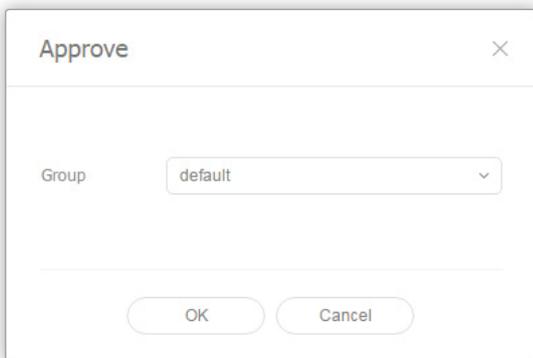
---

Content added or created by users without proper privileges can be approved or disapproved for use on MagicInfo Server.

### Note

- To use the content approval function, the function must be turned on on MagicInfo Server. For details, refer to [▶ Setting MagicInfo Server](#)
- With the content approval feature disabled, content added or created by MagicInfo Server users will be instantly distributed without an approval step.
- Users authorized to manage content can only approve content. Content added by users authorized to manage content is automatically approved and distributed. For details, refer to [▶ Default user role types](#)

- 1 Click **Unapproved**.
  - The list of content awaiting for approval appears.
- 2 Select content and click **Content Approval**.
- 3 In the approval window, select the group to assign the content file to and click **OK**.
  - The content is distributed and can be used on MagicInfo Server.



### Note

- To disapprove of using content, select the content from the list and click **Reject**.
- To delete content from the list, click **Delete**. Deleted content is moved to Recycle Bin.

## Viewing content details

View and edit content file information.

Click the name of a content file from the list.

The screenshot displays the 'food' content file details. On the left, there is a preview image of a burger and drink, with a 'Preview' button (1) below it. On the right, there are two tabs: 'Details' (2) and 'Version' (3). The 'Details' tab is active, showing the following information:

- Content Name: food
- Content Type: MOVIE
- Supported Devices: L53 S2
- Resolution: 800 x 600
- Playing Time: 00:00:40
- Date Modified: 2016-03-08 01:53:52.445
- Version: 1
- Creator: org005admin
- Group: default
- Share:  Yes  No

At the bottom right, there are 'Save' and 'Cancel' buttons (4).

1 Play content directly from MagicInfo Server without deploying it to a device.

2 View detailed information of a content file. Edit content settings, such as the content name, group and sharing mode. For details, refer to [► Changing content file groups](#)

View the version of content and edit content.

- 3
- To change a content file, click **Update File**. Updating a content file converts the content version.
  - Click  next to a version number to change the content to the clicked version. Use file versions to manage content with ease.

4

- **Save:** Save changes made in the details window.
- **Close:** Close the details window.

 **Note**

- Only allowed files for sharing can be shared with other users within the same organization.
- Up to five content versions can be saved. Saving new versions delete older versions. The number of versions to save can be set by editing the file "\conf\config.properties" in the MagicInfo Server installation folder. MagicInfo Server will need to restart to apply the change (e.g. content.version\_limit\_count = 5).

## Deleting content files

Delete content files from the content file list if required.

Select a content file and click **Delete**. The selected file is moved to Recycle Bin. This file can be restored for use if necessary.

- If you select a file being used by another user or a file included in a playlist or schedule, a confirmation window appears. The window shows which playlist or schedule is using the content.
- Click **Yes** in the confirmation window to delete the content file. The file is automatically removed from the playlist or schedule it belongs to.

## Downloading content files

Download content files to your computer. Select a file from the content file list and click **Download**.

## Adding content files to a playlist

---

Add content files to a playlist.

- 1 Select a file from the content file list and click **Add to Playlist**.
- 2 In the list window, select the playlist and click **Add**.
  - The content file is added to the selected playlist.
  - The list of playlists only displays playlists created under your account.
  - To create and add a new playlist, click **Add to New Playlist**. For details on how to create playlists, refer to [▶ Creating playlists](#)

## Changing content file groups

---

Use the content file list to change the group of a content file.



You can only change groups for content that you have added.

Change a content group, using one of the following options:

- Option 1** Select a content file and click **Move**. Use the group selection page to change the group and click **Save**.
- Option 2** Click on a content file name. Use the content details window to change the group and click **Save**.

## Exporting a list of content files

---

Export a list of content files as an Excel or PDF file. To export a content file list, click **Export** and select a file type.

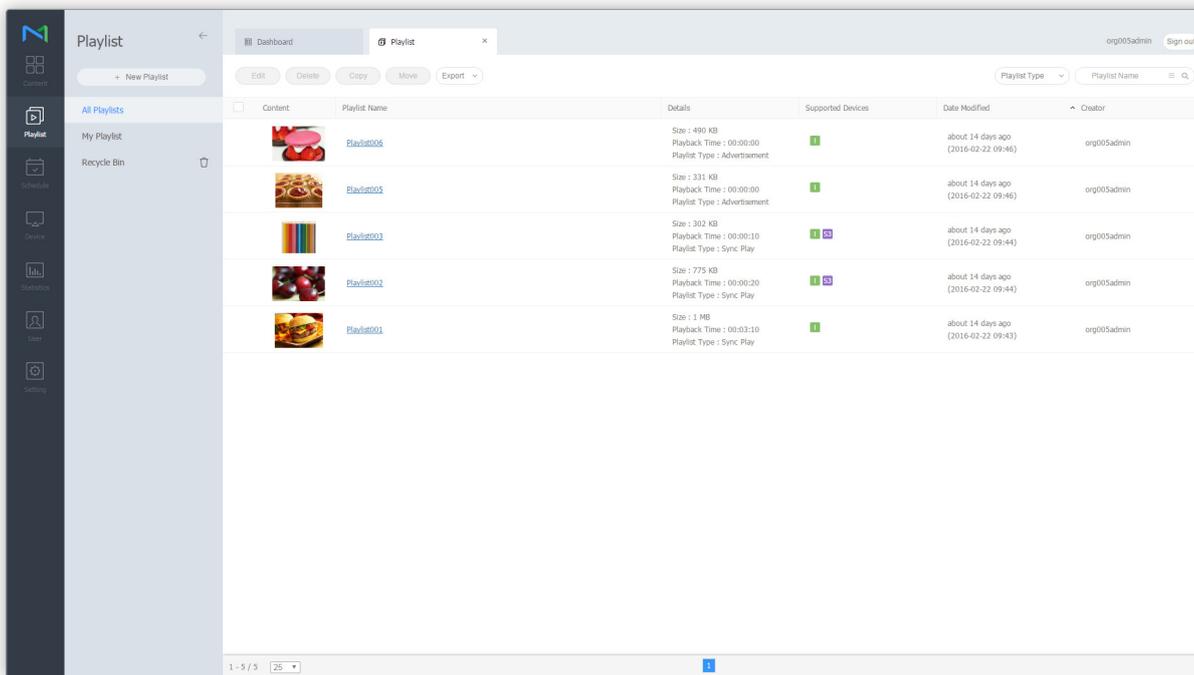
## Playlist menu

Create a playlist containing multiple files for playback in various modes. A playlist is read as a single content file. Playlists can be added to and managed on MagicInfo Server.

Click  on the main menu bar.

 **Note**

- MagicInfo Server administrators (general administrator and organization administrators) can assign a role to each user. Available MagicInfo Server functions depend on the user role. For details on user roles, refer to [▶ Changing a user role](#)
- This chapter assumes that you are signed in with organization administrator privileges.



## Viewing playlists

---

A playlist is read as a single content file. As a result, the same group policies for content files are applicable to playlists.

For details, refer to [▶ Viewing content](#)

### Playlist view menu

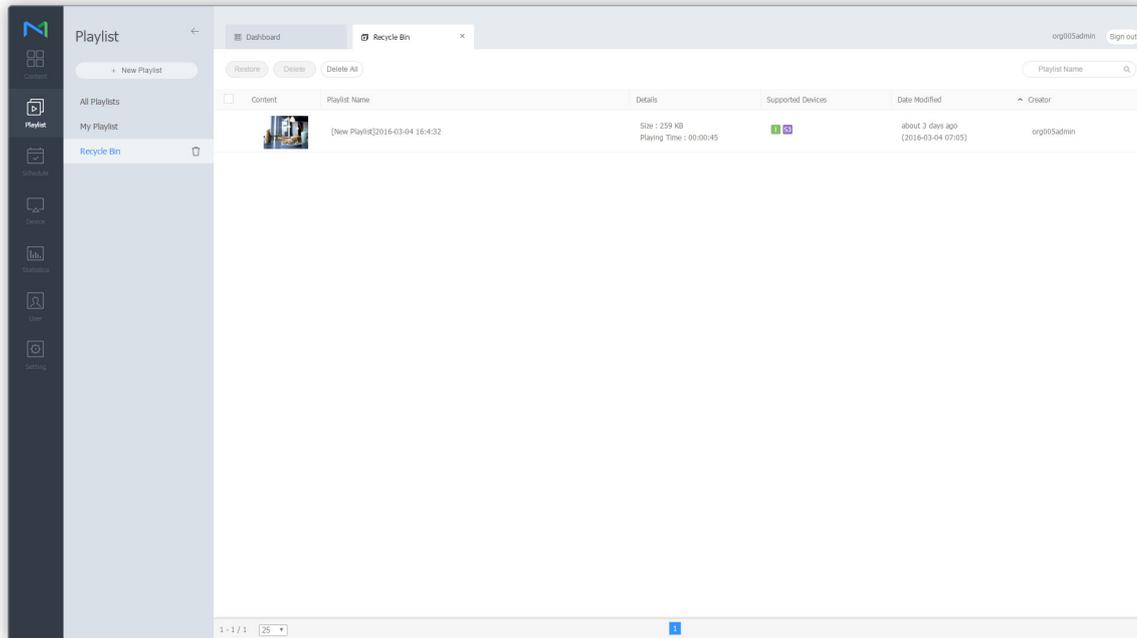
View specific types of playlists or search for a specific playlist.



- 
- 1 Click  and select the checkboxes of playlist types to view. The screen displays only the selected types of playlists.
  - 2 Search playlists with keyword(s). Click  to search playlists for different criteria, such as last modified date.
-

## Recycle Bin

Click **Recycle Bin** to view deleted playlists.



- Click **Restore** to restore the selected playlist to the default group.
- Click **Delete** to delete the selected playlist permanently.
- Click **Delete All** or  next to **Recycle Bin** to permanently delete all playlists in the recycle bin.

### Note

For details on deleting playlists, refer to [▶ Deleting playlists](#)

# Creating playlists

Add content files saved on MagicInfo Server to a playlist and play them on a device.

## Creating common playlists

- 1 Click **New Playlist**.
- 2 Configure initial playlist settings and click **Create**.

### Supported Devices

Select a device type that will play the playlist.

#### Note

- Common playlists can be played on all device types.
- Higher-performance devices than the selected device are automatically included in the selection. For example, if you select S2 Player, higher versions, such as S3 Player, i Player, are automatically selected.
- Supported Devices only displays device types for the devices that have currently licenses registered on MagicInfo Server.

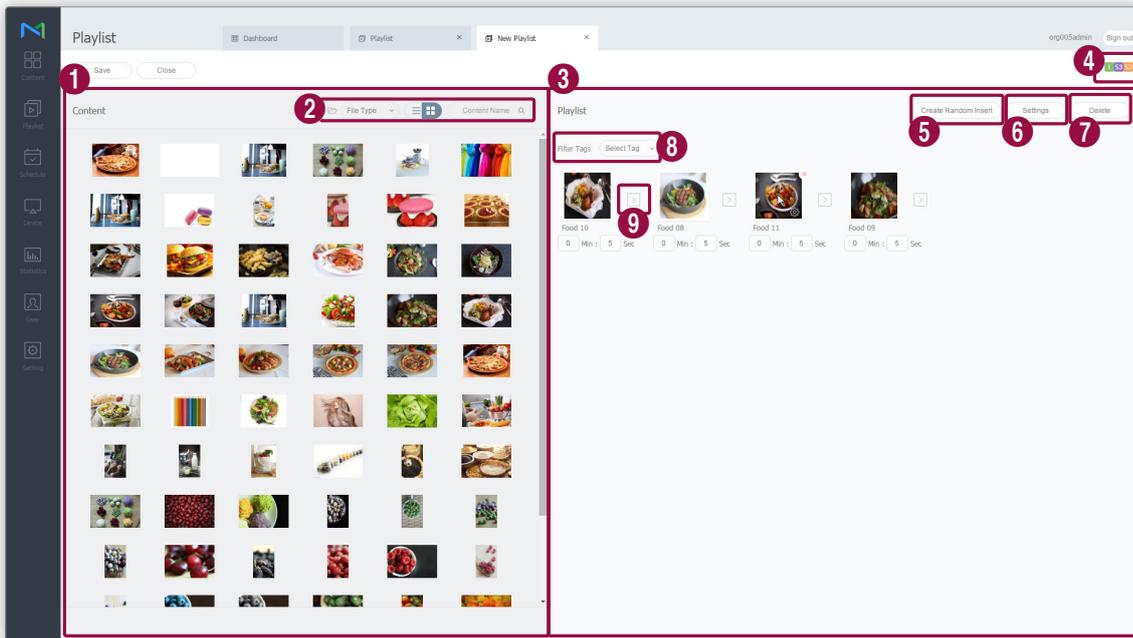
### Playlist Type

Select a playlist type. Select **General**.

#### Note

- Available playlist types may vary, depending on the device type selected in the previous step.
- For details on each playlist type, hover the mouse pointer over  next to Playlist Type.

3 Configure detailed playlist settings and click **Save**.



Content files are displayed as a list. If you click content, the content is added to the Playlist box.

**1** **Note**

The same content can be added multiple times.

Change the content view mode or search for a content file.

- : View content by the group.
- **File Type:** Click and select the checkboxes of desired file types. The screen displays only the selected types of files.
- : Change the content view mode. Select for list view or select for thumbnail view.
- **Content Name:** Search content files by name.

**3** View content files included in the playlist.

**4** View device types that can play the playlist currently being created.

Insert additional content files for random playback in the playlist.

Click the menu to create a list of content files to insert in the playlist.

- A list of additional content files in a playlist can be created using the same method as creating a playlist.
- Use the settings window to set the playback frequency for additional content files.
- To insert additional content files for random playback in a playlist, the device type must be Player I or Player S3 and the playlist type must be General.

Set playback options for content files included in the playlist. Select at least one content file from the playlist and click this menu.

 **Note**

Alternatively, hover the mouse pointer over a content file in the playlist box to display . Click  to set the content file playback options.

- **Duration:** Set the playback duration for a content file.

 **Note**

- It is not possible to change the playback duration for content files that have a pre-defined duration, such as video files.
- The option to change the playback duration can be found under a content file name in the playlist box. Use the option to change the playback duration for a content file.

6

- **Playback Date:** Set the period to play content. The content only plays for a specified period. To loop playback of content, select **Everyday**.
- **Tag:** Assign different tags to content files. This allows you to play content on the desired device. For details on playlist tags, refer to [▶ Playlist tags](#)

 **Note**

You can create new tags. Click **Add Tag** in the tag settings window. For details on creating tags, refer to [▶ Adding Tags](#)

- **Tag MatchType:** Assign multiple tags to a content file and play the file according to matching tags. Select **And** to play content only on devices that have all matching tags or select **Or** to play content on devices that have at least one matching tag. For details on using multiple tags, refer to [▶ Using multiple tags](#)

Delete content files from a playlist. Select at least one content file and click this menu.

7

 **Note**

Alternatively, hover the mouse pointer over a content file in the playlist box to display . Click  to delete the file.

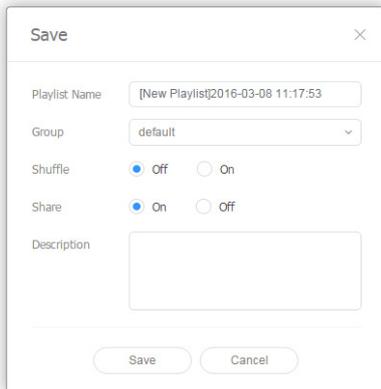
8

Sort files that have specific tags in the playlist. Click  and select the checkboxes of desired tags.

9

Add effects to the beginning and end of content files in the playlist. Click  and select effects from the effect list.

- 4 Configure playlist settings, such as the playlist name, and click **Save**. Creating a playlist is complete.



The screenshot shows a 'Save' dialog box with the following fields and options:

- Playlist Name:** A text input field containing '[New Playlist]2016-03-08 11:17:53'.
- Group:** A dropdown menu with 'default' selected.
- Shuffle:** Radio buttons for 'Off' (selected) and 'On'.
- Share:** Radio buttons for 'On' (selected) and 'Off'.
- Description:** A large empty text area.
- Buttons:** 'Save' and 'Cancel' buttons at the bottom.

<b>Playlist Name</b>	Enter a playlist name.
<b>Group</b>	Select a group for the playlist.
<b>Shuffle</b>	Turn random playback mode on or off.
<b>Share</b>	Choose whether to share the playlist.
<b>Description</b>	Enter a description of the playlist.

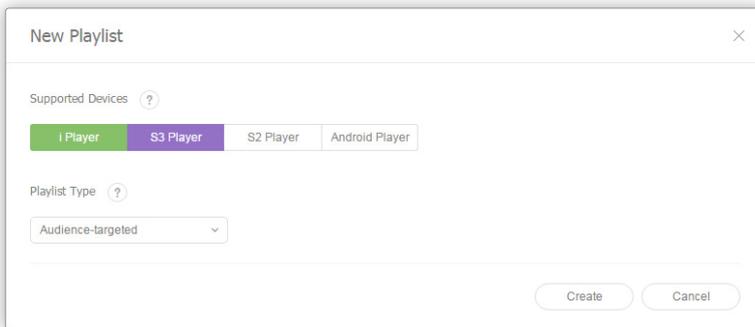
## Creating audience-specific playlists

Create a playlist for a specific audience to play content on a device that has an audience recognition function.

### Note

The audience recognition function allows the device camera to detect people in the vicinity and play specified content.

- 1 Click **New Playlist**.
- 2 Configure initial playlist settings and click **Create**.



### Supported Devices

Select a device type that will play the playlist.

#### Note

- Audience specific playlists can be created when i Player, S3 Player is selected.
- Higher-performance devices than the selected device are automatically included in the selection. For example, if you select S2 Player, higher versions, such as S3 Player, i Player, are automatically selected.
- Supported Devices only displays device types for the devices that have currently licenses registered on MagicInfo Server.

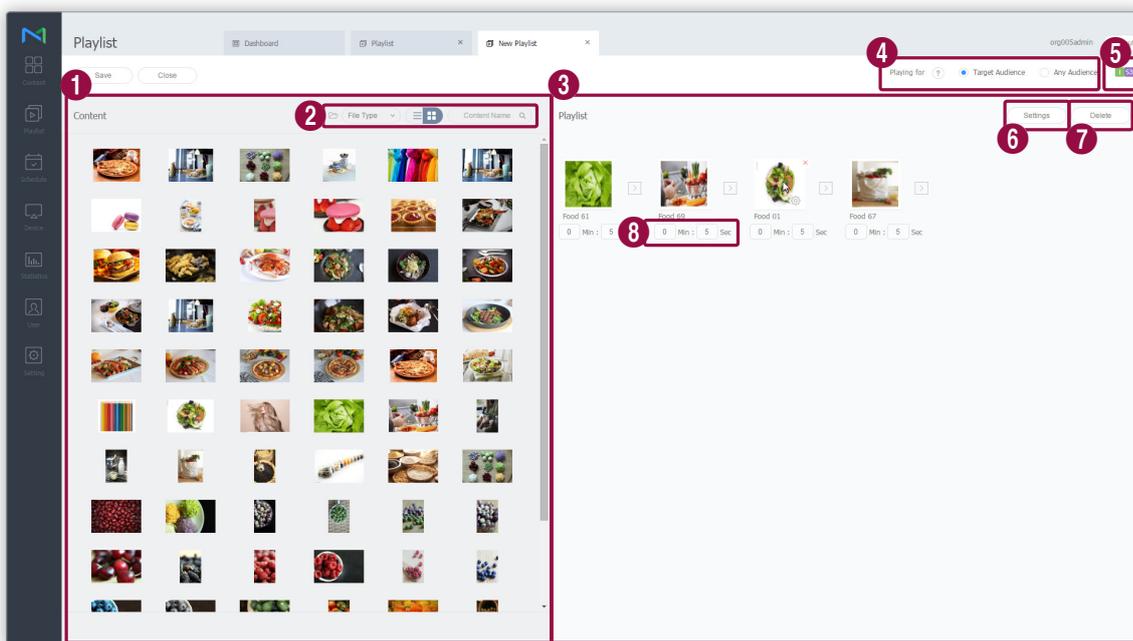
### Playlist Type

Select a playlist type. Select **Audience-targeted**.

#### Note

- Available playlist types may vary, depending on the device type selected in the previous step.
- For details on each playlist type, hover the mouse pointer over  next to Playlist Type.

### 3 Configure detailed playlist settings and click **Save**.



Content files are displayed as a list. If you click content, the content is added to the Playlist box.

#### 1 Note

The same content can be added multiple times.

Change the content view mode or search for a content file.

-  : View content by the group.
- **File Type:** Click  and select the checkboxes of desired file types. The screen displays only the selected types of files.
-   : Change the content view mode. Select  for list view or select  for thumbnail view.
- Content Name: Search content files by name.

#### 3 View content files included in the playlist.

Select a target audience range for playback of audience-specific content.

- **Target Audience:** Play the content if a specific audience type is detected.
- **Any Audience:** Play the content if any audience is detected, regardless of audience type.

#### 5 View device types that can play the playlist currently being created.

Set playback options for audience specific content. Select at least one content file from the playlist and click this menu.

 **Note**

- Alternatively, hover the mouse pointer over a content file in the playlist box to display . Click  to set the content file playback options.
- **Playback Date:** Set the period to play content. The content only plays for a specified period. To loop playback of content, select **Everyday**.
- **Audience Measurement:** Available menu items vary, depending on the selected target audience range.
  - If Target Audience is selected for Playing for, you can let the device play specified content when a specific gender audience is detected. Select Target Audience from the dropdown list and specify a gender for the target audience for the content. For example, select content A and B and set the gender to male. The device plays content A and B each time a male audience is detected. When female audiences are detected, the device plays content files in the playlist sequentially.

6

 **Note**

- Content specified for a male audience will be marked with  and a female audience will be marked with .
- If Any Audience is selected for Playing for, you can let the device play specified content when any audience is detected. Select Any Audience from the dropdown list. If no audience is detected, the device plays content files in the playlist sequentially.

 **Note**

Content that has the target audience set to any audience is indicated by .

Delete content files from a playlist. Select at least one content file and click this menu.

7

 **Note**

Alternatively, hover the mouse pointer over a content file in the playlist box to display . Click  to delete the file.

View the playback duration for a content file. You can change the duration if necessary.

8

 **Note**

It is not possible to change the playback duration for content files that have a pre-defined duration, such as video files.

- 4 Configure playlist settings, such as the playlist name, and click **Save**. Creating a playlist is complete.

<b>Playlist Name</b>	Enter a playlist name.
<b>Group</b>	Select a group for the playlist.
<b>Share</b>	Choose whether to share the playlist.
<b>Direct Play</b>	Specify when to start playback. To play audience-specific content immediately after the target audience is recognized, select <b>On</b> . To play audience-specific content after the current content finishes playback, select <b>Off</b> .
<b>Description</b>	Enter a description of the playlist.

## Creating synced playlists

Create a synced playlist that starts playback of different content files from multiple playlists at the same time. This allows different devices to play different content simultaneously.

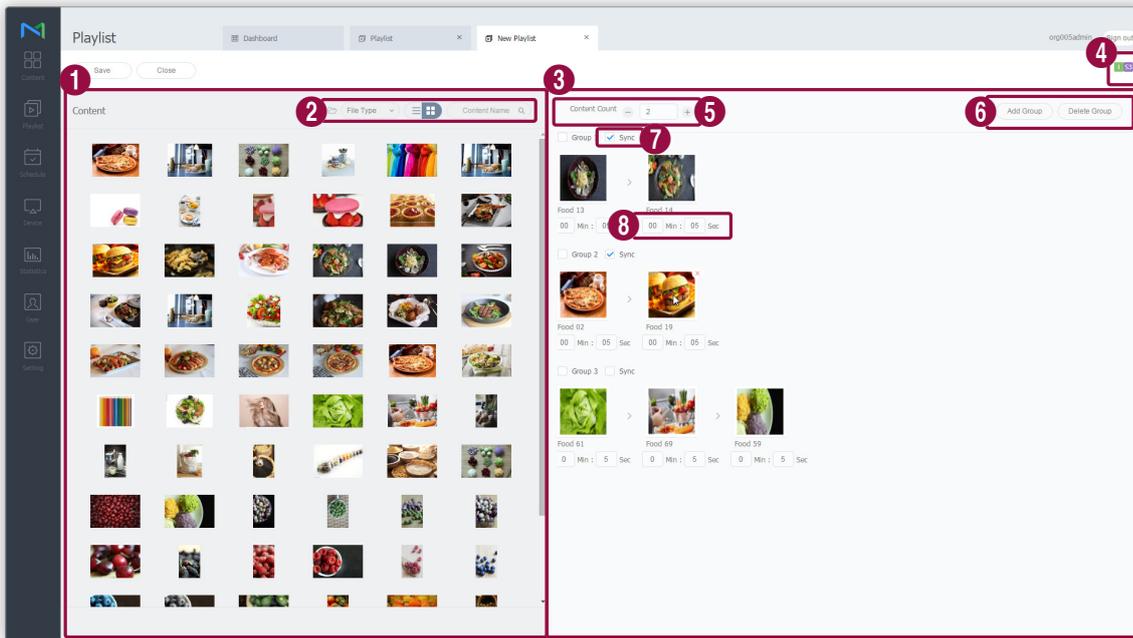
### Note

To play a synced playlist on devices, make sure to create a synced playback schedule. For details, refer to [▶ Creating synced playback schedules](#)

- 1 Click **New Playlist**.
- 2 Configure initial playlist settings and click **Create**.

<b>Supported Devices</b>	<p>Select a device type that will play the playlist.</p> <p><b>Note</b></p> <ul style="list-style-type: none"> <li>• Synced playlists can be created when i Player, S3 Player is selected.</li> <li>• Higher-performance devices than the selected device are automatically included in the selection. For example, if you select S2 Player, higher versions, such as S3 Player, i Player, are automatically selected.</li> <li>• Supported Devices only displays device types for the devices that have currently licenses registered on MagicInfo Server.</li> </ul>
<b>Playlist Type</b>	<p>Select a playlist type. Select <b>Sync Play</b>.</p> <p><b>Note</b></p> <ul style="list-style-type: none"> <li>• Available playlist types may vary, depending on the device type selected in the previous step.</li> <li>• For details on each playlist type, hover the mouse pointer over  next to Playlist Type.</li> </ul>

3 Configure detailed playlist settings and click **Save**.



Content files are displayed as a list. If you click content, the content is added to the Playlist box.

**1** **Note**

The same content can be added multiple times.

Change the content view mode or search for a content file.

- : View content by the group.
- **File Type:** Click and select the checkboxes of desired file types. The screen displays only the selected types of files.
- : Change the content view mode. Select for list view or select for thumbnail view.
- **Content Name:** Search content files by name.

**3** View content files included in each playlist group.

**4** View device types that can play the playlist currently being created.

---

Set the number of content files to apply to each playlist group during synced playback.

5



- Synced playlists must consist of the same number of content files.
- Playlist groups that are not synced can consist of any number of content files.

---

Change playlist group configuration.

6



- **Add Group:** Add playlist groups.
- **Delete Group:** Delete playlist groups. Select at least one group to delete and click this menu.

Alternatively, hover the mouse pointer over a content file in the playlist box to display . Click  to delete the file.

---

Select checkboxes of playlist groups to which to apply synced playback.

Playlist groups with Sync deselected are excluded from synced playback. You can customize the number of content files included in a playlist and the content playback duration.

7



To use synced playback, configure the following settings:

- Assign tags to playlist groups and devices to which to apply synced playback. For example, assign the same tag to playlist group 1 and device A. Make sure that the playlist and device use only the specified single tag. Assigning a tag for synced playback can be done when creating a synced playback schedule.
- Assign the same types of content files to playlist groups to which to synced playback. For example, if the first content file in playlist group 1 is an image file, the first content file in playlist group 2 must also be an image file.

---

View the playback duration for a content file. You can change the duration if necessary.

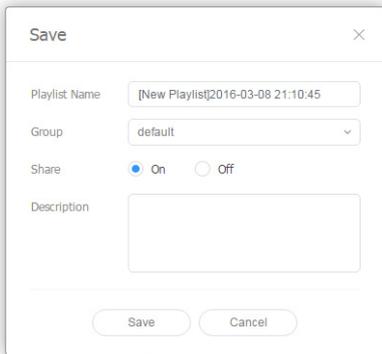
Content files that are included in playlists groups with Sync selected and that have the same playback order must have the same playback duration. For example, if the duration for the first content file in one of the playlist groups to which to apply synced playback is set to 30 seconds, the duration for the first content files in the other playlist groups must also be set to 30 seconds.

8



It is not possible to change the playback duration for content files that have a pre-defined duration, such as video files.

- 4 Configure playlist settings, such as the playlist name, and click **Save**. Creating a playlist is complete.



The screenshot shows a 'Save' dialog box with the following fields and options:

- Playlist Name:** A text input field containing '[New Playlist]2016-03-08 21:10:45'.
- Group:** A dropdown menu with 'default' selected.
- Share:** Radio buttons for 'On' (selected) and 'Off'.
- Description:** A large empty text area.
- Buttons:** 'Save' and 'Cancel' buttons at the bottom.

<b>Playlist Name</b>	Enter a playlist name.
<b>Group</b>	Select a group for the playlist.
<b>Share</b>	Choose whether to share the playlist.
<b>Description</b>	Enter a description of the playlist.

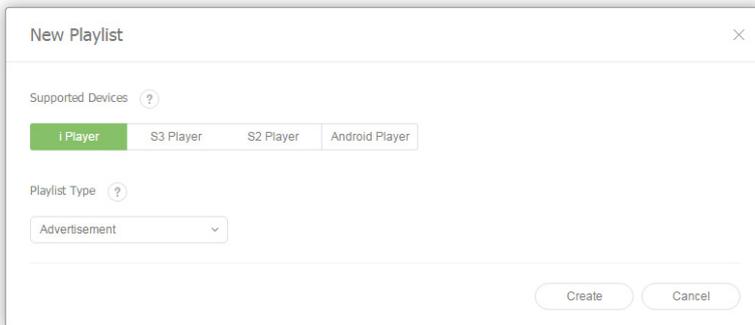
## Creating ad playlists

MagicInfo Server offers an option to map multiple playlists to devices to play each playlist on a specific date or time slot. To use this ad scheduling feature, you will need to create an ad playlist first.

### Note

For details on ad scheduling, refer to [▶ Creating ad schedules](#)

- 1 Click **New Playlist**.
- 2 Configure initial playlist settings and click **Create**.



### Supported Devices

Select a device type that will play the playlist.

### Note

- An ad playlist can be created when i Player is selected.
- Higher-performance devices than the selected device are automatically included in the selection. For example, if you select S2 Player, higher versions, such as S3 Player, i Player, are automatically selected.
- Supported Devices only displays device types for the devices that have currently licenses registered on MagicInfo Server.

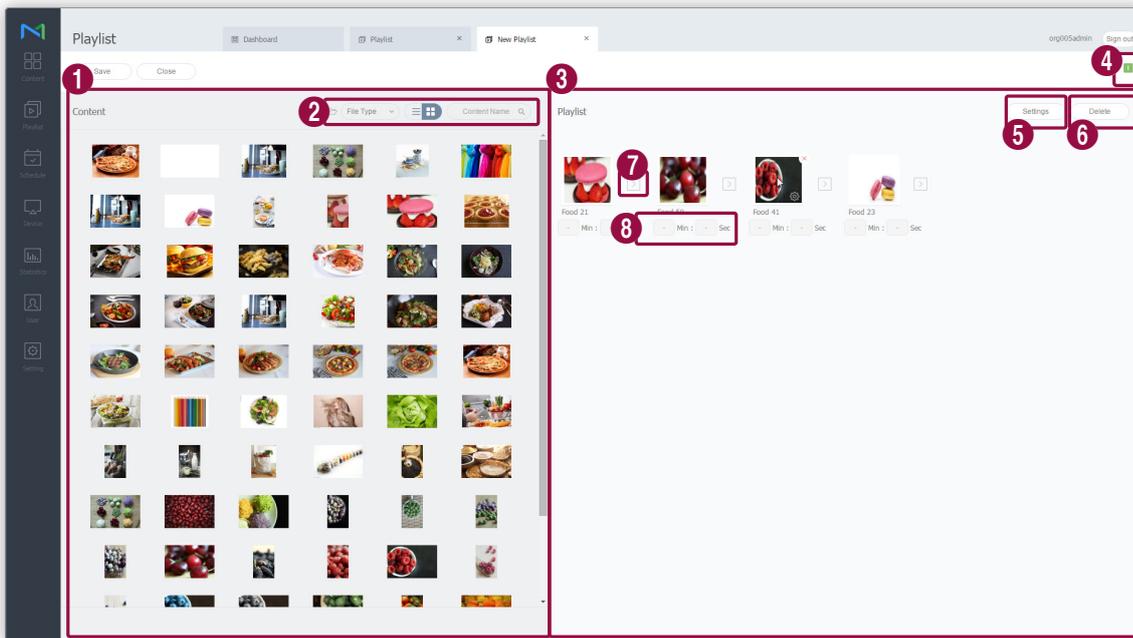
**Playlist Type**

Select a playlist type. Select **Advertisement**.

 **Note**

- Available playlist types may vary, depending on the device type selected in the previous step.
- For details on each playlist type, hover the mouse pointer over  next to Playlist Type.

**3** Configure detailed playlist settings and click **Save**.



Content files are displayed as a list. If you click content, the content is added to the Playlist box.

**1**  **Note**

The same content can be added multiple times.

Change the content view mode or search for a content file.

- : View content by the group.
- **File Type**: Click  and select the checkboxes of desired file types. The screen displays only the selected types of files.
- : Change the content view mode. Select  for a list view or select  to preview content.
- **Content Name**: Search content files by name.

**3** View content files included in the playlist.

---

4 View device types that can play the playlist currently being created.

---

Set playback options for content files included in the playlist. Select at least one content file from the playlist and click this menu.

 **Note**

Alternatively, hover the mouse pointer over a content file in the playlist box to display . Click  to set the content file playback options.

- **Duration:** Select the **Enable** checkbox to set the content playback duration. If you do not select the **Enable** checkbox, the content plays for the slot duration specified when the ad schedule was created.

 **Note**

5 A slot is a time unit for ad scheduling. Create the desired number of slots and assign a different ad schedule to each slot.

- **Play Frequency:** Set the frequency of content playback.
- **Independent Play:** To set a specific playback option for content, click **Independent Play**. Set the content playback date, day and time and turn repeat playback mode on or off.

 **Note**

Content playback time varies, depending on whether repeat playback mode is on or off.

For example, if you set the playback period and time to Oct. 1 - 15, 2016 and 09:00 - 15:00, the content plays as follows:

- If repeat playback mode is on, the content plays continuously from 9 am on Oct. 1 through 3 pm on Oct. 15.
- If repeat playback mode is off, the content plays from 9 am through 3 pm daily between Oct. 1 and 15.

---

Delete content files from a playlist. Select at least one content file and click this menu.

6  **Note**

Alternatively, hover the mouse pointer over a content file in the playlist box to display . Click  to delete the file.

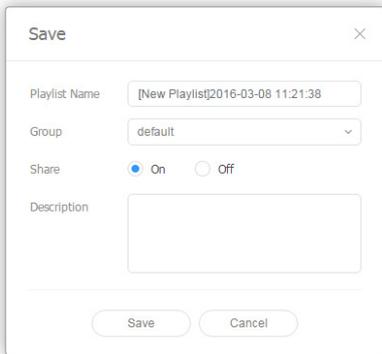
7 Add effects to the beginning and end of content files in the playlist. Click  and select effects from the effect list.

---

8 View the playback duration for a content file.

---

- 4 Configure playlist settings, such as the playlist name, and click **Save**. Creating a playlist is complete.



The screenshot shows a 'Save' dialog box with the following fields and controls:

- Playlist Name:** A text input field containing '[New Playlist]2016-03-08 11:21:38'.
- Group:** A dropdown menu with 'default' selected.
- Share:** Radio buttons for 'On' (selected) and 'Off'.
- Description:** A large empty text area.
- Buttons:** 'Save' and 'Cancel' buttons at the bottom.

<b>Playlist Name</b>	Enter a playlist name.
<b>Group</b>	Select a group for the playlist.
<b>Share</b>	Choose whether to share the playlist.
<b>Description</b>	Enter a description of the playlist.

## Creating VideoWall playlists

Create a playlist to play on a video wall.

- 1 Click **New Playlist**.
- 2 Configure initial playlist settings and click **Create**.

### Supported Devices

Select a device type that will play the playlist.

#### Note

- A VideoWall playlist can be created when S2 Player is selected. However, the playlists can be played on MagicInfo Player I, Player S3.
- Higher-performance devices than the selected device are automatically included in the selection. For example, if you select S2 Player, higher versions, such as S3 Player, i Player, are automatically selected.
- Supported Devices only displays device types for the devices that have currently licenses registered on MagicInfo Server.

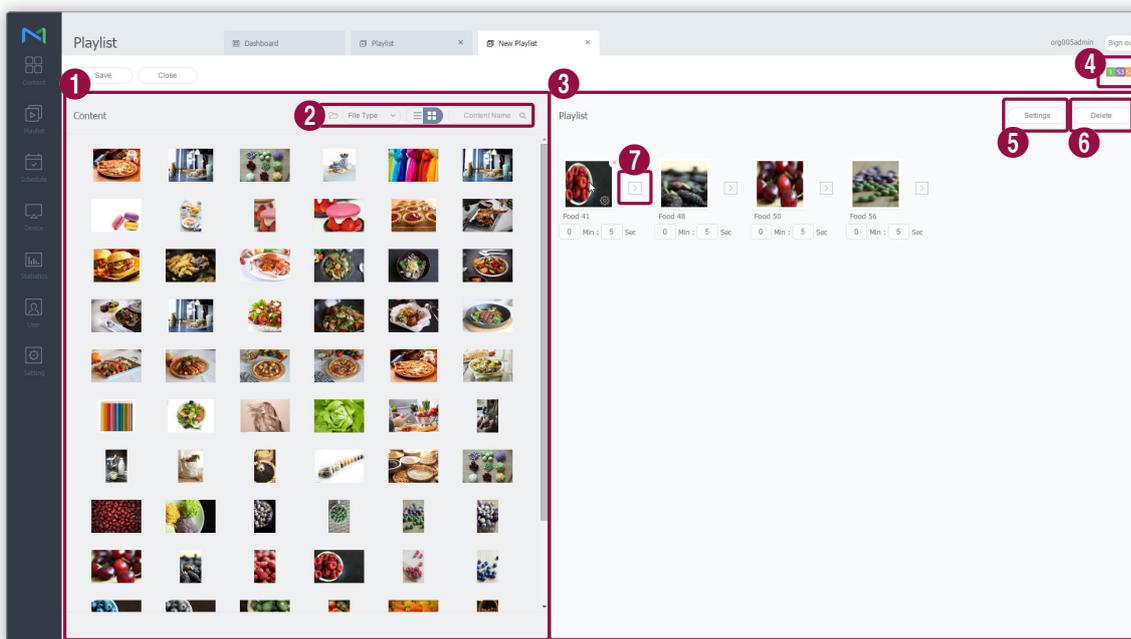
### Playlist Type

Select a playlist type. Select **VideoWall**.

#### Note

- Available playlist types may vary, depending on the device type selected in the previous step.
- For details on each playlist type, hover the mouse pointer over  next to Playlist Type.

### 3 Configure detailed playlist settings and click **Save**.



Content files are displayed as a list. If you click content, the content is added to the **Playlist** box.

#### 1 Note

The same content can be added multiple times.

Change the content view mode or search for a content file.

-  : View content by the group.
- **File Type**: Click  and select the checkboxes of desired file types. The screen displays only the selected types of files.
-  : Change the content view mode. Select  for list view or select  for thumbnail view.
- **Content Name**: Search content files by name.

3 View content files included in the playlist.

4 View device types that can play the playlist currently being created.

Set the playback duration for content files in the playlist. Select at least one content file from the playlist and click this menu.

 **Note**

5

Alternative ways to change the playback duration for content files are as follows:

- The option to change the playback duration can be found under a content file name in the playlist box.
- Alternatively, hover the mouse pointer over a content file in the playlist box to display . Click  to change the content playback duration.
- It is not possible to change the playback duration for content files that have a pre-defined duration, such as video files.

Delete content files from a playlist. Select at least one content file and click this menu.

6

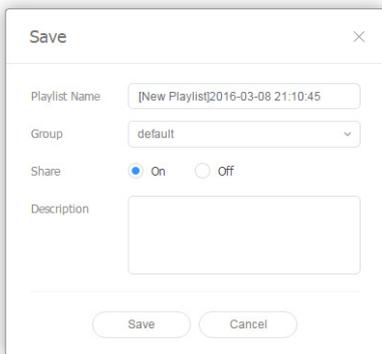
 **Note**

Alternatively, hover the mouse pointer over a content file in the playlist box to display . Click  to delete the file.

7

Add effects to the beginning and end of content files in the playlist. Click  and select effects from the effect list.

4 Configure playlist settings, such as the playlist name, and click **Save**. Creating a playlist is complete.



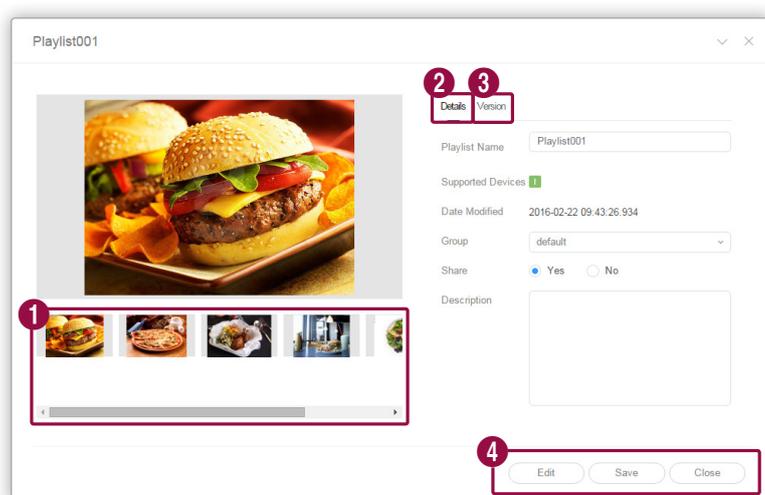
<b>Playlist Name</b>	Enter a playlist name.
<b>Group</b>	Select a group for the playlist.
<b>Share</b>	Choose whether to share the playlist.
<b>Description</b>	Enter a description of the playlist.

# Managing playlists

## Viewing playlist details

View and edit playlist information.

Click a playlist name from the playlist name.



**1** View content files included in the playlist.

**2** View detailed information of a playlist. You can also edit the playlist name, group, sharing option and description. For details on changing playlist groups, refer to [▶ Changing playlist groups](#)

View the playlist version and edit the playlist.

**3**

- Changing content files in a playlist changes the playlist version.
- Click  next to a version number to convert the playlist to the clicked version. Use file versions to manage playlists with ease.

- **Edit:** Edit the playlist using the same method as creating a playlist.

**4**

- **Save:** Save changes made in the details window.
- **Close:** Close the details window.

### Note

- Only allowed files for sharing can be shared with other users within the same organization.
- It is not possible to change the device and playlist types set for a created playlist.

## Editing playlists

---

Edit a playlist, using one of the following options:

**Option 1** Select a playlist from the list and click **Edit**. Edit the playlist by using the same method as creating a playlist.

**Option 2** Click a playlist name from the list of playlists and click **Edit** in the details window.



### Note

- Edit the playlist by using the same method as creating a playlist.
- It is not possible to change the device and playlist types set for a created playlist.
- To save an edited playlist with a different name, click **Save As**.

## Deleting playlists

---

Delete playlists from the list if required.

Select a playlist and click **Delete**. Selected playlists are moved to Recycle Bin and can be restored for use if necessary.

- A notification message will appear if the playlist being deleted is used by another user or included in a schedule. The window means that it is not possible to delete the playlist and shows details of the schedule that uses the playlist.

## Copying playlists

---

Copy a playlist to create a new playlist.

- 1 Select a playlist from the list and click **Copy**.
- 2 Use the copy window to configure playlist settings, such as the playlist name and group, and then click **New**.
  - The playlist is added to the list.

## Changing playlist groups

---

Change playlist groups from the list.



You can only change groups for playlists added under your account.

Change a playlist group, using one of the following options:

**Option 1** Select a playlist and click **Move**. Use the group selection page to change the group and click **Save**.

**Option 2** Click on a playlist name. Use the playlist details window to change the group and click **Save**.

## Exporting a list of playlists

---

Export the playlist list as an Excel or PDF file if necessary. To export a content file list, click **Export** and select a file type.

# Schedule

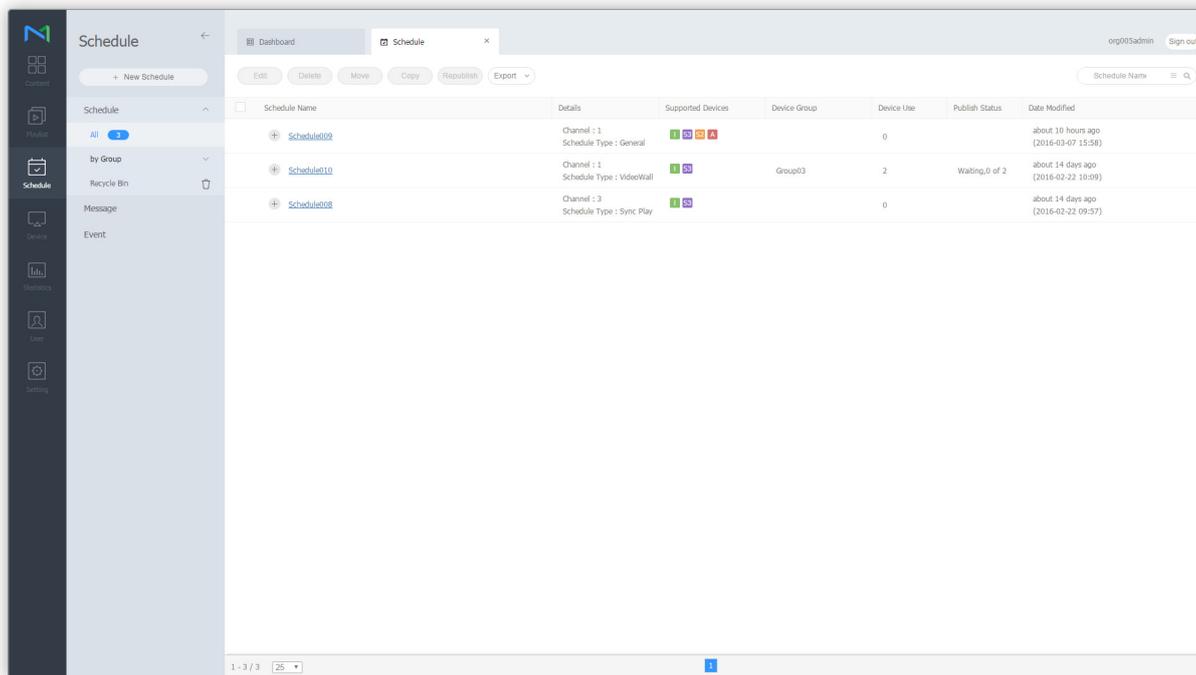
## Schedule menu

The Schedule feature enables MagicInfo to be used efficiently. Create schedules in a well-planned and organized manner to use a large number of devices efficiently.

Click  on the main menu bar.

 **Note**

- MagicInfo Server administrators (general administrator and organization administrators) can assign a role to each user. Available MagicInfo Server functions depend on the user role. For details on user roles, refer to [▶ Changing a user role](#)
- This chapter assumes that you are signed in with organization administrator privileges.



# Content schedules

Create and manage schedules to play content files, saved in MagicInfo Server, on devices.

Daily, weekly and monthly schedules can be created. Play content on a split screen or control devices.

Assigning a channel to a schedule before distributing the schedule increases the choices of content you can play on devices.

Click **Schedule** from the sub-menu items.

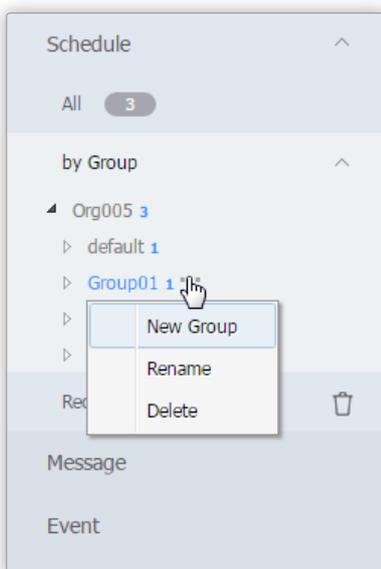
## Viewing content schedules

Create groups in each organization to conveniently manage schedules by the group. For each organization, a default group is created by default.

- **All:** Retrieve all content schedules added by users.
- **by Group:** Retrieve or manage content schedules by group.

## Managing content schedule groups

- 1 Click **by Group**.
- 2 Manage groups, using one of the following options:
  - Option 1** Select a group and right-click on the mouse.
  - Option 2** Place the mouse cursor on a group name and click **...**.



<b>New Group</b>	<p>Create a sub-group under the selected group.</p> <p> <b>Note</b></p> <p>A root group can be created by adding an organization. For details on adding organizations, refer to <a href="#">▶ Creating an organization</a></p>
<b>Rename</b>	<p>Rename the selected group.</p> <p> <b>Note</b></p> <p>It is not possible to rename a root group.</p>
<b>Delete</b>	<p>Delete the selected group.</p> <p> <b>Note</b></p> <p>It is not possible to delete a root group.</p>

 **Note**

- To move a group, drag the group from by Group to a desired location. Sub-groups can be moved to root groups. It is not possible to move root groups to sub-groups. When moving a group that contains sub-groups, all the sub-groups will move together maintaining the group hierarchy.
- The number of schedules assigned to a group is shown next to the group name.

## Searching content schedules

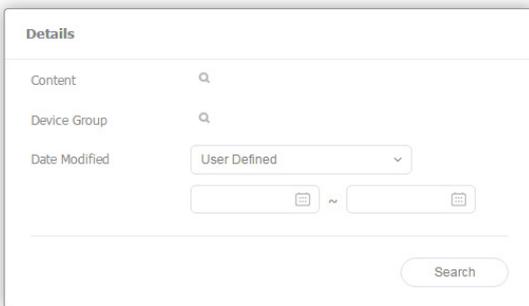
Enter keyword(s) and click .



A search bar with the placeholder text "Schedule Name" and a magnifying glass icon on the right.

### Custom search

Click  to search schedules by using different criteria.

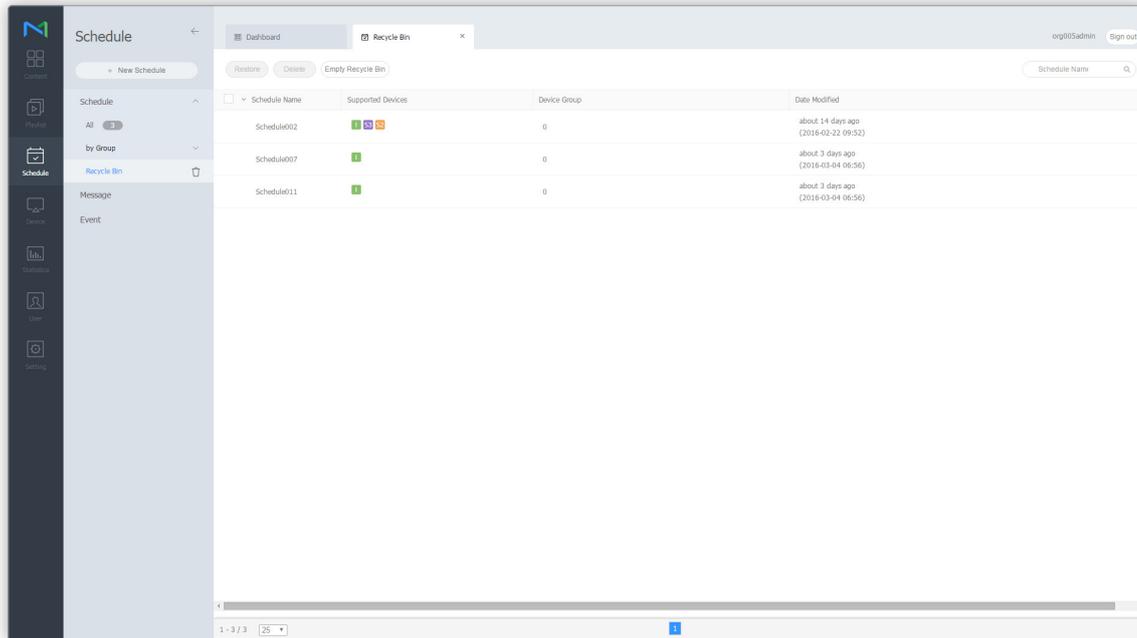


A "Details" panel for custom search. It contains three sections: "Content" with a magnifying glass icon, "Device Group" with a magnifying glass icon, and "Date Modified" with a dropdown menu showing "User Defined" and two date input fields separated by a tilde (~). A "Search" button is at the bottom right.

<b>Content</b>	Search schedules that contain a specific content file. Click  and select a content file from the Select Content window.
<b>Device Group</b>	Search schedules that have been distributed to specific devices. Click  and select a device group from the Select Group window.
<b>Last Modified Date</b>	Search schedules modified on specific dates. Select a date from the dropdown list. Alternatively, select <b>User Defined</b> and manually enter a date.

## Recycle Bin

Click **Recycle Bin** to view deleted schedules.



- Click **Restore** to restore the selected schedule to a desired group.
- Click **Delete** to delete the selected schedule permanently.
- Click **Empty Recycle Bin** to delete all schedules in Recycle Bin permanently.

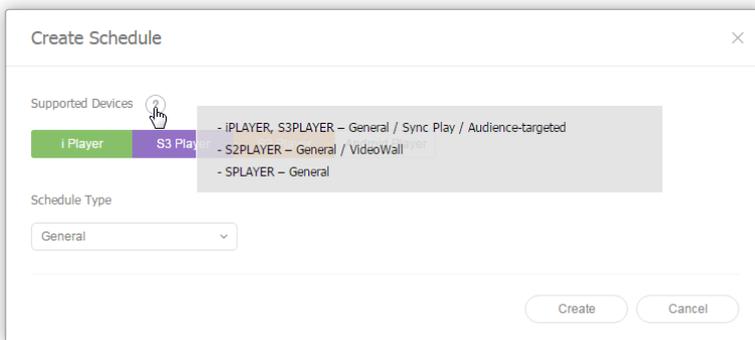
### Note

For details on deleting schedules, refer to [▶ Deleting content schedules](#)

# Creating content schedules

## Creating common schedules

- 1 Click **Create Schedule > Content**.
- 2 Use the Create Schedule window to configure basic schedule settings and click **Create**.



### Supported Devices

Select a device type to which to distribute the schedule.

#### Note

- Common schedules are compatible with all device types.
- Higher-performance devices than the selected device are automatically included in the selection. For example, if you select S2 Player, higher versions, such as S3 Player, i Player, are automatically selected.
- Supported Devices only displays device types for the devices that have currently licenses registered on MagicInfo Server.

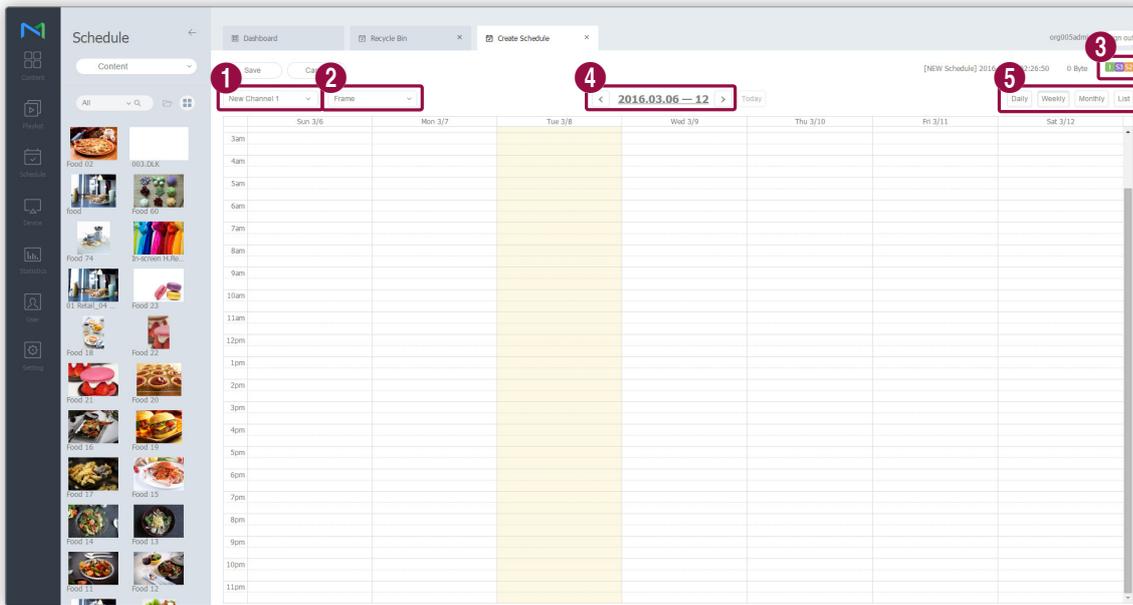
### Schedule Type

Select a schedule type. Select **General**.

#### Note

The options available under Schedule Type vary depending on the selected device types.

### 3 Configure the specific schedule settings.



Set channels. To add or change channels, Click **Edit Channel**. Use the "change channel" window to select a channel. Alternatively, click **Add** and set the channel name and number to add a channel.

1

#### What is a channel?

A channel is similar to a TV broadcast channel. Add channels when creating a schedule and then distribute the channels to devices. This allows you to play desired content by changing device channels. For details on changing channels, refer to [▶ Changing device channels](#)

2

Select a screen frame for a device to which to distribute the schedule. Play a content file on the device screen split according to the selected frame. To change the frame, click **Edit Frame**.

For details on frame settings, refer to [▶ Customizing the frame layout when creating a schedule](#)

3

View device types to which to distribute the schedule.

4

Select a date to which to assign the schedule.

5

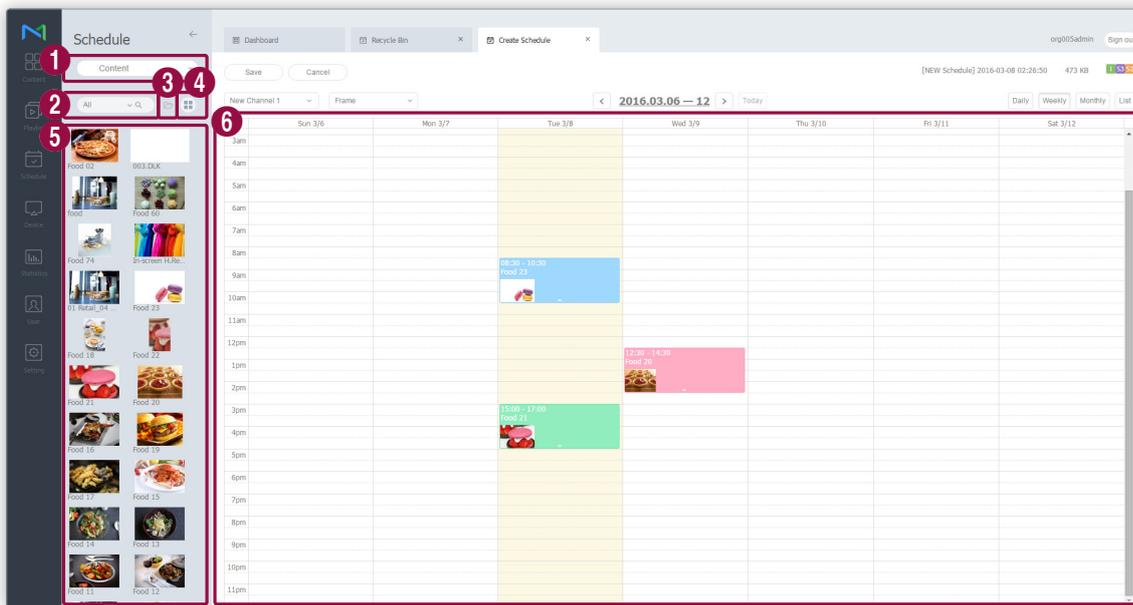
Specify the time unit of a timetable to assign the schedule to. Timetables can be selected daily, weekly or monthly.

- **Everday:** View a daily timetable.
- **Weekly:** View a weekly timetable.
- **Monthly:** View a monthly timetable.
- **List:** View content playback schedules assigned to a timetable as a list.

#### 4 Add programs to the schedule, using one of the following options:

**Option 1** Click and drag content from the content list to the schedule table. Click the added content.

**Option 2** In the schedule table, click or drag the time slot to which to add the content.



- 1 Sort files by the content file, playlist, or input source.
- 2 Search content files or playlists by name. Click on an empty space to search for specific types of content.
- 3 View content under a specific group.
- 4 Sort content files by using thumbnail or list view mode.
- 5 View content, playlists, or input sources in a list.
- 6 This is the schedule table. Drag or click a time slot to assign content dragged from the content list.

- 5 Use the "create program" window to configure specific program settings and click **Save**.

<b>Content</b>	Select or change content, playlists and/or input sources to distribute to devices.
<b>Playback Date</b>	Specify the period to execute a schedule. <ul style="list-style-type: none"> <li>To run a schedule continuously, select the <b>Never expired</b> checkbox.</li> </ul>
<b>Repeat</b>	<ul style="list-style-type: none"> <li><b>Once:</b> Execute a schedule only once.</li> <li><b>Everday:</b> Repeat a schedule every day.</li> <li><b>Weekly:</b> Repeat a schedule on the specified day(s).</li> <li><b>Monthly:</b> Repeat a schedule on the specified dates of every month.</li> </ul>
<b>Playing Time</b>	Set the time to play content. To play content continuously over a specified period of time, select the <b>24 hours</b> checkbox.

 **Note**

A program is similar to a TV broadcast program. You can play selected content for a specified period of time.

- 6 After configuring the required schedule settings, click **Save**.

- 7 Use the content distribution settings window to configure distribution settings and click **Save**. Click **More Options** to view additional settings.

The screenshot shows a 'Save' dialog box with the following fields and options:

- Schedule Name:** [NEW Schedule] 2016-03-08 02:26:50
- Schedule Group:** default
- Publish to:** (Search icon)
- Description:** (Text area)
- More Options:**
  - Background Music:** Background Music
  - Content Synchronization:**  Off  On
  - Deploy with Reservation:**  Reservation

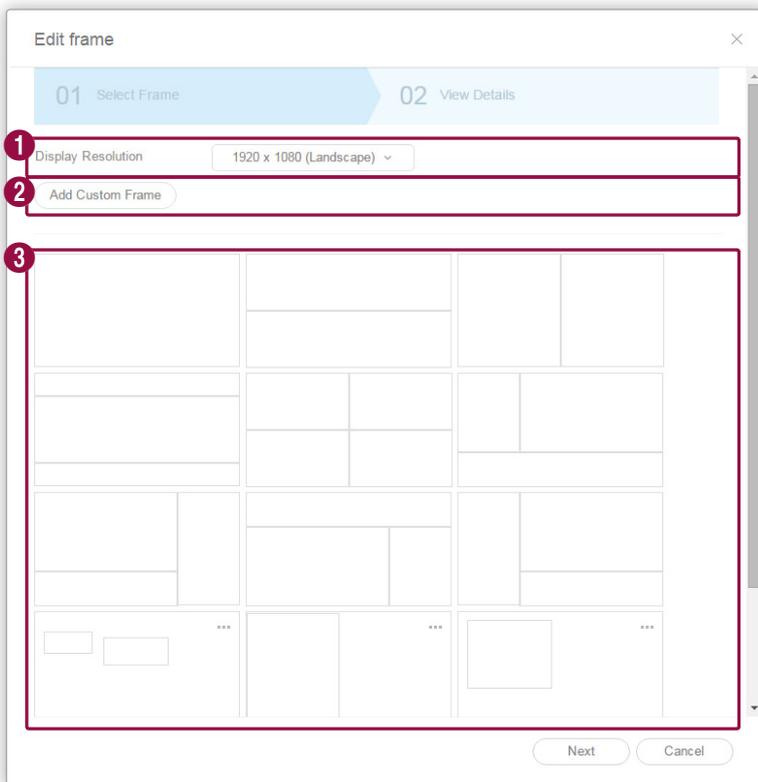
Buttons at the bottom: Save, Cancel

<b>Schedule Name</b>	Enter a schedule name. A single schedule name cannot be used more than once.
<b>Schedule Group</b>	Select a group for the schedule.
<b>Publish to</b>	Click  to select a device group to which to distribute the schedule. Devices can be selected by the group. It is not possible to select individual devices.
<b>Description</b>	Enter a description of the schedule.
<b>Background Music</b>	Select a content to use as background music for the content. If the content mapped to the schedule is a video that contains sound, the sound is replaced by the specified background music and only the video is played.
<b>Content Synchronization</b>	Enable or disable the mode to sync content files. Content file synchronization is a function that syncs playback times when a content file is played on multiple devices that share the same schedule. This function is only available on devices connected to the same network.
<b>Deploy with Reservation</b>	Select the <b>Reservation</b> checkbox to distribute the schedule at a specific time. All requests for schedule changes are saved up until the specified distribution time. These changes are applied all at once when the schedule is distributed.

## Customizing the frame layout when creating a schedule

When creating a schedule, use the timetable settings page to select a frame for a device to which to distribute the schedule. Play a content file on the device screen split according to the selected frame.

- 1 Click **Frame** > **Edit Frame** to set up the frame.
- 2 In the "edit frame" window, select a frame and click **Next**.



- 1 Select the appropriate resolution for the device.
- 2 Create custom frames.
- 3 Select a frame.

### 3 Configure the specific frame settings and click **Save**.

The screenshot shows the 'Edit frame' dialog box with the following configuration fields and callouts:

- 1** Overall Default Content: A search input field.
- 2** Overall Frame Permission: A search input field.
- 3** A grid of four frames labeled Frame 1, Frame 2, Frame 3, and Frame 4.
- 4** Frame Name: A text input field with a checkbox labeled 'Main Frame'.
- 5** Default Content: A search input field.
- 6** Frame Permission: A search input field.

At the bottom of the dialog are three buttons: Back, Save, and Cancel.

**1** Select content to play in all frames by default when there is no content distributed.

**2** Select a user group that can use all the frames.

**3** Select an individual frame.

**4** View and edit the name of the frame selected in step **3**. To use the frame as the main frame, select **Main Frame**.

5 Select content to play by default in the frame selected in step 3.

6 Select a user group that can use the frame selected in step 3.

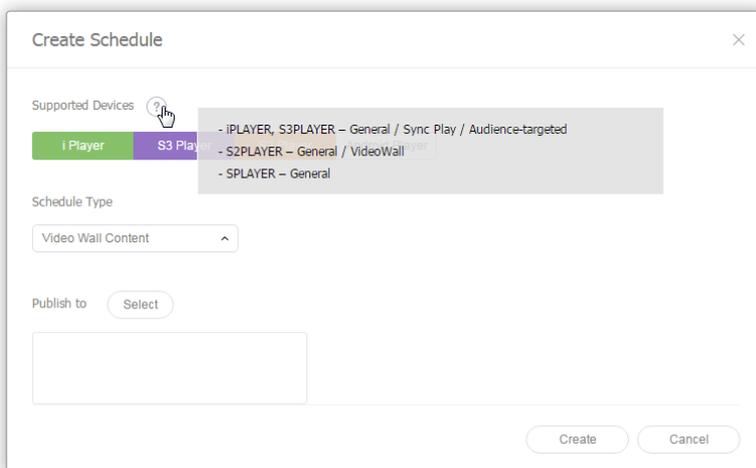
### Note

- The frame of a MagicInfo Player S device can be split into four sections. Two of the sections can only be assigned video files.
- Layout Editor allows you to use VideoWall functions by configuring layouts for multiple devices. For details on Layout Editor, refer to [Using videowall layouts](#)

## Creating VideoWall schedules

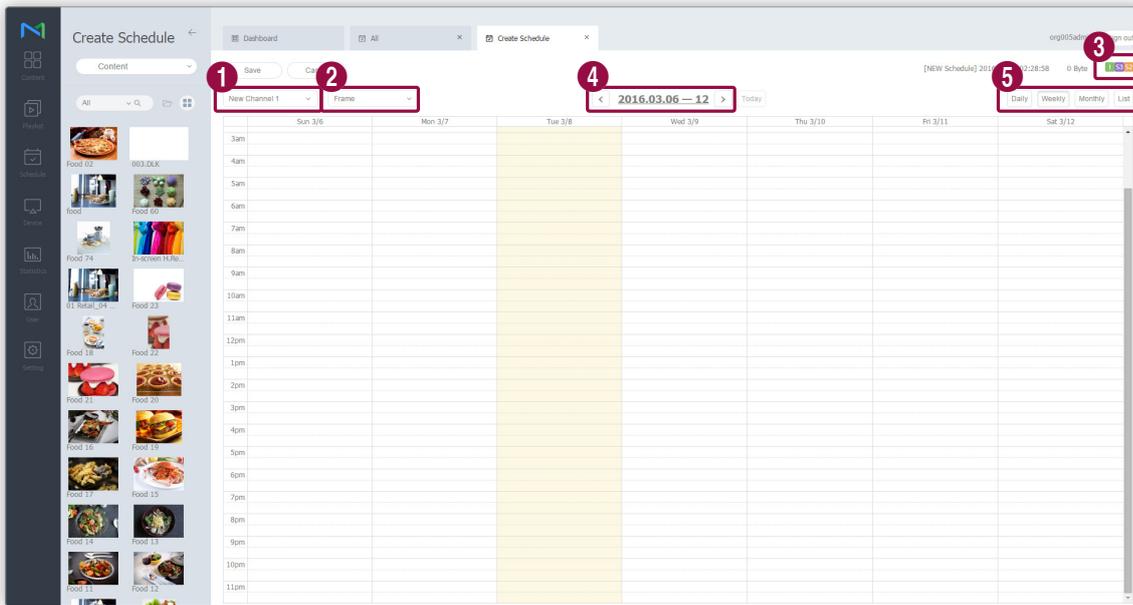
Distribute VideoWall schedules to devices that have VideoWall layouts configured. For details on configuring VideoWall layouts, refer to [Using videowall layouts](#)

- 1 Click **Create Schedule > Content**.
- 2 Use the Create Schedule window to configure basic schedule settings and click **Create**.



<b>Supported Devices</b>	<p>Select a device type to which to distribute the schedule.</p> <p> <b>Note</b></p> <ul style="list-style-type: none"><li>• VideoWall layout schedules can be created when i Player, S3 Player or S2 Player is selected.</li><li>• Higher-performance devices than the selected device are automatically included in the selection. For example, if you select S2 Player, higher versions, such as S3 Player, i Player, are automatically selected.</li><li>• Supported Devices only displays device types for the devices that have currently licenses registered on MagicInfo Server.</li></ul>
<b>Schedule Type</b>	<p>Specify a playback mode. Select <b>Video Wall Content</b>.</p> <p> <b>Note</b></p> <p>The options available under Schedule Type vary depending on the selected device types.</p>
<b>Publish to</b>	<p>Click <b>Select</b> to select a device group to which to distribute the schedule. Devices can be selected by the group. It is not possible to select individual devices.</p> <p> <b>Note</b></p> <p>Videowall layout schedules can only be distributed to devices within the same group. Ensure that the devices have VideoWall layout settings configured.</p>

### 3 Configure the specific schedule settings.



Set channels. To add or change channels, Click **Edit Channel**. Use the "change channel" window to select a channel. Alternatively, click **Add** and set the channel name and number to add a channel.

1



#### What is a channel?

A channel is similar to a TV broadcast channel. Add channels when creating a schedule and then distribute the channels to devices. This allows you to play desired content by changing device channels. For details on changing channels, refer to [▶ Changing device channels](#)

2

Select a screen frame for a device to which to distribute the schedule. Play a content file on the device screen split according to the selected frame. To change the frame, click **Edit Frame**.

For details on frame settings, refer to [▶ Customizing the frame layout when creating a schedule](#)

3

View device types to which to distribute the schedule.

4

Select a date to which to assign the schedule.

5

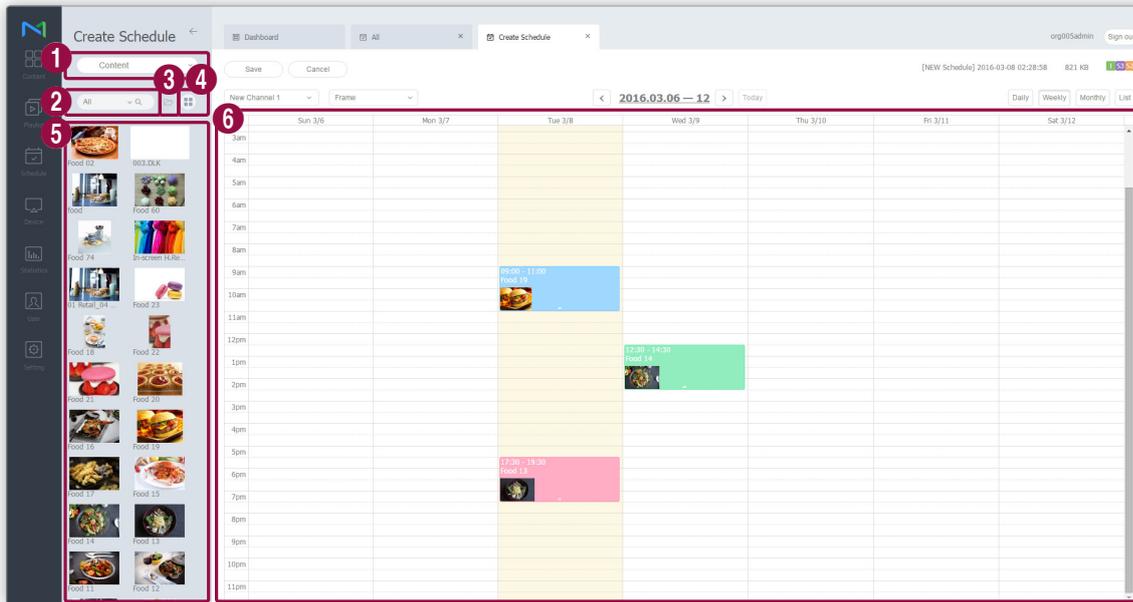
Specify the time unit of a timetable to assign the schedule to. Timetables can be selected daily, weekly or monthly.

- **Everday:** View a daily timetable.
- **Weekly:** View a weekly timetable.
- **Monthly:** View a monthly timetable.
- **List:** View content playback schedules assigned to a timetable as a list.

#### 4 Add programs to the schedule, using one of the following options:

**Option 1** Click and drag content from the content list to the schedule table. Click the added content.

**Option 2** In the schedule table, click or drag the time slot to which to add the content.



- 1 Sort files by the content file, playlist, or input source.
- 2 Search content files or playlists by name. Click on an empty space to search for specific types of content.
- 3 View content under a specific group.
- 4 Sort content files by using thumbnail or list view mode.
- 5 View content, playlists, or input sources in a list.
- 6 This is the schedule table. Drag or click a time slot to assign content dragged from the content list.

5 Use the "create program" window to configure specific program settings and click **Save**.

<b>Content</b>	<p>Select a content type. To create a MagicInfo program, select <b>Player</b>. To create a VideoWall program, select <b>Video Wall</b>.</p> <p>Click  to select or replace a content file.</p>
<b>Playback Date</b>	<p>Specify the period to execute a schedule.</p> <ul style="list-style-type: none"> <li>To run a schedule continuously, select the <b>Never expired</b> checkbox.</li> </ul>
<b>Repeat</b>	<ul style="list-style-type: none"> <li><b>Once</b>: Execute a schedule only once.</li> <li><b>Everday</b>: Repeat a schedule every day.</li> <li><b>Weekly</b>: Repeat a schedule on the specified day(s).</li> <li><b>Monthly</b>: Repeat a schedule on the specified dates of every month.</li> </ul>
<b>Playing Time</b>	<p>Set the time to play content.</p> <p>To play content continuously over a specified period of time, select the <b>24 hours</b> checkbox.</p>

6 After configuring the required schedule settings, click **Save**.

- 7 Use the content distribution settings window to configure distribution settings and click **Save**. Click **More Options** to view additional settings.

The screenshot shows a 'Save' dialog box with the following fields and options:

- Schedule Name:** [NEW Schedule] 2016-03-08 12:19:12
- Schedule Group:** default
- Publish to:** Group03 2
- Description:** (empty text box)
- More Options:**
  - Background Music:** Background Music
  - Content Synchronization:** Off (selected), On
  - Deploy with Reservation:** Reservation (checkbox)

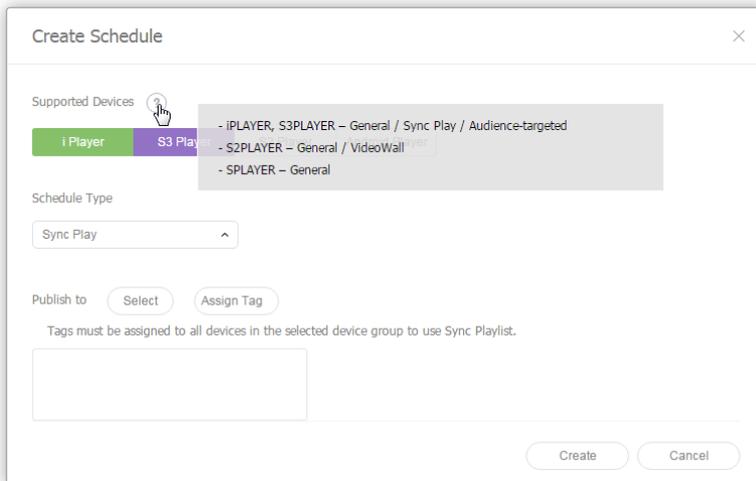
Buttons at the bottom: Save, Cancel

<b>Schedule Name</b>	Enter a schedule name. A single schedule name cannot be used more than once.
<b>Schedule Group</b>	Select a group for the schedule.
<b>Publish to</b>	View the target device group for schedule distribution. Click  to change the device group to which to distribute the schedule. Devices can be selected by the group. It is not possible to select individual devices.
<b>Description</b>	Enter a description of the schedule.
<b>Background Music</b>	Select a content to use as background music for the content. If the content mapped to the schedule is a video that contains sound, the sound is replaced by the specified background music and only the video is played.
<b>Content Synchronization</b>	Enable or disable the mode to sync content files. Content file synchronization is a function that syncs playback times when a content file is played on multiple devices that share the same schedule. This function is only available on devices connected to the same network.
<b>Deploy with Reservation</b>	Select the <b>Reservation</b> checkbox to distribute the schedule at a specific time. All requests for schedule changes are saved up until the specified distribution time. These changes are applied all at once when the schedule is distributed.

## Creating synced playback schedules

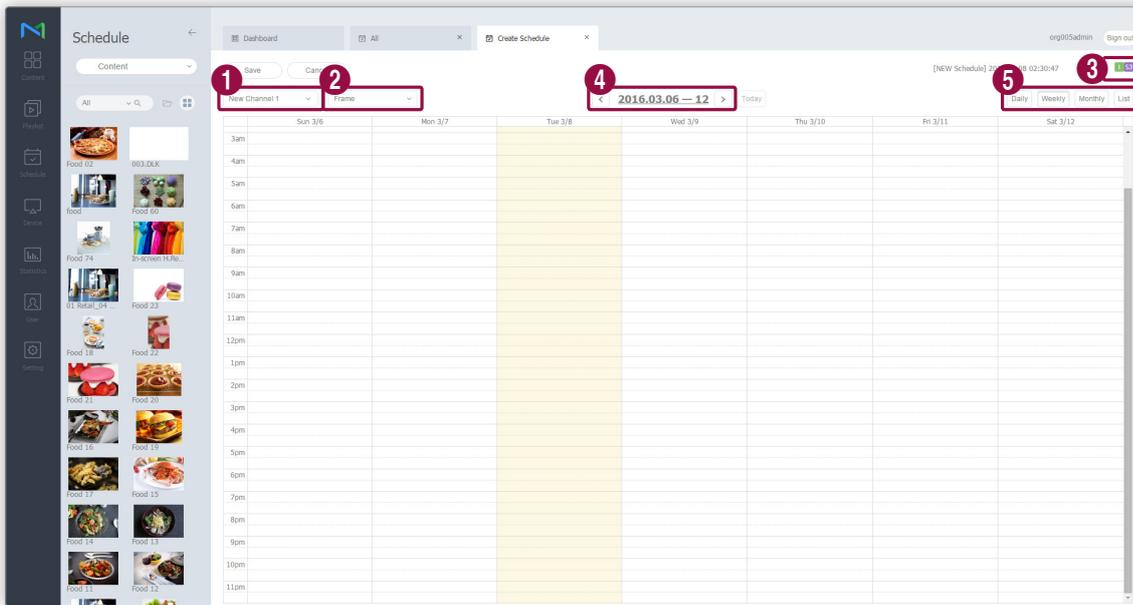
You can create and assign synced playback playlists to tag-mapped devices. Synced playback playlists start or switch content files from multiple playlists at the same time. This allows you to play different content on multiple devices simultaneously. For details on creating synced playback playlists, refer to [▶ Creating synced playlists](#)

- 1 Click **Create Schedule > Content**.
- 2 Use the Create Schedule window to configure basic schedule settings and click **Create**.



<p><b>Supported Devices</b></p>	<p>Select a device type to which to distribute the schedule.</p> <p><b>Note</b></p> <ul style="list-style-type: none"> <li>• Synced playback schedules can be created when i Player, S3 Player is selected.</li> <li>• Higher-performance devices than the selected device are automatically included in the selection. For example, if you select S2 Player, higher versions, such as S3 Player, i Player, are automatically selected.</li> <li>• Supported Devices only displays device types for the devices that have currently licenses registered on MagicInfo Server.</li> </ul>
<p><b>Schedule Type</b></p>	<p>Specify a playback mode. Select <b>Sync Play</b>.</p> <p><b>Note</b></p> <p>The options available under Schedule Type vary depending on the selected device types.</p>
<p><b>Publish to</b></p>	<p>Click <b>Select</b> and select a device group on which to perform synced playback.</p> <p><b>Note</b></p> <ul style="list-style-type: none"> <li>• To perform synced playback, make sure that the same tag is assigned to all devices in the selected group.</li> <li>• Click <b>Assign Tag</b> to tag devices. For details, refer to <a href="#">▶ Assigning tags to devices</a></li> </ul>

### 3 Configure the specific schedule settings.



Set channels. To add or change channels, Click **Edit Channel**. Use the "change channel" window to select a channel. Alternatively, click **Add** and set the channel name and number to add a channel.

1



#### What is a channel?

A channel is similar to a TV broadcast channel. Add channels when creating a schedule and then distribute the channels to devices. This allows you to play desired content by changing device channels. For details on changing channels, refer to [▶ Changing device channels](#)

2

Select a screen frame for a device to which to distribute the schedule. Play a content file on the device screen split according to the selected frame. To change the frame, click **Edit Frame**.

For details on frame settings, refer to [▶ Customizing the frame layout when creating a schedule](#)

3

View device types to which to distribute the schedule.

4

Select a date to which to assign the schedule.

5

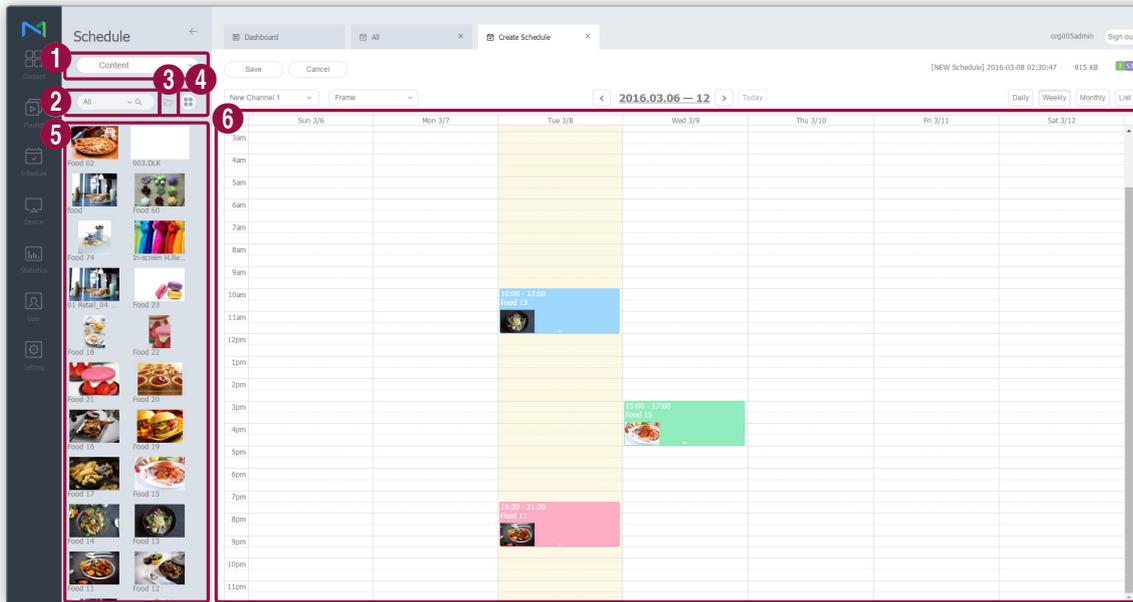
Specify the time unit of a timetable to assign the schedule to. Timetables can be selected daily, weekly or monthly.

- **Everday:** View a daily timetable.
- **Weekly:** View a weekly timetable.
- **Monthly:** View a monthly timetable.
- **List:** View content playback schedules assigned to a timetable as a list.

#### 4 Add programs to the schedule, using one of the following options:

**Option 1** Click and drag content from the content list to the schedule table. Click the added content.

**Option 2** In the schedule table, click or drag the time slot to which to add the content.



- 1 Sort files by the content file, playlist, or input source.
- 2 Search content files or playlists by name. Click on an empty space to search for specific types of content.
- 3 View content under a specific group.
- 4 Sort content files by using thumbnail or list view mode.
- 5 View content, playlists, or input sources in a list.
- 6 This is the schedule table. Drag or click a time slot to assign content dragged from the content list.

5 Use the "create program" window to configure specific program settings and click **Save**.

<b>Content</b>	Select a synced playlist.
<b>Playback Date</b>	Specify the period to execute a schedule. <ul style="list-style-type: none"> <li>To run a schedule continuously, select the <b>Never expired</b> checkbox.</li> </ul>
<b>Repeat</b>	<ul style="list-style-type: none"> <li><b>Once:</b> Execute a schedule only once.</li> <li><b>Everday:</b> Repeat a schedule every day.</li> <li><b>Weekly:</b> Repeat a schedule on the specified day(s).</li> <li><b>Monthly:</b> Repeat a schedule on the specified dates of every month.</li> </ul>
<b>Playing Time</b>	Set the time to play content. To play content continuously over a specified period of time, select the <b>24 hours</b> checkbox.

6 After configuring the required schedule settings, click **Save**.

- 7 Use the content distribution settings window to configure distribution settings and click **Save**. Click **More Options** to view additional settings.

The screenshot shows a 'Save' dialog box with the following fields and options:

- Schedule Name:** [NEW Schedule] 2016-03-08 12:19:12
- Schedule Group:** default
- Publish to:** Group03 2
- Description:** (empty text box)
- More Options:**
  - Background Music:** Background Music
  - Content Synchronization:** Off (selected), On
  - Deploy with Reservation:** Reservation (checkbox)

Buttons at the bottom: Save, Cancel

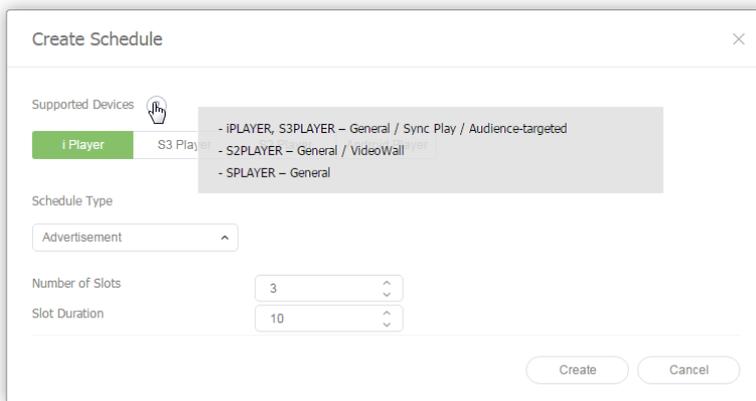
<b>Schedule Name</b>	Enter a schedule name. A single schedule name cannot be used more than once.
<b>Schedule Group</b>	Select a group for the schedule.
<b>Publish to</b>	View the target device group for schedule distribution.
<b>Description</b>	Enter a description of the schedule.
<b>Background Music</b>	Select a content to use as background music for the content. If the content mapped to the schedule is a video that contains sound, the sound is replaced by the specified background music and only the video is played.
<b>Content Synchronization</b>	Enable or disable the mode to sync content files. Content file synchronization is a function that syncs playback times when a content file is played on multiple devices that share the same schedule. This function is only available on devices connected to the same network.
<b>Deploy with Reservation</b>	Select the <b>Reservation</b> checkbox to distribute the schedule at a specific time. All requests for schedule changes are saved up until the specified distribution time. These changes are applied all at once when the schedule is distributed.

## Creating ad schedules

MagicInfo Server offers an ad scheduling option that maps multiple playlists to devices. Play content in the playlists at a specific time on a specific date.

For details on creating ad playlists, refer to [▶ Creating ad playlists](#)

- 1 Click **Create Schedule > Content**.
- 2 Use the Create Schedule window to configure basic schedule settings and click **Create**.

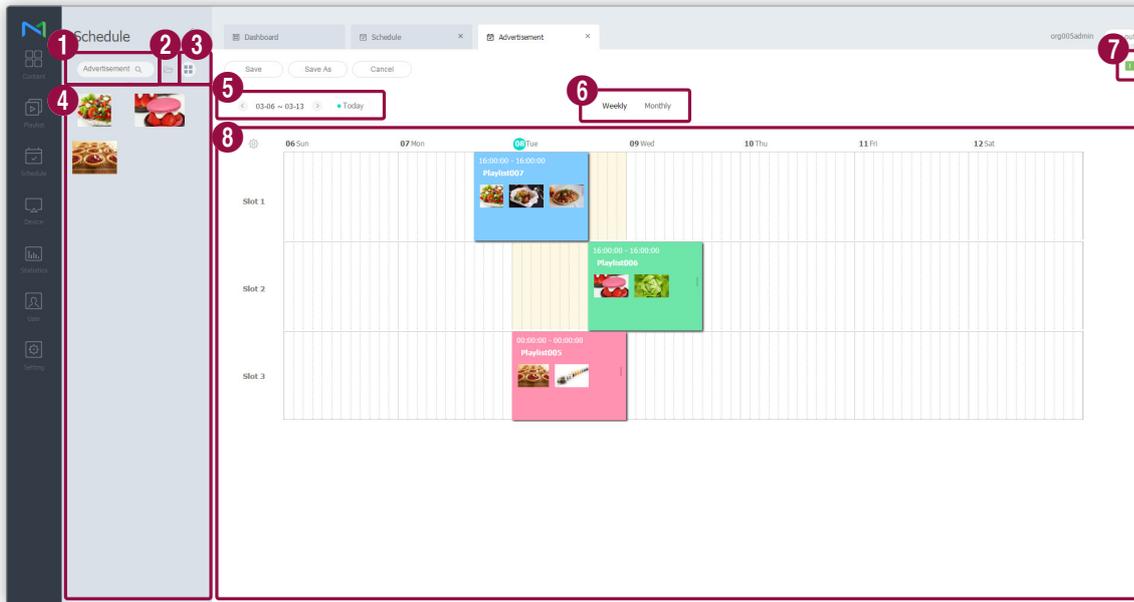


<b>Supported Devices</b>	<p>Select a device type to which to distribute the schedule.</p> <p> <b>Note</b></p> <ul style="list-style-type: none"> <li>• Ad schedules can be created when i Player is selected.</li> <li>• Higher-performance devices than the selected device are automatically included in the selection. For example, if you select S2 Player, higher versions, such as S3 Player, i Player, are automatically selected.</li> <li>• Supported Devices only displays device types for the devices that have currently licenses registered on MagicInfo Server.</li> </ul>
<b>Schedule Type</b>	<p>Specify a playback mode. Select <b>Advertisement</b>.</p> <p> <b>Note</b></p> <p>The options available under Schedule Type vary depending on the selected device types.</p>
<b>Number of Slots</b>	<p>Set the number of ad slots.</p>
<b>Slot Duration</b>	<p>Set playback duration for each slot.</p>

3 Add ads to the schedule, using one of the following options:

**Option 1** Click and drag a playlist from the list of playlists to the slot schedule table. Click the added playlist.

**Option 2** In the slot schedule table, click or drag a time slot to which to add a playlist.



1 Search playlists by name.

2 View playlists under a specific group.

3 Sort playlists by using thumbnail or list view mode.

4 Ad playlists are shown.

5 Select a date to which to assign the schedule.

Specify the time unit of a timetable to assign the schedule to.

- 6
  - **Weekly:** View a weekly timetable.
  - **Monthly:** View a monthly timetable.

7 View device types to which to distribute the schedule.

8 This is the slot schedule table. Drag a playlist, or click or drag a time slot.

#### 4 Configure specific ad settings and click **Save**.

The screenshot shows a 'Create Program' dialog box with the following fields and controls:

- Content:** A search input field with a magnifying glass icon.
- Start Time:** A date field showing '2016-03-10' and a time field showing '16:00:00'. There is a calendar icon next to the date field.
- End Time:** A date field showing '2016-03-10' and a time field showing '18:00:00'. There is a calendar icon next to the date field.
- Never expired:** A checkbox.
- Buttons:** 'Delete', 'Save', and 'Cancel' buttons at the bottom.

<b>Content</b>	Select or change an ad playlist to distribute to devices.
<b>Start Time</b>	Set the time to start the ad playlist playback.
<b>End Time</b>	Set the time to end the ad playlist playback. <ul style="list-style-type: none"><li>▪ To repeat playback of the playlist continuously, select <b>Never expired</b>.</li></ul>

#### 5 After configuring the required schedule settings, click **Save**.

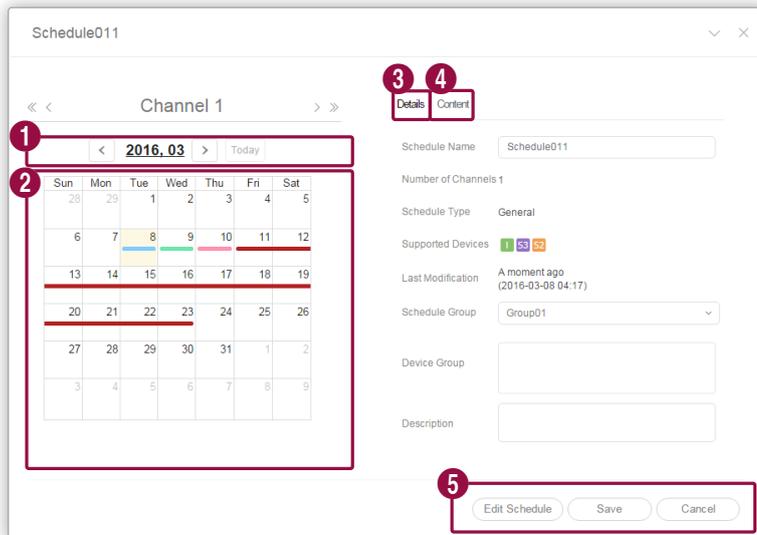
- 6 Use the content distribution settings window to configure distribution settings and click **Save**. Click **More Options** to view additional settings.

<b>Schedule Name</b>	Enter a schedule name. A single schedule name cannot be used more than once.
<b>Schedule Group</b>	Select a group for the schedule.
<b>Publish to</b>	Click  to select a device group to which to distribute the schedule. Devices can be selected by the group. It is not possible to select individual devices.
<b>Description</b>	Enter a description of the schedule.
<b>Deploy with Reservation</b>	Select the <b>Reservation</b> checkbox to distribute the schedule at a specific time. All requests for schedule changes are saved up until the specified distribution time. These changes are applied all at once when the schedule is distributed.

# Managing content schedules

## Viewing content file details

Click a schedule from the schedule list to view the schedule details.



- 1 Click  $\langle / \rangle$  to view information about another channel under a schedule. This function is available when a schedule has several channels registered. Click  $\langle\langle / \rangle\rangle$  to jump to the first or last channel.
- 2 View schedules in calendar.
- 3 View schedule details. Edit name, group and description for the schedule.
- 4 View content files added to the schedule. Click a content name to view its details.
  - **Edit Schedule:** Edit the schedule using the same method as creating a schedule.
  - **Save:** Save changes made in the details window.
  - **Cancel:** Close the details window.

## Editing content schedules

---

Edit a schedule, using one of the following options:

**Option 1** Select a schedule from the schedule list and click **Edit**. Edit the schedule, using the same method as creating a schedule.

**Option 2** Click **+** from the schedule list to quickly edit and distribute the schedule. For details, refer to [Quickly editing content schedules](#)

**Option 3** Select a schedule name from the content schedule list and use the schedule details window to edit the schedule. For details, refer to [Viewing content file details](#)

## Deleting content schedules

---

Delete schedules from the content schedule list.

Select a content schedule and click **Delete**. The schedule is moved to Recycle Bin. Schedules in Recycle Bin can be restored and used again.

- If you delete a schedule, devices assigned to the schedule are moved to the default schedule.

## Changing content schedule groups

---

Change a schedule group from the schedule list.

Change a schedule group, using one of the following options:

**Option 1** Select a schedule and click **Move**. Use the group selection page to change the group and click **Save**.

**Option 2** Click a schedule name. Use the schedule details window to change the group and click **Save**.

## Copying content schedules

---

Copy a content schedule to create a new schedule.

- 1 Select a content schedule from the list and click **Copy**.
- 2 Configure save options for the copied schedule and click **Save**.
  - The schedule is added to the list.

## Re-distributing content schedules to devices

---

- 1 Select a schedule from a list of content file schedules and click **Republish**.
- 2 In the Select Group window, select a device group and click **Save**.

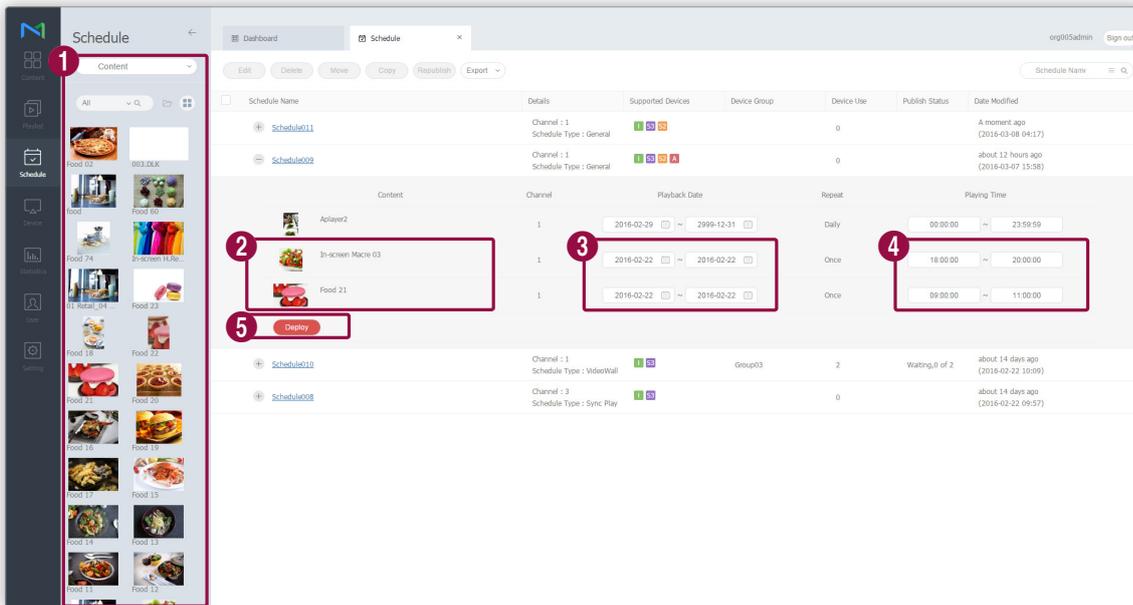
## Quickly editing content schedules

---

Quickly edit and distribute schedules from the content schedule list.

- 1 Click  for a schedule from the content schedule list.

## 2 Use the quick edit window to edit the schedule details.



- 1 Content files are displayed as a list. Click and drag content from the list to the quick edit window to replace content.
- 2 View content files included in the schedule as thumbnails. It is possible to replace a content file with another file in the content list.
- 3 View and edit the content playback period.
- 4 View and edit the content playback time.
- 5 Distribute the content schedule.

# Message schedules

Create and manage messages to play on devices.

Message schedules can be created daily, weekly or monthly.

Click **Message** from the sub-menu items.

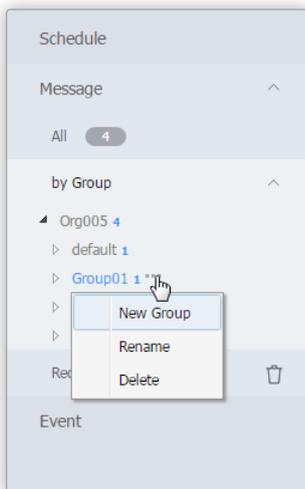
## Viewing message schedules

Create groups in each organization to manage message schedules by the group. For each organization, a default group is created by default.

- **All:** View message schedules added by users within your organization.
- **by Group:** View or manage message schedules by the group specified when adding a message.

## Managing message schedule groups

- 1 Click **by Group**.
- 2 Manage groups, using one of the following options:
  - Option 1** Select a group and right-click on the mouse.
  - Option 2** Place the mouse cursor on a group name and click **...**.



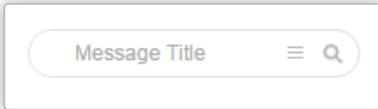
<b>New Group</b>	<p>Create a sub-group under the selected group.</p> <p> <b>Note</b></p> <p>A root group can be created by adding an organization. For details on adding organizations, refer to <a href="#">▶ Creating an organization</a></p>
<b>Rename</b>	<p>Rename the selected group.</p> <p> <b>Note</b></p> <p>It is not possible to rename a root group.</p>
<b>Delete</b>	<p>Delete the selected group.</p> <p> <b>Note</b></p> <p>It is not possible to delete a root group.</p>

 **Note**

- To move a group, drag the group from by Group to a desired location. Sub-groups can be moved to root groups. It is not possible to move root groups to sub-groups. When moving a group that contains sub-groups, all the sub-groups will move together maintaining the group hierarchy.
- The number of users in a group will be displayed next to the group name.

## Searching message schedules

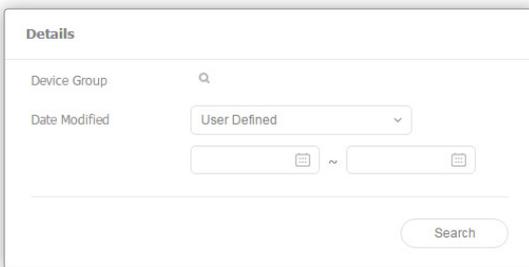
Enter keyword(s) and click .



A search bar with the text "Message Title" inside. To the right of the text is a menu icon (three horizontal lines) and a magnifying glass icon.

### Custom search

Click  to search schedules by using different criteria.

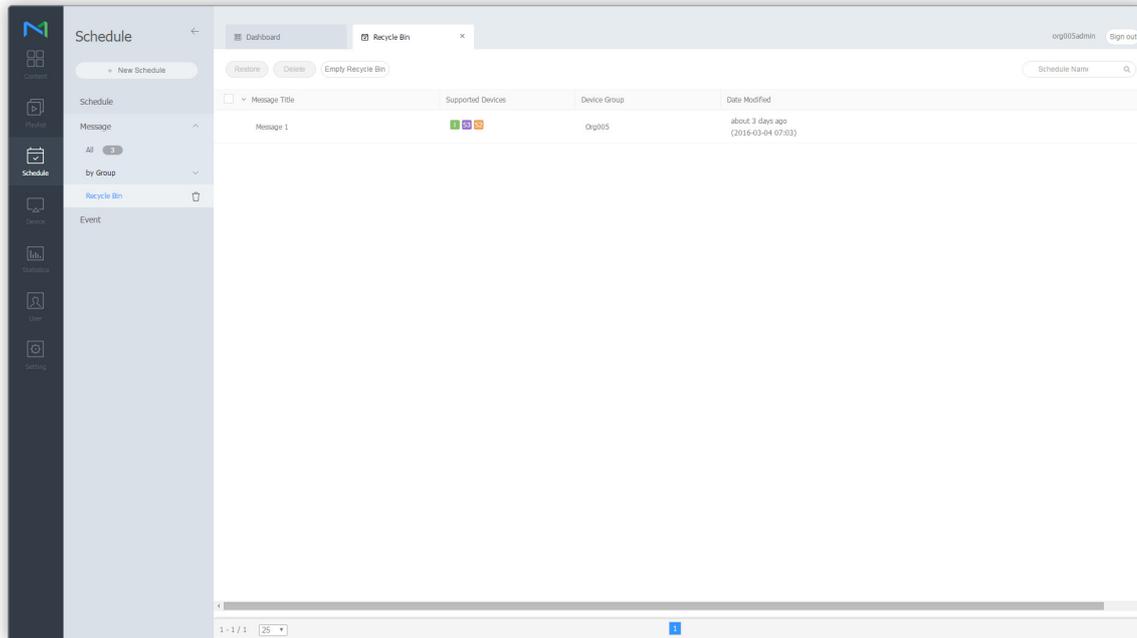


A "Details" panel for custom search. It contains a search bar with a magnifying glass icon. Below it, there are two sections: "Device Group" with a search bar and a magnifying glass icon, and "Date Modified" with a dropdown menu showing "User Defined" and a downward arrow. Below the dropdown are two date pickers separated by a tilde (~) symbol. At the bottom right of the panel is a "Search" button.

<b>Device Group</b>	Search schedules that have been distributed to specific devices. Click  and select a device group from the Select Group window.
<b>Last Modified Date</b>	Search schedules modified on specific dates. Select a date from the dropdown list. Alternatively, select <b>User Defined</b> and manually enter a date.

## Recycle Bin

Click **Recycle Bin** to view deleted schedules.



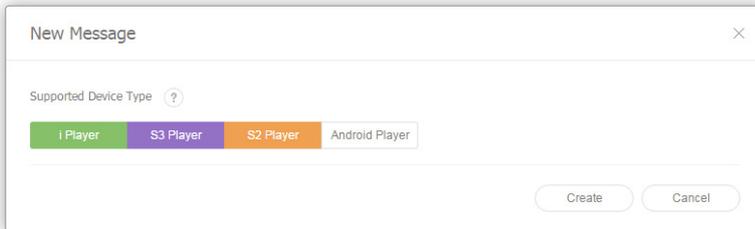
- Click **Restore** to restore the selected schedule to a desired group.
- Click **Delete** to delete the selected schedule permanently.
- Click **Empty Recycle Bin** to delete all schedules in Recycle Bin permanently.

### Note

For details on deleting schedules, refer to [▶ Deleting message schedules](#)

# Creating message schedules

- 1 Click **Create Schedule > Message**.
- 2 Select a device type from the Add Message Schedule window and click **Create**.



## Supported Device Type

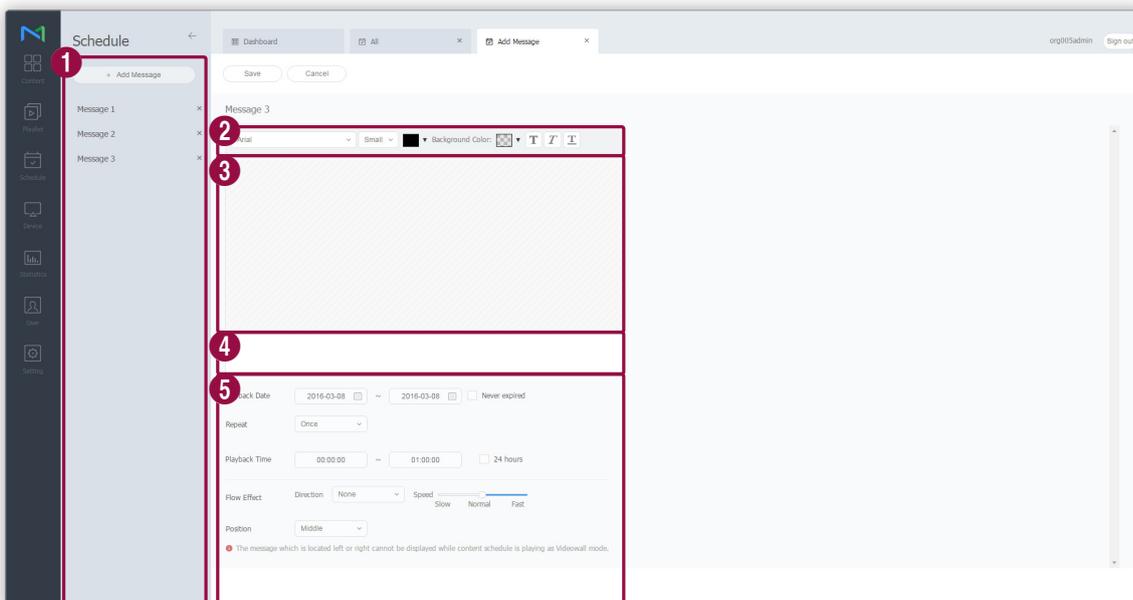
Select a device type to which to distribute the schedule.



### Note

- Message schedules are available for all device types.
- Higher-performance devices than the selected device are automatically included in the selection. For example, if you select S2 Player, higher versions, such as S3 Player, i Player, are automatically selected.
- Supported Device Type only displays types of devices that currently have licenses registered to MagicInfo Server.

- 3 Configured detailed schedule settings.



- 1 Add or delete messages. To add a message, click **Add Message**. To delete a message, click **X**. Adding messages allows you to play various messages at a specified time from a single schedule.
- 2 Configure text properties and background color.
- 3 Preview a message.
- 4 Enter a message.

- **Flow Effect:** Set a message scroll direction and speed.



If the device is in VideoWall mode, the message is displayed in the middle of the layout. The message will not appear on the screen if the message position is set to left or night.

- 5
  - **Playback Date:** Specify the period to play a message. To repeat the message continuously select **Never expired**.
  - **Repeat:** Specify the cycle to repeat a message.
  - **Playing Time:** Specify the duration to play a message.
  - **Location:** Specify the position of a message on devices.

4 After configuring the required schedule settings, click **Save**.

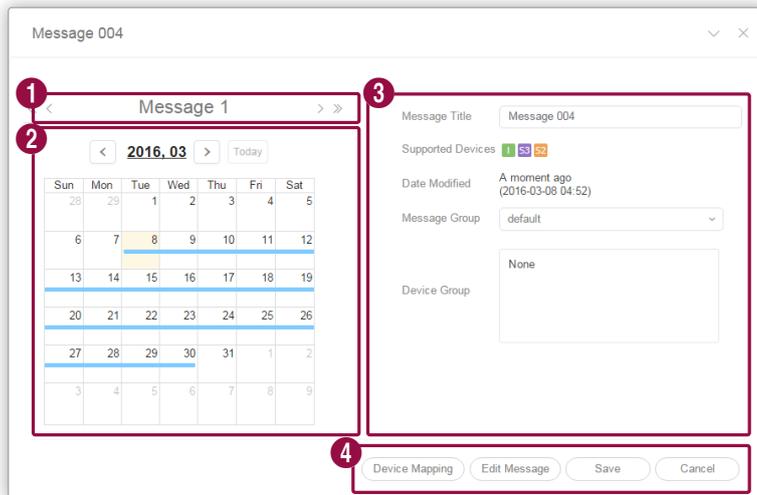
5 Use the content distribution settings window to configure distribution settings and click **Save**.

<b>Message Title</b>	Enter a message schedule name. A single schedule name cannot be used more than once.
<b>Message Group</b>	Select a group for the message schedule.
<b>Publish to</b>	Select a device group to which to distribute the message schedule. Devices can be selected by the group. It is not possible to select individual devices.

# Managing message schedules

## Viewing message schedule details

Click a schedule from the schedule list to view the schedule details.



- 1 Click < / > to view another message details if the message schedule contains multiple messages. Click << / >> to jump to the first or last message.
- 2 View message schedules in the calendar.
- 3 View schedule details. Edit the message schedule name or group.
  - **Device Mapping:** Map message schedules to devices. Select a device group from the Select Group window.
  - **Edit Message:** Edit the schedule using the same method as creating a schedule.
- 4
  - **Save:** Save changes made in the details window.
  - **Close:** Close the details window.

## Editing message schedules

---

Edit a message schedule, using one of the following options:

**Option 1** Select a message from the message list and click **Edit**. Edit the message using the same method as creating a message.

**Option 2** Select a schedule name from the message schedule list and use the schedule details window to edit the schedule. For details, refer to [▶ Viewing message schedule details](#)

## Deleting message schedules

---

Delete messages from a list of messages.

Select a message and click **Delete**. The message is moved to Recycle Bin. Messages in Recycle Bin can be restored and used again.

## Changing message schedule groups

---

Change a schedule group from the message schedule list.

Change a schedule group, using one of the following options:

**Option 1** Select a schedule and click **Move**. Use the group selection page to change the group and click **Save**.

**Option 2** Click a schedule name. Use the schedule details window to change the group and click **Save**.

## Mapping message schedules to devices

---

1 Select a schedule from the message schedule list and click **Device Mapping**.

2 Select a device group from the Select Group window.

# Event schedules

Create and manage events to play on devices.

Event schedules can be created by daily, weekly or monthly.

Click **Event** from the sub-menu items.

## Creating events

Create an event before creating an event schedule.

- 1 To create an event, click **Event Manager**.
- 2 Click **Create**.
- 3 In the "create event" page, configure event settings and click **Save**.

The screenshot shows the 'New Event' form in the Schedule application. The form is titled 'Event' and contains several input fields. Red circles with numbers 1 through 5 highlight specific elements: 1 points to the 'Event Name' field, 2 points to the 'Description' field, 3 points to the 'Event Type' dropdown menu, 4 points to the 'Use Detalink' checkbox, and 5 points to the 'Add Condition' button. Below the main form is a 'Condition' section with a search bar and checkboxes for 'Content', 'Message', and 'Channel'.

- 1 Enter an event name.
- 2 Enter an event description.

---

3 Select an event type from the dropdown list. Event conditions vary depending on the selected event type.

---

4 Import datalink server information by selecting the **Use Datalink** checkbox and clicking **Open**.

---

Add event conditions. To add an event condition, click **Add Condition**. To delete a condition, click . Adding conditions allows you to play various events based on different conditions from a single event.

- **Content:** Click  to select content to play on devices when event conditions are satisfied.
- **Message:** Enter a message to display on devices when event conditions are satisfied. Click  if you want to specify the message text font and position on devices.

5 ▪ **Channel:** Enter a device channel to change when event conditions are satisfied.

 **Note**

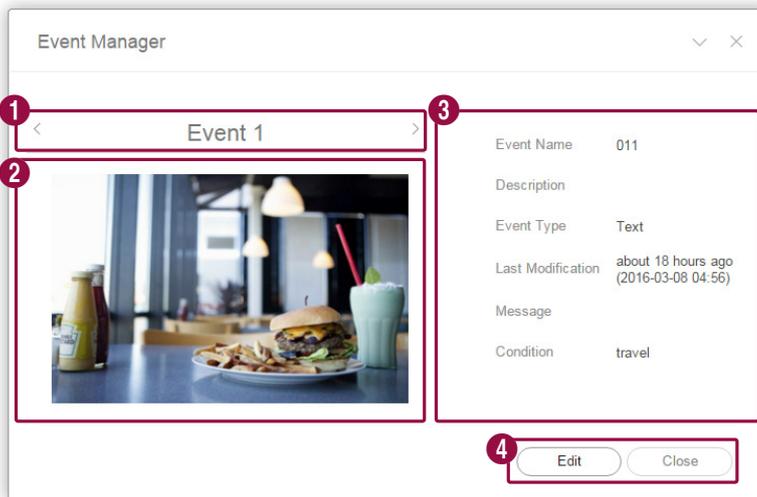
- Displayed event conditions that can be added vary depending on the selected event type.
  - After clicking **Add Condition**, it is not possible to change the event type. To change the event type, cancel creating the event and then start again.
-

## Managing events

---

### Viewing event details

Click an event name from the event list to view the event details.



1 Click < / > to view another event condition details if the event contains multiple conditions.

2 Preview the event.

3 View the event details.

- 4
- **Edit:** Edit the event using the same method as creating an event.
  - **Close:** Close the details window.

## Editing events

Select an event from the event list and click **Edit**. Edit the event using the same method as creating an event.

### Note

- Event Type cannot be edited.
- Some event conditions cannot be edited depending on the event type specified when the event was created.

## Deleting events

Delete events from the event list.

Select an event and click **Delete Permanently** to delete the event from MagicInfo Server permanently. Permanently deleted events cannot be restored.

## Viewing event schedules

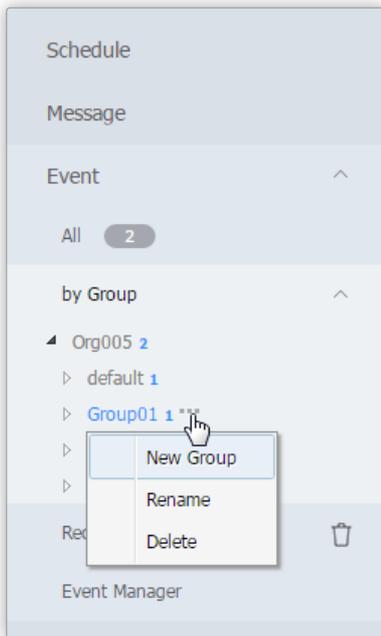
---

Create groups for each organization to manage event schedules by the group. For each organization, a default group is created by default.

- **All:** View all event schedules added by users in your organization.
- **by Group:** View or manage event schedules according to the group specified when the schedules were added.

## Managing event schedule groups

- 1 Click **by Group**.
- 2 Manage groups, using one of the following options:
  - Option 1** Select a group and right-click on the mouse.
  - Option 2** Place the mouse cursor on a group name and click **...**.



<p><b>New Group</b></p>	<p>Create a sub-group under the selected group.</p> <p> <b>Note</b></p> <p>A root group can be created by adding an organization. For details on adding organizations, refer to <a href="#">▶ Creating an organization</a></p>
<p><b>Rename</b></p>	<p>Rename the selected group.</p> <p> <b>Note</b></p> <p>It is not possible to rename a root group.</p>

**Delete**

Delete the selected group.

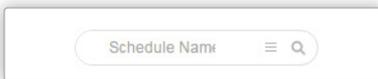
 **Note**

It is not possible to delete a root group.

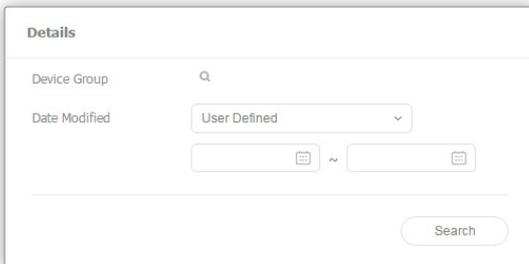
 **Note**

- To move a group, drag the group from by Group to a desired location. Sub-groups can be moved to root groups. It is not possible to move root groups to sub-groups. When moving a group that contains sub-groups, all the sub-groups will move together maintaining the group hierarchy.
- The number of users in a group will be displayed next to the group name.

## Searching event schedules

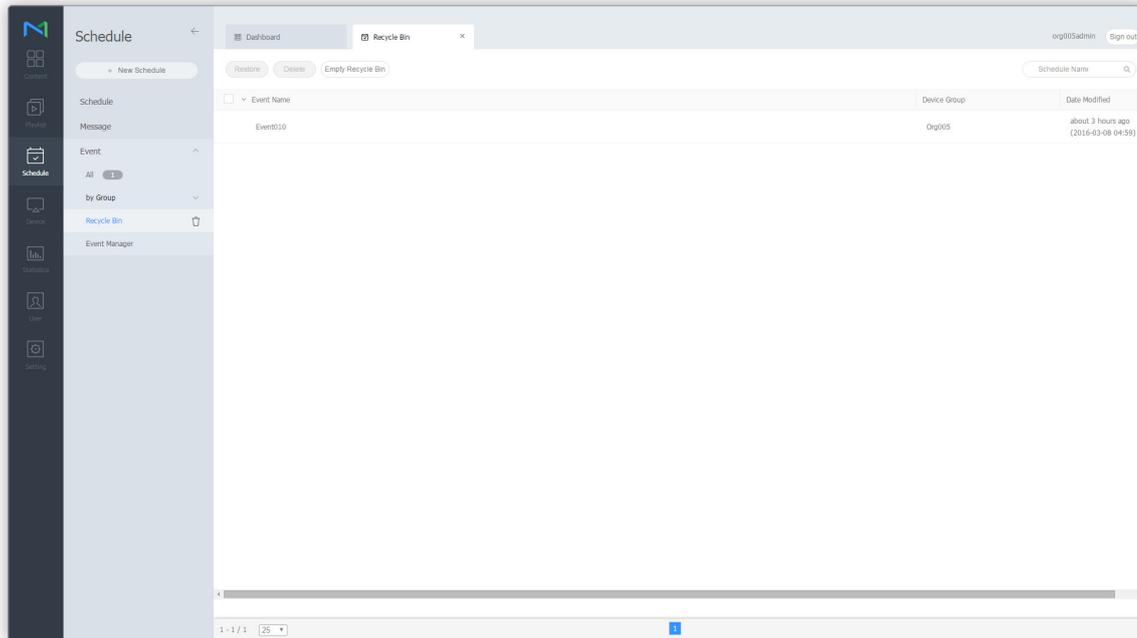
Enter keyword(s) and click .


### Custom search

Click  to search schedules by using different criteria.

**Device Group**Search schedules that have been distributed to specific devices. Click  and select a device group from the Select Group window.**Last Modified Date**Search schedules modified on specific dates. Select a date from the dropdown list. Alternatively, select **User Defined** and manually enter a date.

## Recycle Bin

Click Recycle Bin to view deleted schedules.



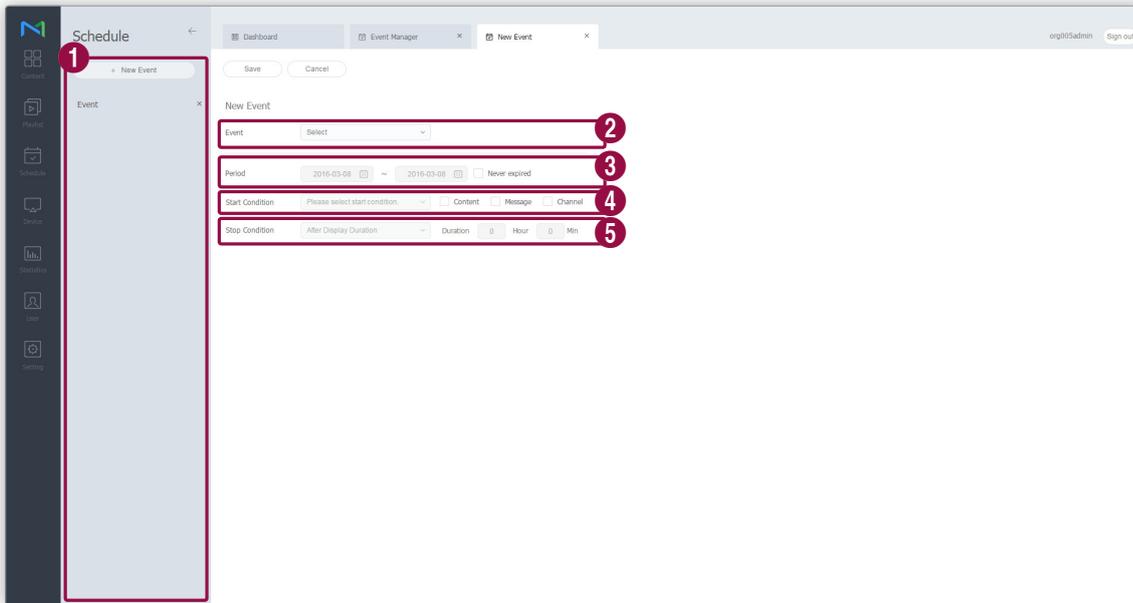
- Click **Restore** to restore the selected schedule to a desired group.
- Click **Delete** to delete the selected schedule permanently.
- Click **Empty Recycle Bin** to delete all schedules in Recycle Bin permanently.

### Note

For details on deleting schedules, refer to [Deleting event schedules](#)

# Creating event schedules

- 1 Click **Create Schedule > Event**.
- 2 Use the schedule settings page to configure an event type, period and conditions.



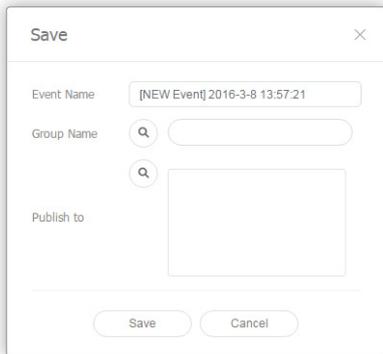
- 1 Click **New Event** to add an event. Adding events allows you to play desired events based on different conditions from a single schedule.
- 2 Configure settings for a created event from Event Manager.
- 3 Specify the period to execute a schedule.
  - To run a schedule continuously, select the **Never expired** checkbox.
- 4 Configure the condition settings to start an event. Select the checkboxes of actions to display on devices when conditions are satisfied. Available setting items vary depending on the selected event.
- 5 Configure the condition settings to stop an event. Available setting items vary depending on the selected event.

## Note

To create an event schedule, create an event first. For details, refer to [▶ Creating events](#)

- 3 After configuring the required schedule settings, click **Save**.

- 4 Use the content distribution settings window to configure distribution settings and click **Save**.



<b>Event Name</b>	Enter an event name.
<b>Group Name</b>	Click the blank field to select a schedule group.
<b>Publish to</b>	Click <b>Select</b> to select devices that will play the event schedule. Devices can be selected by the group. It is not possible to select individual devices.

# Managing event schedules

## Viewing event schedule details

Click a schedule from the event schedule list to view the schedule details.

The screenshot shows a window titled "Event Schedule" with a close button (X) in the top right corner. The window is divided into two main sections. The left section, labeled "1", contains a navigation bar with left and right arrows and the text "Event 1". Below this is a calendar view, labeled "2", showing the month of "2016.03" with a "Today" button. The calendar grid has columns for Sun through Sat and rows for dates 28 through 9. The date "8" is highlighted in yellow. The right section, labeled "3", contains a list of details: "Message Title" (107), "Start Date" (2016-03-08), "End Date" (2016-03-23), "Start" (travel), "Duration" (10Hour 0Minutes), "Content" (food), and "Playlist". At the bottom right, labeled "4", are two buttons: "Edit Event" and "Cancel".

1 Click < / > to another event details if the event schedule contains multiple events.

2 View event schedules in calendar.

3 View schedule details.

- 4
- **Edit Event:** Edit the schedule using the same method as creating a schedule.
  - **Cancel:** Close the details window.

## Editing event schedules

---

Edit a schedule, using one of the following options:

**Option 1** Select a schedule from the list and click **Edit**. Edit the schedule using the same method as creating an event schedule.

**Option 2** Select a schedule name from the event schedule list and use the schedule details window to edit the schedule. For details, refer to [▶ Viewing event schedule details](#)

## Deleting event schedules

---

Delete schedules from the event schedule list.

Select an event schedule and click **Delete** to move the schedule to Recycle Bin. Schedules in Recycle Bin can be restored and used again.

## Sending event conditions

---

Send event conditions to devices.

- 1 Select an event schedule from the list and click **Send Condition**.
- 2 Select an event and condition from the dropdown list and click **Send Condition**.

## Stopping event schedules

---

Stop an event schedule currently playing on devices. Select an event schedule from the list and click **Stop**.

## Device menu

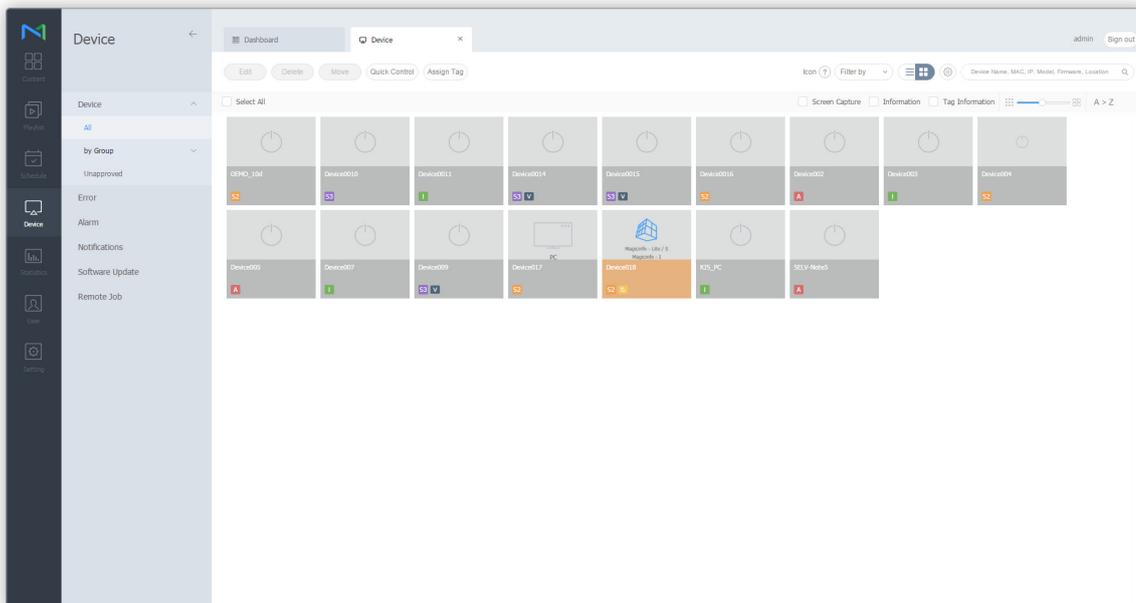
Manage devices added to MagicInfo Server.

Check statuses or resolve issues for devices through monitoring, remote access/control and device error checking. Retrieve device events and services by keeping logs.

Click  on the main menu bar.

 **Note**

- With Device Permissions enabled, the device manager can only manage devices authorized by general administrator or organization administrators. For details on device management privilege settings, refer to [Assigning Device Privileges](#)
- MagicInfo Server administrators (general administrator and organization administrators) can assign a role to each user. Available MagicInfo Server functions depend on the user role. For details on user roles, refer to [Changing a user role](#)
- This chapter assumes that you are signed in with general administrator privileges.



## Viewing devices

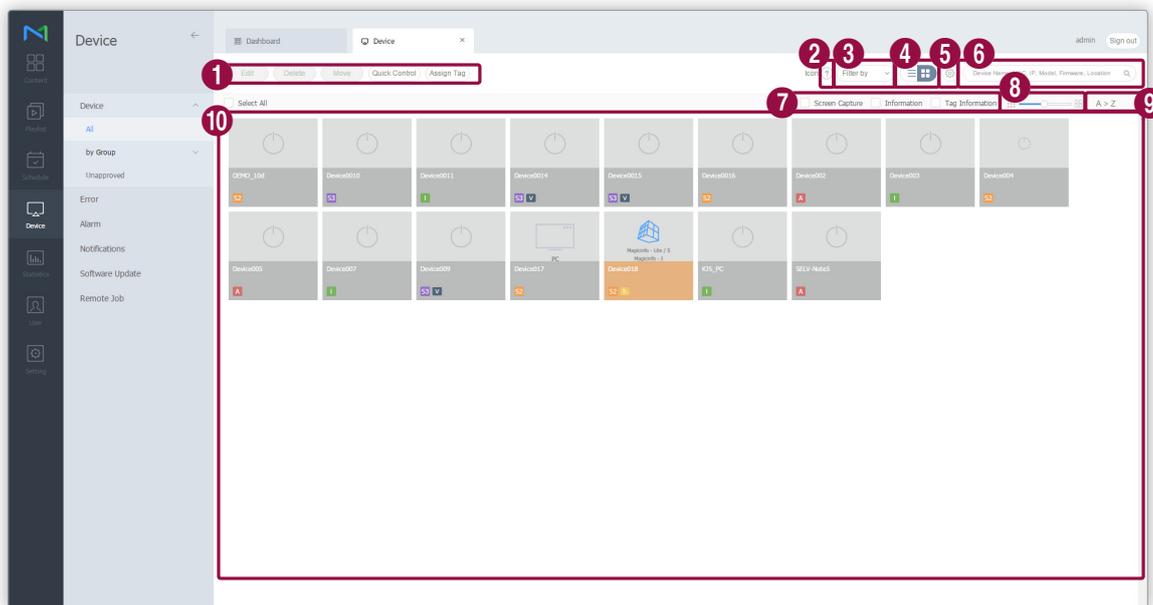
View devices connected to MagicInfo Server, retrieve details for each device, and remotely control devices. Create groups for each organization to manage devices by the group. For each organization, a default group is created by default.

Click **Device** from the sub-menu items.

- **All:** View all devices connected to MagicInfo Server, retrieve details for each device, and remotely control devices.
- **by Group:** View devices connected to MagicInfo Server by the group.

### Note

- If VideoWall devices are connected to MagicInfo Server, click the appropriate menu item view details for each device.
- With Device Permissions enabled, the device manager can only manage devices authorized by general administrator or organization administrators. For details on device management privilege settings, refer to [▶ Viewing detailed user information](#)



- **Edit:** Edit information on the selected device. For details, refer to [▶ Editing device information](#)
- **Delete:** Delete the selected device.
- **1 Move:** Move the selected device. Select a group from the "move group" window.
- **Quick Control:** View a list of frequently used remote control functions. For details, refer to [▶ Quick Control](#)
- **Assign Tag:** Assign tags to devices. For details, refer to [▶ Assigning tags to devices](#)

---

2 View a description of icons displayed on the device list.

Filter the device list to view specific devices only. Select a condition from the filter settings window and click **Save**.

3  **Note**

If you select Device Type, only devices that currently have licenses registered to MagicInfo Server appear.

---

Change the view mode for the device list.

- 4
- : Display devices as thumbnail images.
  - : Display device names and information in the device list.

---

5 Configure device polling settings.

---

6 Search devices by using keywords.

---

7 Select info items to display in thumbnails. This option appears only when the device view mode is set to thumbnail mode.

---

8 Adjust the size of thumbnails. This option appears only when the device view mode is set to thumbnail mode.

---

9 Display the device list in alphabetical or reverse alphabetical order. This option appears only when the device view mode is set to thumbnail mode.

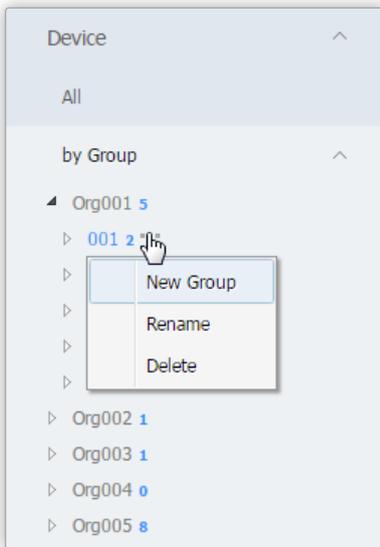
---

View the list of devices.

- 10
- If thumbnail view mode is in use, click a thumbnail to select a device. To view device details, click a device name.
  - If list view mode is in use, select a checkbox to select a device. To view device details, click a device name.
-

## Managing device groups

- 1 Click **by Group**.
- 2 Manage groups, using one of the following options:
  - Option 1** Select a group and right-click on the mouse.
  - Option 2** Place the mouse cursor on a group name and click .



<p><b>New Group</b></p>	<p>Create a sub-group under the selected group.</p> <p> <b>Note</b></p> <p>A root group can be created by adding an organization. For details on adding organizations, refer to <a href="#">▶ Creating an organization</a></p>
<p><b>Rename</b></p>	<p>Rename the selected group.</p> <p> <b>Note</b></p> <p>It is not possible to rename a root group.</p>

<b>Delete</b>	<p>Delete the selected group.</p> <p> <b>Note</b></p> <p>It is not possible to delete a root group.</p>
---------------	--

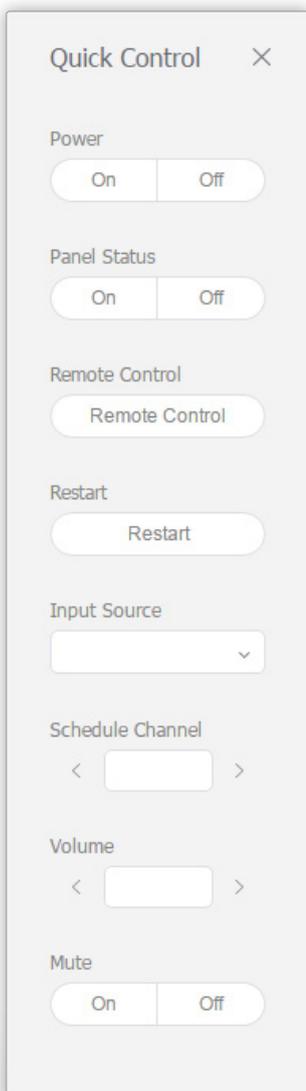
 **Note**

- To move a group, drag the group from by Group to a desired location. Sub-groups can be moved to root groups. It is not possible to move root groups to sub-groups. When moving a group that contains sub-groups, all the sub-groups will move together maintaining the group hierarchy.
- The number of users in a group will be displayed next to the group name.

## Quick Control

Quick Control is the collection of frequently used remote device control functions.

To use Quick Control dashboard, select a device from the list and click **Quick Control**.

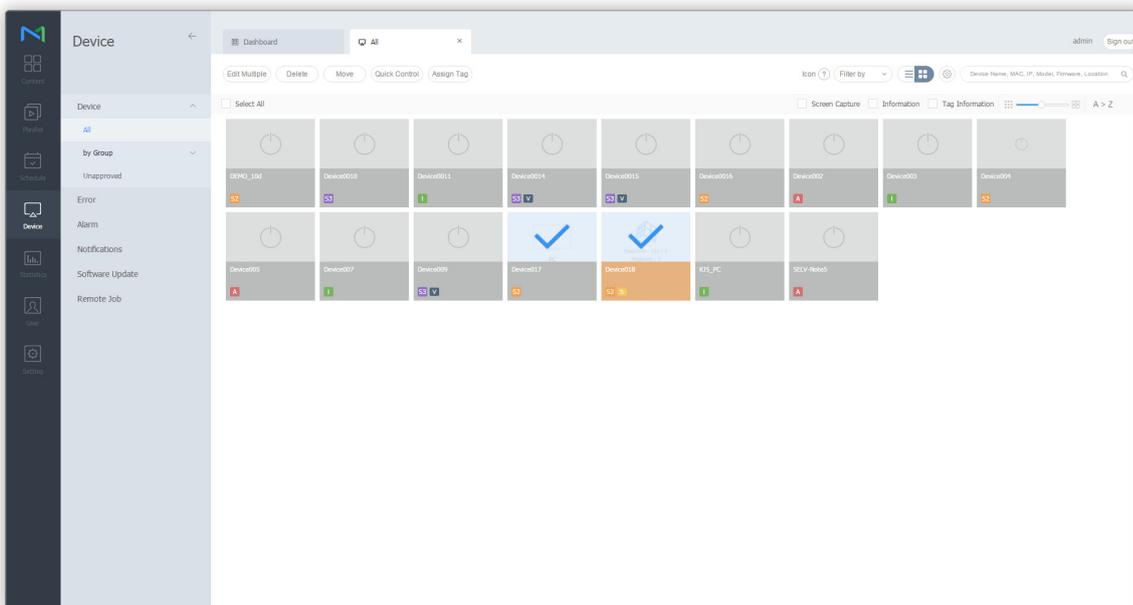


<b>Power</b>	Turn the device on or off.
<b>Panel Status</b>	Switch the device panel on or off.
<b>VNC</b>	Enable the remote access function. The remote access function is only available in MagicInfo Player I.
<b>Restart</b>	Restart the device.
<b>Input Source</b>	Select an input source from the dropdown list.
<b>Schedule Channel</b>	Change the device channel.
<b>Volume</b>	Adjust the volume of the device.
<b>Mute</b>	Mute or unmute the device.

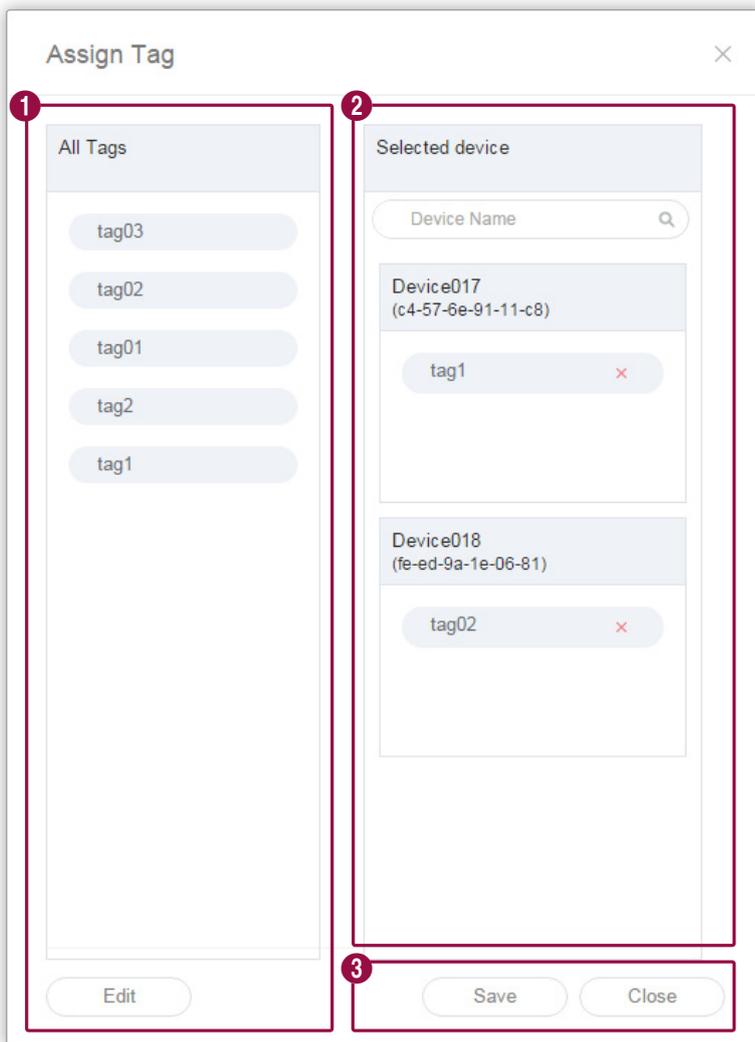
## Assigning tags to devices

Assign a tag to a device. This allows the device to selectively display information that satisfies conditions of the tag assigned to a DLK element or playlist.

- 1 Select a device from the device list and click **Assign Tag**. It is possible to select more than one device.



- 2 Use the tag settings window to configure tag settings and click **Save**.



Tags are displayed as a list.

- 1
  - Select and drag a tag to a device.
  - To add or delete tags, click **Edit**.

View the list of devices.

- 2
  - Add a tag to each device.
  - To delete a tag, click **x**.

3

- **Save:** Save tag settings.
- **Close:** Close the tag settings window.

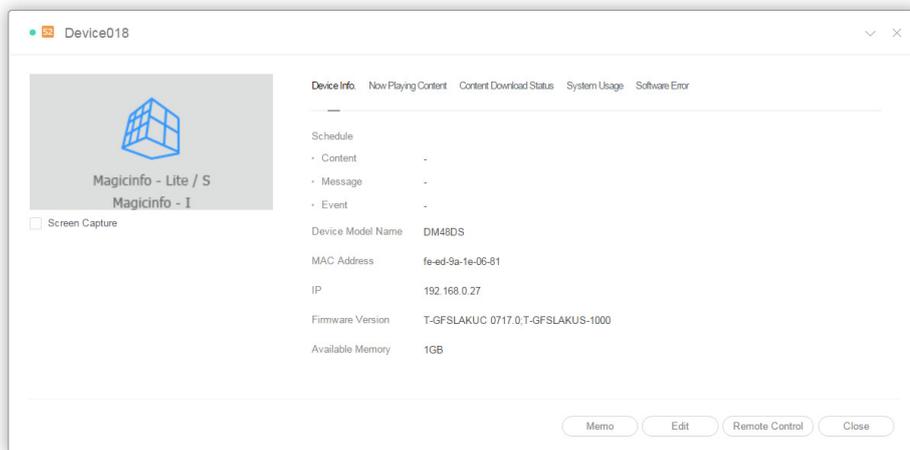
**Note**

To assign a tag to a device, first make sure to add the tag to MagicInfo Server. For details on adding or editing tags, refer to [Managing tags](#)

## Viewing device details

View and edit device details by clicking a device name from the device list.

To view details on content playback status, click a device name from the list.



### Screen Capture

Select the checkbox to display a screenshot of the device.

**Note**

- An image will not appear if no screenshot image has been saved.
- MagicInfo Player S does not support the feature to view screenshot images.
- In the "edit device info" window, use the settings tab to select a device and set a screenshot interval. For details, refer to [Changing device settings](#)

<b>Device Info.</b>	View information about the device.
<b>On Air Content</b>	View details on content playing on the device.
<b>Content Download Status</b>	View the status of content downloaded on the device.
<b>System Usage</b>	View the CPU, RAM and network usage of the device in a graph. To view the CPU, RAM and network usage, click <b>Start</b> .
<b>Errors</b>	View recent errors. To view error details on MagicInfo Player, click <b>View More</b> .
<b>Memo</b>	Add a note to the device.
<b>Edit</b>	Edit device information. For details, refer to <a href="#">▶ Editing device information</a>
<b>Remote Control</b>	<p>Remotely view and configure the device if it is connected to MagicInfo Server. Clicking this option displays the current screen of the device in a new window.</p> <p> <b>Note</b></p> <p>The remote access function is available in MagicInfo Player I. Adding a remote server to MagicInfo Server allows users to control it remotely from MagicInfo Player S2 and MagicInfo Player S3 devices. For details on the MagicInfo Player S remote server, refer to <a href="#">▶ Managing a MagicInfo Player S remote server</a></p>
<b>Close</b>	Close the device details window.

## Editing device information

Edit device information, using one of the following options:

**Option 1** Select a device from the device list and click **Edit**. If more than one device is selected, click **Edit Multiple**.

**Option 2** Click a device name from the device list and click **Edit** on the device details window.

## Editing basic information

- 1 Select the **Information** tab from the "edit device info" window.
- 2 View and edit information and click **Save**.

### Default Information

- **Device Name:** Change a device name.
- **MAC Address:** View the MAC address for the device.
- **IP:** view the IP address.
- **Device Model Name:** Edit the device model name.
- **Location:** Edit the device location details.

### Version

- **Firmware Version:** View the device's firmware version.
- **OS Image Version:** View the device's OS image version.
- **Client Program Version:** View the device's client program version.

System	<ul style="list-style-type: none"><li>▪ <b>CPU:</b> View the device CPU information.</li><li>▪ <b>Memory Size:</b> View the device memory capacity.</li><li>▪ <b>Storage Size:</b> View the device storage capacity.</li><li>▪ <b>Video Adapter:</b> View the device's graphics card information.</li><li>▪ <b>Video Memory:</b> View the device's graphics memory capacity.</li><li>▪ <b>Video Driver:</b> View the device graphics driver information.</li></ul>
Storage Size	<ul style="list-style-type: none"><li>▪ <b>Disk Space Usage:</b> View disk space in use.</li><li>▪ <b>Available Capacity:</b> View available disk space.</li></ul>
ETC	<ul style="list-style-type: none"><li>▪ <b>Approval Date:</b> View the approved date for the device.</li><li>▪ <b>Screen Size:</b> View the device screen size.</li><li>▪ <b>Resolution:</b> View the device screen resolution.</li><li>▪ <b>EFW State:</b> View whether the device disk is write-protected.</li><li>▪ <b>Code:</b> View the device code.</li><li>▪ <b>Serial Key:</b> View the device's serial key.</li></ul>

## Editing time

- 1 Select the **Time** tab from the "edit device info" window.
- 2 View and edit information and click **Save**.
  - To refresh the current device status, click **Current Status**.

Edit Device018

Information **Time** Setup Display

Clock Set

Date 2016-03-08

Time 10:32AM

Timer

Timer	On Time	Off Time	Volume	Input Source
Timer1	-	-	-	-
Timer2	-	-	-	-
Timer3	-	-	-	-
Timer4	-	-	-	-
Timer5	-	-	-	-
Timer6	-	-	-	-
Timer7	-	-	-	-

Current Status Save Close

<b>Clock Set</b>	<ul style="list-style-type: none"> <li>▪ <b>Date:</b> Set current date for the device.</li> <li>▪ <b>Time:</b> Set current time for the device.</li> </ul>
<b>Timer</b>	Set the timer to automatically turn the device on or off. For details, refer to <a href="#">▶ Setting timers</a>
<b>Holiday management</b>	<b>Holiday:</b> Set holidays to prevent the device from operating on specified days.

## Setting timers

Set the timer to automatically turn the device on or off.

- 1 Click a timer from the timer list.
  - If you click a previously set timer, you can edit the timer for use.
  - To add a new timer, click a timer that has not been set up.
- 2 Configure timer details.

The screenshot shows a window titled 'Edit Device018' with tabs for 'Information', 'Time', 'Setup', and 'Display'. The 'Time' tab is active, showing a 'Timer' table with columns for 'Timer', 'On Time', 'Off Time', 'Volume', and 'Input Source'. Below the table, there are two sections: 'On Timer' and 'Off Timer'. Each section has a 'Use' radio button selected, a 'Do not Use' radio button, a 'Day' selection (Sun, Mon, Tue, Wed, Thu, Fri, Sat), an 'On Time' or 'Off Time' input field (both set to '12:00AM'), a 'Volume' slider (set to 20), an 'Input Source' dropdown (set to 'PC'), and a 'Holiday' checkbox (checked and labeled 'Apply'). At the bottom of the window are buttons for 'Current Status', 'Save', and 'Close'.

### On Timer

Set the time to turn on the device. To use the timer, select **Use**.

- **Day:** Select day(s) of the week to repeat the timer.
- **On Time:** Set the time to turn on the device.
- **Volume:** Set the device volume to apply when it turns on.
- **Input Source:** Select an input source to apply when the device turns on.

### Off Timer

Set the time to automatically turn off the device. To use the timer, select **Use**.

- **Day:** Select day(s) of the week to repeat the timer.
- **Off Time:** Set the time to turn off the device.

## Changing device settings

- 1 Select the **Setup** tab from the "edit device info" window.
- 2 View and edit information and click **Save**.

### Time Zone

- **Time Zone:** Select a time zone for each city.
- **Daylight Saving Time:** Turn daylight savings time mode on or off. To use daylight savings time mode, configure start and end settings.

#### Note

Daylight Saving Time, also known as Summer Time, is a system that advances clocks one hour forward in summer.

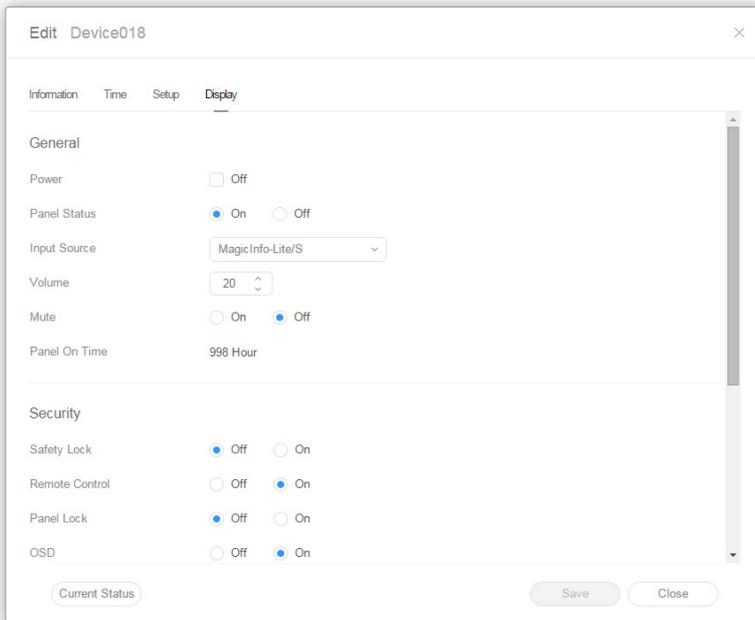
### Connection

- **MagicInfo Sever URL:** Set MagicInfo Server address.
- **Proxy Setting:** Enable or disable the proxy server. Edit the settings if required.
- **FTP Connection Mode:** Configure the FTP connection mode.
- **Connection Time Limit:** Set timeout options to disconnect from MagicInfo Server if communication with the FTP server is not available for a specified period of time.

<p><b>Period</b></p>	<ul style="list-style-type: none"> <li>▪ <b>Triggering Interval:</b> Specify the triggering cycle.</li> <li>▪ <b>Monitoring Interval:</b> Specify the monitoring cycle.</li> <li>▪ <b>Screen Capture Cycle:</b> Specify the screen capture cycle. The range is 1 to 180 minutes.</li> <li>▪ <b>PDFConversion interval:</b> Set the time interval for each device to switch to another page in a distributed PDF document. This option is available when the document contains more than one page.</li> <li>▪ <b>OfficeConversion interval:</b> Set the time interval for each device to switch to another page in a distributed Office document. This option is available when the document contains more than one page.</li> </ul>
<p><b>Manage</b></p>	<p><b>Proof of Play Management</b></p> <ul style="list-style-type: none"> <li>▪ <b>Validity:</b> Set storage period for playback logs.</li> <li>▪ <b>Valid Size:</b> Set storage size for playback logs.</li> <li>▪ <b>Last Check Time:</b> Display the time of last access to playback logs.</li> </ul> <p> <b>Note</b></p> <p>Content files are deleted automatically when the period has expired or the space is full.</p>
<p><b>Tag</b></p>	<p><b>Tag:</b> Add tags to devices.</p>
<p><b>Content Download Status</b></p>	<ul style="list-style-type: none"> <li>▪ <b>Setup:</b> Download content from a download server only.</li> <li>▪ <b>Interval:</b> Set content downloading intervals.</li> <li>▪ <b>Job Unit:</b> Set the unit for download intervals to seconds or percentage.</li> </ul>

## Editing Display Information

- 1 Select **Display** tab in the editing window.
- 2 View and edit information and click **Save**.
  - Click **View More** to view complete display information.
  - To refresh the current device status, click **Current Status**.



## Changing device channels

Change the schedule channel for a device, using one of the following options:

- Option 1** Change the channel using the device remote control.
- Option 2** Check the device from the list and change the channel through Quick Control.

# Errors and Alarms

View critical errors and alarms that may affect system operation. View and change the error status. Take an immediate action when errors and alarms occur to avoid system malfunction.

## Viewing Software Errors

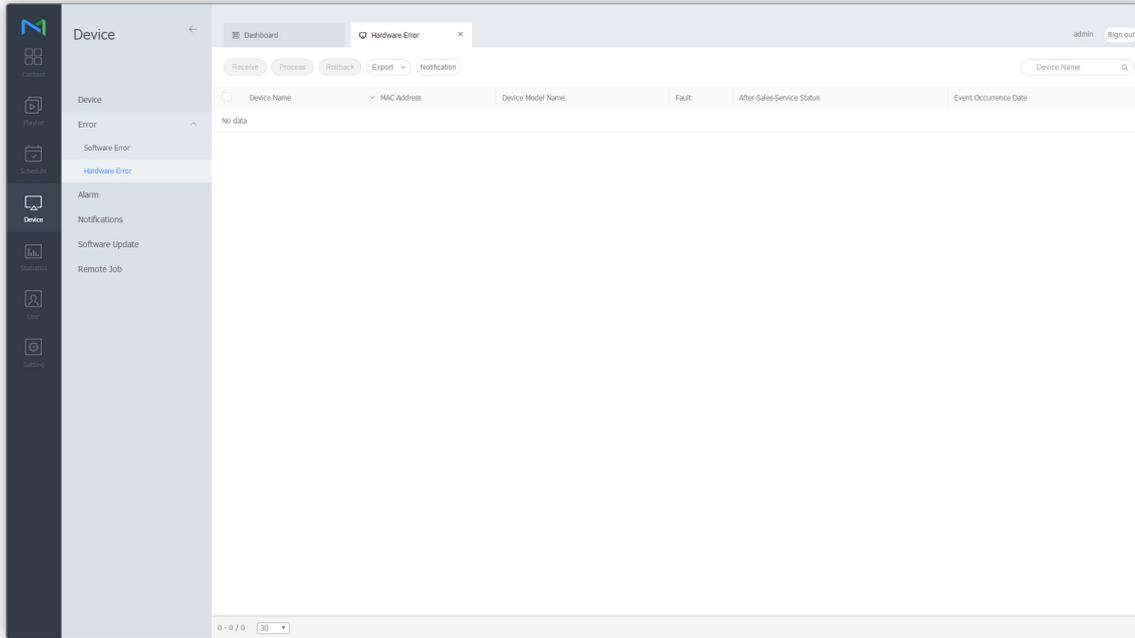
To check players where failures affecting system maintenance occurred and view the details, click **Error > Software Error**.

Device Name	MAC Address	Code	Fault Level	Device Error	Device time	Server time
Device017	c4-57-6e-91-11-c8	22003	F	[Network] Disconnected gateway.(A)	2016-03-08T05:24:43	2016-03-08 04:35:07.0
DEMO_10d	24-4b-03-03-21-8b	21007	F	[Default Contents] There is no content to play in Internal/USB.	2016-03-07T16:53:20	2016-03-07 15:53:26.0
DEMO_10d	24-4b-03-03-21-8b	21003	F	[Default Contents] There is no program in scheduling time.	2016-03-07T16:53:17	2016-03-07 15:53:23.0
DEMO_10d	24-4b-03-03-21-8b	22003	F	[Network] Disconnected gateway.(A)	2016-03-07T15:56:35	2016-03-07 15:15:17.0
DEMO_10d	24-4b-03-03-21-8b	22003	F	[Network] Disconnected gateway.(A)	2016-03-07T15:56:24	2016-03-07 15:15:15.0
DEMO_10d	24-4b-03-03-21-8b	22003	F	[Network] Disconnected gateway.(A)	2016-03-07T15:56:15	2016-03-07 15:15:12.0
DEMO_10d	24-4b-03-03-21-8b	22003	F	[Network] Disconnected gateway.(A)	2016-03-07T15:56:07	2016-03-07 15:15:10.0
DEMO_10d	24-4b-03-03-21-8b	22003	F	[Network] Disconnected gateway.(A)	2016-03-07T15:55:57	2016-03-07 15:15:07.0
DEMO_10d	24-4b-03-03-21-8b	22003	F	[Network] Disconnected gateway.(A)	2016-03-07T15:55:48	2016-03-07 15:15:04.0
DEMO_10d	24-4b-03-03-21-8b	22003	F	[Network] Disconnected gateway.(A)	2016-03-07T15:55:38	2016-03-07 15:15:02.0
DEMO_10d	24-4b-03-03-21-8b	22003	F	[Network] Disconnected gateway.(A)	2016-03-07T15:55:28	2016-03-07 15:14:59.0
DEMO_10d	24-4b-03-03-21-8b	22003	F	[Network] Disconnected gateway.(A)	2016-03-07T15:55:19	2016-03-07 15:14:56.0
Device010	c4-57-6e-db-f4-91	22003	A	[Network] Disconnected gateway.	2016-02-19T19:24:32	2016-02-19 06:55:56.0
Device010	c4-57-6e-db-f4-91	22001	A	[Network] Disconnected wired network.	2016-02-19T19:24:32	2016-02-19 06:55:53.0
Device010	c4-57-6e-db-f4-91	21005	A	[Default Contents] Deployed empty schedule.(4a675c2b-d8c1-4e87-898e-e3b14271821e)	2016-02-19T07:30:25	2016-02-19 06:30:29.0
Device010	c4-57-6e-db-f4-91	21004	F	[Default Contents] Deleted network schedule.(4a675c2b-d8c1-4e87-898e-e3b14271821e)	2016-02-19T07:30:22	2016-02-19 06:30:26.0
Device010	c4-57-6e-db-f4-91	21006	F	[Default Contents] There is no channel information in network schedule.(4a675c2b-d8c1-4e87-898e-e3b14271821e)	2016-02-19T07:29:47	2016-02-19 06:29:52.0
Device010	c4-57-6e-db-f4-91	21005	A	[Default Contents] Deployed empty schedule.(4a675c2b-d8c1-4e87-898e-e3b14271821e)	2016-02-19T07:29:44	2016-02-19 06:29:49.0
Device010	c4-57-6e-db-f4-91	21004	F	[Default Contents] Deleted network schedule.(4a2af61c-9bb2-4fae-96a7-356196cf40b)	2016-02-19T07:29:41	2016-02-19 06:29:46.0
Device014	5c-8f-90-77-b2-d6	21006	F	[Default Contents] There is no channel information in network schedule.(2140141a-807e-495a-8027-72e8f85d94c8)	2016-01-29T11:13:119	2016-01-29 10:31:23.0

<b>Device Name</b>	View the device name.
<b>MAC Address</b>	View the MAC address for the device.
<b>Code</b>	View the code which identifies why the player failed.
<b>Fault Level</b>	View the error type. <ul style="list-style-type: none"> <li>A: Indicates a player issue that sends a warning notification to the administrator.</li> <li>F: Indicates a critical player issue that should be resolved immediately by the administrator.</li> </ul>
<b>Device Error</b>	View a brief overview of the failure.
<b>Device time</b>	View the time on the device when the failure occurred.
<b>Server time</b>	View the time on MagicInfo Server when the failure occurred.

## Viewing Device Errors

To view critical device errors and details that may have a negative impact on system operation, click **Error > Hardware Error**.



<b>Device Name</b>	View the name of a device with an error.
<b>MAC Address</b>	View the MAC address for the device.
<b>Device Model Name</b>	View the model name of a device with an error.
<b>Fault</b>	View the error type. <ul style="list-style-type: none"> <li>Errors such as a lamp error, brightness sensor error and device fan malfunction are displayed.</li> </ul>
<b>After-Sales-Service Status</b>	View the status of the processing of a device error.
<b>Event Occurrence Date</b>	View the date when an error occurred.

## Processing errors

After identifying the device with an error, the administrator can update the error processing status by clicking **Receive**.

- If resolving a device error is underway, click **Process** to update the device error processing status.
- If the error occurs again on a device after action has been taken, click **Rollback** to change the After-Sales-Service Status back to **Occurrence**.

## Error Notification

- 1 To send an email notification for a device error to a specific user, select a device from the list of devices that have errors occurred and click **Notification**.
- 2 Select items to notify (Error, Alarm) the user and click **Save**.



### Note

To send email notifications to users, first make sure to configure SMTP server settings. For details, refer to [▶ Setting MagicInfo Server](#)

## Viewing alarm details

---

Click **Alarm** to view details of an alarm such as the name and model of the device that generated the alarm, and the type, level and date of the alarm.

## Exporting a list of alarms

To export a list of devices with alarms as an Excel or PDF file, click **Export**.

## Alarm notification

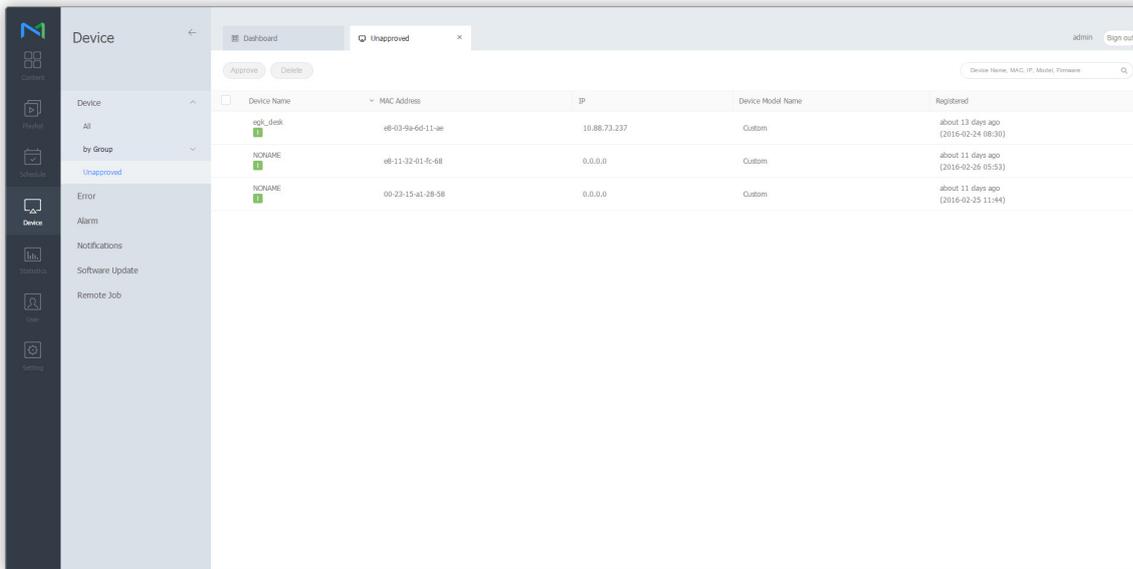
- 1 To send an email notification for a device alarm to a specific user, select a device from the list of devices that have alarms occurred and click **Notification**.
- 2 Select items to notify (Error, Alarm) the user and click **Save**.

# Device approval

View and authorize devices that are connected to MagicInfo Server but not authorized.

## Authorizing devices

- 1 Click **Device > Unapproved**. Unapproved devices appear.



- 2 Select a device and click **Approve**. A window appears where a device can be authorized.
- 3 Specify the name, group, location and expiration date. Click **OK**. The device has been authorized.

### Note

- To delete an unauthorized device without authorizing it, select the device and click **Delete**.
- To authorize multiple devices of the same model, select devices and click **Approve**. If you enter representative names of devices, the device names are saved in the "representative name\_(sequence number)" format.

# Viewing the status of multiple devices

View the storage capacity, schedule or content distribution and other statuses of devices connected to MagicInfo Server for efficient maintenance of multiple devices.

## Checking devices with no specified time zone

---

Check devices where time zones are not set.

Click **Notifications > Time Zone Not Set**.

## Exporting Device List

To export a list of devices that have notifications occurred as an Excel or PDF file, select devices and click **Export**.

## Setting Device Time Zone

You can set universal time zone and daylight saving settings for devices. Select the desired device checkbox and click **Setup**.

## Restarting Devices

You can restart devices after updating the time zone. Select the desired device checkbox and click **Restart**.

## Checking devices with insufficient space

---

Check devices that have insufficient space.

Click **Notifications > Insufficient Capacity**.

### Exporting Device List

To export a list of devices that have notifications occurred as an Excel or PDF file, select devices and click **Export**.

## Checking devices with no distributed schedule

---

Check devices that are connected to MagicInfo Server but do not have deployed schedules.

Click **Notifications > Schedule Not Published**.

### Exporting Device List

To export a list of devices that have notifications occurred as an Excel or PDF file, select devices and click **Export**.

### Distributing Schedules

To distribute a schedule to devices a schedule has not been distributed to, select a device and click **Deploy**.

 **Note**

This function is only available on devices that are turned on.

## Checking devices that failed to receive a schedule

---

Check devices that failed to receive a distributed schedule due to a network connection error or insufficient space.

Click **Notifications > Schedule Publication Failed**.

### Exporting Device List

To export a list of devices that have notifications occurred as an Excel or PDF file, select devices and click **Export**.

### Distributing Schedules

To distribute a schedule again to devices that failed to receive a distributed schedule, select a device and click **Deploy**.



#### Note

This function is only available on devices that are turned on.

## Checking devices with no distributed content

---

Check devices that have not received distributed content.

Click **Notifications > Content Error**.

### Exporting Device List

To export a list of devices that have notifications occurred as an Excel or PDF file, select devices and click **Export**.

### Distributing content

To deploy content to idle devices, select the device and click **Deploy**.



#### Note

This function is only available on devices that are turned on.

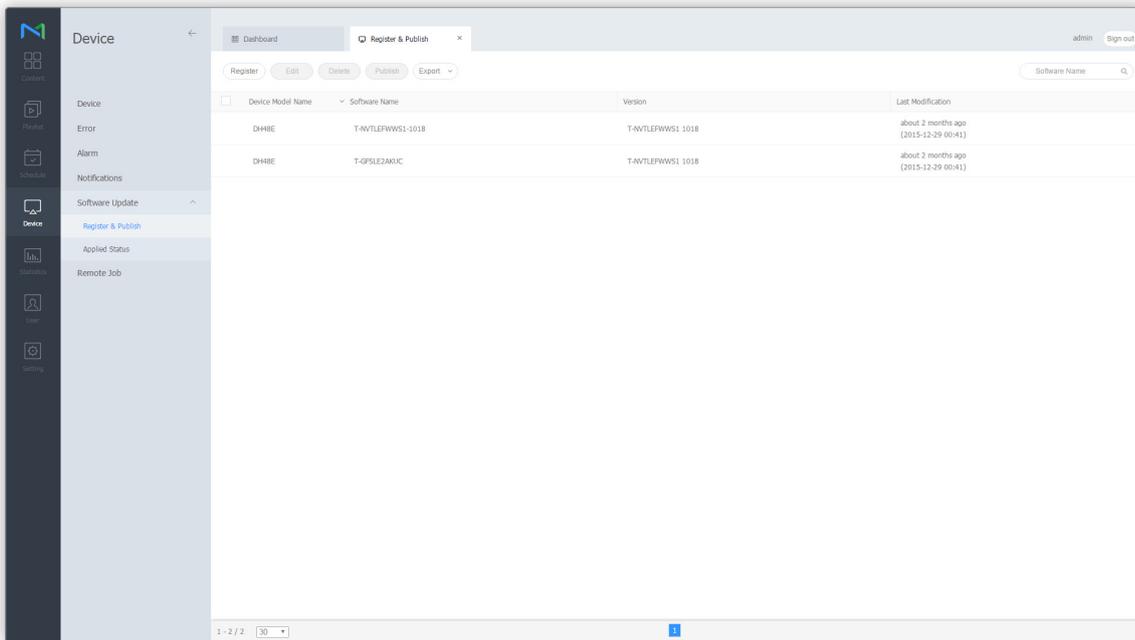
# Software Update

Using MagicInfo Server, distribute software updates on MagicInfo Player at a scheduled time.

## Registering software

To update software installed on a device connected to MagicInfo Server, first register the software on MagicInfo Server.

- 1 To register the software on MagicInfo Server, click **Software Update > Register & Publish**.
- 2 In the Register & Publish window, click **Register**.



- 3 In the registration window, enter information of the software to update and click **Save**.

<b>Device Type</b>	Choose the device types to update the software from the drop-down list of devices connected to MagicInfo Server.
<b>Software Name</b>	Enter the name of the software to update on the device.
<b>File Name</b>	To select a software file, click  .

### Note

To export the list of software registered on MagicInfo Server as an Excel or PDF file, click **Export**.

## Distributing software

- 1 To deploy software registered on MagicInfo Server, click **Software Update > Register & Publish**.
- 2 Select the software to distribute and click **Deploy**.

### 3 Setup deployment details and click **Deploy**.

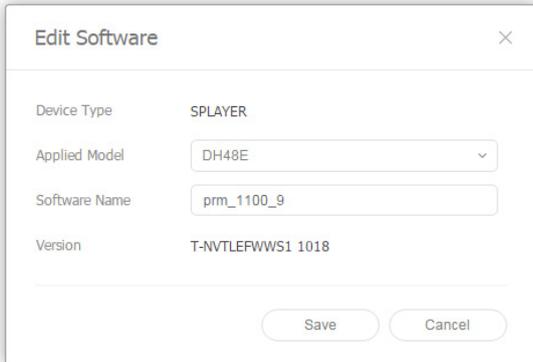
<b>Device Model Name</b>	View device model information configured at the time of software registration.
<b>Software Name</b>	View the software name entered at the time of software registration.
<b>Software File Name</b>	View the update file name selected at the time of software registration.
<b>Software Version</b>	View the software version entered at the time of software registration.
<b>CRC Info.</b>	View CRC information.
<b>Publish Time</b>	You can deploy software immediately or at a later time.
<b>Publish Schedules</b>	Set the distribution date and time. This option is available if software distribution is scheduled.
<b>Applied Version</b>	Select the software version to update from the dropdown list.
<b>Select Applicable Device(s)</b>	Select devices to update software on by model or group.

#### Note

- Cyclic Redundancy Check (CRC) is used to detect errors and verify data integrity in serial transmissions.
- If the time set for a scheduled software distribution precedes the current time, distribution takes place immediately upon scheduling.
- To view the version of software installed on the current device, click the device on the list.

## Editing software

- 1 To edit information of software registered on MagicInfo Server, click **Software Update > Register & Publish**.
- 2 Select the software to edit and click **Edit**.
- 3 Edit software information and click **Save**.



The screenshot shows a dialog box titled "Edit Software" with a close button (X) in the top right corner. The dialog contains the following fields:

- Device Type:** SPLAYER
- Applied Model:** A dropdown menu with "DH48E" selected.
- Software Name:** A text input field containing "prm\_1100\_9".
- Version:** T-NVTLEPWW51 1018

At the bottom of the dialog, there are two buttons: "Save" and "Cancel".

<b>Device Type</b>	View device types to update software.
<b>Applied Model</b>	Choose the device names to update software from the drop-down list of devices connected to MagicInfo Server.
<b>Software Name</b>	Enter the name of the software to update on the device.
<b>Version</b>	View software version.

## Deleting software

---

- 1 To delete software registered on MagicInfo Server, click **Software Update > Register & Publish**.
- 2 Select the software to delete and click **Delete**.

## Viewing the software deployment status

---

After successful registration and deployment of software, click **Software Update > Applied Status**. You can view the status of software deployment.

## Editing distribution schedules

To edit a software distribution schedule, select a schedule and click **Edit**.

## Canceling Deployment

To cancel a software distribution schedule, select a schedule and click **Cancel**.

## Exporting Software Deployment Status

To export a distribution status list as an Excel or PDF file, select a distribution task and click **Export**.

# Remote Job

Control devices and process data from a remote location.

## Note

MagicInfo Player S does not support the remote task feature.

## Adding a remote task

- 1 Click **Remote Job > Add**.
- 2 Use the remote task settings window to enter a task name.

The screenshot shows the 'MagicInfo-i Job Uploader' window with the 'Set Job' step selected. The window has a progress bar at the top with four steps: 'Set Job', 'Set Repeat', 'Set Device', and 'Finished'. The 'Set Job' step is currently active.

Job Name : Devctrl01  
Job Type : Send File

Location :  Default Location  Custom Location

File List :

Auto Run

File Name	File Size	File Location	Auto Run
<input type="checkbox"/> Consol_Temp.cst	2764854	C:#Consol_Temp.cst	<input checked="" type="checkbox"/>

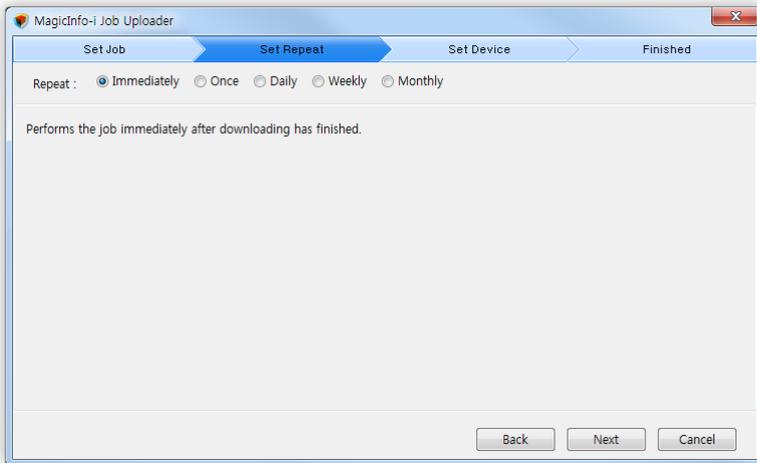
### 3 Specify the task type and complete the rest settings, and click **Next**.

<b>Send File</b>	<p>Send files or folders saved on your computer to specified devices or device groups.</p> <ul style="list-style-type: none"> <li>▪ <b>Auto Run:</b> Configure the settings to execute the selected file automatically upon transmission.</li> <li>▪ <b>Location:</b> Select the default location or a custom location as the source location for file transfer. The default location is D:\Repository\JobFile. To use a custom location, enter a location on your computer.</li> </ul>
<b>Get File</b>	<p>Import files or folders to your computer from the device connected to MagicInfo Server.</p> <ul style="list-style-type: none"> <li>▪ <b>File Location:</b> Enter the path of the file to import.</li> </ul>
<b>Delete File/Folder</b>	<p>Delete files or folders on the device connected to MagicInfo Server.</p> <ul style="list-style-type: none"> <li>▪ <b>File/Folder Location:</b> Enter the path of the file or folder to delete.</li> </ul>
<b>Restart</b>	<p>Restart the system or MagicInfo Player I program on the device connected to MagicInfo Server.</p> <ul style="list-style-type: none"> <li>▪ <b>Reboot Target:</b> Select <b>Player</b> or <b>System</b>.</li> </ul>
<b>Service Management</b>	<p>Manage services supported on a device.</p> <ul style="list-style-type: none"> <li>▪ <b>Service Name:</b> Enter the name of a service.</li> <li>▪ <b>Command Type:</b> Select a service command type.</li> </ul>
<b>Execute Command</b>	<p>Enter and execute a command (CMD) used on a computer.</p> <ul style="list-style-type: none"> <li>▪ This function may not work properly if the command entered does not exist.</li> </ul>
<b>Kill Process</b>	<p>End a process running on a device by entering the process name.</p>
<b>Close Window</b>	<p>Enter the name of a window open on a device to close it.</p> <ul style="list-style-type: none"> <li>▪ If multiple windows with the same name are open, a random window is selected and then closed.</li> <li>▪ Make sure to enter the entire name displayed at the top of a window.</li> </ul>
<b>Get Log File</b>	<p>Import log files from a device to your computer.</p>

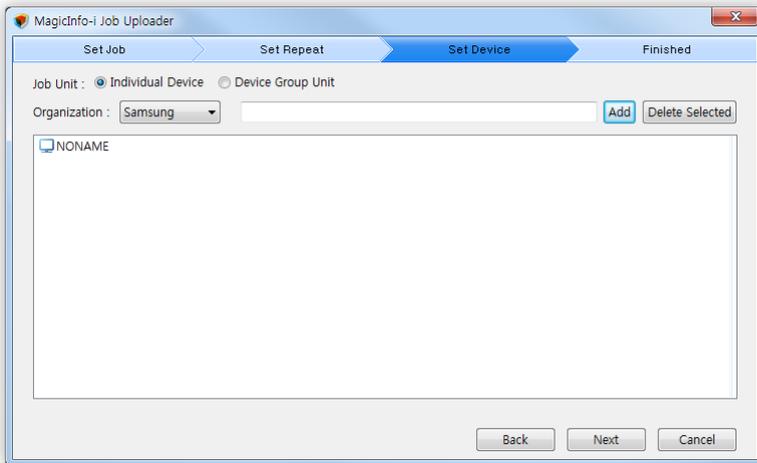
#### Note

When entering a file or folder location, enter the exact path and file name.

4 Set the remote task repeat interval and click **Next**.



5 Select the device to remotely perform the task on and click **Next**.  
 – The remote task will be added to MagicInfo Server.



<b>Individual Device</b>	Select only a specific device.
<b>Device Group Unit</b>	Select all devices in a group.

## Reusing remote tasks

---

Reuse a remote task that is already configured. This can save time when performing the same task again.

- 1 Click **Remote Job**.
- 2 From the list, select the remote task to reuse and click **Reuse**.
- 3 The remaining steps are identical to adding a remote task.

## Editing remote tasks

---

- 1 Click **Remote Job**.
- 2 From the list, select the remote task to edit and click **Edit**.
- 3 The remaining steps are identical to adding a remote task.

## Canceling remote tasks

---

Cancel a scheduled remote task.

- 1 Click **Remote Job**.
- 2 From the list, select the remote task to cancel and click **Cancel**.

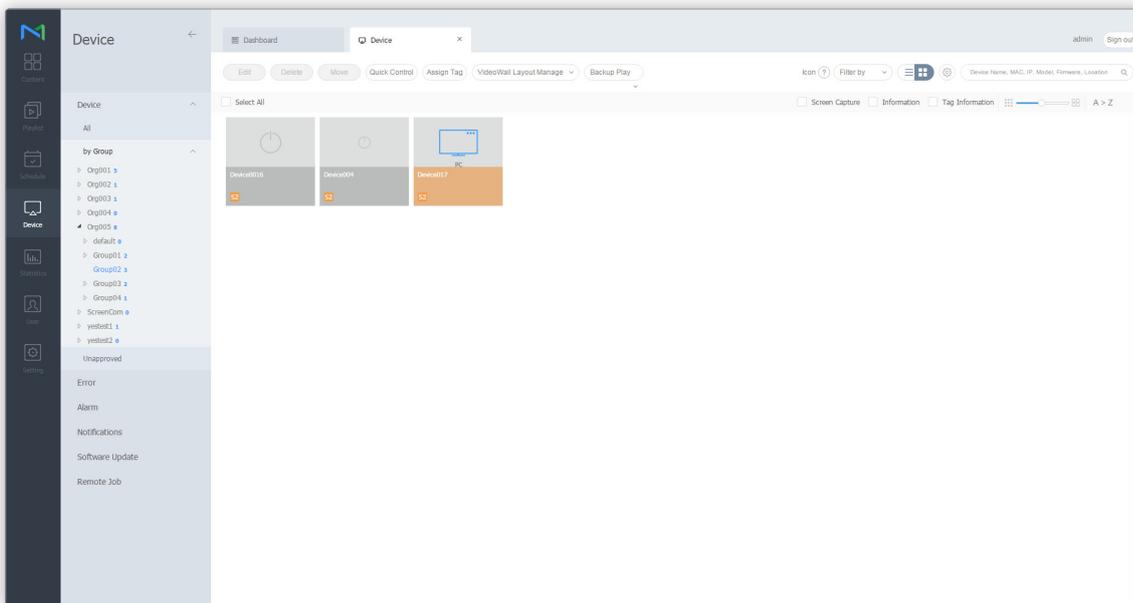
# Backup Play (redundant playback)

If a primary device playing content that needs to play continuously is disconnected from the network or the device's input source changes, a specified secondary device for redundant playback detects the issue and continues to play the content.

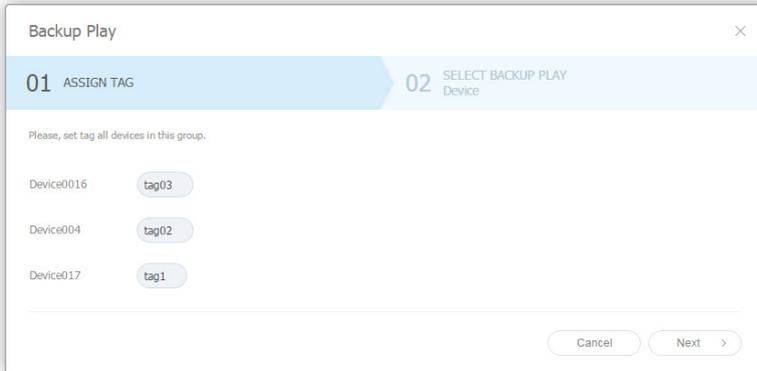
## Note

- The primary and secondary devices must be in the same device group.
- Each of the primary and secondary devices must have a tag assigned.
- For details on using Backup Play, refer to [▶ Using Backup Play](#)

- 1 In by Group, select the device group.
  - The backup play menu will appear.



- 2 Select a secondary device that will perform redundant playback and click **Backup Play > Setting**.
- 3 Use the Backup Play settings window to view device tags and click **Next**.



- 4 Specify a Backup Play type and click **OK**.



<b>Auto Backup</b>	Automatically select a secondary device that will perform redundant playback.
<b>Custom Backup</b>	Use the dropdown list to select a secondary device that will perform redundant playback.

# Using videowall layouts

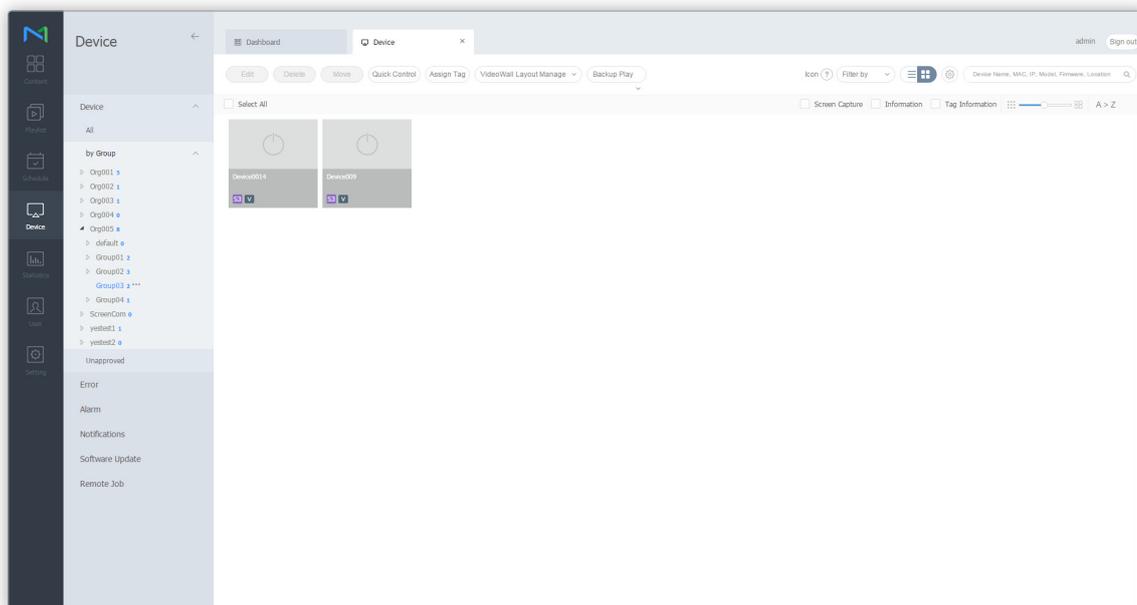
Use multiple devices as a single large display by configuring videowall layout settings.

## Note

- To configure a VideoWall layout for a device group, make sure the group consists of devices that belong to the same player type (i Player, S3 Player or S2 Player).
- The VideoWall Layout Manage menu appears when a group of devices that belong to the same player type are displayed while in device group view mode.

In **by Group**, select the device group.

- The **VideoWall Layout Manage** menu appears.



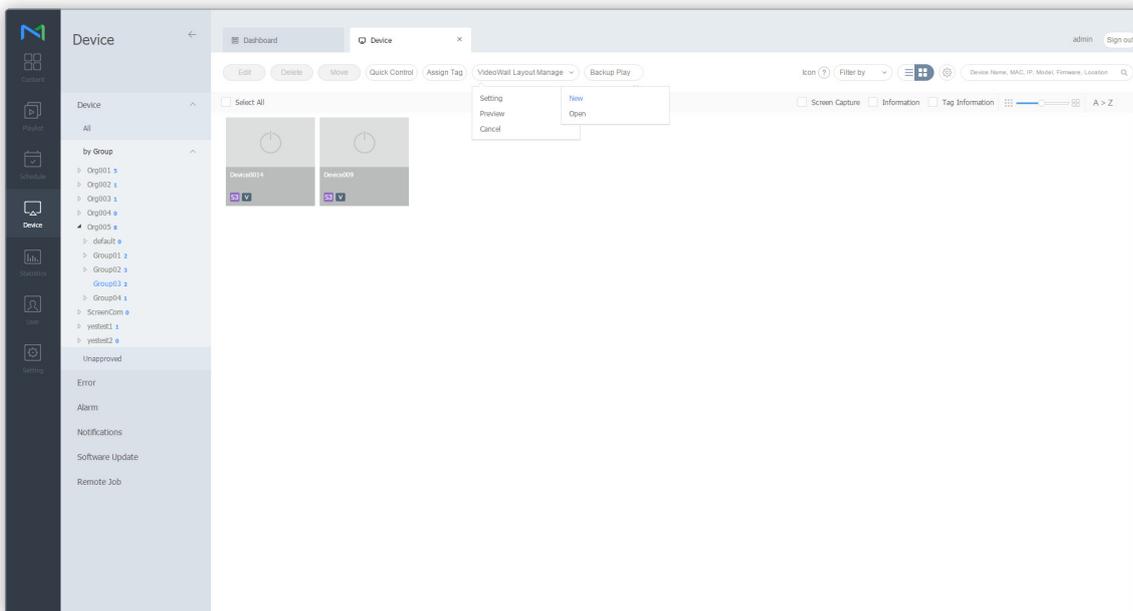
## Configuring videowall layouts

Preview a VideoWall layout created from Layout Editor and then distributed to MagicInfo Server. Assign or unassign the layout to a device group.

### Applying videowall layouts

You can configure VideoWall layouts and deploy them to MagicInfo Server.

- 1 Click **VideoWall Layout Manage > Setup > Create**.



- 2 When Layout Editor is launched, configure a VideoWall layout and deploy it to MagicInfo Server.
  - The configured videowall layout is applied to devices under the corresponding group.
  - Devices belonging to a group that has a videowall layout applied are indicated by .

#### Note

- **VideoWall Layout Manage** menu is available when all devices under the selected device group are connected to MagicInfo Server.
- To configure VideoWall layouts in Layout Editor and deploy them to MagicInfo Server, see [Using Layout Editor](#)

## Viewing the current videowall layout

View the current videowall layout applied to a device group, using a virtual screen.

- 1 Click **VideoWall Layout Manage > Preview**.
  - Each device screen with the videowall layout applied is shown.
  - Each device screen displays main information about the device. Click a device screen if you want to view detailed information about the device or remotely access the device.
- 2 After viewing the videowall layout, click **×**.

## Canceling a videowall layout

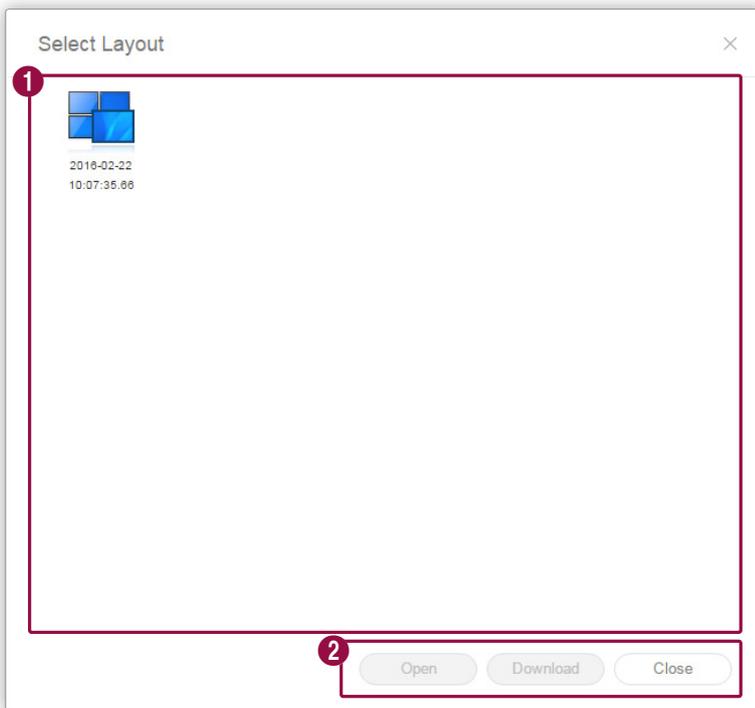
To cancel the current videowall layout of a device group, click **VideoWall Layout Manage > Cancel**.

- The videowall layout is canceled, and the **V** mark disappears on the device list.

## Managing videowall layouts

You can manage VideoWall layouts created with Layout Editor and deployed to MagicInfo Server.

- 1 Click **VideoWall Layout Manage > Setup > Open**.
- 2 Use the VideoWall layout management window to manage layouts.



- 1 The list of registered VideoWall layouts will appear. Select a VideoWall layout.
  - **Open:** Open and edit a VideoWall layout by using Layout Editor.
- 2
  - **Download:** Save a VideoWall layout file to your computer.
  - **Close:** Close the VideoWall layout management window.

# Using Layout Editor

Configure videowall layouts using Layout Editor.

## Note

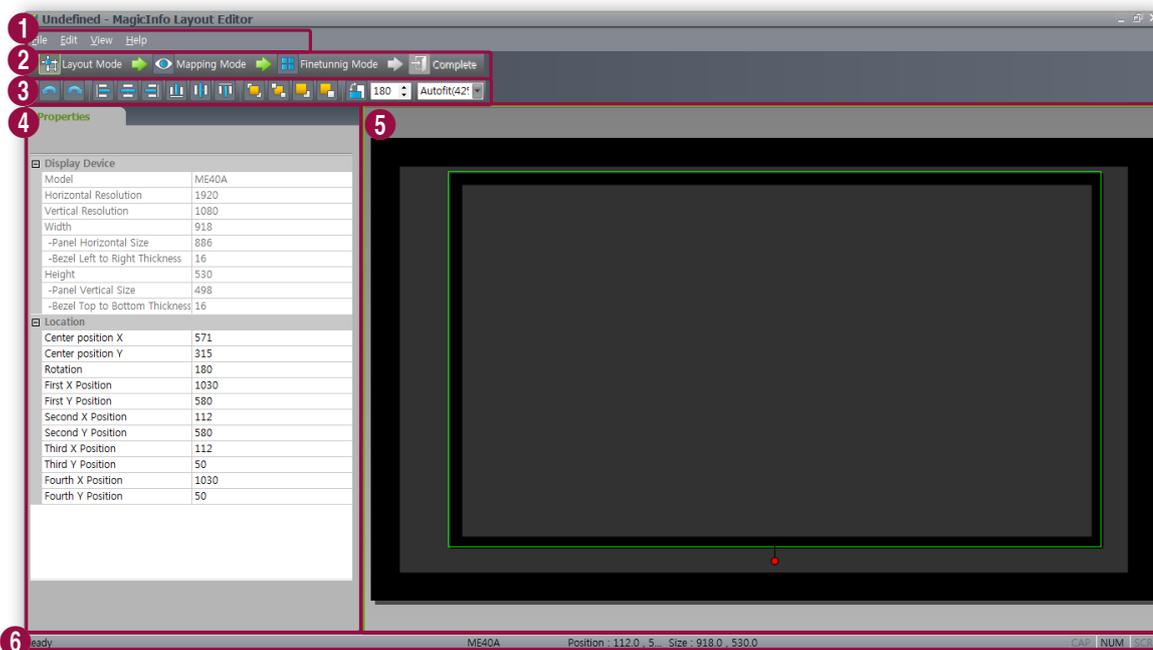
For details on how to run Layout Editor, refer to the following: [► Configuring videowall layouts](#)

## About Layout Editor

### Main page

Running Layout Editor displays the main page as shown below.

- If you launch Layout Editor from MagicInfo Server, the Layout setting window appears. For details on configuring VideoWall layouts, refer to [► Layout settings](#)



---

1 This is the menu bar. Clicking a menu item displays sub-menu items.

---

2 This is the action bar. Four steps to configure a videowall layout are displayed.

---

3 This is the toolbar. Available tools for the step selected in the action bar are displayed.

---

View and configure properties of the element (section or device) selected in the edit section on the right.

4  **Note**

In Layout Editor, devices under a group are recognized as a single section.

---

5 This is the edit section where a videowall layout can be configured. Virtual screen for a device under the selected device group is displayed.

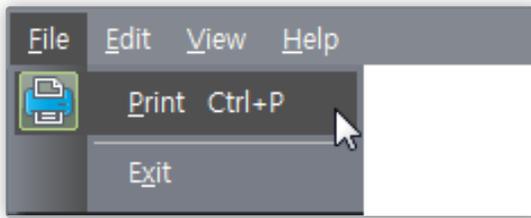
---

6 Status information such as location and size about the element selected in the edit section is displayed.

---

## Using the menu bar

Menu items that belong to the step selected in the action bar are only enabled.



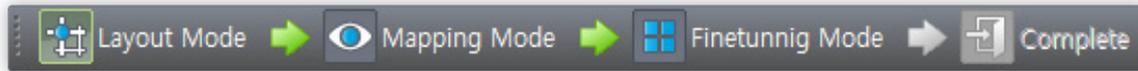
File	<ul style="list-style-type: none"> <li>▪ <b>Print:</b> Print a videowall layout after configuring print settings.</li> <li>▪ <b>Exit:</b> Close the program. If the layout configuration is complete and <b>Complete</b> mode is activated, a prompt will ask you whether you want to deploy the VideoWall layout to MagicInfo Server before closing the program. If <b>Complete</b> mode is not active, a prompt confirming that the program closes will appear.</li> </ul>
Edit	<ul style="list-style-type: none"> <li>▪ <b>Sort:</b> Specify the criterion to align devices in the edit section. For details, refer to <a href="#">▶ Aligning devices</a></li> <li>▪ <b>Order:</b> Specify the arrangement order of devices in the edit section. For details, refer to <a href="#">▶ Arranging devices</a></li> </ul>
View More	<ul style="list-style-type: none"> <li>▪ <b>Position Information:</b> Display or hide information about the location of the device selected in the edit section.</li> <li>▪ <b>Grid Settings:</b> Configure grid settings for the edit section. Tap the menu item and then configure the following settings from the detailed settings window.               <ul style="list-style-type: none"> <li>– <b>Snap Object to Grid:</b> Move a device using the ruler.</li> <li>– <b>Snap Object to Another Object:</b> Move the selected device based on another device.</li> <li>– <b>Show Grid:</b> Display rulers in the edit section.</li> <li>– <b>Interval:</b> Specify the ruler interval in millimeters. Available options include 10mm, 20mm, 50mm, 100mm, 200mm, 500mm and 1,000mm.</li> </ul> </li> </ul>
Help	<p><b>About Software:</b> View the program version and license information.</p>

## Using the action bar

The action bar consists of four menu items which correspond to the four steps used to configure a videowall layout. Available menu items in the menu bar and toolbar may vary depending on the menu item selected in the action bar.

### Note

- Refer to the following for details on how to configure a videowall layout: [▶ Making a videowall layout](#)



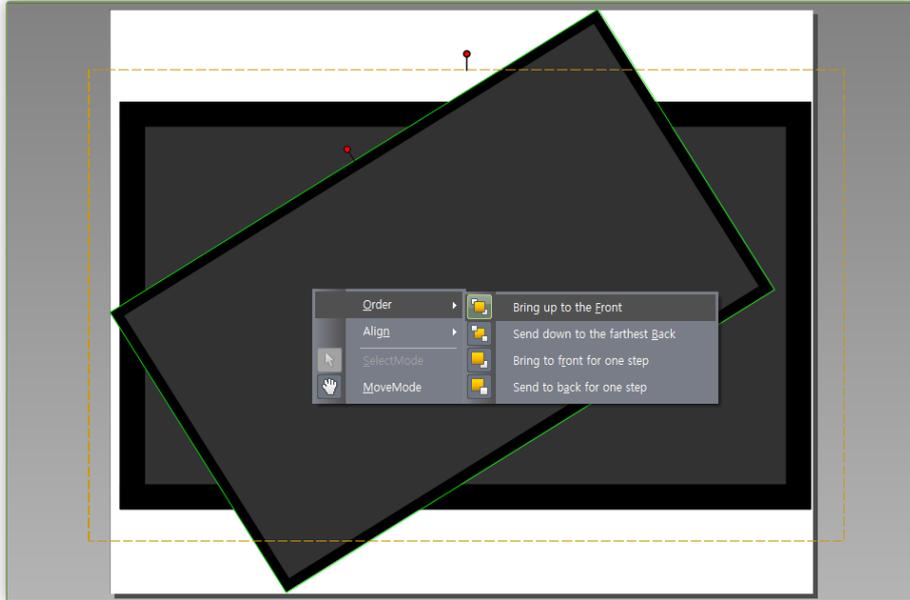
## Using the toolbar

Available tools for the step selected in the action bar are displayed. The undo/redo (↶ / ↷) and zoom (Autofit(42%)) tools are available in all steps.



## Using the quick edit menu

Right-click in the edit section to display the quick edit menu items. The displayed quick edit menu items may vary depending on the clicked location.

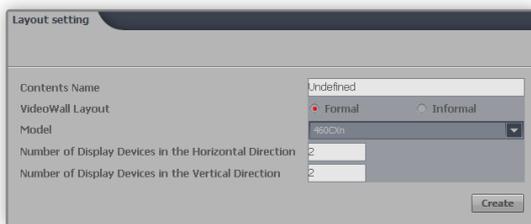


## Making a videowall layout

### Layout settings

If you launch Layout Editor from MagicInfo Server, the Layout setting window appears. Configure basic layout settings from the window, and then click **Create**.

- A videowall layout is created in the edit section, and layout mode activates.
- Using a previously created videowall layout will start Layout Mode without displaying the **Layout setting** window.



<b>Content Name</b>	Enter a new videowall layout name.
<b>VideoWall Layout</b>	Select a videowall layout. This option is available when the device group consists of devices of the same model. <ul style="list-style-type: none"> <li>▪ <b>Formal:</b> Arrange devices in formal mode using a predefined matrix such as 2x2 and 3x4.</li> <li>▪ <b>Irregular:</b> Customize the arrangement of devices to suit your preferences.</li> </ul>
<b>Model Name</b>	The type of devices that will form a videowall layout is shown.
<b>Number of Display Devices in the Horizontal Direction</b>	The number of horizontal devices in a videowall layout is shown.
<b>Number of Display Devices in the Vertical Direction</b>	The number of vertical devices in a videowall layout is shown.

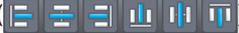
## Configuring a layout

Configure a videowall layout as desired using **Layout Mode**.

### Note

Under formal videowall layout mode, a predefined layout is read-only and cannot be edited.

## Aligning devices

- 1 Select a device from the edit section.
- 2 Align devices using one of the following options:
  - Option 1** Click **Edit > Sort** on the menu bar, and then select an alignment mode.
  - Option 2** Right-click on a device in the edit section and select **Sort**. Next, specify the alignment mode.
  - Option 3** Click the desired alignment icon () from the toolbar.

## Arranging devices

- 1 Select a device from the edit section.
- 2 Arrange devices using one of the following options:
  - Option 1** Click **Edit > Order** from the menu bar, and then select an arrangement order.
  - Option 2** Right-click on a device in the edit section and select **Order**. Next, specify the arrangement order.
  - Option 3** Click the desired arrangement order icon () from the toolbar.

## Configuring section properties

### Note

In Layout Editor, devices under a device group are recognized as a single section.

- 1 Select a section from the edit section.

### Note

To select a section, click on empty area other than the virtual device screen in the edit section and then click a device.

- 2 When detailed section information appears in the **Properties** tab, change information about the section location (rotation angle) as desired.

<b>Location</b>	<ul style="list-style-type: none"> <li>▪ <b>Position X, Position Y:</b> Horizontal and vertical locations of a section are shown.</li> </ul> <p> <b>Note</b></p> <p>X and Y values are read only and cannot be edited.</p> <ul style="list-style-type: none"> <li>▪ <b>Rotation:</b> Specify the arrangement angle for a section. Drag the scroll bar left or right to specify the angle.</li> </ul> <p> <b>Note</b></p> <p>Alternative ways to specify the rotation angle are as follows:</p> <ul style="list-style-type: none"> <li>• Select a section from the edit section, and then click and move the displayed  until a desired angle is reached.</li> <li>• Select a section from the edit section, and then specify the rotation angle using the angle setting tool () on the toolbar.</li> <li>• Select a section from the edit section, and then click  on the toolbar to rotate the section. The section will rotate by 90 degrees each time the icon is clicked.</li> </ul>
-----------------	---

## Configuring device properties

- 1 Select a device from the edit section.
- 2 When detailed information about the selected device appears in the **Properties** tab, configure information about the device location as desired.

<b>Display Device</b>	<p>Display device information is read only and cannot be edited.</p> <ul style="list-style-type: none"> <li>▪ <b>Model Name:</b> A device model name is shown.</li> <li>▪ <b>Horizontal Resolution:</b> The horizontal resolution for a device is shown.</li> <li>▪ <b>Vertical Resolution:</b> The vertical resolution for a device is shown.</li> <li>▪ <b>Width:</b> View the device width. <ul style="list-style-type: none"> <li>– <b>Panel Horizontal Size:</b> Device width is shown. The bezel thickness is excluded from the width.</li> <li>– <b>Bezel Top to Bottom Thickness:</b> The bezel thickness on the left and right edges of a device is shown.</li> </ul> </li> <li>▪ <b>Height:</b> Device height is shown. <ul style="list-style-type: none"> <li>– <b>Panel Vertical Size:</b> View the device height with the bezel width excluded.</li> <li>– <b>Bezel Left to Right Thickness:</b> The bezel thickness on the top and bottom of a device is shown.</li> </ul> </li> </ul>
<b>Location</b>	<p>Configure information about a device location.</p> <ul style="list-style-type: none"> <li>▪ <b>Center position X:</b> Specify the horizontal location for the center of a device. Enter a location value. The device location will change.</li> <li>▪ <b>Center position Y:</b> Specify the vertical location for the center of a device. Enter a location value. The device location will change.</li> <li>▪ <b>Rotation:</b> Specify the arrangement angle for a device. Drag the scroll bar left or right to specify the angle.</li> </ul> <p> <b>Note</b></p> <p>Alternative ways to specify the rotation angle are as follows:</p> <ul style="list-style-type: none"> <li>• Select a device from the edit section, and then click and move the displayed  until a desired angle is reached.</li> <li>• Select a device from the edit section, and then specify the rotation angle using the angle setting tool ( 90) on the toolbar.</li> <li>• Select a device from the edit section, and then click  on the toolbar to rotate the device. The device will rotate by 90 degrees each time the icon is clicked.</li> </ul>

## Location

- **First X Position:** Specify the horizontal location for the top left of a device.
- **First Y Position:** Specify the vertical location for the top left of a device.
- **Second X Position:** Specify the horizontal location for the top right of a device.
- **Second Y Position:** Specify the vertical location for the top right of a device.
- **Third X Position:** Specify the horizontal location for the bottom right of a device.
- **Third Y Position:** Specify the vertical location for the bottom right of a device.
- **Fourth X Position:** Specify the horizontal location for the bottom left of a device.
- **Fourth Y Position:** Specify the vertical location for the bottom left of a device.

 **Note**

A device location can also be configured by dragging the device to a desired location in the edit section.

## Mapping devices

After configuring the required settings in **Layout Mode**, click **Mapping Mode**.

An ID appears on the actual device screen as soon as **Mapping Mode** activates. Use the ID to control the virtual device screen in the edit section in conjunction with the actual device.

 **Note**

Device IDs are assigned according to the number of devices that form a device group. For example, if a device group has ten devices, different IDs are displayed on each device in the range 01–10.

- 1 Select a device from the edit section.
- 2 When detailed information about the selected device appears in the **Properties** tab, enter the ID found on the actual device.
  - The ID will be displayed on the device screen in the edit section.

 **Note**

- To display or hide the device ID on an actual device screen, click  /  on the toolbar.
- To reset the ID assigned to a device in the edit section, click  on the toolbar.

## Finely adjusting layouts

After configuring the required settings in **Mapping Mode**, click **Finetuning Mode**.

To finely adjust location settings for an actual device, use **Finetuning Mode** to edit the settings.

### Note

- **Finetuning Mode** is only available after a device ID is set in **Mapping Mode**.
- **Finetuning Mode** is an optional step. You may skip this step if you want.
- In **Finetuning Mode**, a videowall layout can be finely adjusted even when the layout is in formal mode.

- 1 Select an element (section or device) from the edit section.
- 2 When detailed information about the selected element appears in the **Properties** tab, edit the location value.
- 3 Click  on the toolbar.
  - Changes will be applied.

### Note

- Refer to the following for details on how to specify the location value for a section or device: [▶ Configuring a layout](#)
- A pattern appears on an actual device screen so that the layout can be precisely adjusted. To display or hide the pattern on an actual device screen, click  /  on the toolbar.
- To change the pattern on an actual device screen, click .

## Deploying to MagicInfo Server

- 1 After configuring a videowall layout, click **Complete**.

### Note

**Complete** step is only available after a device ID is set in **Mapping Mode**.

- 2 When prompted to confirm distribution of the VideoWall layout to MagicInfo Server, click **Yes**.
  - The VideoWall layout you configured will be deployed to MagicInfo Server and applied to selected device group(s).

# Statistics

## Statistics Menu

View statistics on devices and content added to MagicInfo Server.

Click  on the main menu bar.

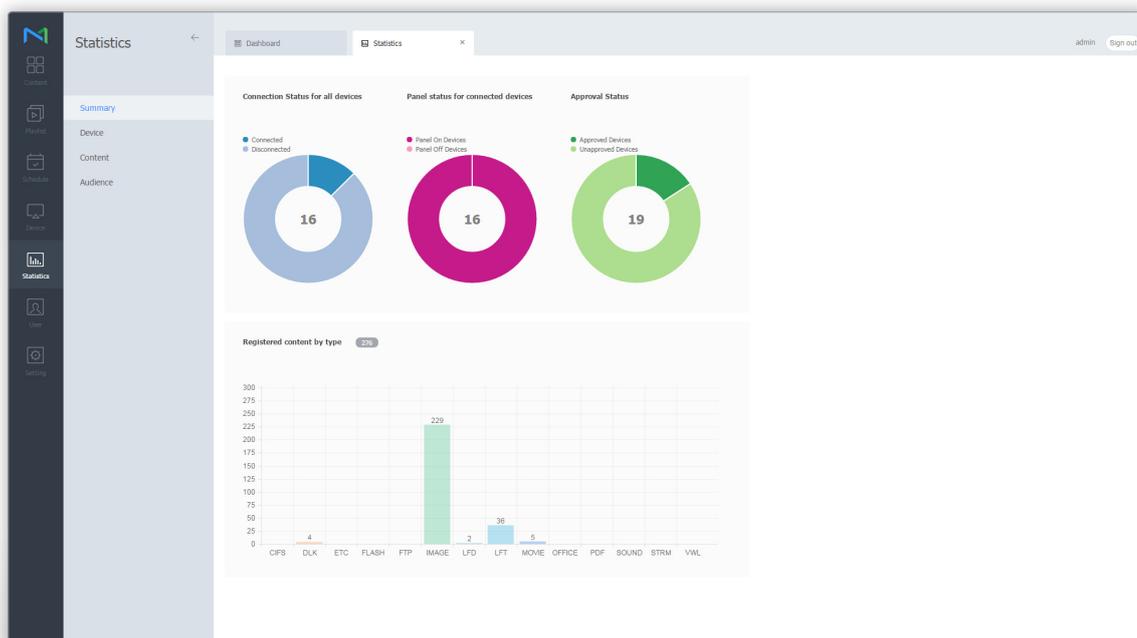
 **Note**

- MagicInfo Server administrators (general administrator and organization administrators) can assign a role to each user. Available MagicInfo Server functions depend on the user role. For details on user roles, refer to [► Changing a user role](#)
- This chapter assumes that you are signed in with general administrator privileges.

## Viewing summary statistics

View summary statistics on devices and content.

Click **Summary**.



<b>Connection Status for all devices</b>	View statistics, in a pie chart, on the connection status of MagicInfo Server with devices registered on MagicInfo Server.
<b>Panel status for connected devices</b>	View statistics, in a pie chart, on the panel status (on/off) of devices connected to MagicInfo Server.
<b>Approval Status</b>	A device requires administrator approval to be added to MagicInfo Server. View statistics for approved and unapproved devices in pie chart form.
<b>Registered content by type</b>	Review statistics on content added to MagicInfo Server by type (CIFS, DLK, ETC, Flash, FTP, photos, LFD, LFT, videos, documents, PDF, music, VWL).

## Viewing statistics on devices

Review statistics on devices added to MagicInfo Server for errors, connection status, connection logs, and authorization.

Click **Device**.

## Viewing statistics for errors

Click **Error Occurrence**.

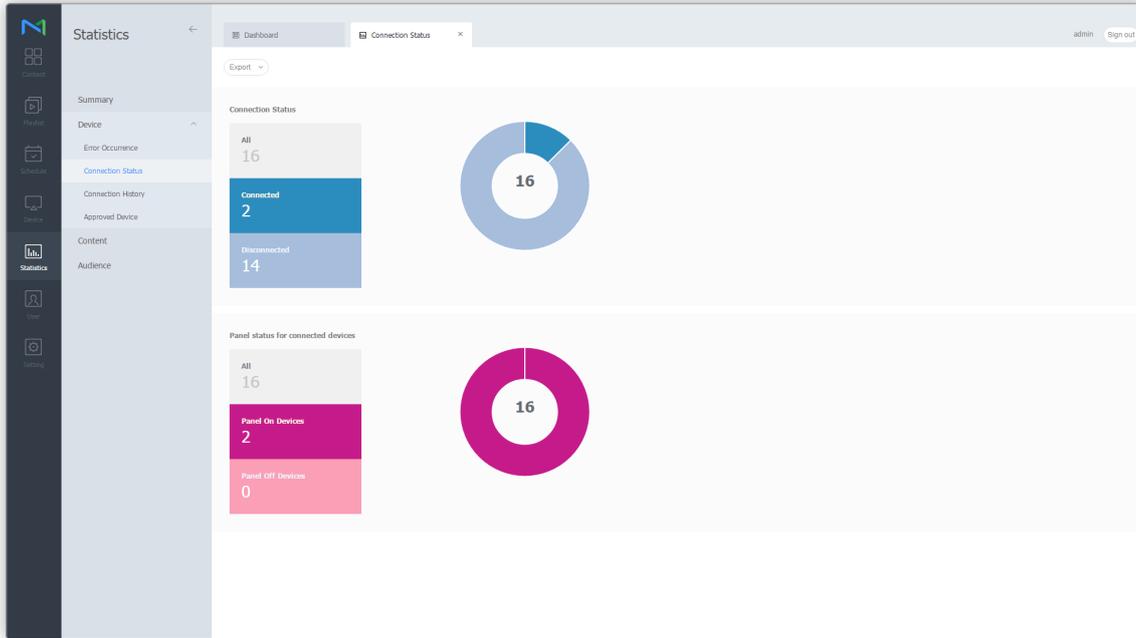
<b>Error Occurrence</b>	View dates when device errors occurred and the total number of errors occurred on a specific date.
<b>Error Occurrence by Period</b>	View the number of device errors by the date.
<b>Error Occurrence by Type</b>	View the number of device errors by the error type.

 **Note**

- View statistics for a specified period. Click  and set a period. If you select **Custom**, the date input window is enabled. Click the window to display a calendar and select dates from the calendar. Click **Search** to view statistics for the specified period.
- You can download retrieved statistics as an Excel or PDF file to your computer. To export a content file list, click **Export** and select a file type.

## Viewing statistics for connection status

Click **Connection Status**.



<b>Connection status</b>	View the current status of all devices registered on MagicInfo Server. It reveals statistics on the number of connected devices on MagicInfo Server, including devices that are disconnected.
<b>Panel status for connected devices</b>	View statistics on the panel status (on/off) of devices connected to MagicInfo Server.

 **Note**

You can download retrieved statistics as an Excel or PDF file to your computer. To export a content file list, click **Export** and select a file type.

## Viewing statistics for connection records

Click **Connection History**.

The screenshot shows the 'Statistics' dashboard with the 'Connection History' tab active. The interface includes a sidebar with navigation options like Summary, Device, and Content. The main area displays a table of connection logs with columns for MAC Address, Device Name, Device Group, Connected, Disconnected, and Duration. A search filter is visible at the top, showing a period from 2016-03-01 to 2016-03-08 and a selected device group of Group02.

MAC Address	Device Name	Device Group	Connected	Disconnected	Duration
c4-57-6e-93-11-c8	Device017	Group02	2016-03-01 13:38:42	2016-03-02 10:36:08	20:57:26
c4-57-6e-93-11-c8	Device017	Group02	2016-03-02 14:15:41	2016-03-03 05:30:03	15:14:22
c4-57-6e-93-11-c8	Device017	Group02	2016-03-03 14:49:37	2016-03-04 05:15:17	14:25:40
c4-57-6e-93-11-c8	Device017	Group02	2016-03-07 18:51:21	2016-03-08 07:21:41	12:30:20
c4-57-6e-93-11-c8	Device017	Group02	2016-03-03 05:32:21	2016-03-03 16:51:39	05:19:19
c4-57-6e-93-11-c8	Device017	Group02	2016-03-07 06:22:05	2016-03-07 10:57:00	04:34:55
c4-57-6e-93-11-c8	Device017	Group02	2016-03-03 05:30:25	2016-03-03 05:32:02	00:01:37
c4-57-6e-93-11-c8	Device017	Group02	2016-03-08 09:15:06	-	-

### Connection History

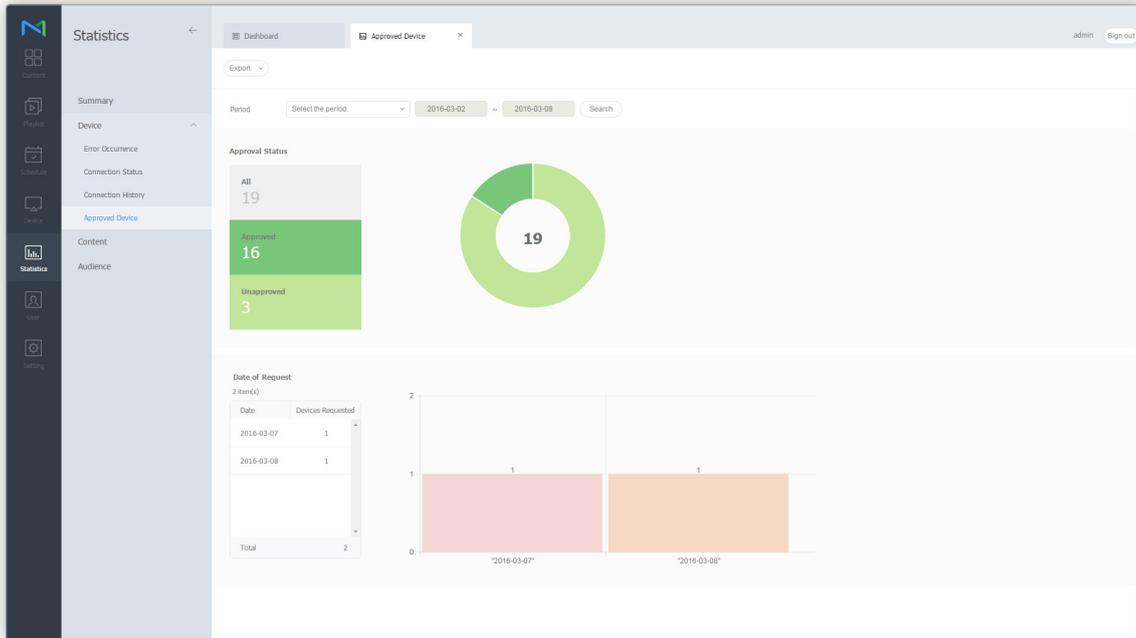
View device connection logs on MagicInfo Server.

#### Note

- View statistics for a specified period. Click and set a period. If you select **Custom**, the date input window is enabled. Click the window to display a calendar and select dates from the calendar. Click **Search** to view statistics for the specified period.
- View connection logs by the device group. Click **Select** next to Device Group to select the device group. Click **Search** to display connection logs for the device group.
- You can download retrieved statistics as an Excel or PDF file to your computer. To export a content file list, click **Export** and select a file type.

## Viewing statistics for approved devices

Click **Approved Device**.



<p><b>Approval Status</b></p>	<p>View the current approval status of devices requested for registration on MagicInfo Server. It will return the number of devices that have requested authorization, devices authorized, and devices rejected on MagicInfo Server.</p>
<p><b>Date of Request</b></p>	<p>View dates when approval requests were submitted and the number of devices requested for approval on a specific date.</p>

 **Note**

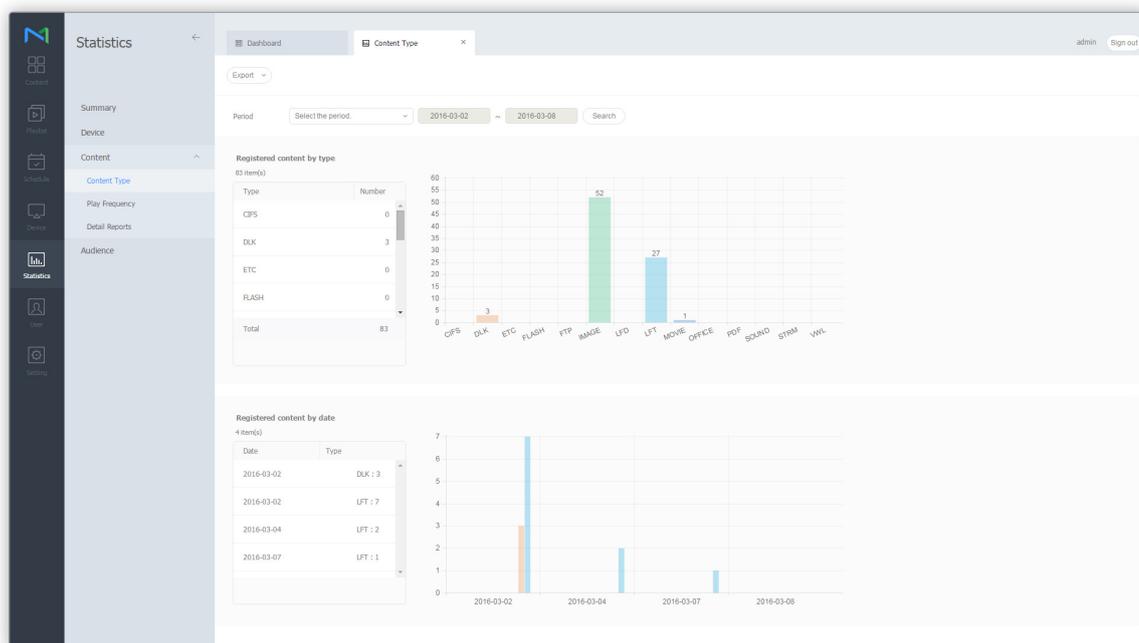
- View statistics for a specified period. Click  and set a period. If you select **Custom**, the date input window is enabled. Click the window to display a calendar and select dates from the calendar. Click **Search** to view statistics for the specified period.
- You can download retrieved statistics as an Excel or PDF file to your computer. To export a content file list, click **Export** and select a file type.

# Viewing statistics on content

View the types, playback frequencies and detailed statistics reports of content files added to MagicInfo Server.  
Click **Content**.

## Content Type

View statistics on content by the type added to MagicInfo Server.  
Click **Content Type**.



### Registered content by type

View the number of content by the type added to MagicInfo Server.

### Registered content by date

Review the number of content added on the date by type.

### Note

- View statistics for a specified period. Click and set a period. If you select **Custom**, the date input window is enabled. Click the window to display a calendar and select dates from the calendar. Click **Search** to view statistics for the specified period.
- You can download retrieved statistics as an Excel or PDF file to your computer. To export a content file list, click **Export** and select a file type.

## Play Frequency

---

View statistics for playback frequency by content item.

- 1 Click **Play Frequency**.
- 2 Select a period and period unit from **Period**.
  - If you select **Custom** from **Period**, the date input window is enabled. Click the window to display a calendar and select dates from the calendar.
- 3 Click **Select** next to **Select Content** to select the content.
- 4 Click **Select** next to **Device Group** and select the device group.
- 5 Click **Search**.
  - You can review playback times and duration of content played from the selected group over the specified period.

### Note

- Statistics on playback frequency of content can be viewed after the content is played on a device for one or more days.
- You can download retrieved statistics as an Excel or PDF file to your computer. To export a content file list, click **Export** and select a file type.

## Detail Statistics Report

---

You can review detailed statistics on playback frequency of content.

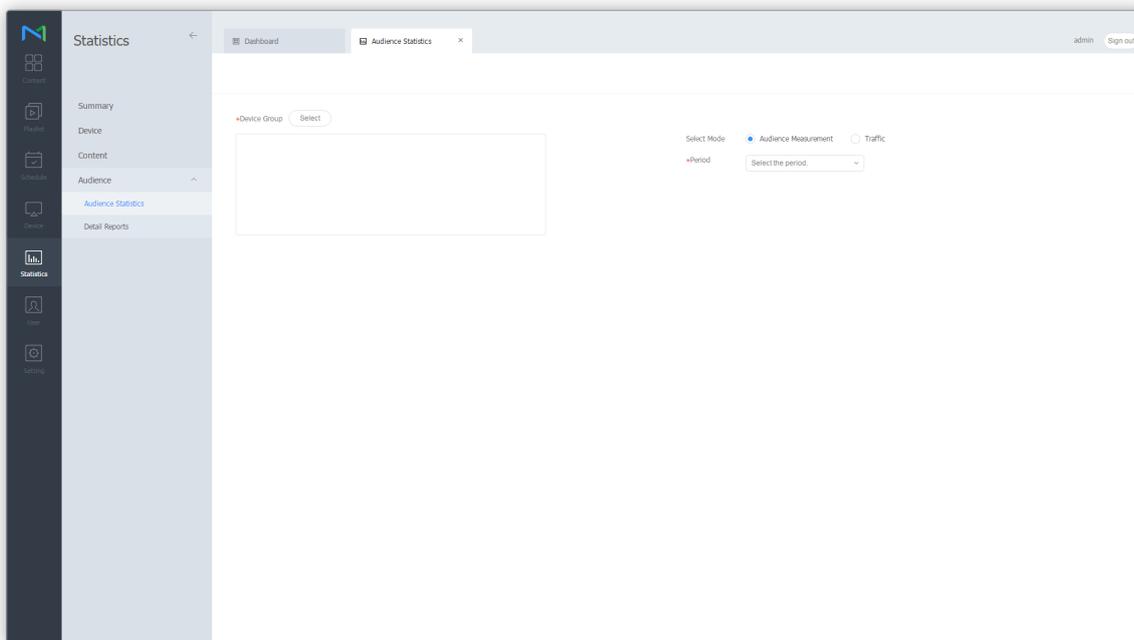
- 1 Click **Detail Reports**.
- 2 Select an organization, statistics period (years), and target for statistics (general content or VideoWall content).
  - Statistics based on the specified conditions appear.

# Viewing statistics on audience

View statistics on the audience that viewed the content. You can also view statistics on the people that passed near the device. Click **Audience Statistics**.

## Audience Measurement

### 1 Click Audience Measurement.



### 2 Click **Select** next to **Device Group** and select the device group.

### 3 Select a statistics mode.

- **Audience Measurement:** View statistics on gender, age group and other characteristics of the audience that viewed the content
- **Traffic:** View statistics on the people that passed near the device.

- 4 Select a period and period unit from **Period**.
  - If you select **Custom** from **Period**, the date input window is enabled. Click the window to display a calendar and select dates from the calendar.
- 5 Click **Search**.
  - Statistics based on the specified conditions appear.

 **Note**

You can download retrieved statistics as an Excel or PDF file to your computer. To export a content file list, click **Export** and select a file type.

## Detail Statistics Report

---

View detailed statistics on audience that viewed content and general population that passed near a device.

- 1 Click **Detail Reports**.
- 2 Specify organization, period, and target (audience and general population).
  - Statistics based on the specified conditions appear.
  - Targets for statistical analysis can be classified as follows:
    - Audience Measurement:** View detailed statistics on audience that viewed content, including genders, ages, and time spent around a device.
    - Traffic:** View detailed statistics on people that have passed near a device.

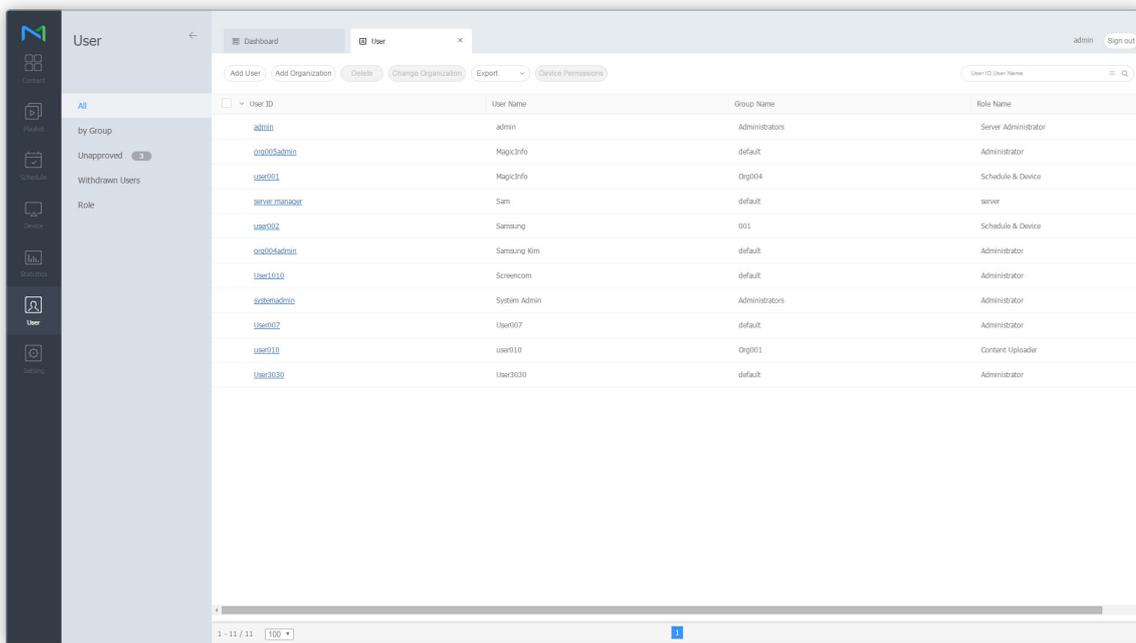
## User Menu

You can add or delete MagicInfo Server users and change user roles and organizations.

Click  on the main menu bar.

 **Note**

- MagicInfo Server administrators (general administrator and organization administrators) can assign a role to each user. Available MagicInfo Server functions depend on the user role. For details on user roles, refer to [▶ Changing a user role](#)
- This chapter assumes that you are signed in with general administrator privileges.



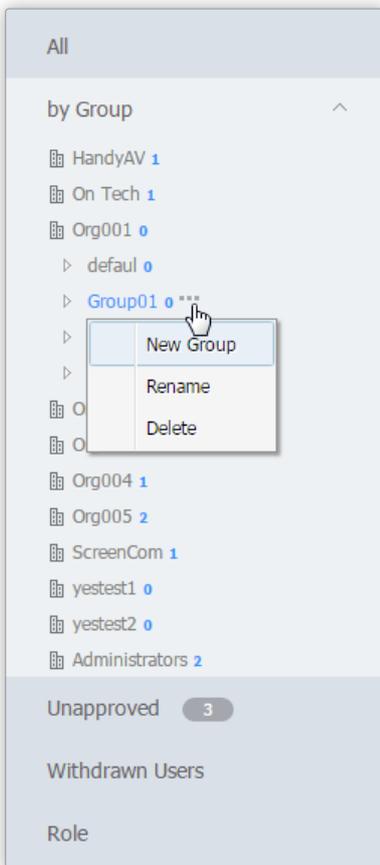
## Viewing users

Create groups in each organization to manage users by group. For each organization, a default group is created by default.

- **All:** You can view and manage all registered users on MagicInfo Server.
- **by Group:** Retrieve and manage users by group.

## Managing User Groups

- 1 Click **by Group**.
- 2 Manage groups, using one of the following options:
  - Option 1** Select a group and right-click on the mouse.
  - Option 2** Place the mouse cursor on a group name and click **...**.



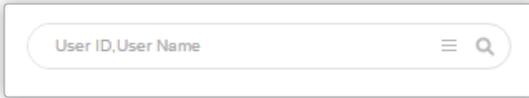
<b>New Group</b>	<p>Create a sub-group under the selected group.</p> <p> <b>Note</b></p> <p>A root group can be created by adding an organization. For details on adding organizations, refer to <a href="#">▶ Creating an organization</a></p>
<b>Rename</b>	<p>Rename the selected group.</p> <p> <b>Note</b></p> <p>It is not possible to rename a root group.</p>
<b>Delete</b>	<p>Delete the selected group.</p> <p> <b>Note</b></p> <p>It is not possible to delete a root group.</p>

 **Note**

- To move a group, drag the group from by Group to a desired location. Sub-groups can be moved to root groups. It is not possible to move root groups to sub-groups. When moving a group that contains sub-groups, all the sub-groups will move together maintaining the group hierarchy.
- The number of users in a group will be displayed next to the group name.

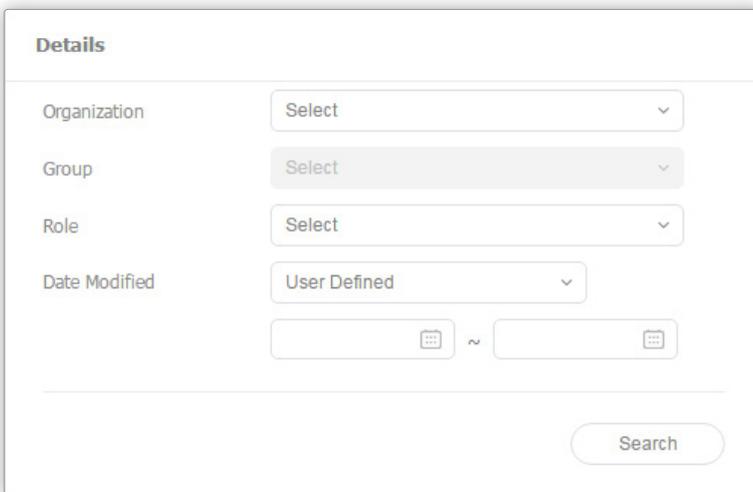
## Searching users

Enter keyword(s) and click .



## Custom search

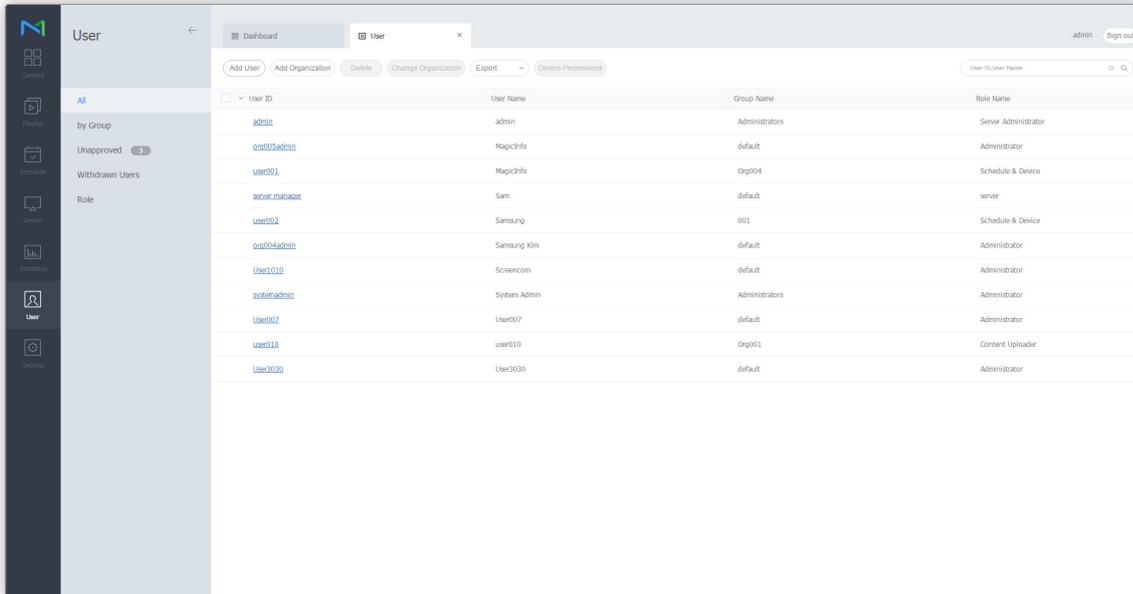
Click  to search users for different criteria.



<b>Organization</b>	Choose an organization.
<b>Group</b>	Choose a group.
<b>Role</b>	Choose a role.
<b>Last Modified Date</b>	Search users whose information was edited on a specific date. Select a date from the dropdown list. Alternatively, select <b>User Defined</b> and manually enter a date.

## Adding users

- 1 Click **Add User** from the user list.



- 2 Enter basic information and organization information of the user.

The screenshot shows the 'Add User' form, which is divided into two sections: 'Default Information' and 'Organization Information'. The form contains several input fields and dropdown menus for user details.

**Default Information** (marked with a red asterisk as required):

- User ID:
- Password:
- Confirm New Password:
- User Name:
- E-mail:
- Mobile Phone Number:
- Phone Number:

**Organization Information** (marked with a red asterisk as required):

- Organization:
- Group:
- Role:
- Team:
- Position:

At the bottom right of the form, there are two buttons: **Save** and **Cancel**.

### Basic Information

<b>User ID</b>	Enter the user ID. A user ID can be 5 - 20 characters long.
<b>User Name</b>	Enter the user name.
<b>Password</b>	Enter the user account password.
<b>Confirm Password</b>	Enter the user account password again.
<b>E-mail</b>	Enter the e-mail address of the user.
<b>Mobile Phone Number</b>	Enter the cell phone number of the user.
<b>Phone Number</b>	Enter the telephone number of the user.

### Organization Information

<b>Organization</b>	Select an organization to assign from the dropdown menu.
<b>Group</b>	Click <b>Select Group</b> to select a group from the selected organization. A group selection window appears.
<b>Role</b>	Assign a role to a user by selecting a role from the dropdown menu.
<b>Team</b>	Enter the department of the user.
<b>Position</b>	Enter the position of the user.

#### Precautions when adding users

- A user ID can be 5 to 20 characters long.
- A user ID is case-sensitive, and can only contain periods (.) and alphanumeric characters.
- A password can be a combination of alphanumeric characters. You cannot use a password that consists of either letters or numbers alone.
- Do not use three or more consecutive of the same characters or numbers.
- A password can be 8 to 50 characters long.
- Fields with \* cannot be left blank.
- Select the correct organization and group roles. Refer to the following for further details on types of roles. [▶ Changing a user role](#)
- Insert + in front of a telephone number to show the country code.
- When adding a user using organization administrator privileges, **Organization** cannot be changed.

### 3 Click **Save**.

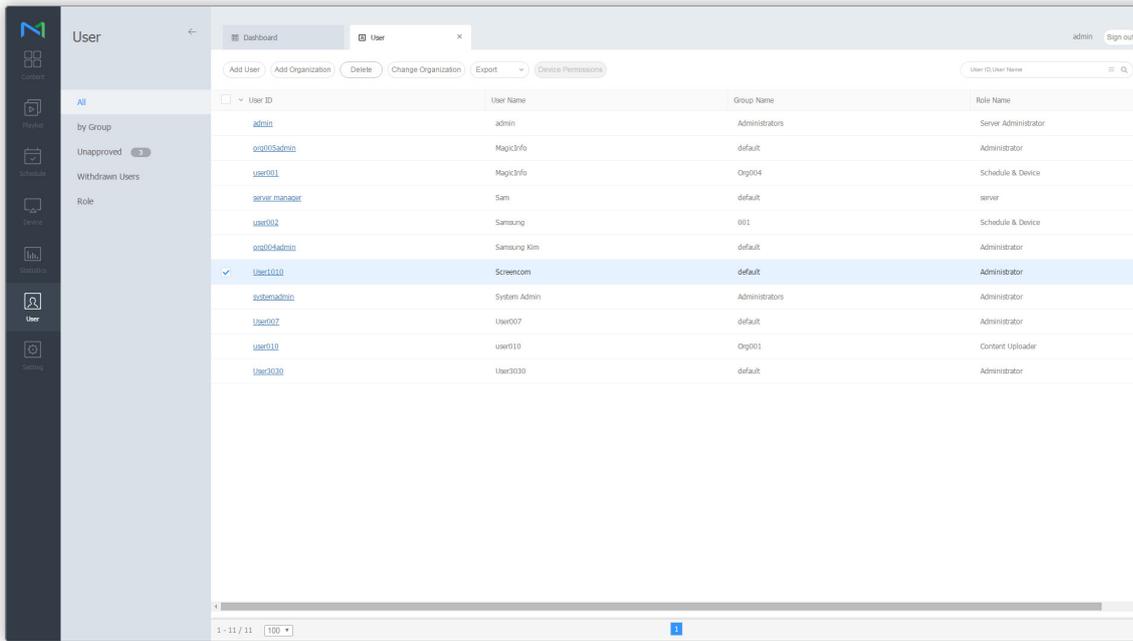
## Deleting users

Delete specific users.

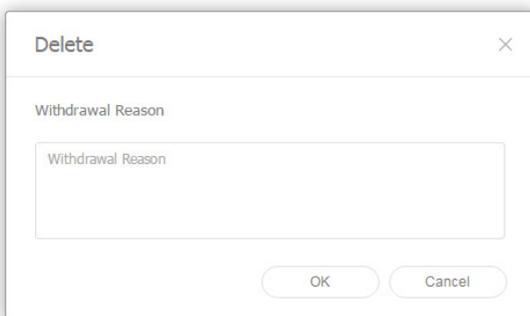
### Note

It is not possible to delete a general administrator or organization administrators.

- 1 Select a user to delete from the user list and click **Delete**.

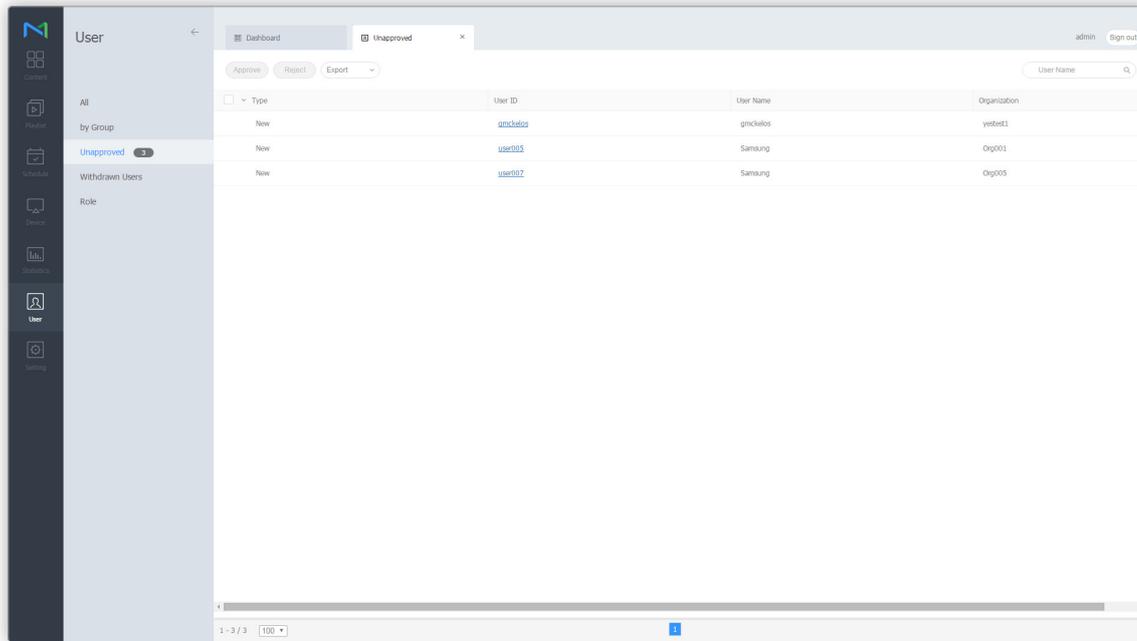


- 2 Provide the reason for cancellation and click **Yes**. Information about a deleted user can be found in **Withdrawn Users** list.



## Viewing users awaiting approval

A user that has signed up needs approval from an administrator before signing in. Administrators can approve or reject users. Click **Unapproved** to view unauthorized users. A list of users who have signed up and waiting for administrator approval will appear.



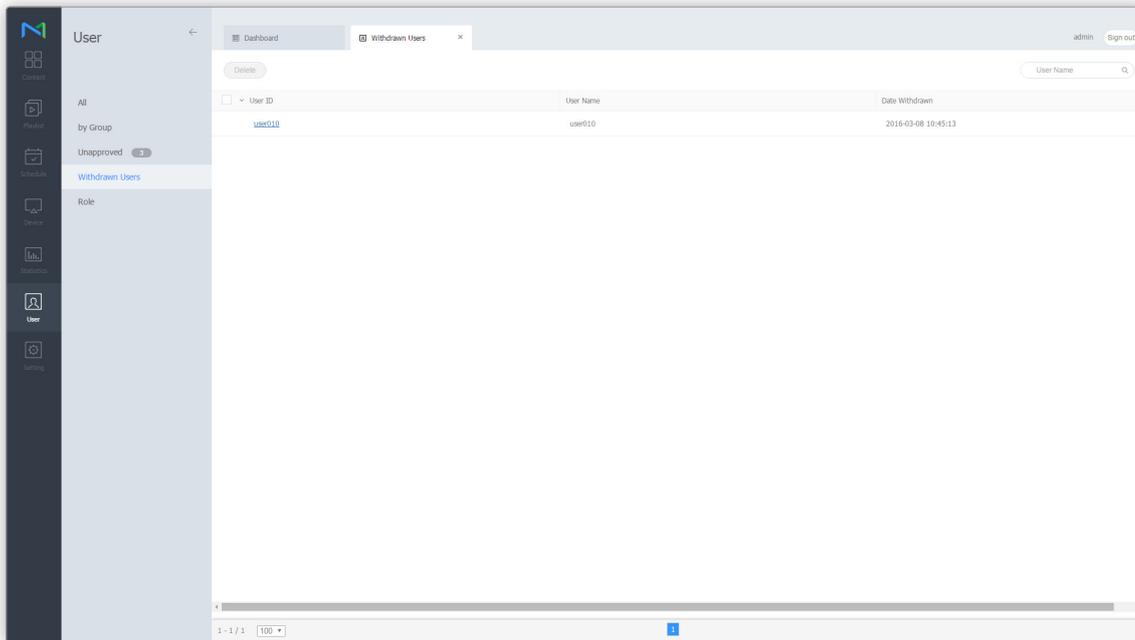
- To approve a request for sign-up, select an unapproved user and click **Approve**. Use the displayed window to set the user role and group, and click **Approve**.
- To reject a request for sign-up, select an unapproved user and click **Reject**. In the displayed window, enter the reasons for rejection and click **Yes**.
- To send a list of users awaiting approval as an Excel or PDF file, click **Export**.

### Note

- Approving users can be done by the general administrator or the organization administrator of the user.
- Only one user can be approved at a time.
- If a user attempts to log in with a rejected ID, the reason for rejection appears. A sign-up failure warning message appears when the first attempt is made to log in. On subsequent attempts to log in, a different message will appear that the ID does not exist.

## Viewing users with canceled accounts

To view users with cancelled accounts, click **Withdrawn Users**. A list of users who either voluntarily canceled their account or had their account deleted by an administrator.



- Click the user ID from the list to view details.
- User information is deleted automatically one week after their account is canceled. To manually delete user information from the list, select the user and click **Delete**.

# Managing user information

## Viewing detailed user information

---

- 1 In the user list, view user information and click a user ID for which you want to edit information.
- 2 View the information. Edit the information as needed and click **Save**.

Edit User ×

**Default Information** \* is a required item. Please enter a value.

User ID \* user001

User Name \*

E-mail \*

Mobile Phone Number

Phone Number

---

**Organization Information**

Organization \* Org004

Group \*

Role \*

Team

Position

---

Join Date 2016-02-22 09:28:33.242

Most Recent Login 2016-02-23 04:28:17.797

Reset Password

---

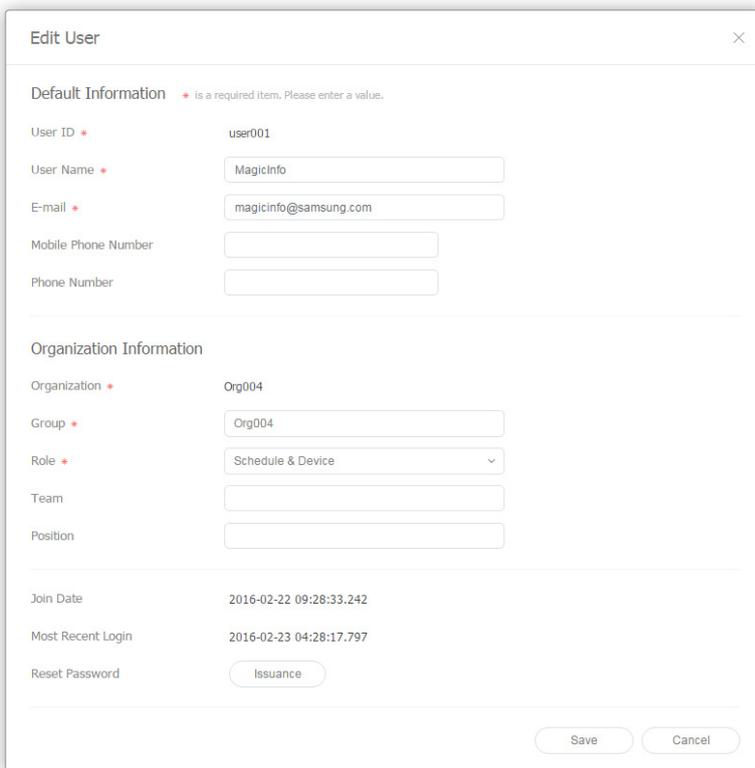
## Changing a user group

Change the group of a user from the user list.

 **Note**

Only the general administrator and organization administrators can change user groups.

- 1 In the user list, click a user ID for which you want to change the group.
- 2 In the detailed user info window, click Group.



The screenshot shows the 'Edit User' dialog box with the following fields and values:

Default Information	
User ID *	user001
User Name *	MagicInfo
E-mail *	magicinfo@samsung.com
Mobile Phone Number	
Phone Number	

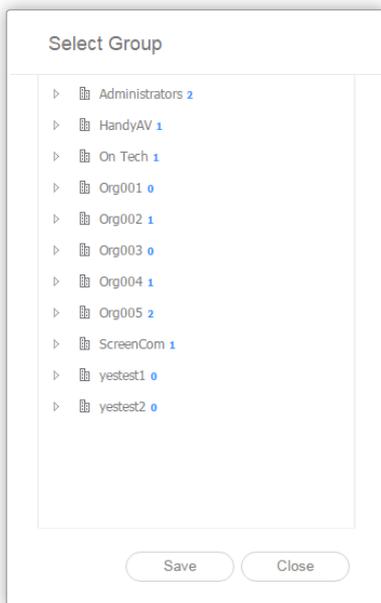
Organization Information	
Organization *	Org004
Group *	Org004
Role *	Schedule & Device
Team	
Position	

Join Date	2016-02-22 09:28:33.242
Most Recent Login	2016-02-23 04:28:17.797
Reset Password	Issuance

Buttons: Save, Cancel

- 3 Select the new group name and click **Save**. The group of the user will be changed.



## Changing a user role

---

Change a user role from the user list.

### Note

- The general administrator and organization administrator role cannot be modified.
- The general administrator and organization administrators can add and manage roles. For details, refer to [▶ User role management](#)

- 1 In the user list, click a user ID for which you want to change the role.

- 2 Select the Role from the drop-down list and click **Save**. The role of the user will be changed.

The screenshot shows the 'Edit User' dialog box with the following fields and values:

- Default Information** (Note: \* is a required item. Please enter a value.)
  - User ID: user001
  - User Name: MagicInfo
  - E-mail: magicinfo@samsung.com
  - Mobile Phone Number: (empty)
  - Phone Number: (empty)
- Organization Information**
  - Organization: Org004
  - Group: Org004
  - Role: Schedule & Device (dropdown menu is open showing options: Administrator, Content Manager, Content Schedule Manager, Content Uploader, Custom\_Role, Device Manager, Schedule & Device, Schedule Editor, Schedule Manager)
  - Team: (empty)
  - Position: (empty)
  - Join Date: (empty)
  - Most Recent Login: (empty)
  - Reset Password: (empty)

Buttons: Save, Cancel

### Default user role types

- **Administrator:** Authorized to manage overall matters of their organization.
- **Content Manager:** Authorized to access and manage the content-related menu items.
- **Content Schedule Manager:** Authorized to retrieve and manage content and schedules.
- **Content Uploader:** Authorized to create content and playlists.
- **Device Manager:** Authorized to access and manage the device-related menu items.
- **Schedule Editor:** Authorized to create and edit content schedules and message schedules.
- **Schedule Manager:** Authorized to access and manage the schedule-related menu items.
- **User Manager:** Authorized to access and manage the user-related menu items.

## Issuing temporary passwords

The administrator can issue a temporary password to a user that has lost their password.

### Note

- To use this function, go to **Setup > Server management > Server Settings >** and select the **Enable Alarm Mailing** checkbox.
- After obtaining a temporary password, make sure to change the password after login. Otherwise, a warning message that the password should be changed will appear each time you log in.

1 In the user list, click a user ID for which you want to issue a temporary password.

2 In the detailed user info window, click **Issuance** from Reset Password.

The screenshot shows the 'Edit User' dialog box with the following fields and values:

Default Information	
User ID *	user001
User Name *	MagicInfo
E-mail *	magicinfo@samsung.com
Mobile Phone Number	
Phone Number	

Organization Information	
Organization *	Org004
Group *	Org004
Role *	Schedule & Device
Team	
Position	

Join Date	2016-02-22 09:28:33.242
Most Recent Login	2016-02-23 04:28:17.797
Reset Password	Issuance

Buttons: Save, Cancel

3 Click **OK** in the issue confirmation dialog box.

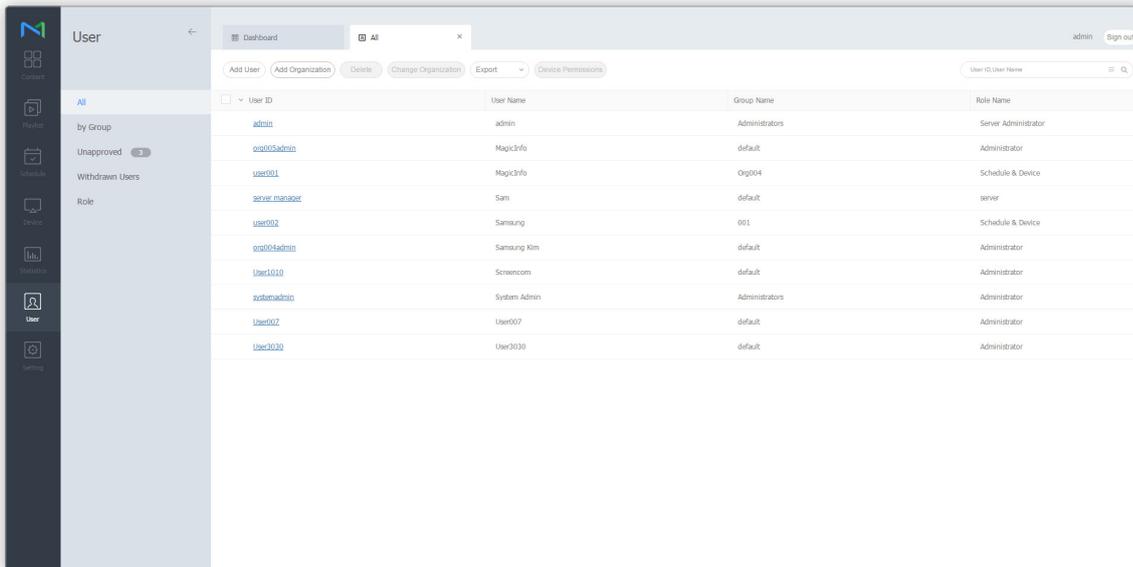
# Creating an organization

Organizations are the largest units to categorize users. The general administrator can create organizations in MagicInfo Server.

## Note

When an organization is created, an administrator for the organization is automatically created.

- 1 Click **Add Organization** from the user list.



User ID	User Name	Group Name	Role Name
admin	admin	Administrators	Server Administrator
org01Admin	MagicInfo	default	Administrator
user001	MagicInfo	Org004	Schedule & Device
server_maboc	Sam	default	server
user002	Samsung	001	Schedule & Device
org02Admin	Samsung Kim	default	Administrator
User1010	Screencom	default	Administrator
systemadmin	System Admin	Administrators	Administrator
User007	User007	default	Administrator
User0030	User0030	default	Administrator

- 2 Enter information about the organization and organization administrator.

### Add Organization

Default Information \* is a required item. Please enter a value.

User ID \*

Password \*

Confirm New Password \*

User Name \*

E-mail \*

Mobile Phone Number

Phone Number

---

Organization Information

Organization \*

Group \*

Role \*

Team

Position

**Basic Information**

<b>User ID</b>	Enter the organization administrator account ID. An organization administrator ID can be 5 - 20 characters long.
<b>Password</b>	Enter the password for the organization administrator account.
<b>Confirm Password</b>	Enter the password for the organization administrator account again.
<b>User Name</b>	Enter the organization administrator name.
<b>E-mail</b>	Enter the e-mail address of the organization administrator.
<b>Mobile Phone Number</b>	Enter the cell phone number of the organization administrator.
<b>Phone Number</b>	Enter the telephone number of the organization administrator.

**Organization Information**

<b>Organization</b>	Enter an organization name.
<b>Group</b>	Create an organization administrator account under the default group.
<b>Role</b>	Create an organization administrator account with the Administrator role.
<b>Team</b>	Enter the department of the organization administrator.
<b>Position</b>	Enter the position of the organization administrator.

3 When complete, click **Save**.

**Note**

- A new organization requires an organization administrator.
- Fields with \* cannot be left blank.

# User role management

The general administrator and organization administrators can add and assign user roles.

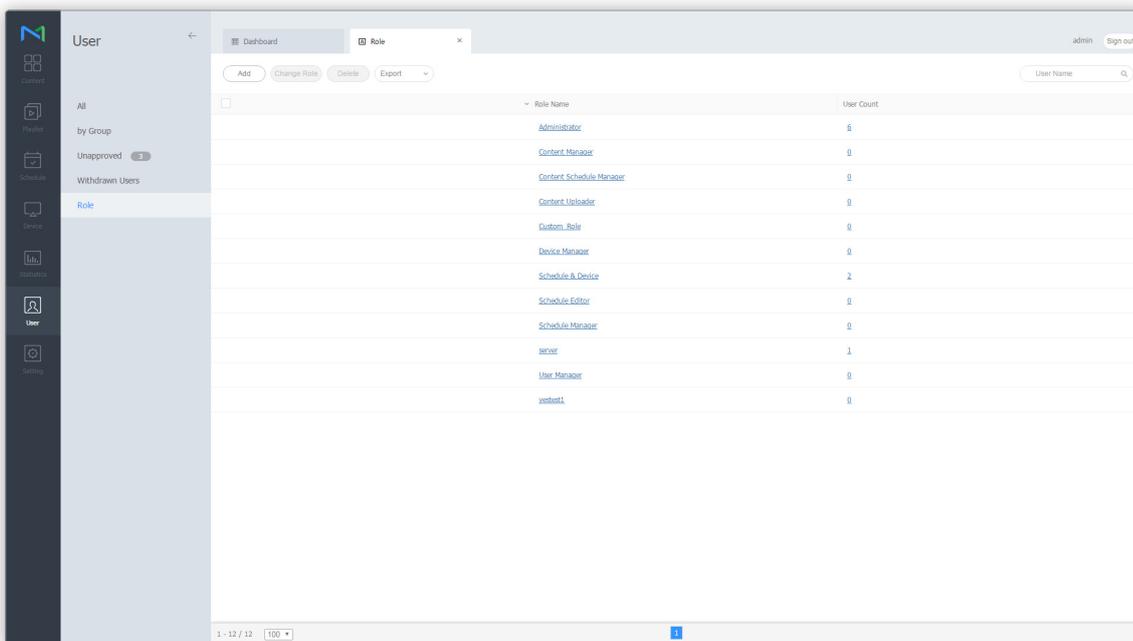
Click **Role**.

## Note

- An organization administrator is only authorized to assign roles to users under the organization where the administrator has privileges.
- Only users with privileges to create users, such as general administrators, organization administrators and user managers, can create users that have privileges to access all MagicInfo Server functions.
- Default roles and privileges cannot be edited.

## Adding a user role

- 1 Click **Add Role** from the list of roles.



## 2 Configure role settings and click **Save**.

The screenshot shows the 'Add Role' dialog box with the following structure:

- 1** Role Name: Enter the role name.
- 2** Role: Custom Role (dropdown menu)
- 3** Privilege Selection Table:
 

	Read	Create	Manage
Content & Playlist	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Schedule	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Device	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
User	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
		Manage	
Server Settings		<input type="checkbox"/>	
Statistics		<input type="checkbox"/>	

Buttons:

**1** Enter a role name and click **Check Duplication** to check for a duplicate role name.

**2** To import privileges from a previously created role, select a role.

Select privileges to assign to the new role.

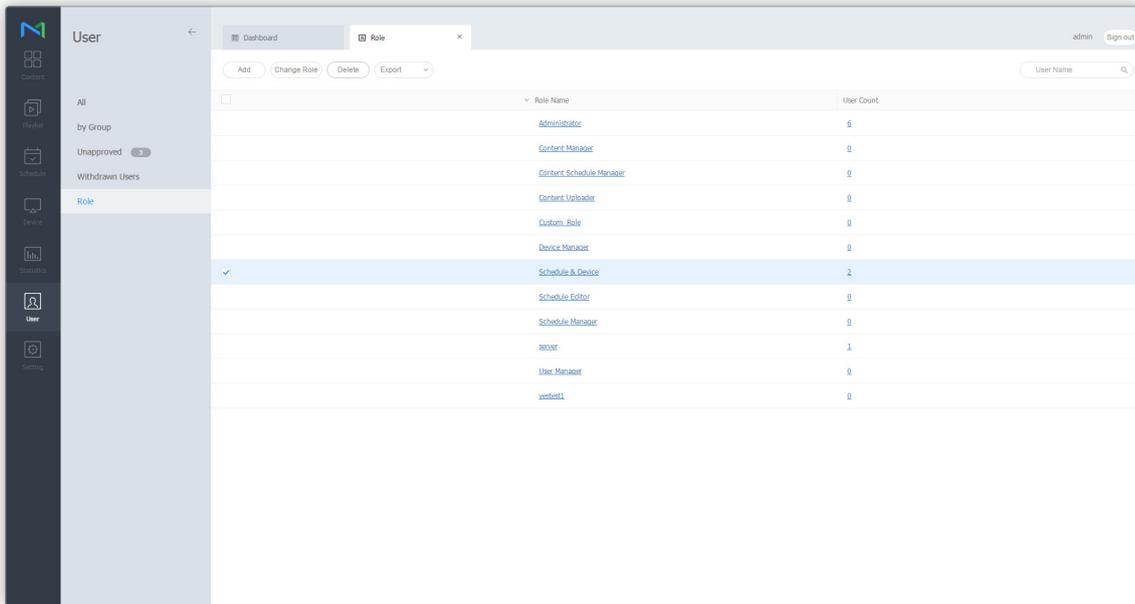
- **View:** Assign privileges to view the selected menu.
- **Create:** Assign privileges to add, edit and delete information or content for the selected menu.
- 3**
  - **Manage:** Assign privileges to view and create information or content for the selected menu. Selecting **Manage** will automatically select **View** and **Create** options together.
  - **Server Settings** or **Statistics > Manage:** Assign privileges to configure MagicInfo Server settings and access all functions related to the statistics menu.

## Editing a user role

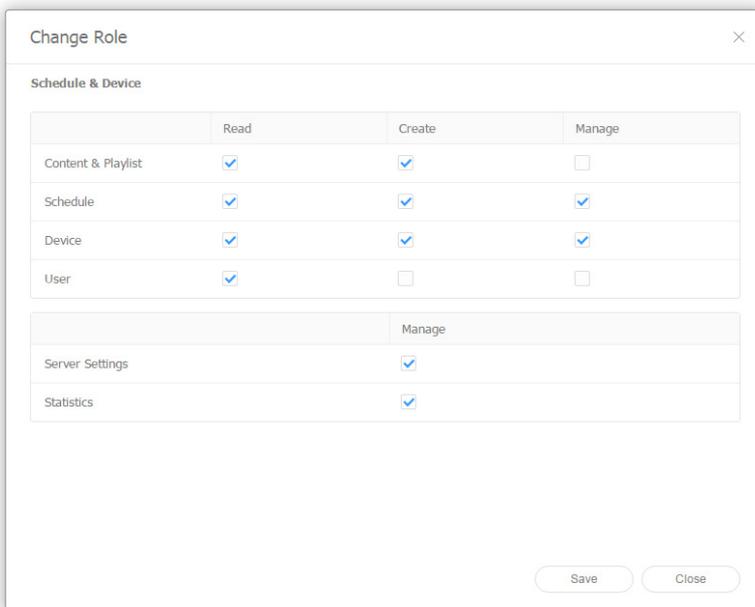
- 1 Click the desired role checkbox from the list of roles and click **Change Role**.

### Note

Alternatively, you can click on the role name.



- 2 Edit the user role and click **Close** to update the user role.



## Deleting a user role

- 1 Select a role to delete and click **Delete**.

### Note

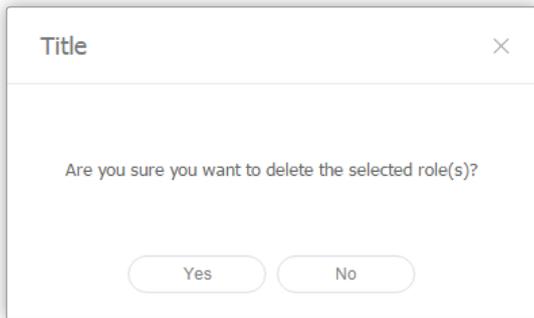
It is not possible to delete roles that are provided by default. The following roles are provided by default:

- **Administrator:** Authorized to manage overall matters of their organization.
- **Content Manager:** Authorized to access and manage the content-related menu items.
- **Content Schedule Manager:** Authorized to retrieve and manage content and schedules.
- **Content Uploader:** Authorized to create content and playlists.
- **Device Manager:** Authorized to access and manage the device-related menu items.
- **Schedule Editor:** Authorized to create and edit content schedules and message schedules.
- **Schedule Manager:** Authorized to access and manage the schedule-related menu items.
- **User Manager:** Authorized to access and manage the user-related menu items.

The screenshot shows the 'User' management interface. The 'Role' tab is active, displaying a table of roles. The 'Schedule & Device' role is highlighted in blue, indicating it is selected. The table includes columns for 'Role Name' and 'User Count'.

Role Name	User Count
Administrator	6
Content Manager	0
Content Schedule Manager	0
Content Uploader	0
Custom Role	0
Device Manager	0
<b>Schedule &amp; Device</b>	<b>2</b>
Schedule Editor	0
Schedule Manager	0
server	1
User Manager	0
vestest1	0

- 2 Click **Yes** to delete the role.



## Exporting a list of roles

---

- 1 To save a list of user roles as a file, click **Export** from the role list.
  - Select roles to save information of those specific roles only.
- 2 Click **Excel** or **PDF**.
  - Role information will be saved in the selected file type.

# Device management

## Assigning Device Privileges

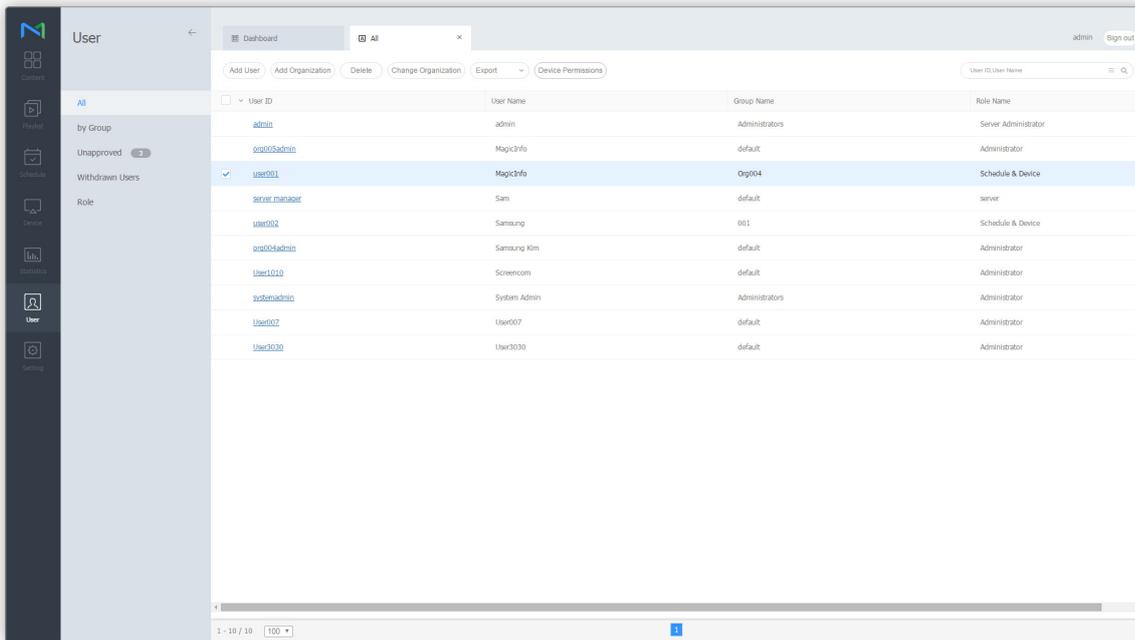
---

The general administrator can assign access privileges for devices currently connected to MagicInfo Server to device managers.

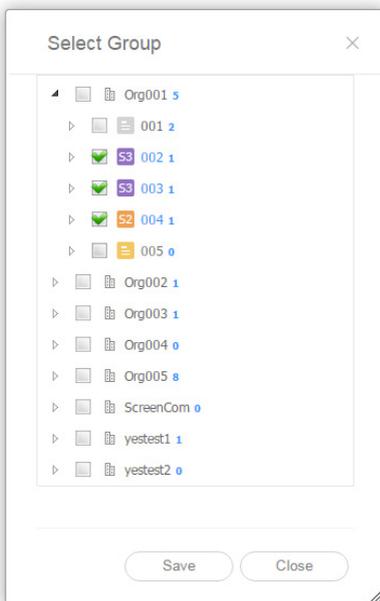
 **Note**

This function is only enabled when a user that has privileges to manage devices is selected.

# 1 Select a user from the user list and click **Device Permissions**.



# 2 When the device selection window appears, select devices for which you want to assign access privileges to the user and click **Save**.



## Setting Menu

Manage your personal information and configure MagicInfo Server settings.

Click  on the main menu bar.

### Note

- MagicInfo Server administrators (general administrator and organization administrators) can assign a role to each user. Available MagicInfo Server functions depend on the user role. For details on user roles, refer to [▶ Changing a user role](#)
- This chapter assumes that you are signed in with general administrator privileges.

## Managing my account

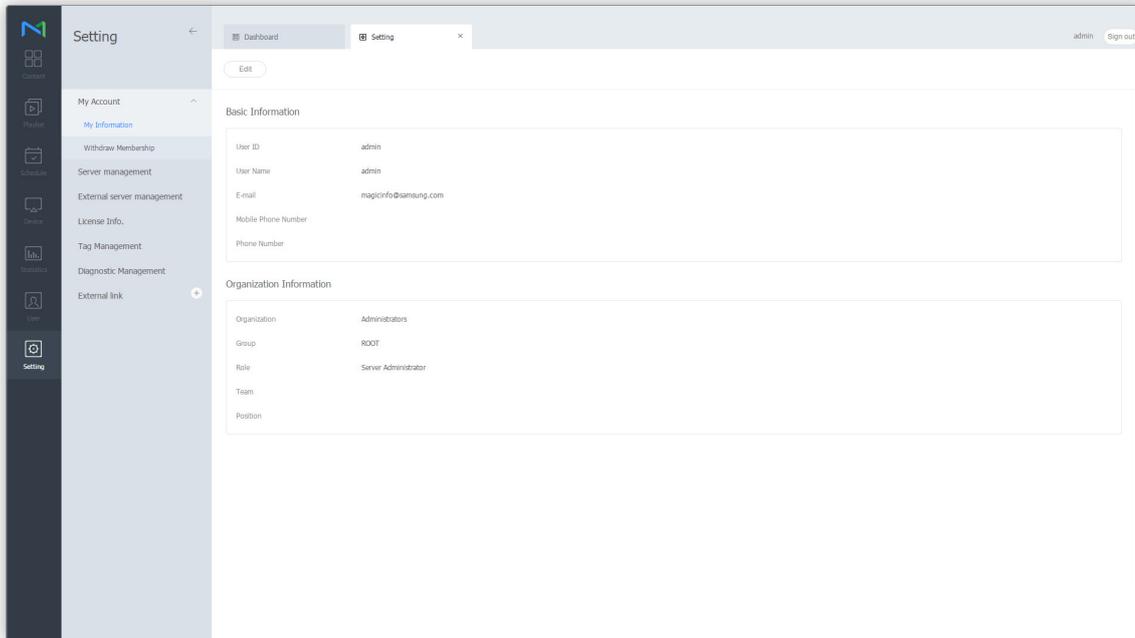
You can view and edit your information added to MagicInfo Server. You can also cancel your account on MagicInfo Server.

Click **My Account**.

## Managing My Information

You can view and manage your information added to MagicInfo Server.

Click **My Information**.



## Editing My Information

- 1 To edit your information, click **Edit**.
- 2 Enter password and click **OK**.
- 3 In the editing window, edit information as needed.
  - Fields with \* cannot be left blank.
  - Password must be a combination of 8-50 alphanumeric characters. Repeating a letter more than three times or using more than three consecutive numbers are not allowed.
- 4 Click **Save** to update changes.



### Note

An organization administrator can use the "edit info" window to transfer organization administrator privileges to another user in the same organization and edit user roles.

## Canceling Account

You can stop using MagicInfo Server and cancel your account.

- 1 Click **Withdraw Membership**.
- 2 Read through the notice before terminating an account, select the confirmation checkbox, and then click **Withdraw**.
  - The confirmation window will appear to complete the cancellation.

### Note

It is not possible to terminate a general administrator account. For an organization administrator to terminate their account, they must first transfer their organization administrator privileges to another user in the same organization. Use the "edit my info" window to transfer organization administrator privileges.

## Managing MagicInfo Server

You can manage MagicInfo Server setup information and device/system information, or view log information. To manage MagicInfo Server general settings, click **Server management**.

## Setting MagicInfo Server

To view MagicInfo Server settings, click **Server Settings**. Edit setup values as needed and click **Save** to apply the change.

The screenshot displays the 'Setting' application interface. On the left is a navigation sidebar with options like 'My Account', 'Server management', 'Device Summary', 'System Info', 'Log', 'External server management', 'License Info', 'Tag Management', 'Diagnostic Management', and 'External link'. The main content area shows the 'Server Settings' window with a 'Save' and 'Cancel' button at the top. The settings are organized into two sections:

- General:**
  - Device Refresh Interval: 10 Sec
  - Device Update Frequency: 3 Min
  - Content Approval:  Enable
  - Sign Up:  Enable
  - Number of Sign-In Failures: 5
  - Sign-In Block Duration: 10 Min
  - Premium Device Permissions:  Enable
  - Backup Play:  Enable
  - Number of Device Groups:  Enable
  - Device Power Control:  Enable
  - External link:  Enable
- Log Management:**
  - Log Level Setting:  ERROR  WARN  INFO
  - File Size: 300 MB
  - File Count: 7
  - Download: [Download](#)
  - Player Log Collect:  Enable

## General

<b>Device Refresh Interval</b>	Set the time interval to import device settings. in seconds in the range 1-999.
<b>Device Update Frequency</b>	Set the cycle to update device information in minutes in the range 1-999.
<b>Content Approval</b>	To enable the approve content function, select the <b>Enable</b> checkbox. Refer to the following for further details on approving content. <a href="#">▶ Approving content</a>
<b>Sign Up</b>	To enable sign up menu in the login page, select the checkbox for <b>Enable</b> .
<b>Number of Sign-In Failures</b>	Set to allow a certain number of login attempts before blocking the user from logging into MagicInfo Server.
<b>Sign-In Block Duration</b>	Specify the amount of time to block users that entered incorrect passwords from signing into MagicInfo Server.
<b>Premium Device Permissions</b>	To authorize the device manager to manage specific devices, select the <b>Enable</b> checkbox.
<b>Backup Play</b>	<p>To activate the redundant playback function, select the <b>Enable</b> checkbox.</p> <p> <b>What is Backup Play?</b></p> <p>In the event of disconnection or input source changes on a device while playing important content, the user-configured backup device will detect the problem and continue to play the content. Refer to the following for further details on Backup Play settings. <a href="#">▶ Using Backup Play</a></p>
<b>External Link</b>	Select the Enable checkbox to turn on the external link function. For using external links, see <a href="#">▶ Using External Links</a>

 Note

- MagicInfo Server administrators (general administrator and organization administrators) do not require special privileges to be setup as they already have permission to manage all devices connected to MagicInfo Server.
- After activating Premium Device Permissions, make sure to configure privilege settings so that the device manager can manage specific devices. For details on device management privilege settings, refer to [▶ Viewing detailed user information](#)

## Log Management

<b>Log Level Setting</b>	Set log level. For instance, setting the log level to ERROR will not save WARN and INFO logs as they are below the ERROR level.
<b>File Size</b>	Set storage size for log files. Saved logs will be automatically deleted when the log storage is full.
<b>File Count</b>	Set the maximum number of log files that can be saved. If the maximum number of log files is exceeded, saved files will be automatically deleted.
<b>Download</b>	Download log files to your computer.
<b>Player Log Collect</b>	Collect logs for MagicInfo Player S events. To turn on the function that collects MagicInfo Player S logs, select the <b>Enable</b> checkbox.

## SMTP Server

<b>Enable Alarm Mailing</b>	Send email notifications for device alarms to the user in charge. Issue and send a temporary password to a user email address registered on MagicInfo Server, if necessary.
<b>Server Address</b>	Enter the SMTP server address to use to send e-mail.
<b>Authentication</b>	Click the checkbox if authentication is required when connecting to the SMTP server.
<b>Login ID</b>	Enter the user account required to connect to the SMTP server.
<b>Password</b>	Enter the password required to connect to the SMTP server.
<b>Port</b>	Enter the SMTP server port number.
<b>SSL</b>	Enable or disable SSL.

### Note

SMTP refers to a protocol used to send e-mail. Similar to http which is the main protocol for WWW, SMTP is a protocol used to send e-mail. Protocols used to receive e-mail include POP and POP3.

## E-mail Alarm for Disconnected Device

Use	To notify users when a device is disconnected from MagicInfo Server, select the <b>Enable</b> checkbox.
Device Refresh Interval	Set time interval to import information on the connection status between MagicInfo Server and a device.
Run Time	Set the time to run the email alarm transmission function.
Notification	Select the user(s) to send email notifications.

 Note

To receive an email notification of a disconnected device, select the **Enable Alarm Mailing** checkbox from SMTP Server.

## LDAP Server

Server Address	Enter the LDAP server address.
Root DN	Enter the root account required to access the LDAP server.
Manager DN	Enter the administrator account required to access the LDAP server.
Manager Password	Enter the administrator password required to access the LDAP server.

## Automatic Time Zone (SPlayer)

Automatic Time Zone	Select the <b>Enable</b> checkbox to automatically set the time zone on the Player S device.
Time Zone	Select a time zone.
Daylight Saving Time	Select the <b>Enable</b> checkbox to turn on daylight savings time mode.
Start Time	Set the time to start daylight saving time mode.
End Time	Set the time to end daylight saving time mode.
Time Difference	Specify hour offset when using daylight saving time mode.

 Note

Start Time, End Time and Time Difference are enabled when daylight savings time mode is turned on.

# Device Info Summary

You can view summarized information for devices added to MagicInfo Server. Click **Device Summary**.

- To download device information to your computer, click **Export**.

The screenshot displays the 'Device Summary' interface with the following data:

**1 Device Model Name**

Device Model Name	Device Count
Custom	3
DB110D	1
DB22D	1
DB40D	1
DB48E	1
DB40E	1
DB48F	7

**2 Software Version**

Firmware Version	Device Count
4.4.2	1
5.0.2	1
5.1.1	1
B2B-EP-APP-5413-131	2
B2B-EP-APP-5413-133	1
B2B-EP-MIP-4602-108	1
B2B-FP-MIP-4607-1K3	1

**3 Device List**

MAC Address	Device Name	IP	Device Model Name	Firmware Version
00-23-15-a1-28-58	NONAME	0.0.0.0	Custom	null
24-4b-03-03-21-8b	DEMO_10d	192.168.5.85	DB110D	B2B-EP-Solution-4116-GoPS_10_L
34-be-00-b1-c6-f2	Device002	192.168.1.24	SM-T800	4.4.2
50-85-69-c5-1d-11	Device0016	192.168.1.178	DB40D	B2B-EP-MIP-4602-183
50-b7-c3-ac-76-df	KIS_PC	10.212.63.119	m	FAIL
5c-f6-dc-b6-85-8b	Device003	106.101.10.244	DB40E	T-GPSLEZAMKC-1022.0
90-f1-aa-74-c9-d3	Device004	192.168.42.199	DB22D	B2B-EP-MIP-4602-108
88-5a-73-0f-d0-9d	Device005	192.168.1.105	SM-P550	5.0.2
c4-57-6e-91-11-c8	Device017	172.16.10.153	DB110D	B2B-EP-MIP-4602-211

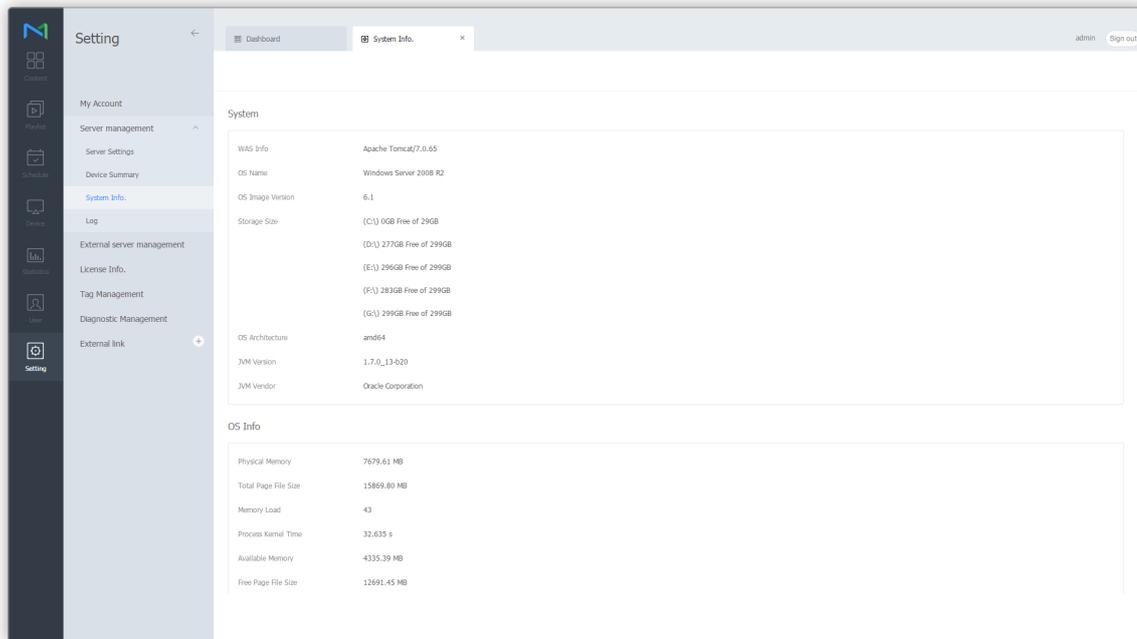
- 1 View model names and the number of devices per model for devices added to MagicInfo Server.
- 2 View firmware versions and the number of devices per version for devices added to MagicInfo Server.

- 3 View information on devices added to MagicInfo Server. This includes MAC address (ID), name, IP address, model name, and firmware version for each device.

# Viewing system information

View the MagicInfo Server system information.

Click **View System Info**.



## View System Info

<b>WAS Info</b>	View the Web Application Server (WAS) information.
<b>OS Name</b>	View the installed OS name.
<b>OS Image Version</b>	View the OS version
<b>Storage Size</b>	View hard disk drive capacity for the computer MagicInfo Server is installed on.
<b>OS Architecture</b>	View the OS architecture.
<b>JVM Version</b>	View the Java Virtual Machine (JVM) version.
<b>JVM Vendor</b>	View the Java Virtual Machine (JVM) provider.

## OS Info

<b>Physical Memory</b>	View the total memory capacity.
<b>Total Page File Size</b>	View the file size of all pages.
<b>Memory Load</b>	View the memory load.
<b>Process Kernel Time</b>	View the process kernel time.
<b>Available Memory</b>	View available memory capacity.
<b>Free Page File Size</b>	View the file size of remaining pages.
<b>Process User Time</b>	View the process user time.

## JVM Info

<b>Free Memory Size</b>	View the amount of remaining memory available on JVM.
<b>Max Free Memory</b>	View maximum memory capacity available on JVM.
<b>Total Free Memory</b>	View total memory capacity available on JVM.

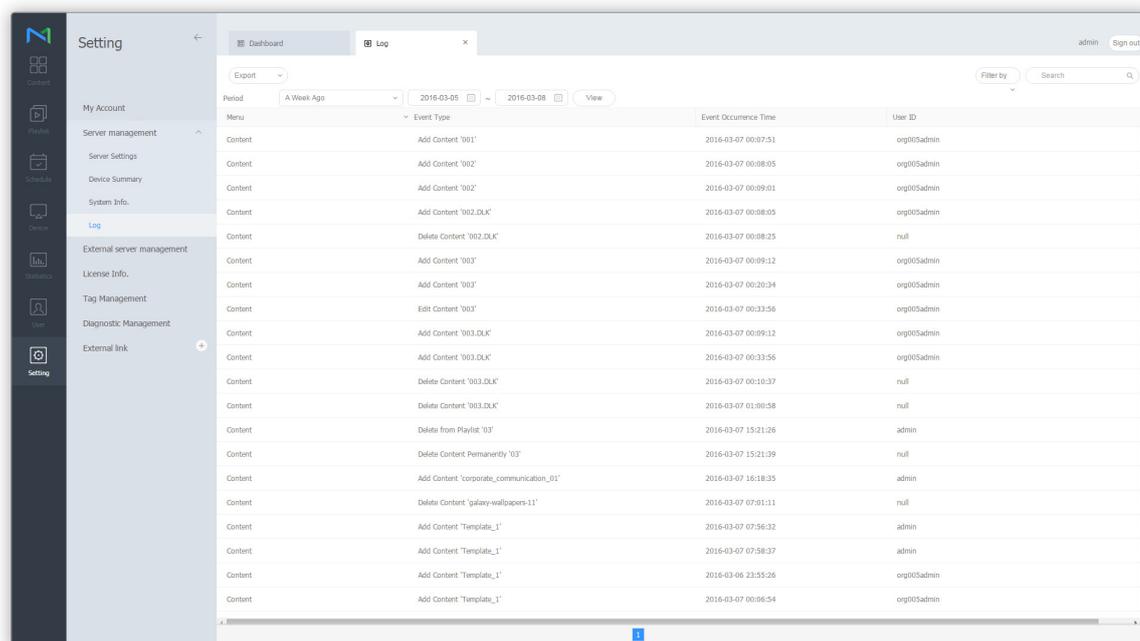
### Note

- JVM is an abbreviation for Java Virtual Machine.
- WAS, abbreviation for Web Application Server, refers to a middleware (software engine) that runs applications online via HTTP on a computer or device.

# Viewing logs

View logs of all events on MagicInfo Server. Click **Log**.

- You can download logs as an Excel or PDF file to your computer. To export a content file list, click **Export** and select a file type.
- To view logs for Content or another specific menu item, click **Filter by** and select a menu item. Use the search box to retrieve specific logs.
- You can search logs for specified period. Click  and set a period. If you select **Custom**, the date input window is enabled. Click the window to display a calendar and select dates from the calendar. Click **View** to view logs in a specified period.



Menu	Event Type	Event Occurrence Time	User ID
Content	Add Content '001'	2016-03-07 00:07:51	org00Admin
Content	Add Content '002'	2016-03-07 00:08:05	org00Admin
Content	Add Content '002'	2016-03-07 00:09:01	org00Admin
Content	Add Content '002.DLK'	2016-03-07 00:08:05	org00Admin
Content	Delete Content '002.DLK'	2016-03-07 00:08:25	null
Content	Add Content '003'	2016-03-07 00:09:12	org00Admin
Content	Add Content '003'	2016-03-07 00:20:34	org00Admin
Content	Edit Content '003'	2016-03-07 00:33:56	org00Admin
Content	Add Content '003.DLK'	2016-03-07 00:09:12	org00Admin
Content	Add Content '003.DLK'	2016-03-07 00:33:56	org00Admin
Content	Delete Content '003.DLK'	2016-03-07 00:10:37	null
Content	Delete Content '003.DLK'	2016-03-07 01:00:58	null
Content	Delete from Playlist '03'	2016-03-07 15:21:26	admin
Content	Delete Content Permanently '03'	2016-03-07 15:21:39	null
Content	Add Content 'corporate_communication_01'	2016-03-07 16:18:35	admin
Content	Delete Content 'gallery-wallpapers-11'	2016-03-07 07:51:11	null
Content	Add Content 'Template_1'	2016-03-07 07:56:32	admin
Content	Add Content 'Template_1'	2016-03-07 07:58:37	admin
Content	Add Content 'Template_1'	2016-03-06 23:55:26	org00Admin
Content	Add Content 'Template_1'	2016-03-07 00:06:54	org00Admin

<b>Menu</b>	View the name of the MagicInfo Server menu item where an event occurred.
<b>Event Type</b>	Display even type.
<b>Event Occurrence Time</b>	Display date and time of event occurrence.
<b>User ID</b>	Display user ID responsible for the event.

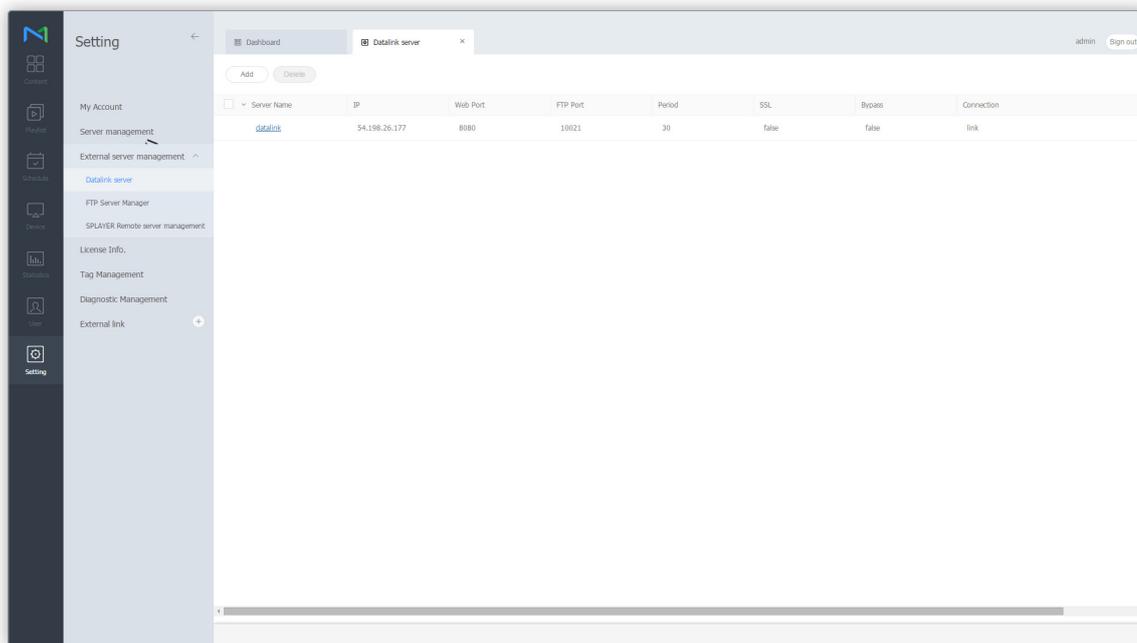
# Managing external servers

You can choose to utilize external servers to facilitate the operation of MagicInfo Server. Click **External Server Management**.

## DataLink server management

Add a DataLink Server to MagicInfo Server to use additional functions.

Click **Datalink server**.



<b>Server Name</b>	Display DataLink Server name.
<b>IP</b>	Display DataLink Server IP address.
<b>Web Port</b>	Display DataLink Server web port number.
<b>FTP Port</b>	Display DataLink Server FTP port number.

<b>Period</b>	Display the interval (in second) to update data from DataLink Server.
<b>SSL</b>	Display status of SSL use.
<b>BYPASS</b>	Display bypass option status for communicating DataLink Server.
<b>Connection</b>	Display connection status between MagicInfo Server and DataLink Server.

## Adding DataLink Servers

- 1 To add a DataLink Server, click **Add**.
- 2 In the DataLink Server registration window, setup each field and click **Save**.
  - The DataLink Server name must be different from names currently in use. Click **OK** next to the server name field to check availability.

### Note

- To edit DataLink Server information, click on the name of DataLink Server to change.
- To delete DataLink Server information, select the DataLink Server and click **Delete**.

## Managing the download server

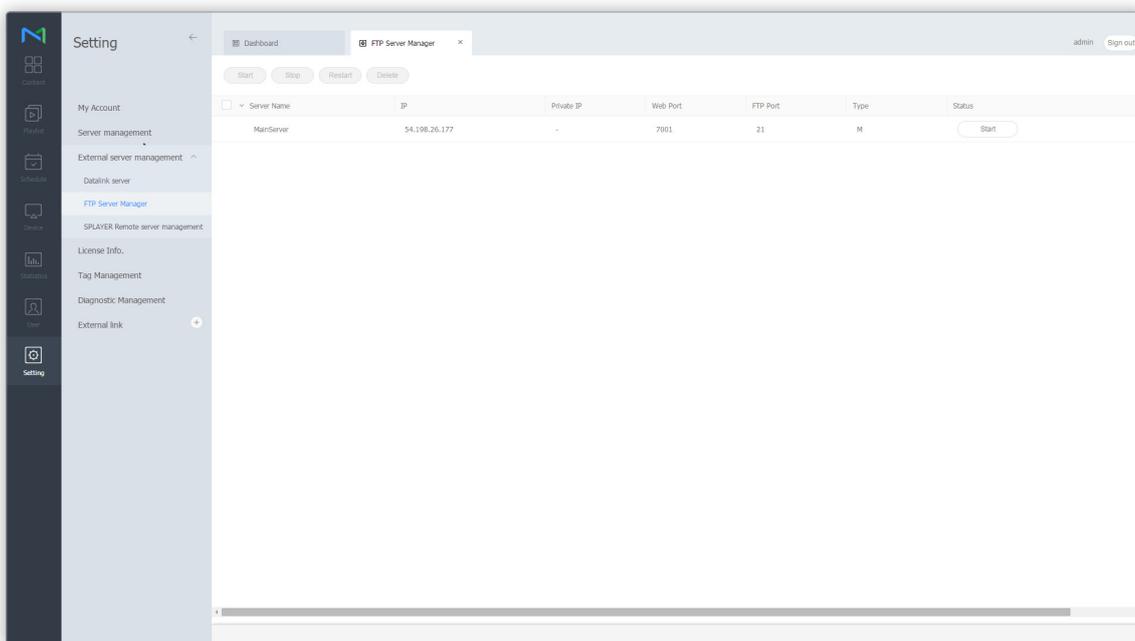
Each main server has one download server by default. It is possible to add a download server in order to reduce load on the main server.

Click **FTP Server Manager**.

- To start a download server, select a desired download server checkbox from the list and then click **Start**. Clicking **Stop** stops the download server. Clicking **Restart** restarts the download server.
- To remove a download server from MagicInfo Server, select the server from the list and click **Delete**.

### Note

You can also start, stop or restart download servers by clicking the action button next to the status indicator for each download server in the list.



<b>Server Name</b>	Display the name of a download server.
<b>IP</b>	View the public IP address for a download server.
<b>Private IP</b>	View the private IP address for a download server.
<b>Web Port</b>	Display the web port number of a download server.

<b>FTP Port</b>	Display the FTP port number of a download server.
<b>Type</b>	Display download server type.
<b>Status</b>	Display download server status.

 **Note**

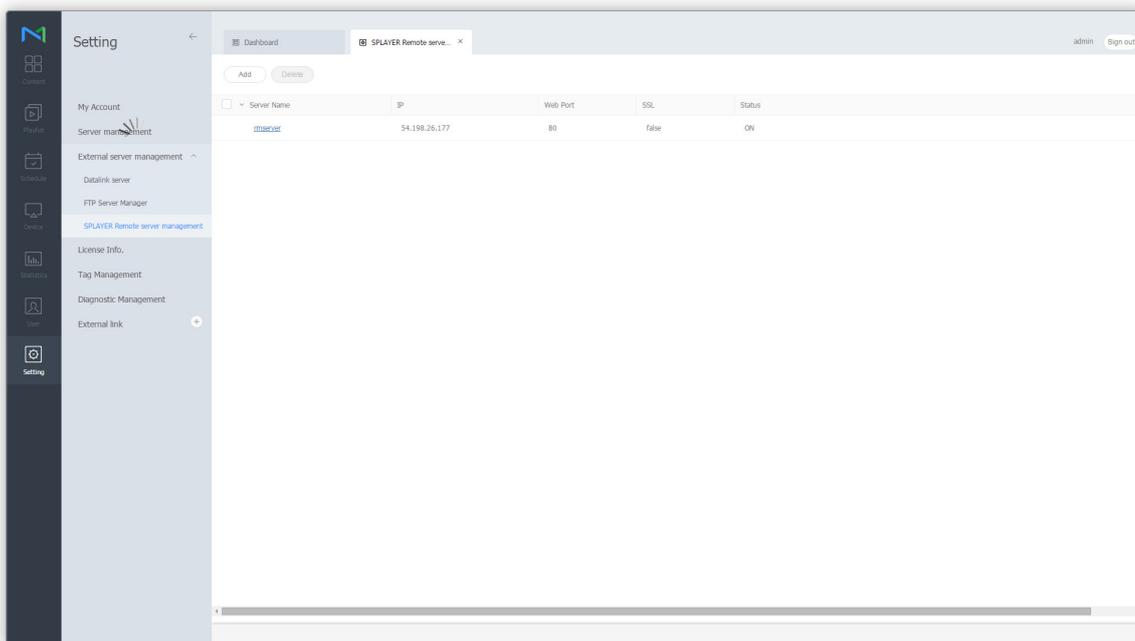
A command that has been selected to control the download server may not immediately be applied to MagicInfo Server.

## Managing a MagicInfo Player S remote server

You can add remote servers to MagicInfo Server to control MagicInfo Player S2 and MagicInfo Player S3 remotely. Click **SPLAYER Remote server management**. For information on how to control servers remotely, see [▶ Viewing device details](#)

 **Note**

MagicInfo Player S does not support the remote control feature available through the registration process of a remote server.



<b>Server Name</b>	Display the name of MagicInfo Player S remote server.
--------------------	---

<b>IP</b>	Display the IP address of MagicInfo Player S remote server.
<b>Web Port</b>	Display the web port number of MagicInfo Player S remote server.
<b>SSL</b>	Display status of SSL use.
<b>Status</b>	Display the status of MagicInfo Player S remote server.

## Adding MagicInfo Player S Remote Servers

- 1 To add a MagicInfo Player S remote server, click **Add**.
- 2 In the MagicInfo Player S remote server registration window, setup each field and click **Save**.
  - The MagicInfo Player S remote server name must be different from names currently in use. Click **OK** next to the server name field to check availability.

### Note

To delete information on a MagicInfo Player S remote server, select a MagicInfo Player S remote server from the list and click **Delete**.

# Managing SLM licenses

View information about licenses activated for MagicInfo Server and manage licenses.

Click **License Info**.

## Additional License Activation

Extend a license use period or add a license for a new device.

### Note

- To extend the expiration date of a registered license, contact the dealer the product was purchased from or your local marketing representative to extend the license expiration date.
- Additional activation is not possible for trial licenses.
- For further details on how to register licenses for the first time, refer to the following: [▶ Activating a product license](#)

1 Select a desired license checkbox from the list, and then click **Additional Activation**.

2 Select an Internet connection status, and then click **Next**.

### Note

- If not connected to the Internet, select **Disconnected** and then activate the license according to the on-screen instructions.
- To register a license offline, access the license server (<https://v3.samsungsbn.com>) and obtain an activation key.

3 Click **Save**.

- To apply changes, log out and then log in again.

## Returning Licenses

---

Once authorized on one computer, licenses cannot be used on other computers. Return a license if you want to move the activated software to another computer or if you no longer use the license.

 **Note**

It is not possible to return a trial license key.

 **Caution**

If you return a license, information on devices connected to MagicInfo Server will be deleted and you are no longer able to use MagicInfo Server. To use MagicInfo Server again, repeat the first time license activation process.

- 1 Select a desired license checkbox from the list, and then click **Return License**.
- 2 Click **OK** in the displayed window to confirm returning of the license.
- 3 Select an Internet connection status, and then click **OK**.

 **Note**

- If not connected to the Internet, select **Disconnected** and then return the license according to the on-screen instructions.
- To return a license offline, access the license server (<http://v3.samsunggsbn.com>) and enter the license key.

- 4 Click **OK**.

## Checking the history of issued licenses

---

To view issued licenses managed on MagicInfo Server, click **License History**.

# Managing tags

Add tags to MagicInfo Server and assign these tags to DLM elements, content files in playlists, or devices.

A content file with a tag plays only on a device that has the same tag.

Click **Tag Management**.

## Viewing Tags

---

View tags added to MagicInfo Server.

- **All:** View all tags added to MagicInfo Server.
- **Group:** View tags by user group.

### Note

- Except for the general administrator, users are limited to view their organization tags and common tags for global use.
- Common tags are marked as **Common**.

## Adding Tags

---

- 1 To add a tag, click **Add**.
- 2 Enter name, organization and description for the tag in the window and click **Save**.

### Note

To delete a tag, select the tag from the list and click **Delete**.

# Diagnostic management

You can diagnose the status of MagicInfo Server and MagicInfo Player I.

Click **Diagnostic Management**.

## Diagnosing MagicInfo Server

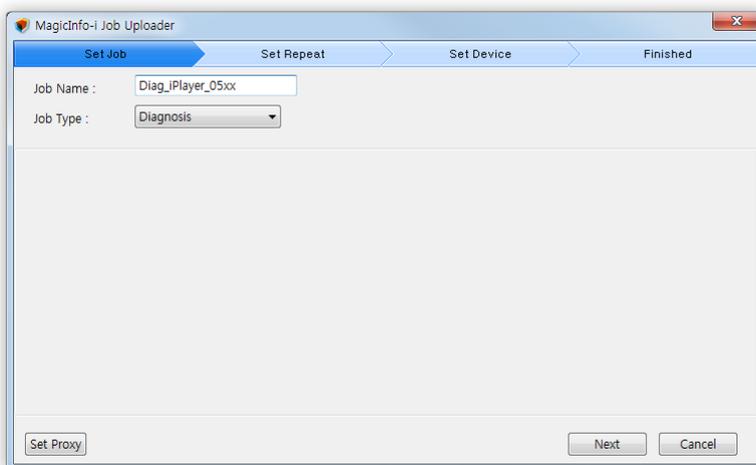
---

- 1 Click **Diagnosis > SERVER**.
- 2 Click **OK** in the notification dialog box to start diagnosis.
  - When MagicInfo Server diagnosis is complete, the results will appear in the list.

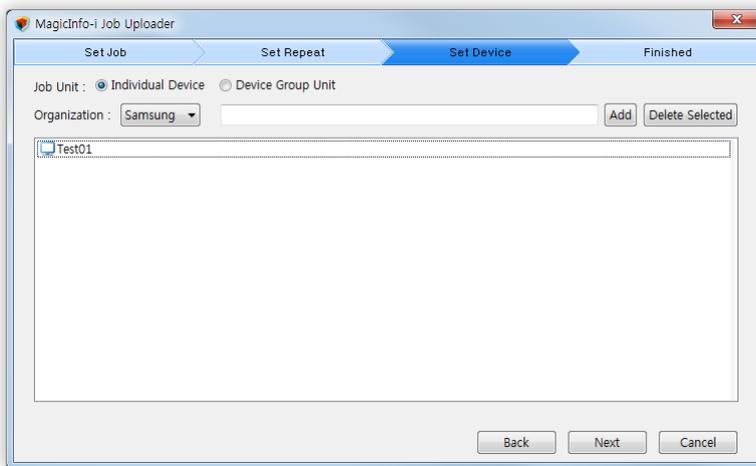
## Diagnosing MagicInfo Player I.

---

- 1 Click **Diagnosis > iPLAYER**.
- 2 Name the task in the task settings window and click **Next**.



- 3 Specify task unit, select the device or device group, and then click **Next**.



- 4 When the process completion notification dialog box appears, click **OK**.
  - The results of MagicInfo Player I diagnosis appear.

## Deleting examination results

To delete diagnosis results, click the result file from the list and click **Delete**.

### Note

There will be no confirmation prompt when deleting diagnosis results. Deleted diagnosis results cannot be restored.

## Using External Links

You can choose to add websites to facilitate the operation of MagicInfo Server.

- 1 Click **+** next to **External Link**.
- 2 Enter name and URL for the link, and click **Save**.
  - Click **▼** next to **External Link** to display the list of added links.
  - Click the link from the list to open the website.

# Guide for content playback

Learn how to send content files to MagicInfo Player from MagicInfo Server and play them on devices.

## Note

- MagicInfo Server administrators (general administrator and organization administrators) can assign a role to each user. Available MagicInfo Server functions depend on the user role. For details on user roles, refer to [▶ Changing a user role](#)
- This chapter assumes that you are signed in with general administrator privileges.

## Adding content

Log into MagicInfo Server and add content to play on devices.

Click  on the main menu bar.

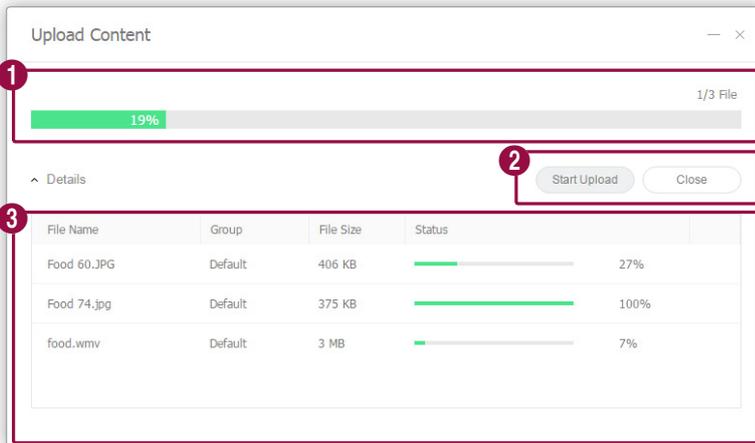
### Adding local content files

---

Add content files saved on your computer.

- 1 Click **Upload Content > Upload Content**.
- 2 Select content files to upload, using one of the following options. Selected files are added to the upload window.
  - Option 1** Select and drag the content files from the computer to the upload window.
  - Option 2** Click on the upload window to select content files and click **Open**.

- 3 Click **Start Upload** in the upload window. Adding a content file is complete.



- 1 View upload progress.
- 2 Start or cancel uploading of content.
- 3 View detailed information of content file(s) to be uploaded.

 **Note**

Click **Details** to display or hide the content file information.

## Adding content files from a remote location

Add content files saved on a computer in a remote location. After a content file is added from a remote location, MagicInfo Server communicates with the source computer regularly to update the added content file.

### Adding content files via FTP

- 1 Click **Upload Content > FTP**.
- 2 Configure the FTP server to import a content file from.

<b>Content Name</b>	Enter the FTP content file name.
<b>FTP Server IP Address</b>	Enter the IP address or host name of the FTP server.
<b>FTP Port</b>	Enter the port number of the FTP server.
<b>Login ID</b>	Enter the ID used to connect to the FTP server.
<b>Password</b>	Enter the password used to connect to the FTP server.
<b>Remote Directory</b>	Enter the location of the FTP folder where the content file is located.
<b>Polling Interval</b>	Set the interval to download data from the remote directory.

- 3 After configuring the required settings, click **Save**. Adding a content file is complete.

## Adding content files via CIFS

- 1 Click **Upload Content > CIFS**.
- 2 Configure the CIFS server to import a content file from.

<b>Content Name</b>	Enter the CIFS content file name.
<b>CIFS Server IP Address</b>	Enter the IP address or host name of the CIFS server.
<b>Login ID</b>	Enter the ID used to connect to the CIFS server.
<b>Password</b>	Enter the password used to connect to the CIFS server.
<b>Remote Directory</b>	Enter the location of the CIFS folder where the content file is located.
<b>Polling Interval</b>	Set the interval to download data from the remote directory.

- 3 After configuring the required settings, click **Save**. Adding a content file is complete.

### CIFS

Common Internet File System (CIFS) is a standard protocol that requests a file or service on a computer from a remote location over the Internet. In the client-server model, the client initiates a file access or program message transfer request to the server of another computer. The server resolves the request and sends a response to the client.

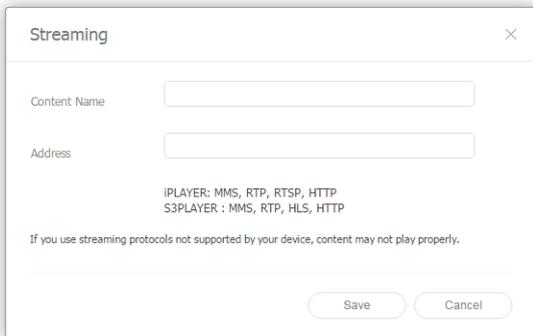
## Adding streaming content files

Register details of the content you want to stream. This allows your LFD device to connect directly to the URL and play the content.

### Note

- Streaming content can be used in MagicInfo Player I and Player S3.
- Protocols compatible with MagicInfo Player I: MMS, RTP, RTSP, HTTP
- Protocols compatible with MagicInfo Player S3: MMS, RTP, HLS, HTTP

- 1 Click **Upload Content > Streaming**.
- 2 Configure information about the streaming content.



<b>Content Name</b>	Enter the name of the streaming content.
<b>Address</b>	Enter the server protocol and URL where the content is registered.

- 3 After configuring the required settings, click **Save**. Adding a content file is complete.

## Adding devices

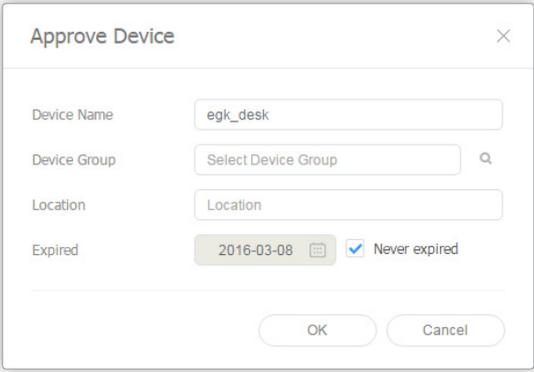
Add devices, to which content files will be distributed, to MagicInfo Server.

Select  on the main menu bar.

### Note

The general administrator is only authorized to approve new devices.

- 1 To add a device to MagicInfo Server, click **Unapproved**. A list of devices connected to MagicInfo Server that are waiting for approval will appear.
- 2 Select a device and click **Approve**. A window appears where a device can be authorized.
- 3 Specify the name, group, location and expiration date. Click **OK**. The device has been authorized.



The screenshot shows a dialog box titled "Approve Device" with a close button (X) in the top right corner. The dialog contains the following fields and controls:

- Device Name:** A text input field containing "egk\_desk".
- Device Group:** A dropdown menu with the text "Select Device Group" and a search icon (magnifying glass) to its right.
- Location:** A text input field containing "Location".
- Expired:** A date picker showing "2016-03-08" and a checked checkbox labeled "Never expired".

At the bottom of the dialog are two buttons: "OK" and "Cancel".

### Note

- To delete an unauthorized device without authorizing it, select the device and click **Delete**.
- To authorize multiple devices of the same model, select devices and click **Approve**. If you enter representative names of devices, the device names are saved in the "representative name\_(sequence number)" format.

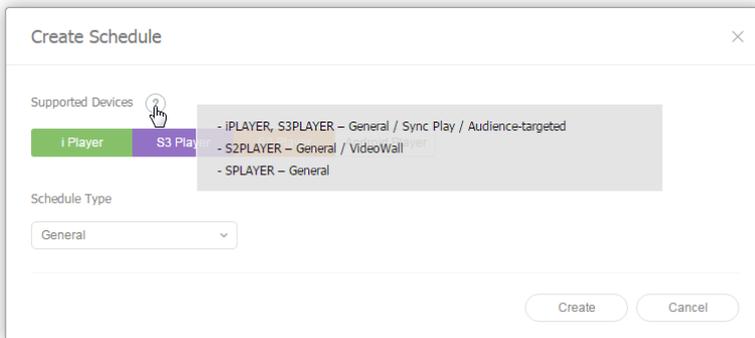
# Adding a schedule

Create a schedule to add to devices saved in MagicInfo Server.

Select  on the main menu bar.

## Creating MagicInfo schedules

- 1 Click **Create Schedule > Content**.
- 2 Use the Create Schedule window to configure basic schedule settings and click **Create**.



### Supported Devices

Select a device type to which to distribute the schedule.

#### Note

- Common schedules are compatible with all device types.
- Higher-performance devices than the selected device are automatically included in the selection. For example, if you select S2 Player, higher versions, such as S3 Player, i Player, are automatically selected.
- Supported Devices only displays device types for the devices that have currently licenses registered on MagicInfo Server.

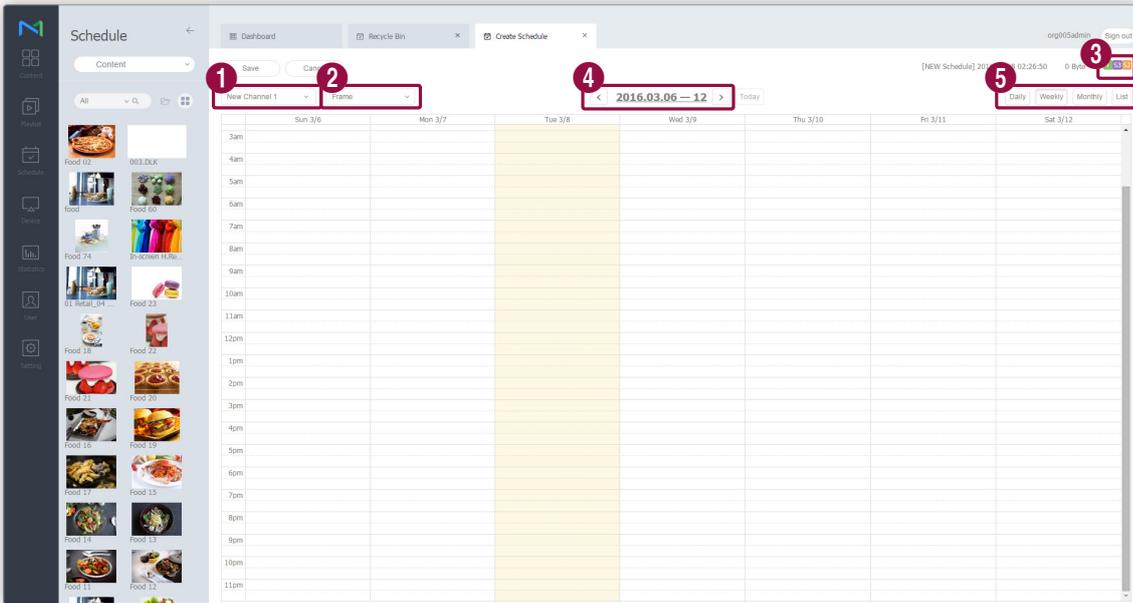
### Schedule Type

Select a schedule type. Select **General**.

#### Note

The options available under Schedule Type vary depending on the selected device types.

3 Configure the specific schedule settings.



Set channels. To add or change channels, Click **Edit Channel**. Use the "change channel" window to select a channel. Alternatively, click **Add** and set the channel name and number to add a channel.

1

**What is a channel?**

A channel is similar to a TV broadcast channel. Add channels when creating a schedule and then distribute the channels to devices. This allows you to play desired content by changing device channels. For details on changing channels, refer to [▶ Changing device channels](#)

2

Select a screen frame for a device to which to distribute the schedule. Play a content file on the device screen split according to the selected frame. To change the frame, click **Edit Frame**.

For details on frame settings, refer to [▶ Customizing the frame layout when creating a schedule](#)

3

View device types to which to distribute the schedule.

4

Select a date to which to assign the schedule.

5

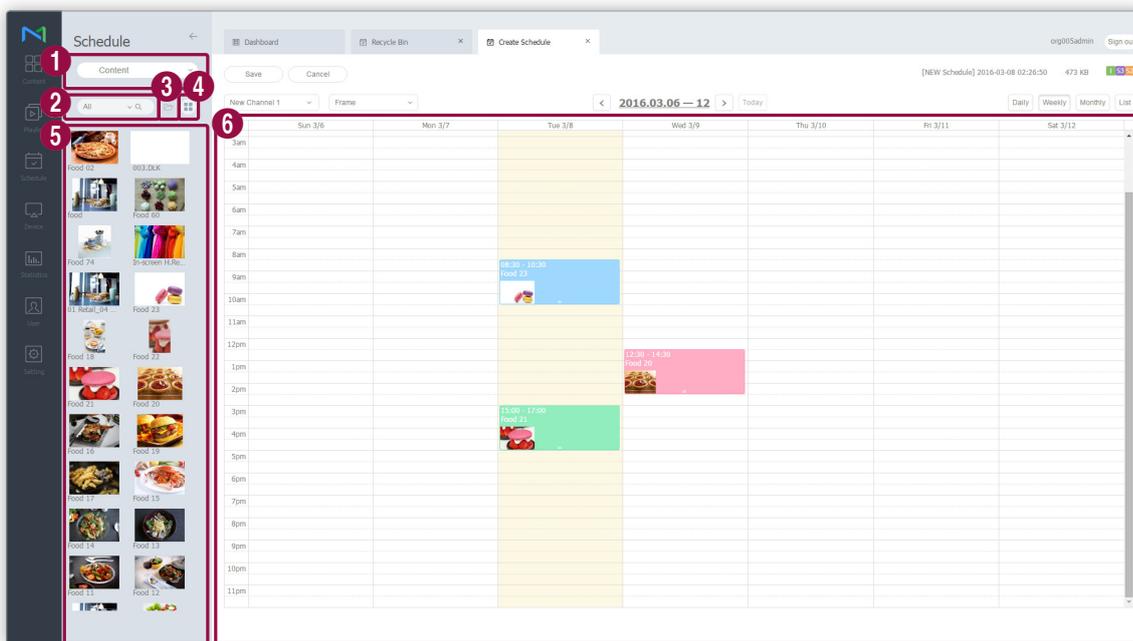
Specify the time unit of a timetable to assign the schedule to. Timetables can be selected daily, weekly or monthly.

- **Everday:** View a daily timetable.
- **Weekly:** View a weekly timetable.
- **Monthly:** View a monthly timetable.
- **List:** View content playback schedules assigned to a timetable as a list.

4 Add programs to the schedule, using one of the following options:

**Option 1** Click and drag content from the content list to the schedule table. Click the added content.

**Option 2** In the schedule table, click or drag the time slot to which to add the content.



- 1 Sort files by the content file, playlist, or input source.
- 2 Search content files or playlists by name. Click on an empty space to search for specific types of content.
- 3 View content under a specific group.
- 4 Sort content files by using thumbnail or list view mode.
- 5 View content, playlists, or input sources in a list.
- 6 This is the schedule table. Drag or click a time slot to assign content dragged from the content list.

5 Use the "create program" window to configure specific program settings and click **Save**.

<b>Content</b>	Select or change content, playlists and/or input sources to distribute to devices.
<b>Playback Date</b>	Specify the period to execute a schedule. <ul style="list-style-type: none"> <li>To run a schedule continuously, select the <b>Never expired</b> checkbox.</li> </ul>
<b>Repeat</b>	<ul style="list-style-type: none"> <li><b>Once:</b> Execute a schedule only once.</li> <li><b>Everday:</b> Repeat a schedule every day.</li> <li><b>Weekly:</b> Repeat a schedule on the specified day(s).</li> <li><b>Monthly:</b> Repeat a schedule on the specified dates of every month.</li> </ul>
<b>Playing Time</b>	Set the time to play content. To play content continuously over a specified period of time, select the <b>24 hours</b> checkbox.

**Note**

A program is similar to a TV broadcast program. You can play selected content for a specified period of time.

6 After configuring the required schedule settings, click **Save**.

- 7 Use the content distribution settings window to configure distribution settings and click **Save**. Click **More Options** to view additional settings.

The screenshot shows a 'Save' dialog box with the following fields and options:

- Schedule Name:** [NEW Schedule] 2016-03-08 02:26:50
- Schedule Group:** default
- Publish to:** (Search icon)
- Description:** (Text input field)
- More Options:**
  - Background Music:** Background Music
  - Content Synchronization:**  Off  On
  - Deploy with Reservation:**  Reservation
- Buttons:** Save, Cancel

<b>Schedule Name</b>	Enter a schedule name. A single schedule name cannot be used more than once.
<b>Schedule Group</b>	Select a group for the schedule.
<b>Publish to</b>	Click  to select a device group to which to distribute the schedule. Devices can be selected by the group. It is not possible to select individual devices.
<b>Description</b>	Enter a description of the schedule.
<b>Background Music</b>	Select a content to use as background music for the content. If the content mapped to the schedule is a video that contains sound, the sound is replaced by the specified background music and only the video is played.

<p><b>Content Synchronization</b></p>	<p>Enable or disable the mode to sync content files. Content file synchronization is a function that syncs playback times when a content file is played on multiple devices that share the same schedule. This function is only available on devices connected to the same network.</p>
<p><b>Deploy with Reservation</b></p>	<p>Select the <b>Reservation</b> checkbox to distribute the schedule at a specific time. All requests for schedule changes are saved up until the specified distribution time. These changes are applied all at once when the schedule is distributed.</p>

 **Note**

- It is possible to distribute videowall schedules to devices that have videowall layouts configured. For details, refer to [▶ Creating VideoWall schedules](#)
- You can have multiple devices play different content simultaneously. For details, refer to [▶ Creating synced playback schedules](#)

## LFD settings

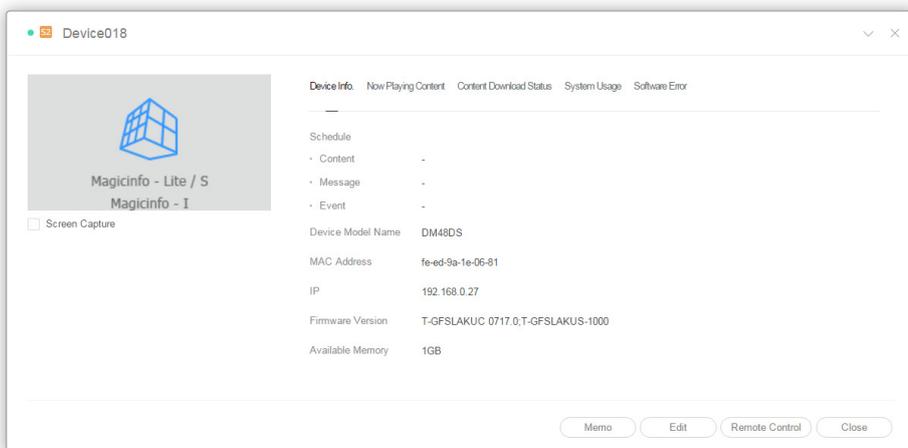
After a schedule is distributed to a device, remotely change the device settings to suit the scheduled content file settings or view the device information.

To setup a device, click  on the main menu bar.

## Viewing device details

View and edit device details by clicking a device name from the device list.

To view details on content playback status, click a device name from the list.



<b>Screen Capture</b>	<p>Select the checkbox to display a screenshot of the device.</p> <p> <b>Note</b></p> <ul style="list-style-type: none"> <li>• An image will not appear if no screenshot image has been saved.</li> <li>• MagicInfo Player S does not support the feature to view screenshot images.</li> <li>• In the "edit device info" window, use the settings tab to select a device and set a screenshot interval. For details, refer to <a href="#">▶ Changing device settings</a></li> </ul>
<b>Device Info.</b>	<p>View information about the device.</p>
<b>On Air Content</b>	<p>View details on content playing on the device.</p>
<b>Content Download Status</b>	<p>View the status of content downloaded on the device.</p>
<b>System Usage</b>	<p>View the CPU, RAM and network usage of the device in a graph. To view the CPU, RAM and network usage, click <b>Start</b>.</p>
<b>Errors</b>	<p>View recent errors. To view error details on MagicInfo Player, click <b>View More</b>.</p>
<b>Memo</b>	<p>Add a note to the device.</p>
<b>Edit</b>	<p>Edit device information. For details, refer to <a href="#">▶ Editing device information</a></p>
<b>Remote Control</b>	<p>Remotely view and configure the device if it is connected to MagicInfo Server. Clicking this option displays the current screen of the device in a new window.</p> <p> <b>Note</b></p> <p>The remote access function is available in MagicInfo Player I. Adding a remote server to MagicInfo Server allows users to control it remotely from MagicInfo Player S2 and MagicInfo Player S3 devices. For details on the MagicInfo Player S remote server, refer to <a href="#">▶ Managing a MagicInfo Player S remote server</a></p>
<b>Close</b>	<p>Close the device details window.</p>

## Editing device information

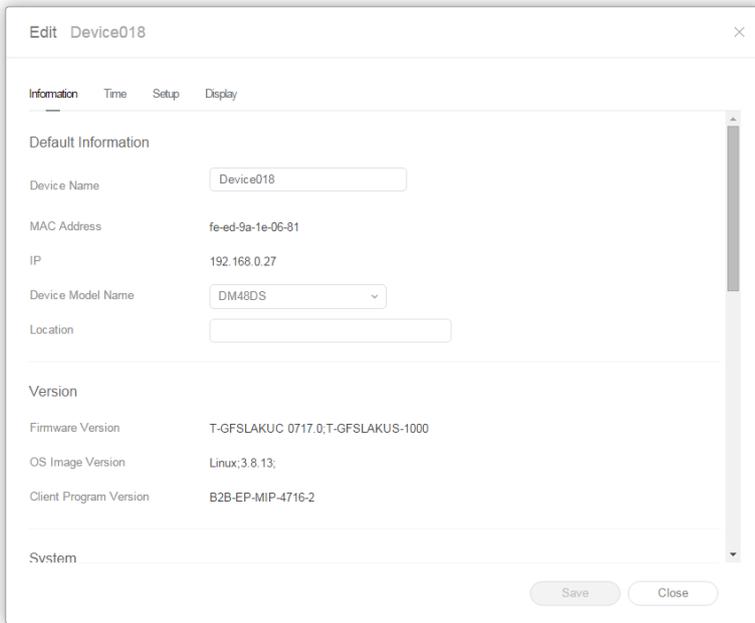
Edit device information, using one of the following options:

**Option 1** Select a device from the device list and click **Edit**. If more than one device is selected, click **Edit Multiple**.

**Option 2** Click a device name from the device list and click **Edit** on the device details window.

## Editing basic information

- 1 Select the **Information** tab from the "edit device info" window.
- 2 View and edit information and click **Save**.

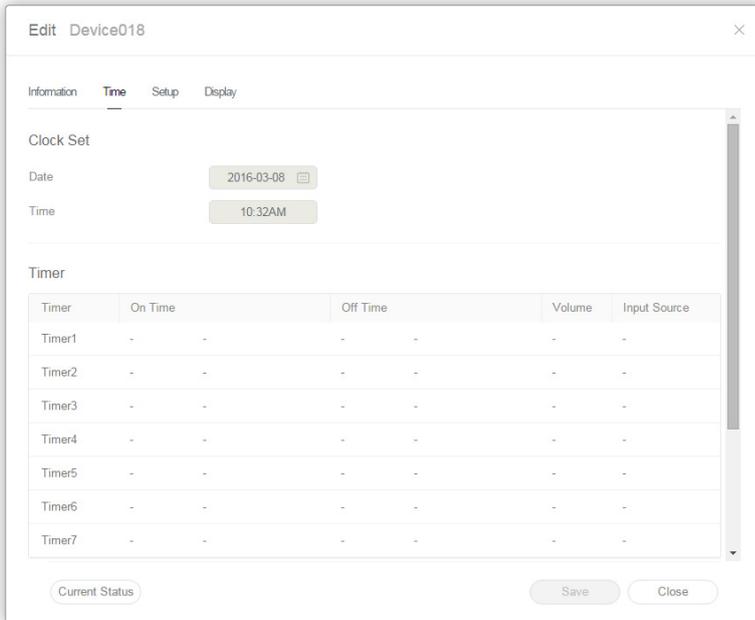


<b>Default Information</b>	<ul style="list-style-type: none"> <li>▪ <b>Device Name:</b> Edit the device name.</li> <li>▪ <b>MAC Address:</b> View the device MAC address.</li> <li>▪ <b>IP:</b> View the IP address.</li> <li>▪ <b>Device Model Name:</b> Edit the device model name.</li> <li>▪ <b>Location:</b> Edit the device location details.</li> </ul>
<b>Version</b>	<ul style="list-style-type: none"> <li>▪ <b>Firmware Version:</b> View the device's firmware version.</li> <li>▪ <b>OS Image Version:</b> View the device's OS image version.</li> <li>▪ <b>Client Program Version:</b> View the device's client program version.</li> </ul>

<p><b>System</b></p>	<ul style="list-style-type: none"> <li>▪ <b>CPU:</b> View the device CPU information.</li> <li>▪ <b>Memory Size:</b> View the device memory capacity.</li> <li>▪ <b>Storage Size:</b> View the device storage capacity.</li> <li>▪ <b>Video Adapter:</b> View the device's graphics card information.</li> <li>▪ <b>Video Memory:</b> View the device's graphics memory capacity.</li> <li>▪ <b>Video Driver:</b> View the device graphics driver information.</li> </ul>
<p><b>Storage Size</b></p>	<ul style="list-style-type: none"> <li>▪ <b>Disk Space Usage:</b> View disk space in use.</li> <li>▪ <b>Available Capacity:</b> View available disk space.</li> </ul>
<p><b>ETC</b></p>	<ul style="list-style-type: none"> <li>▪ <b>Approval Date:</b> View the approved date for the device.</li> <li>▪ <b>Screen Size:</b> View the device screen size.</li> <li>▪ <b>Resolution:</b> View the device screen resolution.</li> <li>▪ <b>EWF State:</b> View whether the device disk is write-protected.</li> <li>▪ <b>Code:</b> View the device code.</li> <li>▪ <b>Serial Key:</b> View the device's serial key.</li> </ul>

## Editing time

- 1 Select the **Time** tab from the "edit device info" window.
- 2 View and edit information and click **Save**.
  - To refresh the current device status, click **Current Status**.

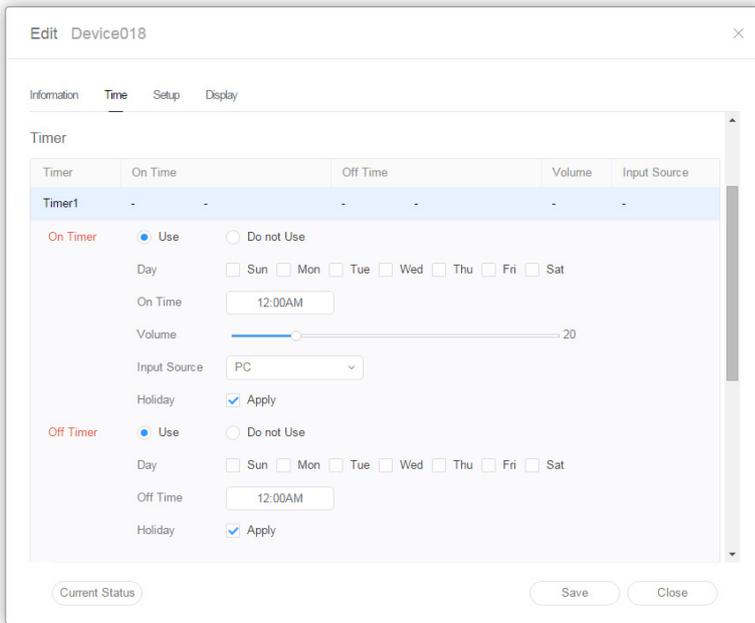


<b>Clock Set</b>	<ul style="list-style-type: none"> <li>▪ <b>Date:</b> Set current date for the device.</li> <li>▪ <b>Time:</b> Set current time for the device.</li> </ul>
<b>Timer</b>	Set the timer to automatically turn the device on or off. For details, refer to <a href="#">▶ Setting timers</a>
<b>Holiday management</b>	<b>Holiday:</b> Set holidays to prevent the device from operating on specified days.

## Setting timers

Set the timer to automatically turn the device on or off.

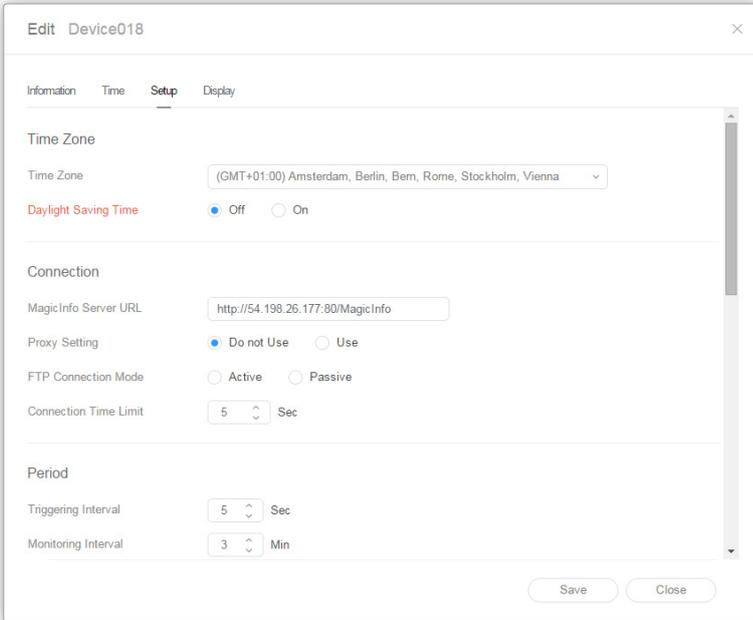
- 1 Click a timer from the timer list.
  - If you click a previously set timer, you can edit the timer for use.
  - To add a new timer, click a timer that has not been set up.
- 2 Configure timer details.



<b>On Timer</b>	<p>Set the time to turn on the device. To use the timer, select <b>Use</b>.</p> <ul style="list-style-type: none"> <li>▪ <b>Day:</b> Select day(s) of the week to repeat the timer.</li> <li>▪ <b>On Time:</b> Set the time to turn on the device.</li> <li>▪ <b>Volume:</b> Set the device volume to apply when it turns on.</li> <li>▪ <b>Input Source:</b> Select an input source to apply when the device turns on.</li> </ul>
<b>Off Timer</b>	<p>Set the time to automatically turn off the device. To use the timer, select <b>Use</b>.</p> <ul style="list-style-type: none"> <li>▪ <b>Day:</b> Select day(s) of the week to repeat the timer.</li> <li>▪ <b>Off Time:</b> Set the time to turn off the device.</li> </ul>

## Changing device settings

- 1 Select the **Setup** tab from the "edit device info" window.
- 2 View and edit information and click **Save**.

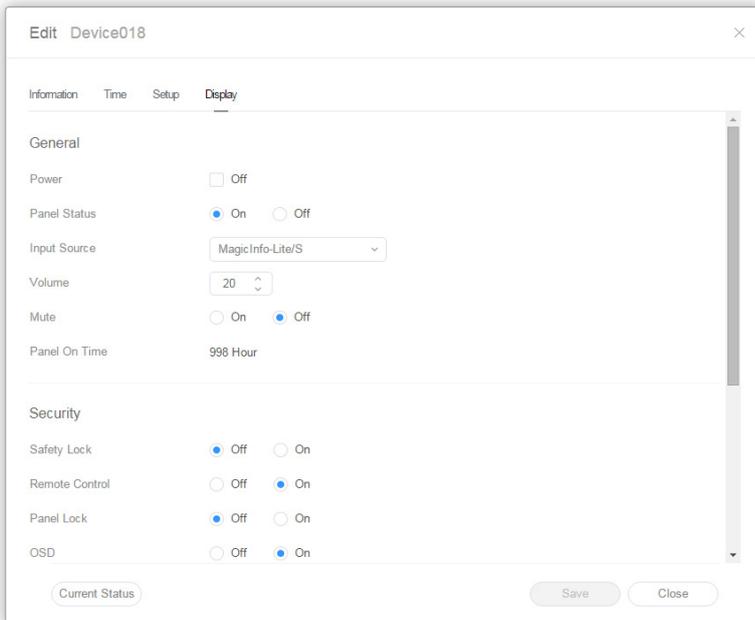


<b>Time Zone</b>	<ul style="list-style-type: none"> <li>▪ <b>Time Zone:</b> Select a time zone for each city.</li> <li>▪ <b>Daylight Saving Time:</b> Turn daylight savings time mode on or off. To use daylight savings time mode, configure start and end settings.</li> </ul> <p> <b>Note</b></p> <p>Daylight Saving Time, also known as Summer Time, is a system that advances clocks one hour forward in summer.</p>
<b>Connection</b>	<ul style="list-style-type: none"> <li>▪ <b>MagicInfo Sever URL:</b> Set MagicInfo Server address.</li> <li>▪ <b>Proxy Setting:</b> Enable or disable the proxy server. Edit the settings if required.</li> <li>▪ <b>FTP Connection Mode:</b> Configure the FTP connection mode.</li> <li>▪ <b>Connection Time Limit:</b> Set timeout options to disconnect from MagicInfo Server if communication with the FTP server is not available for a specified period of time.</li> </ul>

<p><b>Period</b></p>	<ul style="list-style-type: none"> <li>▪ <b>Triggering Interval:</b> Specify the triggering cycle.</li> <li>▪ <b>Monitoring Interval:</b> Specify the monitoring cycle.</li> <li>▪ <b>Screen Capture Cycle:</b> Specify the screen capture cycle. The range is 1 to 180 minutes.</li> <li>▪ <b>PDFConversion interval:</b> Set the time interval for each device to switch to another page in a distributed PDF document. This option is available when the document contains more than one page.</li> <li>▪ <b>OfficeConversion interval:</b> Set the time interval for each device to switch to another page in a distributed Office document. This option is available when the document contains more than one page.</li> </ul>
<p><b>Manage</b></p>	<p><b>Proof of Play Management</b></p> <ul style="list-style-type: none"> <li>▪ <b>Validity:</b> Set storage period for playback logs.</li> <li>▪ <b>Valid Size:</b> Set storage size for playback logs.</li> <li>▪ <b>Last Check Time:</b> Display the time of last access to playback logs.</li> </ul> <p> <b>Note</b></p> <p>Content files are deleted automatically when the period has expired or the space is full.</p>
<p><b>Tag</b></p>	<p><b>Tag:</b> Add tags to devices.</p>
<p><b>Content Download Status</b></p>	<ul style="list-style-type: none"> <li>▪ <b>Setup:</b> Download content from a download server only.</li> <li>▪ <b>Interval:</b> Set content downloading intervals.</li> <li>▪ <b>Job Unit:</b> Specify the unit for download intervals.</li> </ul>

## Editing Display Information

- 1 Select **Display** tab in the editing window.
- 2 View and edit information and click **Save**.
  - Click **View More** to view complete display information.
  - To refresh the current device status, click **Current Status**.



## Changing device channels

Change the schedule channel for a device, using one of the following options:

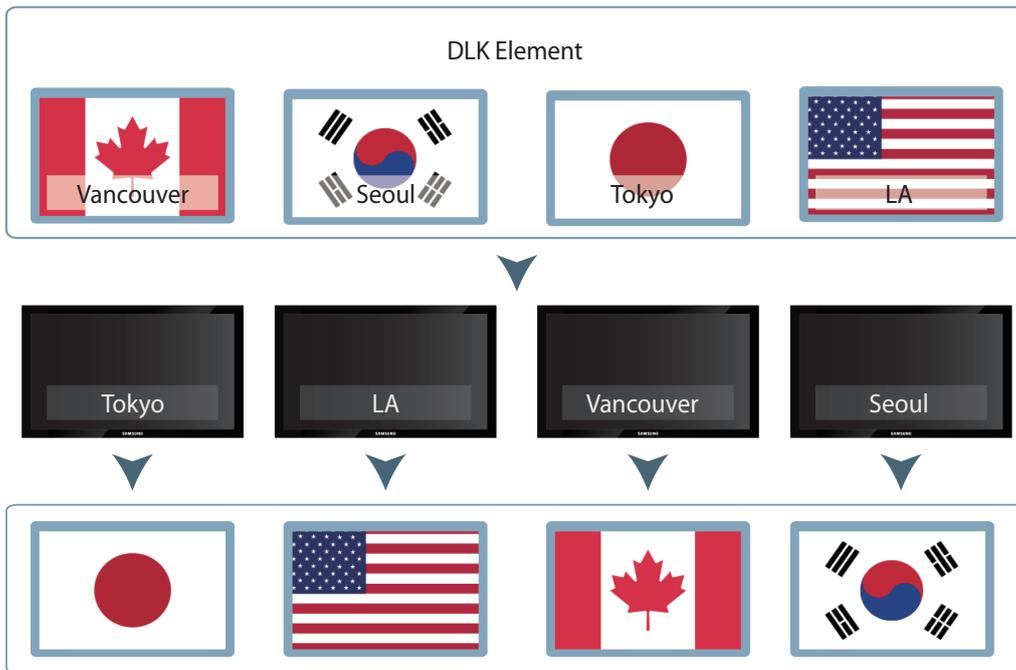
- Option 1** Change the channel using the device remote control.
- Option 2** Check the device from the list and change the channel through quick control.

# Using tags

Assign a tag to a device and content files. This allows you to selectively play content files on a specific device.

 **Note**

To assign a tag to a device and content, first make sure to add the tag to MagicInfo Server. For information about adding and editing tags, refer to the following. [▶ Managing tags](#)



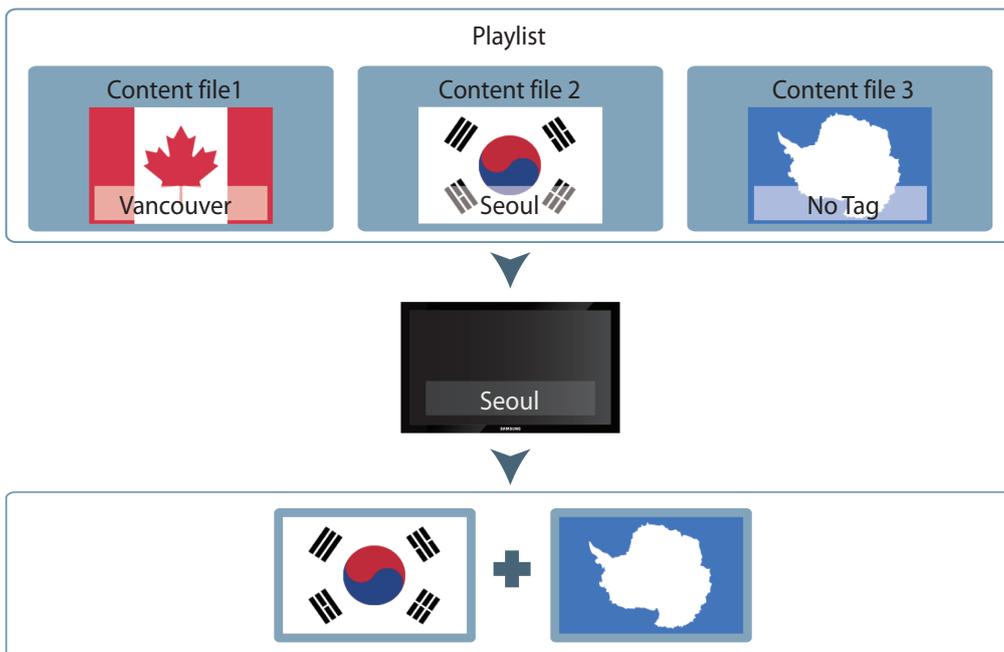
## Example of using tags

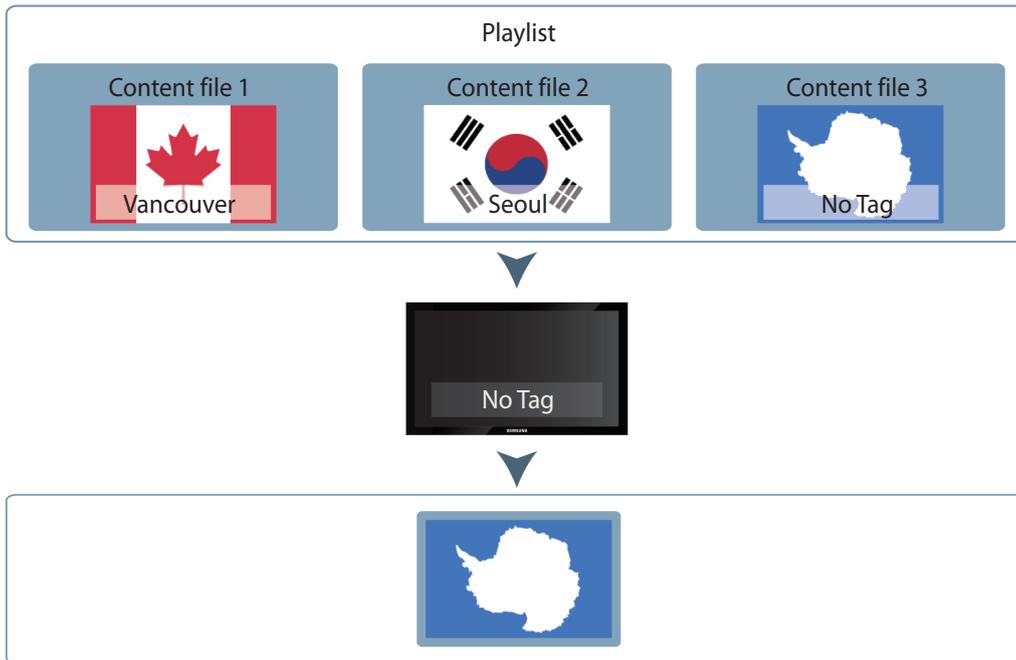
### Playlist tags

Assign different tags to content files in a playlist. This allows a device with a tag to selectively play content files in a playlist that have the same tag.

#### Note

- For tagging content in a playlist, refer to the following. [▶ Creating common playlists](#)
- You can use tags to play content from different playlists on multiple devices simultaneously. For details, refer to [▶ Creating synced playback schedules](#)
- For tagging devices, refer to the following. [▶ Assigning tags to devices](#)
- Insert multiple tags into a single content file, if required. Refer to the following for further details on using multiple tags. [▶ Using multiple tags](#)



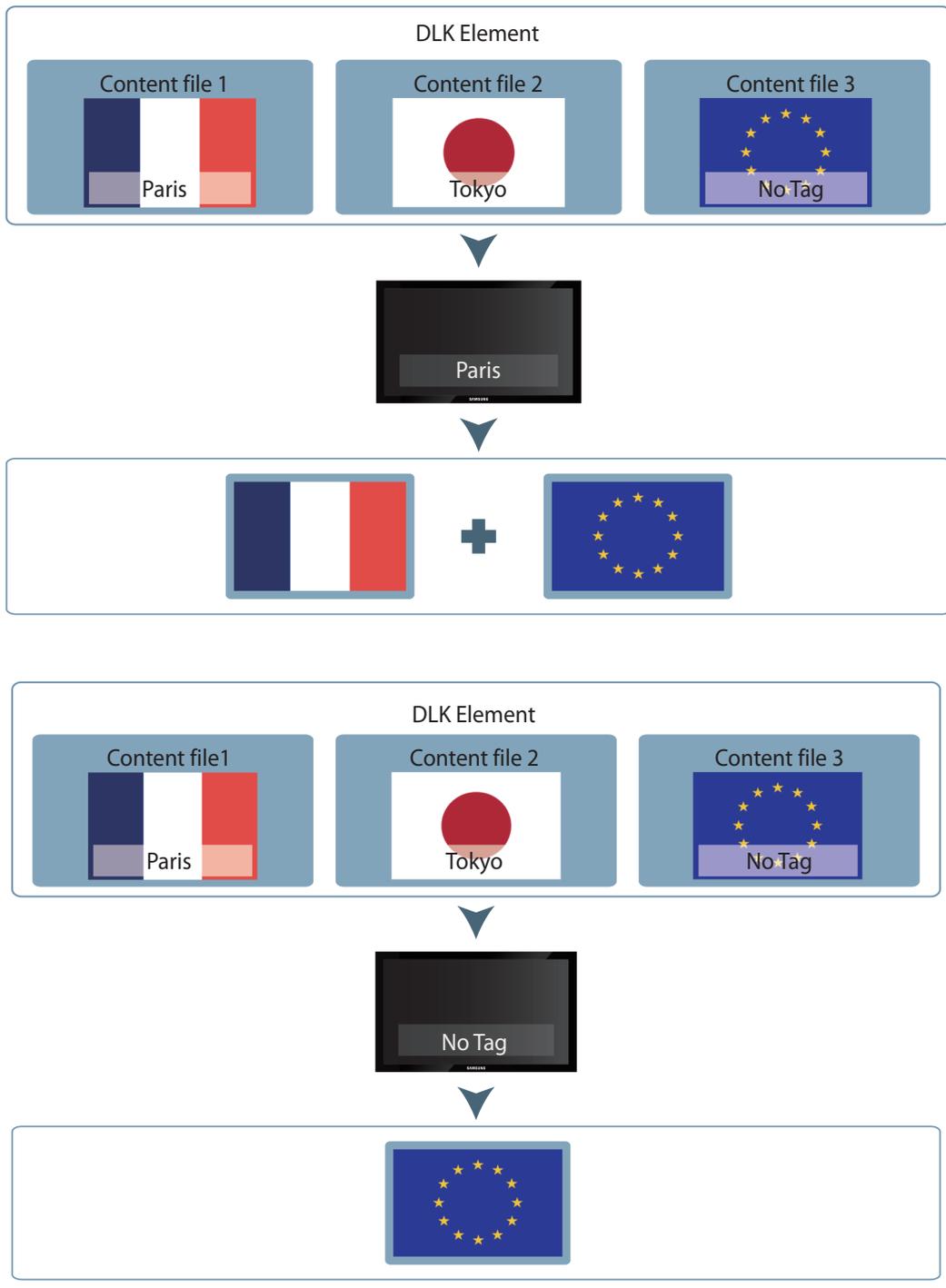


## DLK Content Tags

Elements that can be inserted into a DLK template include image, text, and video files. Users can map various content files into a DLK template. Assign different tags to content files. This allows a device with a tag to selectively play content files that have the same tag.

 **Note**

- DLK content tags can be set when creating the DLK content. For details, refer to [▶ Creating DLK content files](#)
- For tagging devices, refer to the following. [▶ Assigning tags to devices](#)
- Insert multiple tags into a single content file, if required. Refer to the following for further details on using multiple tags. [▶ Using multiple tags](#)



## DataLink tags

Similar to content files, DLK data use tags that have been added to MagicInfo Server as Main Tag.

DLK data display complex and variable information. DataLink Tag allow you to selectively display information as desired.

 **Note**

- DataLink tags can be set when creating DLK content. For details, refer to [▶ Creating DLK content files](#)
- For tagging devices, refer to the following. [▶ Assigning tags to devices](#)

## DataLink Tag example

1 To display "flight information for each city" on multiple devices, add the "flight name" data column as DataLink content.

Data Link

Datalink	Idx	DL_A	DL_B	DL_C	DL_D	DL_E	DL_F	DL_G
datalink	1	TIME	TO	FLIGHT_THUMB	FLIGHT	WILL	GATE	REMARKS
Sheet1	2	00:00	ASAHIKAWA	OZ	OZ 7905		T2	GateClosed
	3	00:00	DALIAN	OZ	OZ 5208		T2	Boarding
	4	00:05	DALIAN	CA	CA 222		G34	GateClosed
	5	00:10	HONG KONG	7C	7C 267		G131	Final Call
	6	00:10	SHENZHEN	ZH	ZH 093		G43	Boarding
	7	00:15	SHENZHEN	OZ	OZ 409		G43	Boarding
	8	00:25	GUAM	LJ	LJ 417		G16	Boarding
	9	00:25	OSAKA/KANSAI	OZ	OZ 5627		G30	Boarding
	10	00:35	OSAKA/KANSAI	NH	NH 417		G30	Boarding
	11	00:40	MIYAZAKI	OZ	OZ 018		G42	Boarding
	12	00:45	MIYAZAKI	AC	AC 104		G42	Boarding

Save Cancel

2 Select the "city name" data column as the DataLink Tag value.

Data Link

Idx	DL_A	DL_B	DL_C	DL_D	DL_E	DL_F	DL_G
1	TIME	TO	FLIGHT_THUMB	FLIGHT	WILL	GATE	REMARKS
2	00:00	ASAHIKAWA	OZ	OZ 7905		T2	GateClosed
3	00:00	DALIAN	OZ	OZ 5208		T2	Boarding
4	00:05	DALIAN	CA	CA 222		G34	GateClosed
5	00:10	HONG KONG	7C	7C 267		G131	Final Call
6	00:10	SHENZHEN	ZH	ZH 093		G43	Boarding
7	00:15	SHENZHEN	OZ	OZ 409		G43	Boarding
8	00:25	GUAM	LJ	LJ 417		G16	Boarding
9	00:25	OSAKA/KANSAI	OZ	OZ 5627		G30	Boarding
10	00:35	OSAKA/KANSAI	NH	NH 417		G30	Boarding
11	00:40	MIYAZAKI	OZ	OZ 018		G42	Boarding
12	00:45	MIYAZAKI	AC	AC 104		G42	Boarding

저장 취소

3 Each device with a tag imports and displays flight information for a city corresponding to the DataLink Tag value that matches their tag.

For example, a device with a tag set to HONG KONG displays 7C 267. A device with a tag set to GUAM displays LJ 417.

Data Link

IDX	DL_A	DL_B	DL_C	DL_D	DL_E	DL_F	DL_G
1	TIME	TO	FLIGHT_THUMB	FLIGHT	WILL	GATE	REMARKS
2	00:00	ASAHIKAWA	OZ	OZ 7905		T2	GateClosed
3	00:00	DALIAN	OZ	OZ 5208		T2	Boarding
4	00:05	DALIAN	CA	CA 222		G34	GateClosed
5	00:10	HONG KONG	7C	7C 267		G131	Final Call
6	00:10	SHENZHEN	ZH	ZH 093		G43	Boarding
7	00:15	SHENZHEN	OZ	OZ 409		G43	Boarding
8	00:25	GUAM	LJ	LJ 417		G16	Boarding
9	00:25	OSAKA/KANSAI	OZ	OZ 5627		G30	Boarding
10	00:35	OSAKA/KANSAI	NH	NH 417		G30	Boarding
11	00:40	MIYAZAKI	OZ	OZ 018		G42	Boarding
12	00:45	MIYAZAKI	AC	AC 104		G42	Boarding

 Note

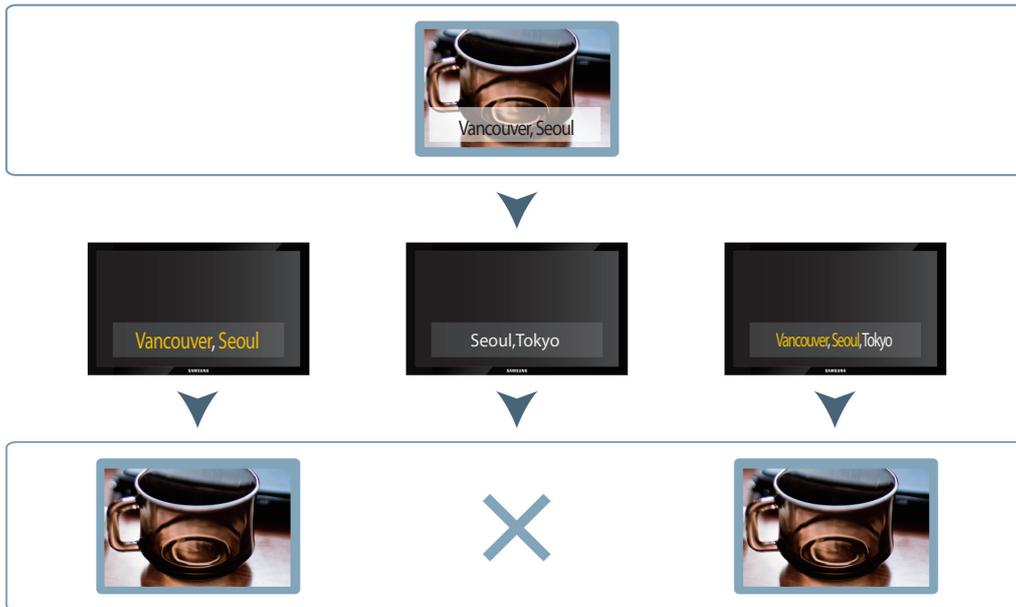
- It is possible to use the Main Tag and a DataLink Tag together.
- A data table cannot have multiple DataLink Tag.
- Refer to the MagicInfo DataLink user guide for details on DataLink.

## Using multiple tags

Assign multiple tags to a single device or content file, if required. Select tags from the list. Next, select the **And** or **Or** condition.

### And condition

Content is played on a device that has all the tags assigned to the content.



## Or condition

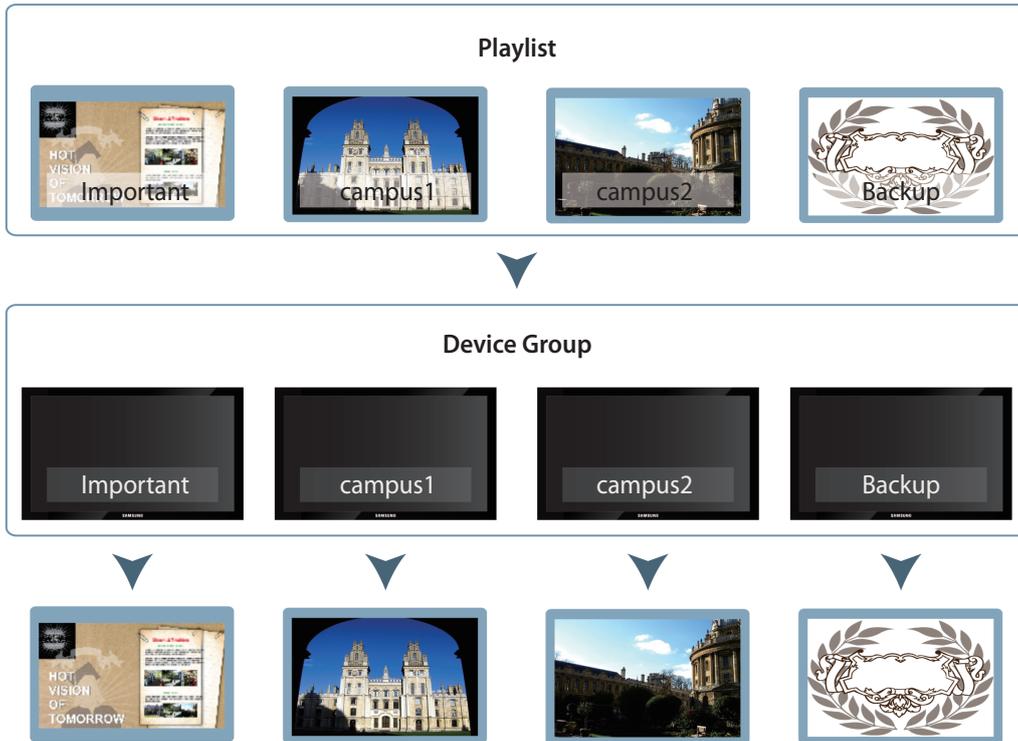
Content is played on a device that has at least one of the tags assigned to the content.



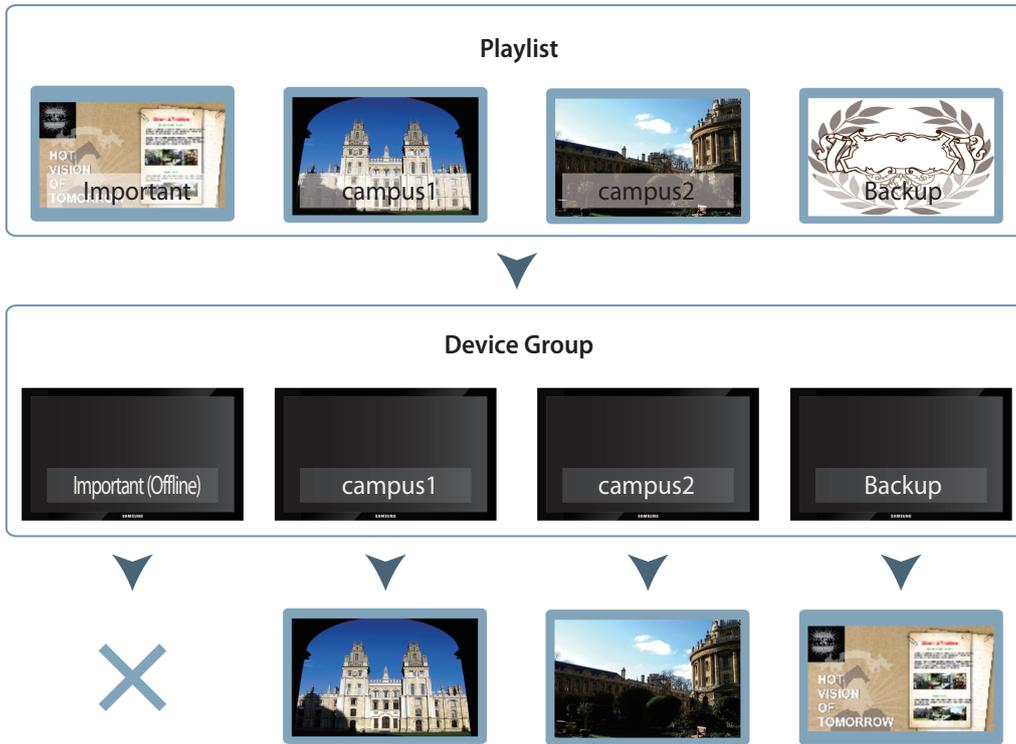
# Using Backup Play

If a device playing important content is disconnected from the network or the device's input source changes, a device with Backup Play configured will detect the change and continue to play content from the backup.

**Normal**



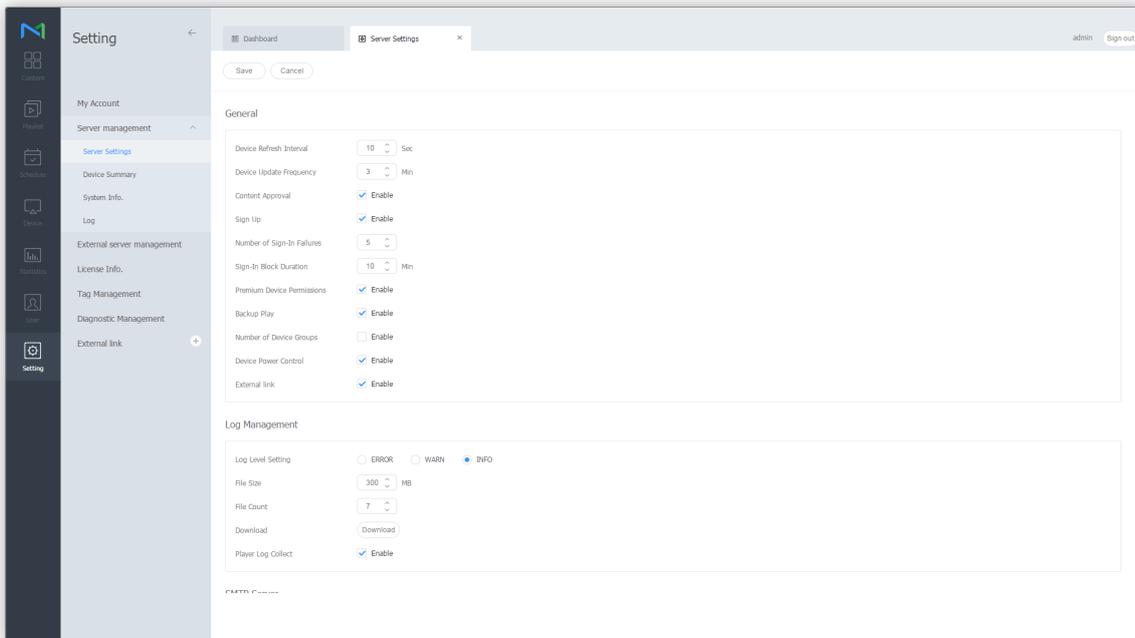
Backup Play



## Setting MagicInfo Server

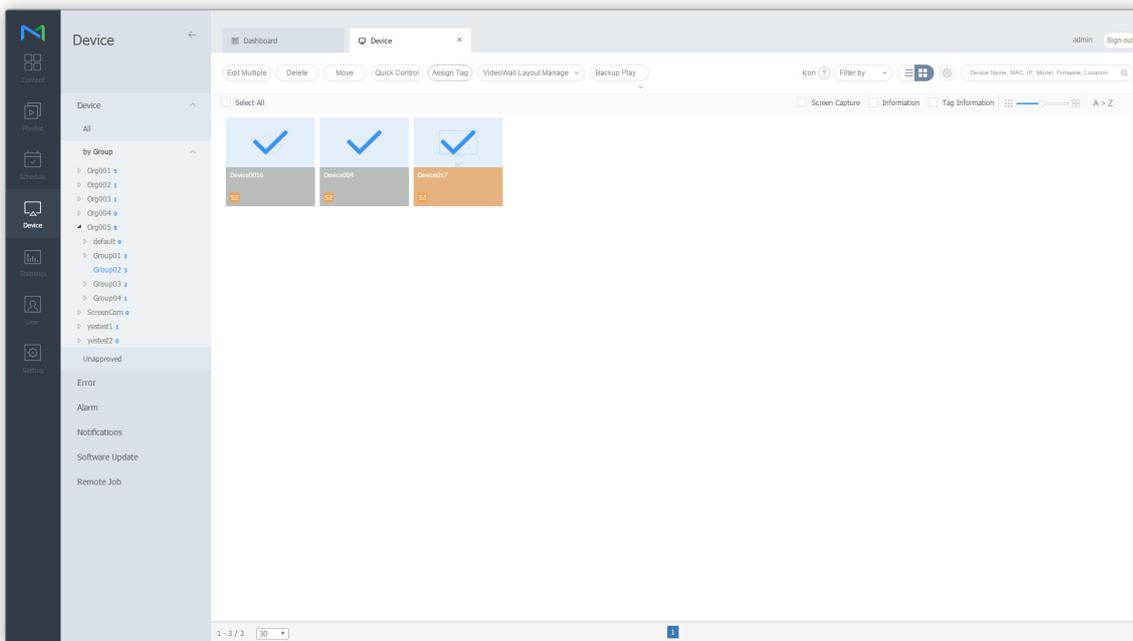
Turn on Backup Play (redundant playback) on MagicInfo Server.

- 1 On the **Setup** menu, click **Server management** > **Server Settings**.
- 2 Under **General**, select the **Enable** checkbox for **Backup Play** and click **Save**.



## Device settings

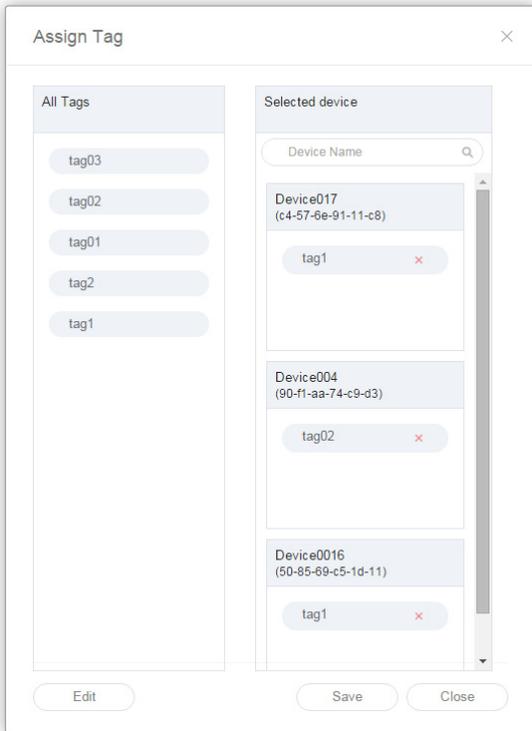
- 1 Go to the **device** tab > **by Group**, and then assign the main device and backup play device that will play content to the same group.
- 2 Select a primary device and secondary device for redundant playback, and then click **Assign Tag**.



3 Assign a tag to each of the devices and click **Save**.

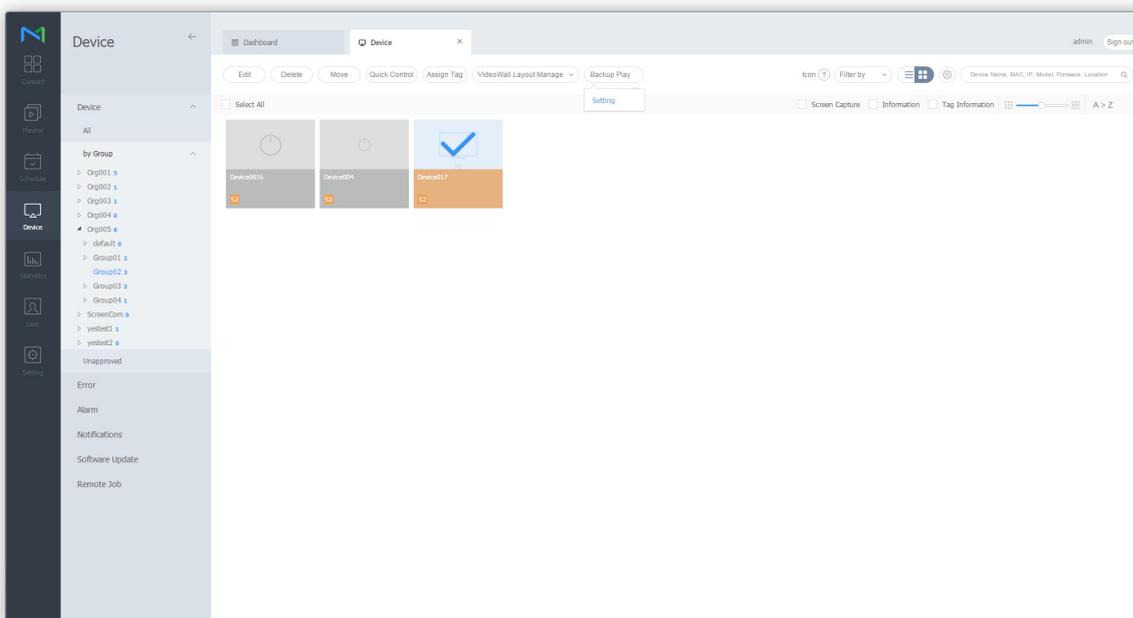
 **Note**

For details on using tags, refer to [▶ Using tags](#)

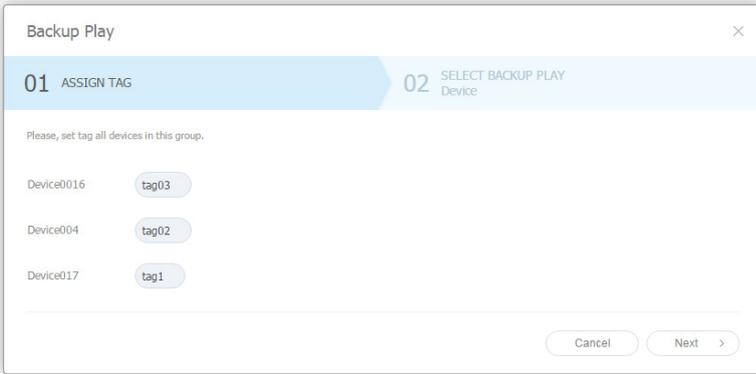


4 Go to the **Device** tab > **by Group**, and then select the device group with the tags assigned.

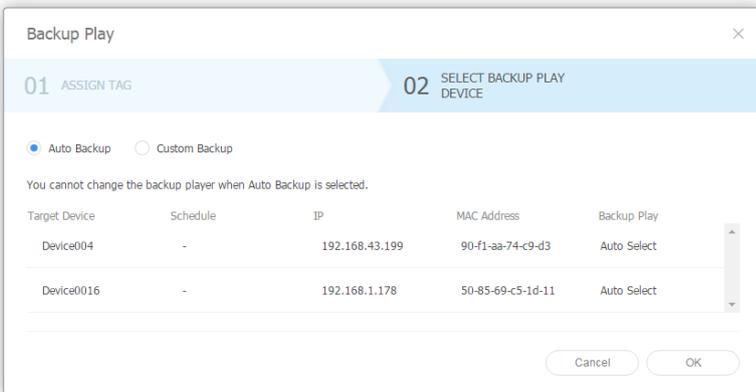
5 Select the backup play device checkbox from the device list, and then click **Backup Play** > **Setup**.



6 Use the Backup Play settings window to view device tags and click **Next**.



7 Specify a Backup Play type and click **OK**.

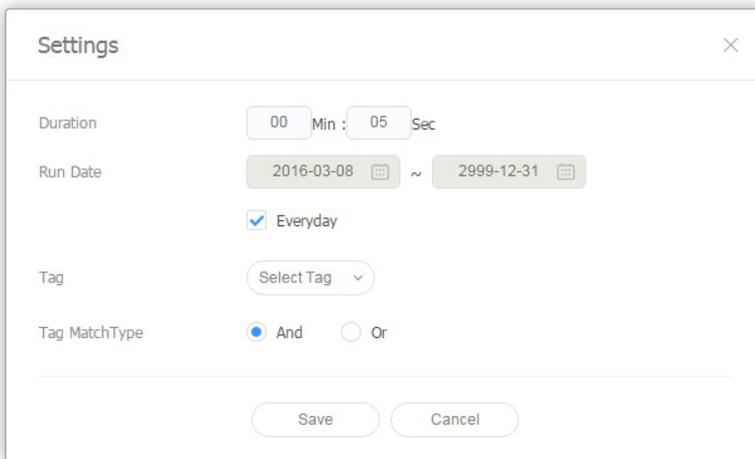


<b>Auto Backup</b>	Automatically select a secondary device that will perform redundant playback.
<b>Custom Backup</b>	Use the dropdown list to select a secondary device that will perform redundant playback.

## Creating a playlist for redundant playback

Create a playlist containing content you want to play on a device. A created playlist can be distributed to a desired device group after creating a schedule.

- 1 Click the **Playlist** tab > **New Playlist**.
- 2 Configure initial playlist settings and click **Create**. For details, refer to [▶ Creating common playlists](#)
- 3 Add content you want to play on the main device and backup play device.
- 4 Select content to play on the primary device and click **Settings**.
- 5 Click **Select Tag**.

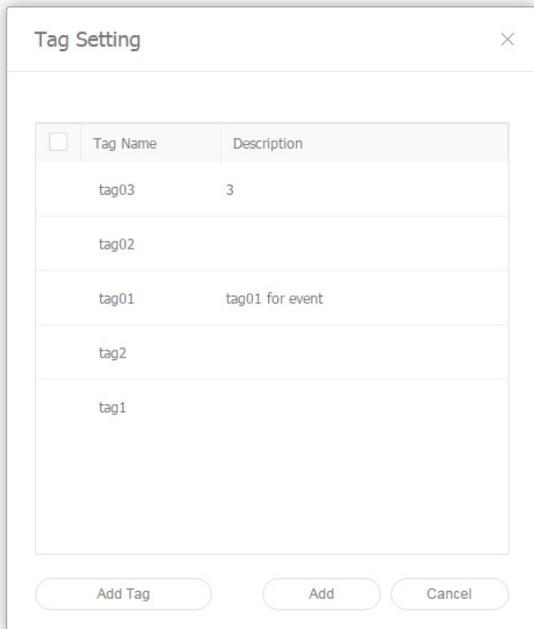


The screenshot shows a 'Settings' dialog box with the following fields and options:

- Duration:** 00 Min : 05 Sec
- Run Date:** 2016-03-08 ~ 2999-12-31
- Everyday
- Tag:** Select Tag (dropdown menu)
- Tag MatchType:**  And  Or

At the bottom of the dialog are two buttons: **Save** and **Cancel**.

- 6 Select the same tag as the tag assigned to the main device, and then click **Add**.



The image shows a 'Tag Setting' dialog box with a close button (X) in the top right corner. It contains a table with two columns: 'Tag Name' and 'Description'. The table has five rows. The first row has a checkbox, 'tag03', and '3'. The second row has 'tag02'. The third row has 'tag01' and 'tag01 for event'. The fourth row has 'tag2'. The fifth row has 'tag1'. Below the table are three buttons: 'Add Tag', 'Add', and 'Cancel'.

<input type="checkbox"/>	Tag Name	Description
<input type="checkbox"/>	tag03	3
	tag02	
	tag01	tag01 for event
	tag2	
	tag1	

Add Tag    Add    Cancel

- 7 Click **Save**.

## Creating a schedule

---

Create and distribute a content schedule containing a playlist for redundant playback to a desired device group. Refer to the following for further details on creating schedules. [▶ Creating MagicInfo schedules](#)

# Licenses

To send inquiries and requests for questions regarding open sources, contact Samsung via Email ([oss.request@samsung.com](mailto:oss.request@samsung.com)).

- This product uses some software programs which are distributed under the OpenSSL Project.
- This product uses some software programs which are distributed under the GPL/LGPL/EPL/CDDL.

GPL software : JavaViewer

LGPL software : c3p0, iText, FFmpeg, JobScheduleUploader, jCIFS

EPL software : Eclipse PDT

CDDL software : STL, SJSXP

## GNU GENERAL PUBLIC LICENSE

Version 2, June 1991

Copyright (C) 1989, 1991 Free Software Foundation, Inc.

51 Franklin Street, Fifth Floor, Boston, MA 02110-1301, USA

Everyone is permitted to copy and distribute verbatim copies of this license document, but changing it is not allowed.

### Preamble

The licenses for most software are designed to take away your freedom to share and change it. By contrast, the GNU General Public License is intended to guarantee your freedom to share and change free software--to make sure the software is free for all its users. This General Public License applies to most of the Free Software Foundation's software and to any other program whose authors commit to using it. (Some other Free Software Foundation software is covered by the GNU Lesser General Public License instead.) You can apply it to your programs, too.

When we speak of free software, we are referring to freedom, not price. Our General Public Licenses are designed to make sure that you have the freedom to distribute copies of free software (and charge for this service if you wish), that you receive source code or can get it if you want it, that you can change the software or use pieces of it in new free programs; and that you know you can do these things.

To protect your rights, we need to make restrictions that forbid anyone to deny you these rights or to ask you to surrender the rights. These restrictions translate to certain responsibilities for you if you distribute copies of the software, or if you modify it.

For example, if you distribute copies of such a program, whether gratis or for a fee, you must give the recipients all the rights that you have. You must make sure that they, too, receive or can get the source code. And you must show them these terms so they know their rights.

We protect your rights with two steps: (1) copyright the software, and (2) offer you this license which gives you legal permission to copy, distribute and/or modify the software.

Also, for each author's protection and ours, we want to make certain that everyone understands that there is no warranty for this free software. If the software is modified by someone else and passed on, we want its recipients to know that what they have is not the original, so that any problems introduced by others will not reflect on the original authors' reputations.

Finally, any free program is threatened constantly by software patents. We wish to avoid the danger that redistributors of a free program will individually obtain patent licenses, in effect making the program proprietary. To prevent this, we have made it clear that any patent must be licensed for everyone's free use or not licensed at all.

The precise terms and conditions for copying, distribution and modification follow.

#### TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

0. This License applies to any program or other work which contains a notice placed by the copyright holder saying it may be distributed under the terms of this General Public License. The "Program", below, refers to any such program or work, and a "work based on the Program" means either the Program or any derivative work under copyright law: that is to say, a work containing the Program or a portion of it, either verbatim or with modifications and/or translated into another language. (Hereinafter, translation is included without limitation in the term "modification".) Each licensee is addressed as "you".

Activities other than copying, distribution and modification are not covered by this License; they are outside its scope. The act of running the Program is not restricted, and the output from the Program is covered only if its contents constitute a work based on the Program (independent of having been made by running the Program). Whether that is true depends on what the Program does.

1. You may copy and distribute verbatim copies of the Program's source code as you receive it, in any medium, provided that you conspicuously and appropriately publish on each copy an appropriate copyright notice and disclaimer of warranty; keep intact all the notices that refer to this License and to the absence of any warranty; and give any other recipients of the Program a copy of this License along with the Program.

You may charge a fee for the physical act of transferring a copy, and you may at your option offer warranty protection in exchange for a fee.

2. You may modify your copy or copies of the Program or any portion of it, thus forming a work based on the Program, and copy and distribute such modifications or work under the terms of Section 1 above, provided that you also meet all of these conditions:

- a) You must cause the modified files to carry prominent notices stating that you changed the files and the date of any change.
- b) You must cause any work that you distribute or publish, that in whole or in part contains or is derived from the Program or any part thereof, to be licensed as a whole at no charge to all third parties under the terms of this License.
- c) If the modified program normally reads commands interactively when run, you must cause it, when started running for such interactive use in the most ordinary way, to print or display an announcement including an appropriate copyright notice and a notice that there is no warranty (or else, saying that you provide a warranty) and that users may redistribute the program under these conditions, and telling the user how to view a copy of this License. (Exception: if the Program itself is interactive but does not normally print such an announcement, your work based on the Program is not required to print an announcement.)

These requirements apply to the modified work as a whole. If identifiable sections of that work are not derived from the Program, and can be reasonably considered independent and separate works in themselves, then this License, and its terms, do not apply to those sections when you distribute them as separate works. But when you distribute the same sections as part of a whole which is a work based on the Program, the distribution of the whole must be on the terms of this License, whose permissions for other licensees extend to the entire whole, and thus to each and every part regardless of who wrote it.

Thus, it is not the intent of this section to claim rights or contest your rights to work written entirely by you; rather, the intent is to exercise the right to control the distribution of derivative or collective works based on the Program.

In addition, mere aggregation of another work not based on the Program with the Program (or with a work based on the Program) on a volume of a storage or distribution medium does not bring the other work under the scope of this License.

3. You may copy and distribute the Program (or a work based on it, under Section 2) in object code or executable form under the terms of Sections 1 and 2 above provided that you also do one of the following:

- a) Accompany it with the complete corresponding machine-readable source code, which must be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange; or,
- b) Accompany it with a written offer, valid for at least three years, to give any third party, for a charge no more than your cost of physically performing source distribution, a complete machine-readable copy of the corresponding source code, to be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange; or,
- c) Accompany it with the information you received as to the offer to distribute corresponding source code. (This alternative is allowed only for noncommercial distribution and only if you received the program in object code or executable form with such an offer, in accord with Subsection b above.)

The source code for a work means the preferred form of the work for making modifications to it. For an executable work, complete source code means all the source code for all modules it contains, plus any associated interface definition files, plus the scripts used to control compilation and installation of the executable. However, as a special exception, the source code distributed need not include anything that is normally distributed (in either source or binary form) with the major components (compiler, kernel, and so on) of the operating system on which the executable runs, unless that component itself accompanies the executable.

If distribution of executable or object code is made by offering access to copy from a designated place, then offering equivalent access to copy the source code from the same place counts as distribution of the source code, even though third parties are not compelled to copy the source along with the object code.

4. You may not copy, modify, sublicense, or distribute the Program except as expressly provided under this License. Any attempt otherwise to copy, modify, sublicense or distribute the Program is void, and will automatically terminate your rights under this License. However, parties who have received copies, or rights, from you under this License will not have their licenses terminated so long as such parties remain in full compliance.
5. You are not required to accept this License, since you have not signed it. However, nothing else grants you permission to modify or distribute the Program or its derivative works. These actions are prohibited by law if you do not accept this License. Therefore, by modifying or distributing the Program (or any work based on the Program), you indicate your acceptance of this License to do so, and all its terms and conditions for copying, distributing or modifying the Program or works based on it.
6. Each time you redistribute the Program (or any work based on the Program), the recipient automatically receives a license from the original licensor to copy, distribute or modify the Program subject to these terms and conditions. You may not impose any further restrictions on the recipients' exercise of the rights granted herein. You are not responsible for enforcing compliance by third parties to this License.

7. If, as a consequence of a court judgment or allegation of patent infringement or for any other reason (not limited to patent issues), conditions are imposed on you (whether by court order, agreement or otherwise) that contradict the conditions of this License, they do not excuse you from the conditions of this License. If you cannot distribute so as to satisfy simultaneously your obligations under this License and any other pertinent obligations, then as a consequence you may not distribute the Program at all. For example, if a patent license would not permit royalty-free redistribution of the Program by all those who receive copies directly or indirectly through you, then the only way you could satisfy both it and this License would be to refrain entirely from distribution of the Program.

If any portion of this section is held invalid or unenforceable under any particular circumstance, the balance of the section is intended to apply and the section as a whole is intended to apply in other circumstances.

It is not the purpose of this section to induce you to infringe any patents or other property right claims or to contest validity of any such claims; this section has the sole purpose of protecting the integrity of the free software distribution system, which is implemented by public license practices. Many people have made generous contributions to the wide range of software distributed through that system in reliance on consistent application of that system; it is up to the author/donor to decide if he or she is willing to distribute software through any other system and a licensee cannot impose that choice.

This section is intended to make thoroughly clear what is believed to be a consequence of the rest of this License.

8. If the distribution and/or use of the Program is restricted in certain countries either by patents or by copyrighted interfaces, the original copyright holder who places the Program under this License may add an explicit geographical distribution limitation excluding those countries, so that distribution is permitted only in or among countries not thus excluded. In such case, this License incorporates the limitation as if written in the body of this License.
9. The Free Software Foundation may publish revised and/or new versions of the General Public License from time to time. Such new versions will be similar in spirit to the present version, but may differ in detail to address new problems or concerns.

Each version is given a distinguishing version number. If the Program specifies a version number of this License which applies to it and "any later version", you have the option of following the terms and conditions either of that version or of any later version published by the Free Software Foundation. If the Program does not specify a version number of this License, you may choose any version ever published by the Free Software Foundation.

10. If you wish to incorporate parts of the Program into other free programs whose distribution conditions are different, write to the author to ask for permission. For software which is copyrighted by the Free Software Foundation, write to the Free Software Foundation; we sometimes make exceptions for this. Our decision will be guided by the two goals of preserving the free status of all derivatives of our free software and of promoting the sharing and reuse of software generally.

#### NO WARRANTY

11. BECAUSE THE PROGRAM IS LICENSED FREE OF CHARGE, THERE IS NO WARRANTY FOR THE PROGRAM, TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES PROVIDE THE PROGRAM "AS IS" WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE PROGRAM IS WITH YOU. SHOULD THE PROGRAM PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.

12. IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY AND/OR REDISTRIBUTE THE PROGRAM AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES, INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE PROGRAM (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A FAILURE OF THE PROGRAM TO OPERATE WITH ANY OTHER PROGRAMS), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

#### END OF TERMS AND CONDITIONS

##### How to Apply These Terms to Your New Programs

If you develop a new program, and you want it to be of the greatest possible use to the public, the best way to achieve this is to make it free software which everyone can redistribute and change under these terms.

To do so, attach the following notices to the program. It is safest to attach them to the start of each source file to most effectively convey the exclusion of warranty; and each file should have at least the "copyright" line and a pointer to where the full notice is found.

<one line to give the program's name and a brief idea of what it does.>

Copyright (C) <year> <name of author>

This program is free software; you can redistribute it and/or modify it under the terms of the GNU General Public License as published by the Free Software Foundation; either version 2 of the License, or (at your option) any later version.

This program is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU General Public License for more details.

You should have received a copy of the GNU General Public License along with this program; if not, write to the Free Software Foundation, Inc., 51 Franklin Street, Fifth Floor, Boston, MA 02110-1301 USA.

Also add information on how to contact you by electronic and paper mail.

If the program is interactive, make it output a short notice like this when it starts in an interactive mode:

Gnomovision version 69, Copyright (C) year name of author

Gnomovision comes with ABSOLUTELY NO WARRANTY; for details type `show w'. This is free software, and you are welcome to redistribute it under certain conditions; type `show c' for details.

The hypothetical commands `show w' and `show c' should show the appropriate parts of the General Public License. Of course, the commands you use may be called something other than `show w' and `show c'; they could even be mouse-clicks or menu items--whatever suits your program.

You should also get your employer (if you work as a programmer) or your school, if any, to sign a "copyright disclaimer" for the program, if necessary. Here is a sample; alter the names:

Yoyodyne, Inc., hereby disclaims all copyright interest in the program `Gnomovision' (which makes passes at compilers) written by James Hacker.

<signature of Ty Coon>, 1 April 1989

Ty Coon, President of Vice

This General Public License does not permit incorporating your program into proprietary programs. If your program is a subroutine library, you may consider it more useful to permit linking proprietary applications with the library. If this is what you want to do, use the GNU Lesser General Public License instead of this License.

#### GNU Lesser General Public License (LGPL)

Version 2.1, February 1999

Copyright (C) 1991, 1999 Free Software Foundation, Inc.

51 Franklin Street, Fifth Floor, Boston, MA 02110-1301, USA

Everyone is permitted to copy and distribute verbatim copies of this license document, but changing it is not allowed.

[This is the first released version of the Lesser GPL. It also counts as the successor of the GNU Library Public License, version 2, hence the version number 2.1.]

#### Preamble

The licenses for most software are designed to take away your freedom to share and change it. By contrast, the GNU General Public Licenses are intended to guarantee your freedom to share and change free software--to make sure the software is free for all its users.

This license, the Lesser General Public License, applies to some specially designated software packages--typically libraries--of the Free Software Foundation and other authors who decide to use it. You can use it too, but we suggest you first think carefully about whether this license or the ordinary General Public License is the better strategy to use in any particular case, based on the explanations below.

When we speak of free software, we are referring to freedom of use, not price. Our General Public Licenses are designed to make sure that you have the freedom to distribute copies of free software (and charge for this service if you wish); that you receive source code or can get it if you want it; that you can change the software and use pieces of it in new free programs; and that you are informed that you can do these things.

To protect your rights, we need to make restrictions that forbid distributors to deny you these rights or to ask you to surrender these rights. These restrictions translate to certain responsibilities for you if you distribute copies of the library or if you modify it.

For example, if you distribute copies of the library, whether gratis or for a fee, you must give the recipients all the rights that we gave you. You must make sure that they, too, receive or can get the source code. If you link other code with the library, you must provide complete object files to the recipients, so that they can relink them with the library after making changes to the library and recompiling it. And you must show them these terms so they know their rights.

We protect your rights with a two-step method: (1) we copyright the library, and (2) we offer you this license, which gives you legal permission to copy, distribute and/or modify the library.

To protect each distributor, we want to make it very clear that there is no warranty for the free library. Also, if the library is modified by someone else and passed on, the recipients should know that what they have is not the original version, so that the original author's reputation will not be affected by problems that might be introduced by others.

Finally, software patents pose a constant threat to the existence of any free program. We wish to make sure that a company cannot effectively restrict the users of a free program by obtaining a restrictive license from a patent holder. Therefore, we insist that any patent license obtained for a version of the library must be consistent with the full freedom of use specified in this license.

Most GNU software, including some libraries, is covered by the ordinary GNU General Public License. This license, the GNU Lesser General Public License, applies to certain designated libraries, and is quite different from the ordinary General Public License. We use this license for certain libraries in order to permit linking those libraries into non-free programs.

When a program is linked with a library, whether statically or using a shared library, the combination of the two is legally speaking a combined work, a derivative of the original library. The ordinary General Public License therefore permits such linking only if the entire combination fits its criteria of freedom. The Lesser General Public License permits more lax criteria for linking other code with the library.

We call this license the "Lesser" General Public License because it does Less to protect the user's freedom than the ordinary General Public License. It also provides other free software developers Less of an advantage over competing non-free programs. These disadvantages are the reason we use the ordinary General Public License for many libraries. However, the Lesser license provides advantages in certain special circumstances.

For example, on rare occasions, there may be a special need to encourage the widest possible use of a certain library, so that it becomes a de-facto standard. To achieve this, non-free programs must be allowed to use the library. A more frequent case is that a free library does the same job as widely used non-free libraries. In this case, there is little to gain by limiting the free library to free software only, so we use the Lesser General Public License.

In other cases, permission to use a particular library in non-free programs enables a greater number of people to use a large body of free software. For example, permission to use the GNU C Library in non-free programs enables many more people to use the whole GNU operating system, as well as its variant, the GNU/Linux operating system.

Although the Lesser General Public License is Less protective of the users' freedom, it does ensure that the user of a program that is linked with the Library has the freedom and the wherewithal to run that program using a modified version of the Library.

The precise terms and conditions for copying, distribution and modification follow. Pay close attention to the difference between a "work based on the library" and a "work that uses the library". The former contains code derived from the library, whereas the latter must be combined with the library in order to run.

## TERMS AND CONDITIONS FOR COPYING, DISTRIBUTION AND MODIFICATION

0. This License Agreement applies to any software library or other program which contains a notice placed by the copyright holder or other authorized party saying it may be distributed under the terms of this Lesser General Public License (also called "this License"). Each licensee is addressed as "you".

A "library" means a collection of software functions and/or data prepared so as to be conveniently linked with application programs (which use some of those functions and data) to form executables.

The "Library", below, refers to any such software library or work which has been distributed under these terms. A "work based on the Library" means either the Library or any derivative work under copyright law: that is to say, a work containing the Library or a portion of it, either verbatim or with modifications and/or translated straightforwardly into another language. (Hereinafter, translation is included without limitation in the term "modification".)

"Source code" for a work means the preferred form of the work for making modifications to it. For a library, complete source code means all the source code for all modules it contains, plus any associated interface definition files, plus the scripts used to control compilation and installation of the library.

Activities other than copying, distribution and modification are not covered by this License; they are outside its scope. The act of running a program using the Library is not restricted, and output from such a program is covered only if its contents constitute a work based on the Library (independent of the use of the Library in a tool for writing it). Whether that is true depends on what the Library does and what the program that uses the Library does.

1. You may copy and distribute verbatim copies of the Library's complete source code as you receive it, in any medium, provided that you conspicuously and appropriately publish on each copy an appropriate copyright notice and disclaimer of warranty; keep intact all the notices that refer to this License and to the absence of any warranty; and distribute a copy of this License along with the Library.

You may charge a fee for the physical act of transferring a copy, and you may at your option offer warranty protection in exchange for a fee.

2. You may modify your copy or copies of the Library or any portion of it, thus forming a work based on the Library, and copy and distribute such modifications or work under the terms of Section 1 above, provided that you also meet all of these conditions:

- a) The modified work must itself be a software library.
- b) You must cause the files modified to carry prominent notices stating that you changed the files and the date of any change.
- c) You must cause the whole of the work to be licensed at no charge to all third parties under the terms of this License.
- d) If a facility in the modified Library refers to a function or a table of data to be supplied by an application program that uses the facility, other than as an argument passed when the facility is invoked, then you must make a good faith effort to ensure that, in the event an application does not supply such function or table, the facility still operates, and performs whatever part of its purpose remains meaningful. (For example, a function in a library to compute square roots has a purpose that is entirely well-defined independent of the application. Therefore, Subsection 2d requires that any application-supplied function or table used by this function must be optional: if the application does not supply it, the square root function must still compute square roots.)

These requirements apply to the modified work as a whole. If identifiable sections of that work are not derived from the Library, and can be reasonably considered independent and separate works in themselves, then this License, and its terms, do not apply to those sections when you distribute them as separate works. But when you distribute the same sections as part of a whole which is a work based on the Library, the distribution of the whole must be on the terms of this License, whose permissions for other licensees extend to the entire whole, and thus to each and every part regardless of who wrote it.

Thus, it is not the intent of this section to claim rights or contest your rights to work written entirely by you; rather, the intent is to exercise the right to control the distribution of derivative or collective works based on the Library.

In addition, mere aggregation of another work not based on the Library with the Library (or with a work based on the Library) on a volume of a storage or distribution medium does not bring the other work under the scope of this License.

3. You may opt to apply the terms of the ordinary GNU General Public License instead of this License to a given copy of the Library. To do this, you must alter all the notices that refer to this License, so that they refer to the ordinary GNU General Public License, version 2, instead of to this License. (If a newer version than version 2 of the ordinary GNU General Public License has appeared, then you can specify that version instead if you wish.) Do not make any other change in these notices.

Once this change is made in a given copy, it is irreversible for that copy, so the ordinary GNU General Public License applies to all subsequent copies and derivative works made from that copy.

This option is useful when you wish to copy part of the code of the Library into a program that is not a library.

4. You may copy and distribute the Library (or a portion or derivative of it, under Section 2) in object code or executable form under the terms of Sections 1 and 2 above provided that you accompany it with the complete corresponding machine-readable source code, which must be distributed under the terms of Sections 1 and 2 above on a medium customarily used for software interchange.

If distribution of object code is made by offering access to copy from a designated place, then offering equivalent access to copy the source code from the same place satisfies the requirement to distribute the source code, even though third parties are not compelled to copy the source along with the object code.

5. A program that contains no derivative of any portion of the Library, but is designed to work with the Library by being compiled or linked with it, is called a “work that uses the Library”. Such a work, in isolation, is not a derivative work of the Library, and therefore falls outside the scope of this License.

However, linking a “work that uses the Library” with the Library creates an executable that is a derivative of the Library (because it contains portions of the Library), rather than a “work that uses the library”. The executable is therefore covered by this License. Section 6 states terms for distribution of such executables.

When a “work that uses the Library” uses material from a header file that is part of the Library, the object code for the work may be a derivative work of the Library even though the source code is not. Whether this is true is especially significant if the work can be linked without the Library, or if the work is itself a library. The threshold for this to be true is not precisely defined by law.

If such an object file uses only numerical parameters, data structure layouts and accessors, and small macros and small inline functions (ten lines or less in length), then the use of the object file is unrestricted, regardless of whether it is legally a derivative work. (Executables containing this object code plus portions of the Library will still fall under Section 6.)

Otherwise, if the work is a derivative of the Library, you may distribute the object code for the work under the terms of Section 6. Any executables containing that work also fall under Section 6, whether or not they are linked directly with the Library itself.

6. As an exception to the Sections above, you may also combine or link a “work that uses the Library” with the Library to produce a work containing portions of the Library, and distribute that work under terms of your choice, provided that the terms permit modification of the work for the customer’s own use and reverse engineering for debugging such modifications.

You must give prominent notice with each copy of the work that the Library is used in it and that the Library and its use are covered by this License. You must supply a copy of this License. If the work during execution displays copyright notices, you must include the copyright notice for the Library among them, as well as a reference directing the user to the copy of this License. Also, you must do one of these things:

- a) Accompany the work with the complete corresponding machine-readable source code for the Library including whatever changes were used in the work (which must be distributed under Sections 1 and 2 above); and, if the work is an executable linked with the Library, with the complete machine-readable “work that uses the Library”, as object code and/or source code, so that the user can modify the Library and then relink to produce a modified executable containing the modified Library. (It is understood that the user who changes the contents of definitions files in the Library will not necessarily be able to recompile the application to use the modified definitions.)
- b) Use a suitable shared library mechanism for linking with the Library. A suitable mechanism is one that (1) uses at run time a copy of the library already present on the user’s computer system, rather than copying library functions into the executable, and (2) will operate properly with a modified version of the library, if the user installs one, as long as the modified version is interface-compatible with the version that the work was made with.
- c) Accompany the work with a written offer, valid for at least three years, to give the same user the materials specified in Subsection 6a, above, for a charge no more than the cost of performing this distribution.
- d) If distribution of the work is made by offering access to copy from a designated place, offer equivalent access to copy the above specified materials from the same place.
- e) Verify that the user has already received a copy of these materials or that you have already sent this user a copy.

For an executable, the required form of the “work that uses the Library” must include any data and utility programs needed for reproducing the executable from it. However, as a special exception, the materials to be distributed need not include anything that is normally distributed (in either source or binary form) with the major components (compiler, kernel, and soon) of the operating system on which the executable runs, unless that component itself accompanies the executable.

It may happen that this requirement contradicts the license restrictions of other proprietary libraries that do not normally accompany the operating system. Such a contradiction means you cannot use both them and the Library together in an executable that you distribute.

7. You may place library facilities that are a work based on the Library side-by-side in a single library together with other library facilities not covered by this License, and distribute such a combined library, provided that the separate distribution of the work based on the Library and of the other library facilities is otherwise permitted, and provided that you do these two things:

a) Accompany the combined library with a copy of the same work based on the Library, uncombined with any other library facilities. This must be distributed under the terms of the Sections above.

b) Give prominent notice with the combined library of the fact that part of it is a work based on the Library, and explaining where to find the accompanying uncombined form of the same work.

8. You may not copy, modify, sublicense, link with, or distribute the Library except as expressly provided under this License. Any attempt otherwise to copy, modify, sublicense, link with, or distribute the Library is void, and will automatically terminate your rights under this License. However, parties who have received copies, or rights, from you under this License will not have their licenses terminated so long as such parties remain in full compliance.

9. You are not required to accept this License, since you have not signed it. However, nothing else grants you permission to modify or distribute the Library or its derivative works. These actions are prohibited by law if you do not accept this License. Therefore, by modifying or distributing the Library (or any work based on the Library), you indicate your acceptance of this License to do so, and all its terms and conditions for copying, distributing or modifying the Library or works based on it.

10. Each time you redistribute the Library (or any work based on the Library), the recipient automatically receives a license from the original licensor to copy, distribute, link with or modify the Library subject to these terms and conditions. You may not impose any further restrictions on the recipients' exercise of the rights granted herein. You are not responsible for enforcing compliance by third parties with this License.

11. If, as a consequence of a court judgment or allegation of patent infringement or for any other reason (not limited to patent issues), conditions are imposed on you (whether by court order, agreement or otherwise) that contradict the conditions of this License, they do not excuse you from the conditions of this License. If you cannot distribute so as to satisfy simultaneously your obligations under this License and any other pertinent obligations, then as a consequence you may not distribute the Library at all. For example, if a patent license would not permit royalty-free redistribution of the Library by all those who receive copies directly or indirectly through you, then the only way you could satisfy both it and this License would be to refrain entirely from distribution of the Library.

If any portion of this section is held invalid or unenforceable under any particular circumstance, the balance of the section is intended to apply, and the section as a whole is intended to apply in other circumstances.

It is not the purpose of this section to induce you to infringe any patents or other property right claims or to contest validity of any such claims; this section has the sole purpose of protecting the integrity of the free software distribution system which is implemented by public license practices. Many people have made generous contributions to the wide range of software distributed through that system in reliance on consistent application of that system; it is up to the author/donor to decide if he or she is willing to distribute software through any other system and a licensee cannot impose that choice.

This section is intended to make thoroughly clear what is believed to be a consequence of the rest of this License.

12. If the distribution and/or use of the Library is restricted in certain countries either by patents or by copyrighted interfaces, the original copyright holder who places the Library under this License may add an explicit geographical distribution limitation excluding those countries, so that distribution is permitted only in or among countries not thus excluded. In such case, this License incorporates the limitation as if written in the body of this License.

13. The Free Software Foundation may publish revised and/or new versions of the Lesser General Public License from time to time. Such new versions will be similar in spirit to the present version, but may differ in detail to address new problems or concerns.

Each version is given a distinguishing version number. If the Library specifies a version number of this License which applies to it and "any later version", you have the option of following the terms and conditions either of that version or of any later version published by the Free Software Foundation. If the Library does not specify a license version number, you may choose any version ever published by the Free Software Foundation.

14. If you wish to incorporate parts of the Library into other free programs whose distribution conditions are incompatible with these, write to the author to ask for permission. For software which is copyrighted by the Free Software Foundation, write to the Free Software Foundation; we sometimes make exceptions for this. Our decision will be guided by the two goals of preserving the free status of all derivatives of our free software and of promoting the sharing and reuse of software generally.

#### NO WARRANTY

15. BECAUSE THE LIBRARY IS LICENSED FREE OF CHARGE, THERE IS NO WARRANTY FOR THE LIBRARY, TO THE EXTENT PERMITTED BY APPLICABLE LAW. EXCEPT WHEN OTHERWISE STATED IN WRITING THE COPYRIGHT HOLDERS AND/OR OTHER PARTIES PROVIDE THE LIBRARY "AS IS" WITHOUT WARRANTY OF ANY KIND,

EITHER EXPRESSED OR IMPLIED, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE LIBRARY IS WITH YOU. SHOULD THE LIBRARY PROVE DEFECTIVE, YOU ASSUME THE COST OF ALL NECESSARY SERVICING, REPAIR OR CORRECTION.

16. IN NO EVENT UNLESS REQUIRED BY APPLICABLE LAW OR AGREED TO IN WRITING WILL ANY COPYRIGHT HOLDER, OR ANY OTHER PARTY WHO MAY MODIFY AND/OR REDISTRIBUTE THE LIBRARY AS PERMITTED ABOVE, BE LIABLE TO YOU FOR DAMAGES, INCLUDING ANY GENERAL, SPECIAL, INCIDENTAL OR CONSEQUENTIAL DAMAGES ARISING OUT OF THE USE OR INABILITY TO USE THE LIBRARY (INCLUDING BUT NOT LIMITED TO LOSS OF DATA OR DATA BEING RENDERED INACCURATE OR LOSSES SUSTAINED BY YOU OR THIRD PARTIES OR A FAILURE OF THE LIBRARY TO OPERATE WITH ANY OTHER SOFTWARE), EVEN IF SUCH HOLDER OR OTHER PARTY HAS BEEN ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

#### END OF TERMS AND CONDITIONS

##### How to Apply These Terms to Your New Libraries

If you develop a new library, and you want it to be of the greatest possible use to the public, we recommend making it free software that everyone can redistribute and change. You can do so by permitting redistribution under these terms (or, alternatively, under the terms of the ordinary General Public License).

To apply these terms, attach the following notices to the library. It is safest to attach them to the start of each source file to most effectively convey the exclusion of warranty; and each file should have at least the "copyright" line and a pointer to where the full notice is found.

<one line to give the library's name and an idea of what it does.>

Copyright (C) <year> <name of author>

This library is free software; you can redistribute it and/or modify it under the terms of the GNU Lesser General Public License as published by the Free Software Foundation; either version 2.1 of the License, or (at your option) any later version.

This library is distributed in the hope that it will be useful, but WITHOUT ANY WARRANTY; without even the implied warranty of MERCHANTABILITY or FITNESS FOR A PARTICULAR PURPOSE. See the GNU Lesser General Public License for more details.

You should have received a copy of the GNU Lesser General Public License along with this library; if not, write to the Free Software Foundation, Inc., 59 Temple Place, Suite 330, Boston, MA 02111-1307 USA

Also add information on how to contact you by electronic and paper mail.

You should also get your employer (if you work as a programmer) or your school, if any, to sign a "copyright disclaimer" for the library, if necessary. Here is a sample; alter the names:

Yoyodyne, Inc., hereby disclaims all copyright interest in the library 'Frob' (a library for tweaking knobs) written by James Random Hacker.

signature of Ty Coon, 1 April 1990

Ty Coon, President of Vice

That's all there is to it!

Eclipse Public License -v 1.0

(plain text)

THE ACCOMPANYING PROGRAM IS PROVIDED UNDER THE TERMS OF THIS ECLIPSE PUBLIC LICENSE ("AGREEMENT"). ANY USE, REPRODUCTION OR DISTRIBUTION OF THE PROGRAM CONSTITUTES RECIPIENT'S ACCEPTANCE OF THIS AGREEMENT.

#### 1. DEFINITIONS

"Contribution" means:

a) in the case of the initial Contributor, the initial code and documentation distributed under this Agreement, and

b) in the case of each subsequent Contributor:

i) changes to the Program, and

ii) additions to the Program;

where such changes and/or additions to the Program originate from and are distributed by that particular Contributor. A Contribution 'originates' from a Contributor if it was added to the Program by such Contributor itself or anyone acting on such Contributor's behalf. Contributions do not include additions to the Program which: (i) are separate modules of software distributed in conjunction with the Program under their own license agreement, and (ii) are not derivative works of the Program.

"Contributor" means any person or entity that distributes the Program.

"Licensed Patents " mean patent claims licensable by a Contributor which are necessarily infringed by the use or sale of its Contribution alone or when combined with the Program.

"Program" means the Contributions distributed in accordance with this Agreement.

"Recipient" means anyone who receives the Program under this Agreement, including all Contributors.

## 2. GRANT OF RIGHTS

a) Subject to the terms of this Agreement, each Contributor hereby grants Recipient a non-exclusive, worldwide, royalty-free copyright license to reproduce, prepare derivative works of, publicly display, publicly perform, distribute and sublicense the Contribution of such Contributor, if any, and such derivative works, in source code and object code form.

b) Subject to the terms of this Agreement, each Contributor hereby grants Recipient a non-exclusive, worldwide, royalty-free patent license under Licensed Patents to make, use, sell, offer to sell, import and otherwise transfer the Contribution of such Contributor, if any, in source code and object code form. This patent license shall apply to the combination of the Contribution and the Program if, at the time the Contribution is added by the Contributor, such addition of the Contribution causes such combination to be covered by the Licensed Patents. The patent license shall not apply to any other combinations which include the Contribution. No hardware per se is licensed hereunder.

c) Recipient understands that although each Contributor grants the licenses to its Contributions set forth herein, no assurances are provided by any Contributor that the Program does not infringe the patent or other intellectual property rights of any other entity. Each Contributor disclaims any liability to Recipient for claims brought by any other entity based on infringement of intellectual property rights or otherwise. As a condition to exercising the rights and licenses granted hereunder, each Recipient hereby assumes sole responsibility to secure any other intellectual property rights needed, if any. For example, if a third party patent license is required to allow Recipient to distribute the Program, it is Recipient's responsibility to acquire that license before distributing the Program.

d) Each Contributor represents that to its knowledge it has sufficient copyright rights in its Contribution, if any, to grant the copyright license set forth in this Agreement.

## 3. REQUIREMENTS

A Contributor may choose to distribute the Program in object code form under its own license agreement, provided that:

a) it complies with the terms and conditions of this Agreement; and

b) its license agreement:

i) effectively disclaims on behalf of all Contributors all warranties and conditions, express and implied, including warranties or conditions of title and non-infringement, and implied warranties or conditions of merchantability and fitness for a particular purpose;

ii) effectively excludes on behalf of all Contributors all liability for damages, including direct, indirect, special, incidental and consequential damages, such as lost profits;

iii) states that any provisions which differ from this Agreement are offered by that Contributor alone and not by any other party; and

iv) states that source code for the Program is available from such Contributor, and informs licensees how to obtain it in a reasonable manner on or through a medium customarily used for software exchange.

When the Program is made available in source code form:

a) it must be made available under this Agreement; and

b) a copy of this Agreement must be included with each copy of the Program.

Contributors may not remove or alter any copyright notices contained within the Program.

Each Contributor must identify itself as the originator of its Contribution, if any, in a manner that reasonably allows subsequent Recipients to identify the originator of the Contribution.

#### 4. COMMERCIAL DISTRIBUTION

Commercial distributors of software may accept certain responsibilities with respect to end users, business partners and the like. While this license is intended to facilitate the commercial use of the Program, the Contributor who includes the Program in a commercial product offering should do so in a manner which does not create potential liability for other Contributors. Therefore, if a Contributor includes the Program in a commercial product offering, such Contributor ("Commercial Contributor") hereby agrees to defend and indemnify every other Contributor ("Indemnified Contributor") against any losses, damages and costs (collectively "Losses") arising from claims, lawsuits and other legal actions brought by a third party against the Indemnified Contributor to the extent caused by the acts or omissions of such Commercial Contributor in connection with its distribution of the Program in a commercial product offering. The obligations in this section do not apply to any claims or Losses relating to any actual or alleged intellectual property infringement. In order to qualify, an Indemnified Contributor must: a) promptly notify the Commercial Contributor in writing of such claim, and b) allow the Commercial Contributor to control, and cooperate with the Commercial Contributor in, the defense and any related settlement negotiations. The Indemnified Contributor may participate in any such claim at its own expense.

For example, a Contributor might include the Program in a commercial product offering, Product X. That Contributor is then a Commercial Contributor. If that Commercial Contributor then makes performance claims, or offers warranties related to Product X, those performance claims and warranties are such Commercial Contributor's responsibility alone. Under this section, the Commercial Contributor would have to defend claims against the other Contributors related to those performance claims and warranties, and if a court requires any other Contributor to pay any damages as a result, the Commercial Contributor must pay those damages.

#### 5. NO WARRANTY

EXCEPT AS EXPRESSLY SET FORTH IN THIS AGREEMENT, THE PROGRAM IS PROVIDED ON AN "AS IS" BASIS, WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, EITHER EXPRESS OR IMPLIED INCLUDING, WITHOUT LIMITATION, ANY WARRANTIES OR CONDITIONS OF TITLE, NON-INFRINGEMENT, MERCHANTABILITY OR FITNESS FOR A PARTICULAR PURPOSE. Each Recipient is solely responsible for determining the appropriateness of using and distributing the Program and assumes all risks associated with its exercise of rights under this Agreement, including but not limited to the risks and costs of program errors, compliance with applicable laws, damage to or loss of data, programs or equipment, and unavailability or interruption of operations.

#### 6. DISCLAIMER OF LIABILITY

EXCEPT AS EXPRESSLY SET FORTH IN THIS AGREEMENT, NEITHER RECIPIENT NOR ANY CONTRIBUTORS SHALL HAVE ANY LIABILITY FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING WITHOUT LIMITATION LOST PROFITS), HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OR DISTRIBUTION OF THE PROGRAM OR THE EXERCISE OF ANY RIGHTS GRANTED HEREUNDER, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGES.

## 7. GENERAL

If any provision of this Agreement is invalid or unenforceable under applicable law, it shall not affect the validity or enforceability of the remainder of the terms of this Agreement, and without further action by the parties hereto, such provision shall be reformed to the minimum extent necessary to make such provision valid and enforceable.

If Recipient institutes patent litigation against any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the Program itself (excluding combinations of the Program with other software or hardware) infringes such Recipient's patent(s), then such Recipient's rights granted under Section 2(b) shall terminate as of the date such litigation is filed.

All Recipient's rights under this Agreement shall terminate if it fails to comply with any of the material terms or conditions of this Agreement and does not cure such failure in a reasonable period of time after becoming aware of such noncompliance. If all Recipient's rights under this Agreement terminate, Recipient agrees to cease use and distribution of the Program as soon as reasonably practicable. However, Recipient's obligations under this Agreement and any licenses granted by Recipient relating to the Program shall continue and survive.

Everyone is permitted to copy and distribute copies of this Agreement, but in order to avoid inconsistency the Agreement is copyrighted and may only be modified in the following manner. The Agreement Steward reserves the right to publish new versions (including revisions) of this Agreement from time to time. No one other than the Agreement Steward has the right to modify this Agreement. The Eclipse Foundation is the initial Agreement Steward. The Eclipse Foundation may assign the responsibility to serve as the Agreement Steward to a suitable separate entity. Each new version of the Agreement will be given a distinguishing version number. The Program (including Contributions) may always be distributed subject to the version of the Agreement under which it was received. In addition, after a new version of the Agreement is published, Contributor may elect to distribute the Program (including its Contributions) under the new version. Except as expressly stated in Sections 2(a) and 2(b) above, Recipient receives no rights or licenses to the intellectual property of any Contributor under this Agreement, whether expressly, by implication, estoppel or otherwise. All rights in the Program not expressly granted under this Agreement are reserved.

This Agreement is governed by the laws of the State of New York and the intellectual property laws of the United States of America. No party to this Agreement will bring a legal action under this Agreement more than one year after the cause of action arose. Each party waives its rights to a jury trial in any resulting litigation.

Apache License, Version 2.0

Foundation Projects People Get Involved Download Support Apache Home Licenses

Apache License Version 2.0, January 2004

<http://www.apache.org/licenses/>

## TERMS AND CONDITIONS FOR USE, REPRODUCTION, AND DISTRIBUTION

### 1. Definitions.

"License" shall mean the terms and conditions for use, reproduction, and distribution as defined by Sections 1 through 9 of this document.

"Licensor" shall mean the copyright owner or entity authorized by the copyright owner that is granting the License.

"Legal Entity" shall mean the union of the acting entity and all other entities that control, are controlled by, or are under common control with that entity. For the purposes of this definition, "control" means (i) the power, direct or indirect, to cause the direction or management of such entity, whether by contract or otherwise, or (ii) ownership of fifty percent (50%) or more of the outstanding shares, or (iii) beneficial ownership of such entity.

"You" (or "Your") shall mean an individual or Legal Entity exercising permissions granted by this License.

"Source" form shall mean the preferred form for making modifications, including but not limited to software source code, documentation source, and configuration files.

"Object" form shall mean any form resulting from mechanical transformation or translation of a Source form, including but not limited to compiled object code, generated documentation, and conversions to other media types.

"Work" shall mean the work of authorship, whether in Source or Object form, made available under the License, as indicated by a copyright notice that is included in or attached to the work (an example is provided in the Appendix below).

"Derivative Works" shall mean any work, whether in Source or Object form, that is based on (or derived from) the Work and for which the editorial revisions, annotations, elaborations, or other modifications represent, as a whole, an original work of authorship. For the purposes of this License, Derivative Works shall not include works that remain separable from, or merely link (or bind by name) to the interfaces of, the Work and Derivative Works thereof.

"Contribution" shall mean any work of authorship, including the original version of the Work and any modifications or additions to that Work or Derivative Works thereof, that is intentionally submitted to Licensor for inclusion in the Work by the copyright owner or by an individual or Legal Entity authorized to submit on behalf of the copyright owner. For the purposes of this definition, "submitted" means any form of electronic, verbal, or written communication sent to the Licensor or its representatives, including but not limited to communication on electronic mailing lists, source code control systems, and issue tracking systems that are managed by, or on behalf of, the Licensor for the purpose of discussing and improving the Work, but excluding communication that is conspicuously marked or otherwise designated in writing by the copyright owner as "Not a Contribution."

"Contributor" shall mean Licensor and any individual or Legal Entity on behalf of whom a Contribution has been received by Licensor and subsequently incorporated within the Work.

2. Grant of Copyright License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable copyright license to reproduce, prepare Derivative Works of, publicly display, publicly perform, sublicense, and distribute the Work and such Derivative Works in Source or Object form.

3. Grant of Patent License. Subject to the terms and conditions of this License, each Contributor hereby grants to You a perpetual, worldwide, non-exclusive, no-charge, royalty-free, irrevocable (except as stated in this section) patent license to make, have made, use, offer to sell, sell, import, and otherwise transfer the Work, where such license applies only to those patent claims licensable by such Contributor that are necessarily infringed by their Contribution(s) alone or by combination of their Contribution(s) with the Work to which such Contribution(s) was submitted. If You institute patent litigation against any entity (including a cross-claim or counterclaim in a lawsuit) alleging that the Work or a Contribution incorporated within the Work constitutes direct or contributory patent infringement, then any patent licenses granted to You under this License for that Work shall terminate as of the date such litigation is filed.

4. Redistribution. You may reproduce and distribute copies of the Work or Derivative Works thereof in any medium, with or without modifications, and in Source or Object form, provided that You meet the following conditions:

You must give any other recipients of the Work or Derivative Works a copy of this License; and

You must cause any modified files to carry prominent notices stating that You changed the files; and

You must retain, in the Source form of any Derivative Works that You distribute, all copyright, patent, trademark, and attribution notices from the Source form of the Work, excluding those notices that do not pertain to any part of the Derivative Works; and

If the Work includes a "NOTICE" text file as part of its distribution, then any Derivative Works that You distribute must include a readable copy of the attribution notices contained within such NOTICE file, excluding those notices that do not pertain to any part of the Derivative Works, in at least one of the following places: within a NOTICE text file distributed as part of the Derivative Works; within the Source form or documentation, if provided along with the Derivative Works; or, within a display generated by the Derivative Works, if and wherever such third-party notices normally appear. The contents of the NOTICE file are for informational purposes only and do not modify the License. You may add Your own attribution notices within Derivative Works that You distribute, alongside or as an addendum to the NOTICE text from the Work, provided that such additional attribution notices cannot be construed as modifying the License. You may add Your own copyright statement to Your modifications and may provide additional or different license terms and conditions for use, reproduction, or distribution of Your modifications, or for any such Derivative Works as a whole, provided Your use, reproduction, and distribution of the Work otherwise complies with the conditions stated in this License.

5. Submission of Contributions. Unless You explicitly state otherwise, any Contribution intentionally submitted for inclusion in the Work by You to the Licensor shall be under the terms and conditions of this License, without any additional terms or conditions. Notwithstanding the above, nothing herein shall supersede or modify the terms of any separate license agreement you may have executed with Licensor regarding such Contributions.

6. Trademarks. This License does not grant permission to use the trade names, trademarks, service marks, or product names of the Licensor, except as required for reasonable and customary use in describing the origin of the Work and reproducing the content of the NOTICE file.

7. Disclaimer of Warranty. Unless required by applicable law or agreed to in writing, Licensor provides the Work (and each Contributor provides its Contributions) on an "AS IS" BASIS, WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied, including, without limitation, any warranties or conditions of TITLE, NON-INFRINGEMENT, MERCHANTABILITY, or FITNESS FOR A PARTICULAR PURPOSE. You are solely responsible for determining the appropriateness of using or redistributing the Work and assume any risks associated with Your exercise of permissions under this License.

8. **Limitation of Liability.** In no event and under no legal theory, whether in tort (including negligence), contract, or otherwise, unless required by applicable law (such as deliberate and grossly negligent acts) or agreed to in writing, shall any Contributor be liable to You for damages, including any direct, indirect, special, incidental, or consequential damages of any character arising as a result of this License or out of the use or inability to use the Work (including but not limited to damages for loss of goodwill, work stoppage, computer failure or malfunction, or any and all other commercial damages or losses), even if such Contributor has been advised of the possibility of such damages.

9. **Accepting Warranty or Additional Liability.** While redistributing the Work or Derivative Works thereof, You may choose to offer, and charge a fee for, acceptance of support, warranty, indemnity, or other liability obligations and/or rights consistent with this License. However, in accepting such obligations, You may act only on Your own behalf and on Your sole responsibility, not on behalf of any other Contributor, and only if You agree to indemnify, defend, and hold each Contributor harmless for any liability incurred by, or claims asserted against, such Contributor by reason of your accepting any such warranty or additional liability.

## END OF TERMS AND CONDITIONS

### APPENDIX: How to apply the Apache License to your work

To apply the Apache License to your work, attach the following boilerplate notice, with the fields enclosed by brackets "[]" replaced with your own identifying information. (Don't include the brackets!) The text should be enclosed in the appropriate comment syntax for the file format. We also recommend that a file or class name and description of purpose be included on the same "printed page" as the copyright notice for easier identification within third-party archives.

Copyright [yyyy] [name of copyright owner]

Licensed under the Apache License, Version 2.0 (the "License");  
you may not use this file except in compliance with the License.  
You may obtain a copy of the License at

<http://www.apache.org/licenses/LICENSE-2.0>

Unless required by applicable law or agreed to in writing, software  
distributed under the License is distributed on an "AS IS" BASIS,  
WITHOUT WARRANTIES OR CONDITIONS OF ANY KIND, either express or implied.  
See the License for the specific language governing permissions and  
limitations under the License.

## COMMON DEVELOPMENT AND DISTRIBUTION LICENSE (CDDL)

Version 1.0

### 1. Definitions.

1.1. "Contributor" means each individual or entity that creates or contributes to the creation of Modifications.

1.2. "Contributor Version" means the combination of the Original Software, prior Modifications used by a Contributor (if any), and the Modifications made by that particular Contributor.

1.3. "Covered Software" means (a) the Original Software, or (b) Modifications, or (c) the combination of files containing Original Software with files containing Modifications, in each case including portions thereof.

1.4. "Executable" means the Covered Software in any form other than Source Code.

1.5. "Initial Developer" means the individual or entity that first makes Original Software available under this License.

1.6. "Larger Work" means a work which combines Covered Software or portions thereof with code not governed by the terms of this License.

1.7. "License" means this document.

1.8. "Licensable" means having the right to grant, to the maximum extent possible, whether at the time of the initial grant or subsequently acquired, any and all of the rights conveyed herein.

1.9. "Modifications" means the Source Code and Executable form of any of the following:

- A. Any file that results from an addition to, deletion from or modification of the contents of a file containing Original Software or previous Modifications;
- B. Any new file that contains any part of the Original Software or previous Modification; or
- C. Any new file that is contributed or otherwise made available under the terms of this License.

1.10. "Original Software" means the Source Code and Executable form of computer software code that is originally released under this License.

1.11. "Patent Claims" means any patent claim(s), now owned or hereafter acquired, including without limitation, method, process, and apparatus claims, in any patent Licensable by grantor.

1.12. "Source Code" means (a) the common form of computer software code in which modifications are made and (b) associated documentation included in or with such code.

1.13. "You" (or "Your") means an individual or a legal entity exercising rights under, and complying with all of the terms of, this License. For legal entities, "You" includes any entity which controls, is controlled by, or is under common control with You. For purposes of this definition, "control" means (a) the power, direct or indirect, to cause the direction or management of such entity, whether by contract or otherwise, or (b) ownership of more than fifty percent (50%) of the outstanding shares or beneficial ownership of such entity.

## 2. License Grants.

### 2.1. The Initial Developer Grant.

Conditioned upon Your compliance with Section 3.1 below and subject to third party intellectual property claims, the Initial Developer hereby grants You a world-wide, royalty-free, non-exclusive license:

(a) under intellectual property rights (other than patent or trademark) Licensable by Initial Developer, to use, reproduce, modify, display, perform, sublicense and distribute the Original Software (or portions thereof), with or without Modifications, and/or as part of a Larger Work; and

(b) under Patent Claims infringed by the making, using or selling of Original Software, to make, have made, use, practice, sell, and offer for sale, and/or otherwise dispose of the Original Software (or portions thereof).

(c) The licenses granted in Sections 2.1(a) and (b) are effective on the date Initial Developer first distributes or otherwise makes the Original Software available to a third party under the terms of this License.

(d) Notwithstanding Section 2.1(b) above, no patent license is granted: (1) for code that You delete from the Original Software, or (2) for infringements caused by: (i) the modification of the Original Software, or (ii) the combination of the Original Software with other software or devices.

### 2.2. Contributor Grant.

Conditioned upon Your compliance with Section 3.1 below and subject to third party intellectual property claims, each Contributor hereby grants You a world-wide, royalty-free, non-exclusive license:

(a) under intellectual property rights (other than patent or trademark) Licensable by Contributor to use, reproduce, modify, display, perform, sublicense and distribute the Modifications created by such Contributor (or portions thereof), either on an unmodified basis, with other Modifications, as Covered Software and/or as part of a Larger Work; and

(b) under Patent Claims infringed by the making, using, or selling of Modifications made by that Contributor either alone and/or in combination with its Contributor Version (or portions of such combination), to make, use, sell, offer for sale, have made, and/or otherwise dispose of: (1) Modifications made by that Contributor (or portions thereof); and (2) the combination of Modifications made by that Contributor with its Contributor Version (or portions of such combination).

(c) The licenses granted in Sections 2.2(a) and 2.2(b) are effective on the date Contributor first distributes or otherwise makes the Modifications available to a third party.

(d) Notwithstanding Section 2.2(b) above, no patent license is granted: (1) for any code that Contributor has deleted from the Contributor Version; (2) for infringements caused by: (i) third party modifications of Contributor Version, or (ii) the combination of Modifications made by that Contributor with other software (except as part of the Contributor Version) or other devices; or (3) under Patent Claims infringed by Covered Software in the absence of Modifications made by that Contributor.

### 3. Distribution Obligations.

#### 3.1. Availability of Source Code.

Any Covered Software that You distribute or otherwise make available in Executable form must also be made available in Source Code form and that Source Code form must be distributed only under the terms of this License. You must include a copy of this License with every copy of the Source Code form of the Covered Software You distribute or otherwise make available. You must inform recipients of any such Covered Software in Executable form as to how they can obtain such Covered Software in Source Code form in a reasonable manner on or through a medium customarily used for software exchange.

#### 3.2. Modifications.

The Modifications that You create or to which You contribute are governed by the terms of this License. You represent that You believe Your Modifications are Your original creation(s) and/or You have sufficient rights to grant the rights conveyed by this License.

#### 3.3. Required Notices.

You must include a notice in each of Your Modifications that identifies You as the Contributor of the Modification. You may not remove or alter any copyright, patent or trademark notices contained within the Covered Software, or any notices of licensing or any descriptive text giving attribution to any Contributor or the Initial Developer.

#### 3.4. Application of Additional Terms.

You may not offer or impose any terms on any Covered Software in Source Code form that alters or restricts the applicable version of this License or the recipients' rights hereunder. You may choose to offer, and to charge a fee for, warranty, support, indemnity or liability obligations to one or more recipients of Covered Software. However, you may do so only on Your own behalf, and not on behalf of the Initial Developer or any Contributor. You must make it absolutely clear that any such warranty, support, indemnity or liability obligation is offered by You alone, and You hereby agree to indemnify the Initial Developer and every Contributor for any liability incurred by the Initial Developer or such Contributor as a result of warranty, support, indemnity or liability terms You offer.

#### 3.5. Distribution of Executable Versions.

You may distribute the Executable form of the Covered Software under the terms of this License or under the terms of a license of Your choice, which may contain terms different from this License, provided that You are in compliance with the terms of this License and that the license for the Executable form does not attempt to limit or alter the recipient's rights in the Source Code form from the rights set forth in this License. If You distribute the Covered Software in Executable form under a different license, You must make it absolutely clear that any terms which differ from this License are offered by You alone, not by the Initial Developer or Contributor. You hereby agree to indemnify the Initial Developer and every Contributor for any liability incurred by the Initial Developer or such Contributor as a result of any such terms You offer.

#### 3.6. Larger Works.

You may create a Larger Work by combining Covered Software with other code not governed by the terms of this License and distribute the Larger Work as a single product. In such a case, You must make sure the requirements of this License are fulfilled for the Covered Software.

### 4. Versions of the License.

#### 4.1. New Versions.

Sun Microsystems, Inc. is the initial license steward and may publish revised and/or new versions of this License from time to time. Each version will be given a distinguishing version number. Except as provided in Section 4.3, no one other than the license steward has the right to modify this License.

#### 4.2. Effect of New Versions.

You may always continue to use, distribute or otherwise make the Covered Software available under the terms of the version of the License under which You originally received the Covered Software. If the Initial Developer includes a notice in the Original Software prohibiting it from being distributed or otherwise made available under any subsequent version of the License, You must distribute and make the Covered Software available under the terms of the version of the License under which You originally received the Covered Software. Otherwise, You may also choose to use, distribute or otherwise make the Covered Software available under the terms of any subsequent version of the License published by the license steward.

#### 4.3. Modified Versions.

When You are an Initial Developer and You want to create a new license for Your Original Software, You may create and use a modified version of this License if You: (a) rename the license and remove any references to the name of the license steward (except to note that the license differs from this License); and (b) otherwise make it clear that the license contains terms which differ from this License.

#### 5. DISCLAIMER OF WARRANTY.

COVERED SOFTWARE IS PROVIDED UNDER THIS LICENSE ON AN "AS IS" BASIS, WITHOUT WARRANTY OF ANY KIND, EITHER EXPRESSED OR IMPLIED, INCLUDING, WITHOUT LIMITATION, WARRANTIES THAT THE COVERED SOFTWARE IS FREE OF DEFECTS, MERCHANTABILITY, FIT FOR A PARTICULAR PURPOSE OR NON-INFRINGEMENT. THE ENTIRE RISK AS TO THE QUALITY AND PERFORMANCE OF THE COVERED SOFTWARE IS WITH YOU. SHOULD ANY COVERED SOFTWARE PROVE DEFECTIVE IN ANY RESPECT, YOU (NOT THE INITIAL DEVELOPER OR ANY OTHER CONTRIBUTOR) ASSUME THE COST OF ANY NECESSARY SERVICING, REPAIR OR CORRECTION. THIS DISCLAIMER OF WARRANTY CONSTITUTES AN ESSENTIAL PART OF THIS LICENSE. NO USE OF ANY COVERED SOFTWARE IS AUTHORIZED HEREUNDER EXCEPT UNDER THIS DISCLAIMER.

#### 6. TERMINATION.

6.1. This License and the rights granted hereunder will terminate automatically if You fail to comply with terms herein and fail to cure such breach within 30 days of becoming aware of the breach. Provisions which, by their nature, must remain in effect beyond the termination of this License shall survive.

6.2. If You assert a patent infringement claim (excluding declaratory judgment actions) against Initial Developer or a Contributor (the Initial Developer or Contributor against whom You assert such claim is referred to as "Participant") alleging that the Participant Software (meaning the Contributor Version where the Participant is a Contributor or the Original Software where the Participant is the Initial Developer) directly or indirectly infringes any patent, then any and all rights granted directly or indirectly to You by such Participant, the Initial Developer (if the Initial Developer is not the Participant) and all Contributors under Sections 2.1 and/or 2.2 of this License shall, upon 60 days notice from Participant terminate prospectively and automatically at the expiration of such 60 day notice period, unless if within such 60 day period You withdraw Your claim with respect to the Participant Software against such Participant either unilaterally or pursuant to a written agreement with Participant.

6.3. In the event of termination under Sections 6.1 or 6.2 above, all end user licenses that have been validly granted by You or any distributor hereunder prior to termination (excluding licenses granted to You by any distributor) shall survive termination.

#### 7. LIMITATION OF LIABILITY.

UNDER NO CIRCUMSTANCES AND UNDER NO LEGAL THEORY, WHETHER TORT (INCLUDING NEGLIGENCE), CONTRACT, OR OTHERWISE, SHALL YOU, THE INITIAL DEVELOPER, ANY OTHER CONTRIBUTOR, OR ANY DISTRIBUTOR OF COVERED SOFTWARE, OR ANY SUPPLIER OF ANY OF SUCH PARTIES, BE LIABLE TO ANY PERSON FOR ANY INDIRECT, SPECIAL, INCIDENTAL, OR CONSEQUENTIAL DAMAGES OF ANY CHARACTER INCLUDING, WITHOUT LIMITATION, DAMAGES FOR LOST PROFITS, LOSS OF GOODWILL, WORK STOPPAGE, COMPUTER FAILURE OR MALFUNCTION, OR ANY AND ALL OTHER COMMERCIAL DAMAGES OR LOSSES, EVEN IF SUCH PARTY SHALL HAVE BEEN INFORMED OF THE POSSIBILITY OF SUCH DAMAGES. THIS LIMITATION OF LIABILITY SHALL NOT APPLY TO LIABILITY FOR DEATH OR PERSONAL INJURY RESULTING FROM SUCH PARTY'S NEGLIGENCE TO THE EXTENT APPLICABLE LAW PROHIBITS SUCH LIMITATION. SOME JURISDICTIONS DO NOT ALLOW THE EXCLUSION OR LIMITATION OF INCIDENTAL OR CONSEQUENTIAL DAMAGES, SO THIS EXCLUSION AND LIMITATION MAY NOT APPLY TO YOU.

#### 8. U.S. GOVERNMENT END USERS.

The Covered Software is a "commercial item," as that term is defined in 48 C.F.R. 2.101 (Oct. 1995), consisting of "commercial computer software" (as that term is defined at 48 C.F.R. § 252.227-7014(a)(1)) and "commercial computer software documentation" as such terms are used in 48 C.F.R. 12.212 (Sept. 1995). Consistent with 48 C.F.R. 12.212 and 48 C.F.R. 227.7202-1 through 227.7202-4 (June 1995), all U.S. Government End Users acquire Covered Software with only those rights set forth herein. This U.S. Government Rights clause is in lieu of, and supersedes, any other FAR, DFAR, or other clause or provision that addresses Government rights in computer software under this License.

## 9. MISCELLANEOUS.

This License represents the complete agreement concerning subject matter hereof. If any provision of this License is held to be unenforceable, such provision shall be reformed only to the extent necessary to make it enforceable. This License shall be governed by the law of the jurisdiction specified in a notice contained within the Original Software (except to the extent applicable law, if any, provides otherwise), excluding such jurisdiction's conflict-of-law provisions. Any litigation relating to this License shall be subject to the jurisdiction of the courts located in the jurisdiction and venue specified in a notice contained within the Original Software, with the losing party responsible for costs, including, without limitation, court costs and reasonable attorneys' fees and expenses. The application of the United Nations Convention on Contracts for the International Sale of Goods is expressly excluded. Any law or regulation which provides that the language of a contract shall be construed against the drafter shall not apply to this License. You agree that You alone are responsible for compliance with the United States export administration regulations (and the export control laws and regulation of any other countries) when You use, distribute or otherwise make available any Covered Software.

## 10. RESPONSIBILITY FOR CLAIMS.

As between Initial Developer and the Contributors, each party is responsible for claims and damages arising, directly or indirectly, out of its utilization of rights under this License and You agree to work with Initial Developer and Contributors to distribute such responsibility on an equitable basis. Nothing herein is intended or shall be deemed to constitute any admission of liability.

## The OpenSSL License

The OpenSSL toolkit stays under a dual license, i.e. both the conditions of the OpenSSL License and the original SSLeay license apply to the toolkit. See below for the actual license texts. Actually both licenses are BSD-style Open Source licenses. In case of any license issues related to OpenSSL please contact [openssl-core@openssl.org](mailto:openssl-core@openssl.org).

## OpenSSL License

Copyright (c) 1998-2007 The OpenSSL Project. All rights reserved.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

1. Redistributions of source code must retain the above copyright notice, this list of conditions and the following disclaimer.
2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.
3. All advertising materials mentioning features or use of this software must display the following acknowledgment: "This product includes software developed by the OpenSSL Project for use in the OpenSSL Toolkit. (<http://www.openssl.org/>)"
4. The names "OpenSSL Toolkit" and "OpenSSL Project" must not be used to endorse or promote products derived from this software without prior written permission. For written permission, please contact [openssl-core@openssl.org](mailto:openssl-core@openssl.org).
5. Products derived from this software may not be called "OpenSSL" nor may "OpenSSL" appear in their names without prior written permission of the OpenSSL Project.
6. Redistributions of any form whatsoever must retain the following acknowledgment: "This product includes software developed by the OpenSSL Project for use in the OpenSSL Toolkit (<http://www.openssl.org/>)"

THIS SOFTWARE IS PROVIDED BY THE OpenSSL PROJECT ``AS IS'' AND ANY EXPRESSED OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE OpenSSL PROJECT OR ITS CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

This product includes cryptographic software written by Eric Young (eay@cryptsoft.com). This product includes software written by Tim Hudson (tjh@cryptsoft.com).

Original SSLeay License

Copyright (C) 1995-1998 Eric Young (eay@cryptsoft.com) All rights reserved.

This package is an SSL implementation written by Eric Young (eay@cryptsoft.com).

The implementation was written so as to conform with Netscapes SSL.

This library is free for commercial and non-commercial use as long as the following conditions are adhered to. The following conditions apply to all code found in this distribution, be it the RC4, RSA, lhash, DES, etc., code; not just the SSL code. The SSL documentation included with this distribution is covered by the same copyright terms except that the holder is Tim Hudson (tjh@cryptsoft.com).

Copyright remains Eric Young's, and as such any Copyright notices in the code are not to be removed. If this package is used in a product, Eric Young should be given attribution as the author of the parts of the library used. This can be in the form of a textual message at program startup or in documentation (online or textual) provided with the package.

Redistribution and use in source and binary forms, with or without modification, are permitted provided that the following conditions are met:

1. Redistributions of source code must retain the copyright notice, this list of conditions and the following disclaimer.
2. Redistributions in binary form must reproduce the above copyright notice, this list of conditions and the following disclaimer in the documentation and/or other materials provided with the distribution.
3. All advertising materials mentioning features or use of this software must display the following acknowledgement:

"This product includes cryptographic software written by Eric Young (eay@cryptsoft.com)"

The word 'cryptographic' can be left out if the routines from the library being used are not cryptographic related :-).

4. If you include any Windows specific code (or a derivative thereof) from the apps directory (application code) you must include an acknowledgement: "This product includes software written by Tim Hudson (tjh@cryptsoft.com)"

THIS SOFTWARE IS PROVIDED BY ERIC YOUNG ``AS IS'' AND ANY EXPRESS OR IMPLIED WARRANTIES, INCLUDING, BUT NOT LIMITED TO, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE DISCLAIMED. IN NO EVENT SHALL THE AUTHOR OR CONTRIBUTORS BE LIABLE FOR ANY DIRECT, INDIRECT, INCIDENTAL, SPECIAL, EXEMPLARY, OR CONSEQUENTIAL DAMAGES (INCLUDING, BUT NOT LIMITED TO, PROCUREMENT OF SUBSTITUTE GOODS OR SERVICES; LOSS OF USE, DATA, OR PROFITS; OR BUSINESS INTERRUPTION) HOWEVER CAUSED AND ON ANY THEORY OF LIABILITY, WHETHER IN CONTRACT, STRICT LIABILITY, OR TORT (INCLUDING NEGLIGENCE OR OTHERWISE) ARISING IN ANY WAY OUT OF THE USE OF THIS SOFTWARE, EVEN IF ADVISED OF THE POSSIBILITY OF SUCH DAMAGE.

The licence and distribution terms for any publicly available version or derivative of this code cannot be changed. i.e. this code cannot simply be copied and put under another distribution licence [including the GNU Public Licence.]

