BrightAuthor User Guide

BrightAuthor is a software application that allows you to create and publish digital-signage presentations for BrightSign players. You can play BrightAuthor presentations on all BrightSign models. Your presentations can include various types of content:

- Images
- Videos
- Live video: Supported on the XD1230, XD1132, 4K1142, and XT1143
- Audio
- HTML5 pages
- IP Streaming audio/video
- Text
- Date and time
- RSS, MRSS, and Twitter feeds
- BrightSign Network features: Dynamic Playlists, Live Data feeds (RSS), Live Media feeds (MRSS)
- SignChannel

> **Note**
> A subscription is required to use SignChannel. Go to http://www.signchannel.com/ for details.

What Types of Presentation Can I Create?

You can create three types of presentation in BrightAuthor:

- Non-Interactive: A playlist of media (images, video, audio) that plays in a continuous loop. You can play non-interactive presentations on all BrightSign models.
- Interactive: A presentation that transitions between media based on input from a user via button board, touchscreen, remote control, or similar input device. All models support at least one type of interactive event. The event types supported by a player model depend on the connectors and inputs that player has (for example, players with a USB port support touch screen and button board events, and players with an Ethernet port support UDP events).
- BrightWall™: A non-interactive playlist of media (video files or live video) that is closely synchronized across multiple players. BrightWall presentations are ideal for video-wall applications.

What Types of Screen Layout Can I Use?

You can choose from a variety of ready-to-use layout templates. You can also create your own template. Layout templates fall into two basic categories:

- Full Screen: The media (images, video, HTML) occupies the entire screen (this can be used for audio-only presentations as well).
- Multi-Zone: The presentation contains content in separate regions of the screen. The screen can include multiple Clock, Text, Ticker, and Images zones, as well as (depending on the player model) multiple Video Only zones.

Requirements

To create presentations with BrightAuthor and publish them to your player, you will need the following:

- Windows PC
- BrightSign player
- Display

- Storage device
- Card reader/writer (optional if using USB storage)
- Input device (optional)

Windows PC – Any Windows PC that meets or exceeds the following *minimum* requirements:

- 2.3 GHz CPU
- 2 GB RAM required (4 GB recommended)
- 100 MB available hard disk space for program files (additional disk space required if storing content and/or presentations on your hard disk)
- One of the following operating systems:
    - Windows Vista (32 or 64 bit)
    - Windows 7 (32 or 64 bit)
    - Windows 8 (32 or 64 bit)
    - Windows 10 (32 or 64 bit)

BrightSign Player – Any of the following models:

- XT243, XT1143
- 4K242, 4K1042, 4K1142
- XD233, XD1033
- XD232, XD1032, XD1132
- XD230, XD1030, XD1230
- HD223, HD1023
- HD222, HD1022
- HD120, HD220, HD1020, HD970, AU320
- LS423
- LS322, LS422

Display – Any monitor, TV, or touchscreen with one of the following types of inputs:

- HDMI
- VGA (on all model lines except 4Kx42)
- Component (supported with a VGA converter on all model lines except 4Kx42)

Storage Device – Any of the following:

- microSD card (for XTx43, XDx33, HDx23, LS423 models) or SD card (for all other models)
- USB Flash Drive (supported on models with a USB port)
- SSD (XTx43, XDx33 models only)
- mSATA drive (4K models only)

> We recommend formatting your storage device using FAT32. Formatting your card using NTFS allows you to play media files that are 4GB or larger in size, but the player will not be able to receive network updates or generate logs.

Card Reader/Writer – Only required if using an SD card. The card reader/writer must be connected to your PC and must be compatible with your storage card.

Input Device – Required for interactive presentations only. Depending on the model, BrightSign players support one or more of the following types of input device:

- Touchscreen equipped with a supported touch controller. See this link for a list of all supported touch controllers.
- BrightSign BP200 and BP900 USB button panels
- Many brands of USB keyboards
- Many brands of USB mice or trackballs
- Many brands of USB bar code scanners
- Quadravox Serial Button Board
- AMX, Crestron, and similar control devices
- Any GPIO (open/close contact switch) button, signal, or LED (your custom board or LED display)

- PC (via UDP or serial)
- IR input/output devices using the NEC or Pronto Hex remote control protocols.

Getting Started

∨ BrightAuthor Version 4.6
- Version 4.4
- Previous Versions

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- Step 1: Install BrightAuthor
- Step 2: Launch BrightAuthor
- Step 3: Set up your BrightSign player
- Step 4: Add your Content
- Step 5: Create your Presentations
- Step 6: Publish your Presentations

> **Tip**
> View this tutorial video to get an overview of using BrightAuthor.

If you're new to BrightAuthor, follow the below steps to get started.

STEP 1: INSTALL BRIGHTAUTHOR

Download the latest software and install it on your PC:

1. Go to the BrightSign Downloads page.
2. Locate the model series of your player.
3. Click the **BrightAuthor** link to download the current official release of BrightAuthor. To download a beta release (if there currently is one), click the **More Downloads** link and select the **Beta Release** of BrightAuthor.
4. Unzip the contents of the downloaded *.zip* file.
5. Double-click the setup *.exe* file to begin the installation.
6. Follow the onscreen instructions to install BrightAuthor on your PC.

> **Note**
> BrightAuthor requires the latest version of Microsoft .Net Framework. If this component is not already on your PC, BrightAuthor installs it during the installation. However, if BrightAuthor needs to install Microsoft .Net Framework, the installation may take up to 45 minutes to complete and you may need to restart your PC to complete the installation process.

STEP 2: LAUNCH BRIGHTAUTHOR

1. Double-click the **BrightAuthor** icon on your desktop.
2. (Optional) If prompted, sign in to BrightSign Network (account required). See the BrightSign Network publishing instructions for more details.

STEP 3: SET UP YOUR BRIGHTSIGN PLAYER

1. Depending on how you want to publish your presentations, create the appropriate setup files for your BrightSign player.
2. Insert an SD card or USB flash drive containing the setup files into the player.
3. Connect your player to a display and power it on.

STEP 4: ADD YOUR CONTENT

BrightAuthor presentations can include video, audio, image, and HTML files. See the following links to learn more about supported content types:

- Video: Supported formats, codecs, bitrates, etc.
- Audio: Supported formats, sampling rates, etc.
- Images: Supported formats
- HTML: Developer's guide

STEP 5: CREATE YOUR PRESENTATIONS

Now you're ready to start using BrightAuthor to create presentations. To get started, create a simple full-screen presentation. You can then go on to create more complex multi-zone and interactive presentations.

STEP 6: PUBLISH YOUR PRESENTATIONS

After creating presentations, use one of the publishing options to deliver them to your BrightSign players.

Setting up BrightSign Players

⌄ BrightAuthor Version 4.6
- Version 4.4
- Previous Versions

Before you can publish presentations, you must first set up your BrightSign player(s). Follow these steps to set up a player:

1. Navigate to **Tools > Setup BrightSign Unit**.
2. Configure your unit for one of the four publishing options described below.
3. Save the setup files to a storage device (SD card or USB flash drive).
4. Insert the storage device into the BrightSign player and power it up.

Once the storage device is inserted, your BrightSign player is ready to receive and play presentations.

> **Note**
> The storage device *must remain inside the player* during playback—BrightSign players have no internal storage and, therefore, cannot download or play content without a storage device connected.

PUBLISHING OPTIONS

There are four publishing options, depending on how you want to publish presentations to your players:

- **BrightSign Network**: Use the BrightSign Network cloud-based content-management system (CMS) to remotely schedule presentations, distribute content, assign players to groups, and monitor the health of players.
- **Local File Networking**: Publish presentations and schedules to players over your local network.
- **Simple File Networking**: Publish presentations and schedules remotely using your own web server.
- **Standalone**: Publish presentations directly to your player using an SD card or USB drive. Use this method if your player doesn't have a network connection or if you do not plan to update the presentation frequently.

If you're using the BrightSign Network, Local Networking, or Simple File Networking to publish your presentations, you must connect your player(s) to the local network via Ethernet or WiFi. Alternatively, you can set up players for use as standalone units that are not connected to a network. With this option, you will need to manually update the player storage (SD card or USB flash drive) each time you want to update presentations. For more details on the publishing process, see the Publishing Presentations section.

BrightSign Network Setup

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You must have a BrightSign Network Account to set up players for the BrightSign Network (BSN). Contact BrightSign Sales or your BrightSign vendor to purchase BSN subscriptions.

> **Tip**
> This tutorial video outlines the basic steps for setting up a player for the BrightSign Network.

Sign in to BSN

To create BrightSign Network setup files, you must first sign in to BSN in BrightAuthor. Once you have your BSN account credentials, follow these steps:

1. Navigate to **Tools** > **Sign In to BrightSign Network**. If you don't see this option, navigate to Edit > Preferences > Networking and check the **Enable BrightSign Network** box.
2. Enter your **Account, User name,** and **Password**.
3. (Optional) Check the **Remember account and user name** box if you don't want to perform these steps every time you open BrightAuthor.
4. Click **Sign In**.
5. Navigate to **Tools** > **Setup BrightSign Unit**.

Name Specification

- **Name**: Enter a name for the player.
- **Description**:(Optional) Enter a description for the player.
- **Customization**: Select one of the following:
  - **Append unit ID**: Appends the serial number of the player to the end of the player name.
  - **Use name only**: Does not append anything to the player name.

Network Properties

- **Enable Wireless**: Check this box to connect the player to the local network using a wireless connection. In order to use a wireless connection, you must purchase a Wireless Module for your BrightSign player. If the player is connecting to a secured network, enter the following:
  - **SSID**: Enter the SSID of the wireless network.
  - **Security key**: Enter the password for the wireless network.
- **Network Connection Priority**: Use the up and down arrows to prioritize either the **Wired** or **Wireless** connection. The BrightSign player will always attempt to download and upload using the first option, and will only use the second option if the first is unavailable.
- **Time zone**: Select the time zone where the player is located.
- **Time server**:(Optional) Specify the server (and protocol) that the player should use to synchronize its clock. Players use the BrightSign Network time server by default.

Advanced Network Setup

Click the **Advanced Network Setup** button to customize advanced settings for your networked player.

Unit Configuration

Use the **Unit Configuration** tab to specify the following:

- **Specify hostname**: Check this box to specify a custom hostname for the player on the network. By default, the player serial number is used to generate a unique hostname.
- **Use Proxy**: Check this box if you want the player to use a proxy server.
  - **Address**: Enter the address of the proxy. If you need to provide a user name and password for the proxy, use this format:

name>:<password>@<proxy server address> (e.g. "admin:root@myproxy.com").

- **Port**: Enter the port number of the proxy.
- **Proxy Bypass**: Use the **Add Host** button to add host names to the proxy bypass list. Host names that are checked will be accessed directly, rather than using the specified proxy server. Entering a host name such as "example.com" will exempt "example.com", "example.com:80", and "www.example.com" from the proxy setting. This feature includes bypass options for the **BrightSign Network** (content downloads, log uploads) and **BrightSign Network Feeds** (Dynamic Playlists, Live Media Feeds, Live Text Feeds) by default.

- **Limit content downloads**: Check this box to restrict player content downloads to a certain time of day. This is helpful if you want to limit network traffic during peak hours.
  - **Start of Range**: The beginning of the time frame during which content downloads can occur.
  - **End of Range**: The end of the time frame during which content downloads can occur.
- **Limit health updates**: Check this box to limit when the player sends health updates to the BrightSign Network. This is helpful if you know a player will be powered off or otherwise disabled during a certain time of day.
  - **Start of Range**: The beginning of the time frame during which health updates can be sent.
  - **End of Range**: The end of the time frame during which health updates can be sent.
- **Copy content from the current published schedule**: Check this box to copy the current scheduled presentation(s) of the group to the storage device along with the setup files. Use this option if you don't want the player downloading large content files from the BrightSign Network right after it is set up.

Wired/Wireless

Use the **Wired** and **Wireless** tabs to specify the following:

- **Data Types Enabled**: Use these checkboxes to determine the data types that can be transferred using the connection. You can enable/disable downloads (**Content**, **Text Feeds**, **Media Feeds**), as well as uploads (**Health**, **Log Updates**).
- **Connection Settings**: Indicate whether the IP address is auto-generated (via DHCP) or static. If you're using a static IP address, enter the parameters in the fields.
- **Rate Limit Network Download Traffic**: Set rate limitations for downloading content. The options are divided into three categories: **Outside content download window**, **During content download window**, and **During initial downloads**. The "content download window" described by the first two options corresponds to the **Limit content downloads** interval set in the **Unit Configuration** tab.
  - **Unlimited download rate**: Sets no limit on downloads.
  - **Default limit**: Sets the default limit (2000 Kibit/s) on downloads.
  - **Specify limit**: Sets a customized limit. Enter a limit in the text field (in Kbit/s).

Diagnostics

Use the **Diagnostics** tab to specify the following:

- **Enable network diagnostics**: Check this box to have the player display the network diagnostics screen during setup.
  - **Test Ethernet**: The player will indicate whether or not it was able to attain an IP address over Ethernet.
  - **Test Wireless**: The player will indicate whether or not it was able to attain an IP address over wireless.
  - **Test Internet Connection**: The player will indicate whether or not it was able to communicate with a remote server.

Firmware

Click the **Specify Firmware Update** button to include a firmware update with the setup files. The firmware update will be performed after you insert the storage device containing the setup files into the player and power it up. Locate the section corresponding to your BrightSign model and select one of the following:

- **Production Release**: The current official release of BrightSign firmware
- **Beta Release**: The current beta release of BrightSign firmware
- **Minimum Compatible Release**: The minimum firmware version that supports presentations created by your version of BrightAuthor. The minimum compatible firmware will likely not support all features provided by a contemporary version of BrightAuthor.
- **Select specific file**: Use the **Browse** button to select a *.bsfw* firmware update file from your hard drive. The other options will download the update file from BrightSign when the setup files are created.

Splash Screen

- **Standard Splash Screen**: The player will display the BrightSign logo when booting up.
- **Custom Splash Screen**: The player will display a custom logo when booting up. Click **Browse** to locate and select the image you wish to use. See this FAQ for image size and format restrictions.

Unit Configuration

Select the **Networked with the BrightSign Network** option. Then configure the following:

- **Enable diagnostic web server**:(Optional) Check this box to enable the Diagnostic Web Server. You can include a username and password in the text fields below for added security.
- **Enable local web server**:(Optional) Check this box to enable the Local Web Server. You can include a username and password in the text fields below for added security.
    - **Enable Update Notifications**:(Optional) Check this box to have the player automatically refresh the User Variables webpage whenever variable values change on the player.
- **Group**: Select this option to include the player in a standard BSN group. Use the dropdown list to select a BSN group for the player. Groups allow you to publish presentation schedules to multiple players. See the Publishing with BrightSign Network page for more details.
- **BrightWall Group**: Select this option to include the player in a BSN BrightWall group. Use the dropdown list to select a BrightWall group for the player. Each BrightWall group includes one or more BrightWall(s) that share a common configuration file, and each BrightWall in a BrightWall group plays the same presentation.

> **Tip**
> You can create BrightWall groups in the **Manage > Status** section.

  - **BrightWall Name**: Use the dropdown list to assign the player to a BrightWall within the BrightWall group. If you haven't created the BrightWall yet, click **Add BrightWall** and enter the **BrightWall name**. Note that a new BrightWall will utilize the configuration file that is assigned to the BrightWall group.
  - **Screen Number**: Specify the section of the BrightWall to which the player belongs. Screens are numbered by row, starting from the top-left section of the BrightWall (the example diagram to the right shows the numbering of a 4x3 BrightWall).

- **Content Check Frequency**: Specify how often the player should communicate with the BSN servers to determine if there is new scheduled content to download.
- **Update Health Frequency**: Specify how often the player should send health status updates to the BSN servers. This determines how up-to-date the Player Status colors are.

Beacons

This section allows you to configure BLE beaconing devices connected to the player.

- **Name**: Enter a name for the beacon.
- **Type**: Use the dropdown list to select the beaconing mode/format:
    - **iBeacon**: A simple beaconing format
        - **UUID**: A string representation of a UUID, which can be in 16-bit, 32-bit, or 128-bit format. A 16-bit UUID must be exactly four hex digits with no punctuation; a 32-bit UUID must be exactly eight hex digits with no punctuation; and a 128-bit UUID must be punctuated exactly as follows: "cd7b6f81-f738-4cad-aebf-d2a2ea36d996".
        - **Major**: An integer specifying the 2-byte Major value (0 to 65535)
        - **Minor**: An integer specifying the 2-byte Minor value (0 to 65535)
        - **TxPower**: An integer value specifying the Tx power level in dBm at 0 meters. The default value is -19, which corresponds to a level of -60dBm at 1 meter. The recommended calibration practice is to measure at 1 meter and add 41: For example, -65dBm RSSI leads to a value of -24.
    - **Eddystone URL:** The Eddystone-URL format
        - **URL**: The URL to encapsulate in the advertisement packet.
        - **TxPower**: An integer value specifying the Tx power level in dBm at 0 meters. The default value is -19, which corresponds to a level of -60dBm at 1 meter. The recommended calibration practice is to measure at 1 meter and add 41: For example, -65dBm RSSI leads to a value of -24.
    - **Eddystone UID**: The Eddystone-UID format
        - **Namespace**: A 6-byte value expressed as 12 hexadecimal digits
        - **Instance**: A 10-byte value expressed as 20 hexadecimal digits
        - **TxPower**: An integer value specifying the Tx power level in dBm at 0 meters. The default value is -19, which corresponds to a level of -60dBm at 1 meter. The recommended calibration practice is to measure at 1 meter and add 41: For example, -65dBm RSSI leads to a value of -24.

Logging

Use the check boxes to enable/disable logs and specify log upload settings. You can view logs in the **Current Usage** tab of the BSN WebUI or in the *currentLog* folder on the player storage.

- **Enable playback logging**: Records playback start and end times, zone names, media types, and file names.
- **Enable event logging**: Records timestamps, state names, zone names, event types, and event data.

- **Enable state logging**: Records current and last state names, timestamps, and media types.
- **Enable diagnostic logging**: Records timestamps, firmware and script versions, and the current presentation.
- **Enable Variable logging**: Records the current and default values of all User Variables in the presentation. This log is only generated when logs are uploaded to the BSN servers.
- **Upload logs**: Check either of the following:
  - **On startup**: Uploads log files each time the player is powered on.
  - **At specific time each day**: Uploads log files daily at the specified time. Use the dropdown lists to pick a time.

> **Tip**
> See this FAQ to learn how to read player logs.

Remote Snapshot

Check the **Enable remote snapshot** box to enable the Remote Snapshot feature, which allows you to remotely monitor the contents of the presentation display.

> **Note**
> The Remote Snapshot feature is not available for the LS422, HD220, or HD1020.

- **Remote snapshot every [ ] minutes**: Specify how often the player should take a snapshot of the presentation display.
- **Save up to [ ] images (1 - 100) on local storage**: Specify how many JPEG snapshot images can be stored on the local storage of the player.
- **JPEG quality level [ ] (0 - 100)**: Specify the quality level (and thus the file size) of each image file.
- **Display snapshots in portrait mode**: Check this box to have the player rotate the snapshots to portrait mode before saving and uploading them.

RF Channel Scan Data (optional)

Use this field to publish RF channel scan settings to an XD1230 player. This option is useful if you need to publish identical channel scan settings to multiple XD1230 players. See Publishing Channel Scan Results for more details.

Screen Color

Click **Choose** to specify what screen color the player should display after it has successfully completed the setup process. When the player displays this color, it is ready to receive content.

Creating and Installing the Setup Files

Now that you've configured the setup files, you need to publish them to your player:

1. Click **Create Setup Files**.
2. Browse to and select an SD card (recommended) or USB flash drive. Ensure the setup files are written to the *root folder* of the storage device.
3. Click **OK**.
4. Turn off the BrightSign player by unplugging the power adapter (or Ethernet cable if the player is being powered by PoE).
5. Insert the SD card or USB flash drive into the player.
6. Turn on the BrightSign player by reconnecting the power.

> **Note**
> We recommend formatting your SD card or USB flash drive using FAT32. Formatting your card using NTFS allows you to play media files that are 4GB or larger in size, but the player will not be able to receive network updates or generate logs.

> **Important**
> The storage device must remain in the player at all times while playing presentations.

Local File Network Setup

Tip
This tutorial video outlines the basic setups for setting up a player for Local File Networking.

Local File Networking allows you to publish presentations to your BrightSign player over the local network. To set up a player for Local File Networking, navigate to **Tools > Setup BrightSign Unit**.

Name Specification

- **Name**: Enter a name for the player
- **Description**:(Optional) Enter a description for the player.
- **Customization**: Select one of the following:
    - **Append unit ID**: Appends the serial number of the player to the end of the player name.
    - **Use name only**: Does not append anything to the player name.

Network Properties

- **Enable Wireless**: Check this box to connect the player to the local network using a wireless connection. In order to use a wireless connection, you must purchase a Wireless Module for your BrightSign player. If the player is connecting to a secured network, enter the following:
    - **SSID**: Enter the SSID of the wireless network.
    - **Security key**: Enter the password for the wireless network.
- **Network Connection Priority**: Use the up and down arrows to prioritize either the **Wired** or **Wireless** connection. The BrightSign player will always attempt to download and upload using the first option, and will only use the second option if the first is unavailable.
- **Time zone**: Select the time zone where the player is located.
- **Time server**:(Optional) Specify the server (and protocol) that the player should use to synchronize its clock. Players use the BrightSign Network time server by default.

Advanced Network Setup

Click the **Advanced Network Setup** button to customize advanced settings for your networked player.

Unit Configuration

Use the **Unit Configuration** tab to specify the following:

- **Specify hostname**: Check this box to specify a custom hostname for the player on the network. By default, the player serial number is used to generate a unique hostname.
- **Use Proxy**: Check this box if you want the player to use a proxy server.
    - **Address**: Enter the address of the proxy. If you need to provide a user name and password for the proxy, use this format: <user name>:<password>@<proxy server address> (e.g. "admin:root@myproxy.com").
    - **Port**: Enter the port number of the proxy.
    - **Proxy Bypass**: Use the **Add Host** button to add host names to the proxy bypass list. Host names that are checked will be accessed directly, rather than using the specified proxy server. Entering a host name such as "example.com" will exempt "example.com", "example.com:80", and "www.example.com" from the proxy setting. This feature includes bypass options for the **BrightSign Network** (content downloads, log uploads) and **BrightSign Network Feeds** (Dynamic Playlists, Live Media Feeds, Live Text Feeds) by default.

Wired/Wireless

Use the **Wired** and **Wireless** tabs to specify the following:

- **Data Types Enabled**: Use these checkboxes to determine the data types that can be transferred using the connection. You can enable/disable downloads (**Content**, **Text Feeds**, **Media Feeds**), as well as uploads (**Health**, **Log Updates**).
- **Connection Settings**: Indicate whether the IP address is auto-generated (via DHCP) or static. If you're using a static IP address, enter the parameters in the fields.

Diagnostics

Use the **Diagnostics** tab to specify the following:

- **Enable network diagnostics**: Check this box to have the player display the network diagnostics screen during setup.
    - **Test Ethernet**: The player will indicate whether or not it was able to attain an IP address over Ethernet.
    - **Test Wireless**: The player will indicate whether or not it was able to attain an IP address over wireless.
    - **Test Internet Connection**: The player will indicate whether or not it was able to communicate with a remote server.

Firmware

Click the **Specify Firmware Update** button to include a firmware update with the setup files. The firmware update will be performed after you insert the storage device containing the setup files into the player and power it up. Locate the section corresponding to your BrightSign model and select one of the following:

- **Production Release**: The current official release of BrightSign firmware

- **Beta Release**: The current beta release of BrightSign firmware
- **Minimum Compatible Release**: The minimum firmware version that supports presentations created by your version of BrightAuthor. The minimum compatible firmware will likely not support all features provided by a contemporary version of BrightAuthor.
- **Select specific file**: Use the **Browse** button to select a *.bsfw* firmware update file from your hard drive. The other options will download the update file from BrightSign when the setup files are created.

Splash Screen

- **Standard Splash Screen**: The player will display the BrightSign logo when booting up.
- **Custom Splash Screen**: The player will display a custom logo when booting up. Click **Browse** to locate and select the image you wish to use. See this FAQ for image size and format restrictions.

Unit Configuration

Select the **Networked with Local File Networking** option. Then configure the following:

- **Enable diagnostic web server**:(Optional) Check this box to enable the Diagnostic Web Server. You can include a username and password in the text fields below for added security.
- **Enable local web server**: This box must be checked to use Local File Networking. You can add a username and password in the text fields below for added security.
    - **Enable Update Notifications**:(Optional) Check this box to have the player automatically refresh the User Variables webpage whenever variable values change on the player.

Beacons

This section allows you to configure BLE beaconing devices connected to the player.

- **Name**: Enter a name for the beacon.
- **Type**: Use the dropdown list to select the beaconing mode/format:
    - **iBeacon**: A simple beaconing format
        - **UUID**: A string representation of a UUID, which can be in 16-bit, 32-bit, or 128-bit format. A 16-bit UUID must be exactly four hex digits with no punctuation; a 32-bit UUID must be exactly eight hex digits with no punctuation; and a 128-bit UUID must be punctuated exactly as follows: "cd7b6f81-f738-4cad-aebf-d2a2ea36d996".
        - **Major**: An integer specifying the 2-byte Major value (0 to 65535)
        - **Minor**: An integer specifying the 2-byte Minor value (0 to 65535)
        - **TxPower**: An integer value specifying the Tx power level in dBm at 0 meters. The default value is -19, which corresponds to a level of -60dBm at 1 meter. The recommended calibration practice is to measure at 1 meter and add 41: For example, -65dBm RSSI leads to a value of -24.
    - **Eddystone URL:** The Eddystone-URL format
        - **URL**: The URL to encapsulate in the advertisement packet.
        - **TxPower**: An integer value specifying the Tx power level in dBm at 0 meters. The default value is -19, which corresponds to a level of -60dBm at 1 meter. The recommended calibration practice is to measure at 1 meter and add 41: For example, -65dBm RSSI leads to a value of -24.
    - **Eddystone UID**: The Eddystone-UID format
        - **Namespace**: A 6-byte value expressed as 12 hexadecimal digits
        - **Instance**: A 10-byte value expressed as 20 hexadecimal digits
        - **TxPower**: An integer value specifying the Tx power level in dBm at 0 meters. The default value is -19, which corresponds to a level of -60dBm at 1 meter. The recommended calibration practice is to measure at 1 meter and add 41: For example, -65dBm RSSI leads to a value of -24.

Logging

Use the check boxes to enable/disable logs and specify log upload settings. You can view logs in the *currentLog* folder on the player storage.

- **Enable playback logging**: Records playback start and end times, zone names, media types, and file names.
- **Enable event logging**: Records timestamps, state names, zone names, event types, and event data.
- **Enable state logging**: Records current and last state names, timestamps, and media types.
- **Enable diagnostic logging**: Records timestamps, firmware and script versions, and the current presentation.
- **Enable Variable logging**: Records the current and default values of all User Variables in the presentation. This log is only generated when logs are uploaded to custom log handler URL.

> **Tip**
> See this FAQ to learn how to read player logs.

Remote Snapshot

Check the **Enable remote snapshot** box to enable the Remote Snapshot feature, which allows you to remotely monitor the contents of the presentation display.

> **Note**
> The Remote Snapshot feature is not available for the LS422, HD220, or HD1020.

- **Remote snapshot every [ ] minutes**: Specify how often the player should take a snapshot of the presentation display.
- **Save up to [ ] images (1 - 100) on local storage**: Specify how many JPEG snapshot images can be stored on the local storage of the player.
- **JPEG quality level [ ] (0 - 100)**: Specify the quality level (and thus the file size) of each image file.
- **Display snapshots in portrait mode**: Check this box to have the player rotate the snapshots to portrait mode before saving and uploading them.

RF Channel Scan Data (optional)

Use this field to publish RF channel scan settings to an XD1230 player. This option is useful if you need to publish identical channel scan settings to multiple XD1230 players. See Publishing Channel Scan Results for more details.

Screen Color

Click **Choose** to specify what screen color the player should display after it has successfully completed the setup process. When the player displays this color, it is ready to receive content.

Creating and Installing the Setup Files

Now that you've configured the setup files, you need to publish them to your player:

1. Click **Create Setup Files**.
2. Browse to and select an SD card (recommended) or USB flash drive. Ensure the setup files are written to the *root folder* of the storage device.
3. Click **OK**.
4. Turn off the BrightSign player by unplugging the power adapter (or Ethernet cable if the player is being powered by PoE).
5. Insert the SD card or USB flash drive into the player.
6. Turn on the BrightSign player by reconnecting the power.

> **Note**
> We recommend formatting your SD card or USB flash drive using FAT32. Formatting your card using NTFS allows you to play media files that are 4GB or larger in size, but the player will not be able to receive network updates or generate logs.

> **Important**
> The storage device must remain in the player at all times while playing presentations.

Simple File Network Setup

- BrightAuthor Version 4.6
    - Version 4.4
    - Previous Versions

> **Tip**
> This video tutorial outlines basic steps for setting up a player for Simple File Networking.

A player set up for Simple File Networking will retrieve content and schedule updates from your server at regular intervals. The setup files generated here provide settings for your network and point the player to the web server that it will use for updates. To set up a player for Simple File Networking, navigate to **File > Setup BrightSign Unit**.

Name Specification

- • **Name**: Enter a name for the player
- • **Description**:(Optional) Enter a description for the player.

- **Customization**: Select one of the following:
  - **Append unit ID**: Appends the serial number of the player to the end of the player name.
  - **Use name only**: Does not append anything to the player name.

- **Enable Wireless**: Check this box to connect the player to the local network using a wireless connection. In order to use a wireless connection, you must purchase a Wireless Module for your BrightSign player. If the player is connecting to a secured network, enter the following:
  - **SSID**: Enter the SSID of the wireless network.
  - **Security key**: Enter the password for the wireless network
- **Network Connection Priority**: Use the up and down arrows to prioritize either the **Wired** or **Wireless** connection. The BrightSign player will always attempt to download and upload using the first option, and will only use the second option if the first is unavailable.
- **Time zone**: Select the time zone where the player is located.
- **Time server**:(Optional) Specify the server (and protocol) that the player should use to synchronize its clock. Players use the BrightSign Network time server by default.

Click the **Advanced Network Setup** button to customize advanced settings for your networked player.

Unit Configuration

Use the **Unit Configuration** tab to specify the following:

- **Specify hostname**: Check this box to specify a custom hostname for the player on the network. By default, the player serial number is used to generate a unique hostname.
- **Use Proxy**: Check this box if you want the player to use a proxy server.
  - **Address**: Enter the address of the proxy. If you need to provide a user name and password for the proxy, use this format: <user name>:<password>@<proxy server address> (e.g. "admin:root@myproxy.com").
  - **Port**: Enter the port number of the proxy.
  - **Proxy Bypass**: Use the **Add Host** button to add host names to the proxy bypass list. Host names that are checked will be accessed directly, rather than using the specified proxy server. Entering a host name such as "example.com" will exempt "example.com", "example.com:80", and "www.example.com" from the proxy setting. This feature includes bypass options for the **BrightSign Network** (content downloads, log uploads) and **BrightSign Network Feeds** (Dynamic Playlists, Live Media Feeds, Live Text Feeds) by default.
- **Limit content downloads**: Check this box to restrict player content downloads to a certain time of day. This is helpful if you want to limit network traffic during peak hours.
  - **Start of Range**: The beginning of the time frame during which content downloads can occur.
  - **End of Range**: The end of the time frame during which content downloads can occur.

Wired/Wireless

Use the **Wired** and **Wireless** tabs to specify the following:

- **Data Types Enabled**: Use these checkboxes to determine the data types that can be transferred using the connection. You can enable/disable downloads (**Content**, **Text Feeds**, **Media Feeds**), as well as uploads (**Health**, **Log Updates**).
- **Connection Settings**: Indicate whether the IP address is auto-generated (via DHCP) or static. If you're using a static IP address, enter the parameters in the fields.
- **Rate Limit Network Download Traffic**: Set rate limitations for downloading content. The options are divided into three categories: **Outside content download window**, **During content download window**, and **During initial downloads**. The "content download window" described by the first two options corresponds to the **Limit content downloads** interval set in the **Unit Configuration** tab.
  - **Unlimited download rate**: Sets no limit on downloads.
  - **Default limit**: Sets the default limit (2000 Kibit/s) on downloads.
  - **Specify limit**: Sets a customized limit. Enter a limit in the text field (in Kbit/s).

Diagnostics

Use the **Diagnostics** tab to specify the following:

- **Enable network diagnostics**: Check this box to have the player display the network diagnostics screen during setup.
  - **Test Ethernet**: The player will indicate whether or not it was able to attain an IP address over Ethernet.
  - **Test Wireless**: The player will indicate whether or not it was able to attain an IP address over wireless.
  - **Test Internet Connection**: The player will indicate whether or not it was able to communicate with a remote server.

Click the **Specify Firmware Update** button to include a firmware update with the setup files. The firmware update will be performed after you insert the storage device containing the setup files into the player and power it up. Locate the section corresponding to your BrightSign model and select one of the following:

- **Production Release**: The current official release of BrightSign firmware
- **Beta Release**: The current beta release of BrightSign firmware
- **Minimum Compatible Release**: The minimum firmware version that supports presentations created by your version of BrightAuthor. The minimum compatible firmware will likely not support all features provided by a contemporary version of BrightAuthor.
- **Select specific file**: Use the **Browse** button to select a *.bsfw* firmware update file from your hard drive. The other options will download the update file from BrightSign when the setup files are created.

Splash Screen

- **Standard Splash Screen**: The player will display the BrightSign logo when booting up.
- **Custom Splash Screen**: The player will display a custom logo when booting up. Click **Browse** to locate and select the image you wish to use. See this FAQ for image size and format restrictions.

Unit Configuration

Select the **Networked with Simple File Networking** option. Then configure the following:

- **Enable diagnostic web server**:(Optional) Check this box to enable the Diagnostic Web Server. You can include a username and password in the text fields below for added security.
- **Enable local web server**:(Optional) Check this box to enable the Local Web Server. You can include a username and password in the text fields below for added security.
  - **Enable Update Notifications**:(Optional) Check this box to have the player automatically refresh the User Variables webpage whenever variable values change on the player.
- **URL for the web folder**: Specify the location from which the player will download content updates. Do not use trailing slashes in your URL; some web servers do not support trailing slashes.

> **Important**
> The URL for the web folder must be identical to the URL you use when publishing presentations. See the Simple File Networking publishing page for details. If you're having trouble getting players to communicate with your web server, see this FAQ for troubleshooting tips.

- **Content Check Frequency**: Set how often you want the player to check your server for updates.
- **Simple File Networking Authentication**:(Optional) Enter a **User name** and **password** to enable digest authentication between the BrightSign player and the server.
  - **Enable basic authentication**: Check this box to have the player pass credentials to the web server in unsecured packets. Use this option only if it is absolutely required by the configuration of your web server.

Beacons

This section allows you to configure BLE beaconing devices connected to the player.

- **Name**: Enter a name for the beacon.
- **Type**: Use the dropdown list to select the beaconing mode/format:
  - **iBeacon**: A simple beaconing format
    - **UUID**: A string representation of a UUID, which can be in 16-bit, 32-bit, or 128-bit format. A 16-bit UUID must be exactly four hex digits with no punctuation; a 32-bit UUID must be exactly eight hex digits with no punctuation; and a 128-bit UUID must be punctuated exactly as follows: "cd7b6f81-f738-4cad-aebf-d2a2ea36d996".
    - **Major**: An integer specifying the 2-byte Major value (0 to 65535)
    - **Minor**: An integer specifying the 2-byte Minor value (0 to 65535)
    - **TxPower**: An integer value specifying the Tx power level in dBm at 0 meters. The default value is -19, which corresponds to a level of -60dBm at 1 meter. The recommended calibration practice is to measure at 1 meter and add 41: For example, -65dBm RSSI leads to a value of -24.
  - **Eddystone URL:** The Eddystone-URL format
    - **URL**: The URL to encapsulate in the advertisement packet.
    - **TxPower**: An integer value specifying the Tx power level in dBm at 0 meters. The default value is -19, which corresponds to a level of -60dBm at 1 meter. The recommended calibration practice is to measure at 1 meter and add 41: For example, -65dBm RSSI leads to a value of -24.

- **Eddystone UID**: The Eddystone-UID format
    - **Namespace**: A 6-byte value expressed as 12 hexadecimal digits
    - **Instance**: A 10-byte value expressed as 20 hexadecimal digits
    - **TxPower**: An integer value specifying the Tx power level in dBm at 0 meters. The default value is -19, which corresponds to a level of -60dBm at 1 meter. The recommended calibration practice is to measure at 1 meter and add 41: For example, -65dBm RSSI leads to a value of -24.

Logging

Use the check boxes to enable/disable logs and specify log upload settings. You can view logs in the *currentLog* folder on the player storage.

- **Enable playback logging**: Records playback start and end times, zone names, media types, and file names.
- **Enable event logging**: Records timestamps, state names, zone names, event types, and event data.
- **Enable state logging**: Records current and last state names, timestamps, and media types.
- **Enable diagnostic logging**: Records timestamps, firmware and script versions, and the current presentation.
- **Enable Variable logging**: Records the current and default values of all User Variables in the presentation. This log is only generated when logs are uploaded to custom log handler URL.
- **Upload logs**: Check either of the following:
    - **On startup**: Uploads log files each time the player is powered on.
    - **At specific time each day**: Uploads log files daily at the specified time. Use the dropdown lists to pick a time.
- **Relative URL for log handler**: Specify the location on the server where you want logs to be uploaded and parsed.

> **Tip**
> See this FAQ to learn how to read player logs.

Remote Snapshot

Check the **Enable remote snapshot** box to enable the Remote Snapshot feature, which allows you to remotely monitor the contents of the presentation display.

> **Note**
> The Remote Snapshot feature is not available for the LS422, HD220, or HD1020.

- **Remote snapshot every [ ] minutes**: Specify how often the player should take a snapshot of the presentation display.
- **Save up to [ ] images (1 - 100) on local storage**: Specify how many JPEG snapshot images can be stored on the local storage of the player.
- **JPEG quality level [ ] (0 - 100)**: Specify the quality level (and thus the file size) of each image file.
- **Display snapshots in portrait mode**: Check this box to have the player rotate the snapshots to portrait mode before saving and uploading them.

RF Channel Scan Data (optional)

Use this field to publish RF channel scan settings to an XD1230 player. This option is useful if you need to publish identical channel scan settings to multiple XD1230 players. See Publishing Channel Scan Results for more details.

Screen Color

Click **Choose** to specify what screen color the player should display after it has successfully completed the setup process. When the player displays this color, it is ready to receive content.

Creating and Installing the Setup Files

Now that you've configured the setup files, you need to publish them to your player:

1. Click **Create Setup Files**.
2. Browse to and select an SD card (recommended) or USB flash drive. Ensure the setup files are written to the *root folder* of the storage device.
3. Click **OK**.
4. Turn off the BrightSign player by unplugging the power adapter (or Ethernet cable if the player is being powered by PoE).
5. Insert the SD card or USB flash drive into the player.

6. Turn on the BrightSign player by reconnecting the power.

> **note**
> We recommend formatting your SD card or USB flash drive using FAT32. Formatting your card using NTFS allows you to play media files that are 4GB or larger in size, but the player will not be able to receive network updates or generate logs.

> **Important**
> The storage device must remain in the player at all times while playing presentations.

Standalone Setup

⌄ BrightAuthor Version 4.6

- Version 4.4
- Previous Versions

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- Name Specification
- Network Properties
- Advanced Network Setup
  - Unit Configuration
  - Wired/Wireless
  - Diagnostics
- Firmware
- Splash Screen
- Unit Configuration
- Beacons
- Logging
- Remote Snapshot
- RF Channel Scan Data (optional)
- Screen Color
- Creating and Installing the Setup Files

Standalone players are not connected to a network and must be updated manually. To change presentations/schedules, you must remove the storage card (or USB flash drive), update it on your computer, and reinsert it into the player. Updating standalone units is the only case in which you should remove the storage card after setting up the unit.

> **Tip**
> If your player has a USB flash drive slot, we recommend that you use an SD card when setting up the unit and keep it in the player as the internal storage. You can then update the content on the SD card via a USB flash drive. See the Local Storage publishing page for details.

To set up a player for standalone use, navigate to **Tools > Setup BrightSign Unit**.

Name Specification

- **Name**: Enter a name for the player
- **Description**:(Optional) Enter a description for the player.
- **Customization**: Select one of the following:
    - **Append unit ID**: Appends the serial number of the player to the end of the player name.
    - **Use name only**: Does not append anything to the player name.

Network Properties

- **Enable Wireless**: Check this box to connect the player to the local network using a wireless connection. In order to use a wireless connection, you must purchase a Wireless Module for your BrightSign player. If the player is connecting to a secured network, enter the following:
    - **SSID**: Enter the SSID of the wireless network.
    - **Security key**: Enter the password for the wireless network
- **Network Connection Priority**: Use the up and down arrows to prioritize either the **Wired** or **Wireless** connection. The BrightSign player will always attempt to download and upload using the first option, and will only use the second option if the first is unavailable.
- **Time zone**: Select the time zone where the player is located.
- **Time server**:(Optional) Specify the server (and protocol) that the player should use to synchronize its clock. Players use the BrightSign Network time server by default.

Advanced Network Setup

Click the **Advanced Network Setup** button to customize advanced settings for your networked player.

Unit Configuration

Use the **Unit Configuration** tab to specify the following:

- **Specify hostname**: Check this box to specify a custom hostname for the player on the network. By default, the player serial number is used to generate a unique hostname.
- **Use Proxy**: Check this box if you want the player to use a proxy server.
    - **Address**: Enter the address of the proxy. If you need to provide a user name and password for the proxy, use this format: <user name>:<password>@<proxy server address> (e.g. "admin:root@myproxy.com").

- **Port**: Enter the port number of the proxy.
- **Proxy Bypass**: Use the **Add Host** button to add host names to the proxy bypass list. Host names that are checked will be accessed directly, rather than using the specified proxy server. Entering a host name such as "example.com" will exempt "example.com", "example.com:80", and "www.example.com" from the proxy setting. This feature includes bypass options for the **BrightSign Network** (content downloads, log uploads) and **BrightSign Network Feeds** (Dynamic Playlists, Live Media Feeds, Live Text Feeds) by default.

Wired/Wireless

Use the **Wired** and **Wireless** tabs to specify the following:

- **Data Types Enabled**: Use these checkboxes to determine the data types that can be transferred using the connection. You can enable/disable downloads (**Content**, **Text Feeds**, **Media Feeds**), as well as uploads (**Health**, **Log Updates**).
- **Connection Settings**: Indicate whether the IP address is auto-generated (via DHCP) or static. If you're using a static IP address, enter the parameters in the fields.

Diagnostics

Use the **Diagnostics** tab to specify the following:

- **Enable network diagnostics**: Check this box to have the player display the network diagnostics screen during setup.
    - **Test Ethernet**: The player will indicate whether or not it was able to attain an IP address over Ethernet.
    - **Test Wireless**: The player will indicate whether or not it was able to attain an IP address over wireless.
    - **Test Internet Connection**: The player will indicate whether or not it was able to communicate with a remote server.

Firmware

Click the **Specify Firmware Update** button to include a firmware update with the setup files. The firmware update will be performed after you insert the storage device containing the setup files into the player and power it up. Locate the section corresponding to your BrightSign model and select one of the following:

- **Production Release**: The current official release of BrightSign firmware
- **Beta Release**: The current beta release of BrightSign firmware
- **Minimum Compatible Release**: The minimum firmware version that supports presentations created by your version of BrightAuthor. The minimum compatible firmware will likely not support all features provided by a contemporary version of BrightAuthor.
- **Select specific file**: Use the **Browse** button to select a *.bsfw* firmware update file from your hard drive. The other options will download the update file from BrightSign servers when the setup files are created.

Splash Screen

- **Standard Splash Screen**: The player will display the BrightSign logo when booting up.
- **Custom Splash Screen**: The player will display a custom logo when booting up. Click **Browse** to locate and select the image you wish to use. See this FAQ for image size and format restrictions.

Unit Configuration

Select the **Standalone** option. Then configure the following:

- **Enable diagnostic web server**:(Optional) Check this box to enable the Diagnostic Web Server. You can include a username and password in the text fields below for added security.
- **Enable local web server**:(Optional) Check this box to enable the Local Web Server. You can include a username and password in the text fields below for added security.
    - **Enable Update Notifications**:(Optional) Check this box to have the player automatically refresh the User Variables webpage whenever variable values change on the player.
- **USB Content Update Password**: Enter a password in the field to enable password protection for USB content updates. This feature helps to ensure that a player will not be assigned incorrect schedules or data when updated via USB.

Beacons

This section allows you to configure BLE beaconing devices connected to the player.

- **Name**: Enter a name for the beacon.
- **Type**: Use the dropdown list to select the beaconing mode/format:
    - **iBeacon**: A simple beaconing format

- **UUID**: A string representation of a UUID, which can be in 16-bit, 32-bit, or 128-bit format. A 16-bit UUID must be exactly four hex digits with no punctuation; a 32-bit UUID must be exactly eight hex digits with no punctuation; and a 128-bit UUID must be punctuated exactly as follows: "cd7b6f81-f738-4cad-aebf-d2a2ea36d996".
        - **Major**: An integer specifying the 2-byte Major value (0 to 65535)
        - **Minor**: An integer specifying the 2-byte Minor value (0 to 65535)
        - **TxPower**: An integer value specifying the Tx power level in dBm at 0 meters. The default value is -19, which corresponds to a level of -60dBm at 1 meter. The recommended calibration practice is to measure at 1 meter and add 41: For example, -65dBm RSSI leads to a value of -24.
    - **Eddystone URL:** The Eddystone-URL format
        - **URL**: The URL to encapsulate in the advertisement packet.
        - **TxPower**: An integer value specifying the Tx power level in dBm at 0 meters. The default value is -19, which corresponds to a level of -60dBm at 1 meter. The recommended calibration practice is to measure at 1 meter and add 41: For example, -65dBm RSSI leads to a value of -24.
    - **Eddystone UID**: The Eddystone-UID format
        - **Namespace**: A 6-byte value expressed as 12 hexadecimal digits
        - **Instance**: A 10-byte value expressed as 20 hexadecimal digits
        - **TxPower**: An integer value specifying the Tx power level in dBm at 0 meters. The default value is -19, which corresponds to a level of -60dBm at 1 meter. The recommended calibration practice is to measure at 1 meter and add 41: For example, -65dBm RSSI leads to a value of -24.

Logging

Use the check boxes to enable/disable logs and specify log upload settings. You can view logs in the *currentLog* folder on the player storage.

- **Enable playback logging**: Records playback start and end times, zone names, media types, and file names.
- **Enable event logging**: Records timestamps, state names, zone names, event types, and event data.
- **Enable state logging**: Records current and last state names, timestamps, and media types.
- **Enable diagnostic logging**: Records timestamps, firmware and script versions, and the current presentation.
- **Enable Variable logging**: Records the current and default values of all User Variables in the presentation. This log is only generated when logs are uploaded to a custom log handler URL.

> **Tip**
> See this FAQ to learn how to read player logs.

Remote Snapshot

Check the **Enable remote snapshot** box to enable the Remote Snapshot feature, which allows you to remotely monitor the contents of the presentation display.

> **Note**
> The Remote Snapshot feature is not available for the LS422, HD220, or HD1020.

- **Remote snapshot every [ ] minutes**: Specify how often the player should take a snapshot of the presentation display.
- **Save up to [ ] images (1 - 100) on local storage**: Specify how many JPEG snapshot images can be stored on the local storage of the player.
- **JPEG quality level [ ] (0 - 100)**: Specify the quality level (and thus the file size) of each image file.
- **Display snapshots in portrait mode**: Check this box to have the player rotate the snapshots to portrait mode before saving and uploading them.

RF Channel Scan Data (optional)

Use this field to publish RF channel scan settings to an XD1230 player. This option is useful if you need to publish identical channel scan settings to multiple XD1230 players. See Publishing Channel Scan Results for more details.

Screen Color

Click **Choose** to specify what screen color the player should display after it has successfully completed the setup process. When the player displays this color, it is ready to receive content.

Creating and Installing the Setup Files

Now that you've configured the setup files, you need to publish them to your player:

1. Click **Create Setup Files**.
2. Browse to and select an SD card (recommended) or USB flash drive. Ensure the setup files are written to the *root folder* of the storage device.
3. Click **OK**.
4. Turn off the BrightSign player by unplugging the power adapter (or Ethernet cable if the player is being powered by PoE).
5. Insert the SD card or USB flash drive into the player.
6. Turn on the BrightSign player by reconnecting the power.

> **Note**
> We recommend formatting your SD card or USB flash drive using FAT32. Formatting your card using NTFS allows you to play media files that are 4GB or larger in size, but the player will not be able to receive network updates or generate logs.

> **Important**
> The storage device must remain in the player at all times while playing presentations.

Creating Presentations

∨ BrightAuthor Version 4.6
- Version 4.4
- Previous Versions

This section describes how to create presentations. There are three types of presentation you can create in BrightAuthor. They are listed here in descending order of complexity:

- Full-screen presentations: A looping playlist of media–images, videos, HTML pages, etc.–that occupies the entire presentation display.
- Multi-zone presentations: Content can occupy different zones on the screen, allowing you to display multiple images, videos, and other pieces of content in a customizable layout.
- Interactive presentations: Playback, whether full-screen or multi-zone, is responsive to interactive events such as button presses, GPIO input, or UDP commands.

Besides image, video, audio, and HTML files, presentations can also feature a number of BrightAuthor states, such as Live Text, Media RSS feeds, and HDMI input.

Full-Screen Presentations

∨ BrightAuthor Version 4.6
- Version 4.4
- Previous Versions

ON THIS PAGE

- Creating a New Project
- Adding Content to the Presentation Playlist
- Editing the Presentation Playlist
- Editing Media Playback Options
- Next Steps

> **Tip**
> This tutorial video outlines the basic steps for creating a full-screen presentation.

In a full-screen presentation, your images and videos occupy the entire screen. To create a new presentation project, navigate to **File > New Presentation**.

If you don't see **New Presentation** under **File**, make sure you have the **Edit**, **Publish**, or **Manage** tab selected.

Creating a New Project

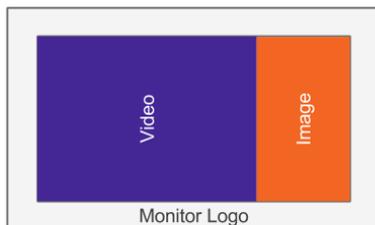Specify the following in the **New Project** window:
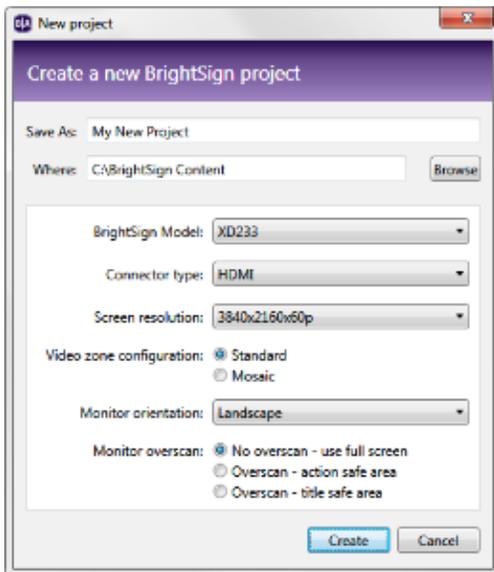
- **Save as**: Enter a name for the presentation project.
- **Where**: Click **Browse** to select the folder where you want to save the presentation project.
- **BrightSign model**: Select the target player model for the presentation. This will determine the options available when creating the presentation in the **Edit** tab.
- **Connector type**: Select the video connector type that connects the player to the display: HDMI, VGA, or Component.
- **Screen resolution**: Choose a resolution that matches the native resolution of your monitor. You can view all available screen resolutions in this FAQ.
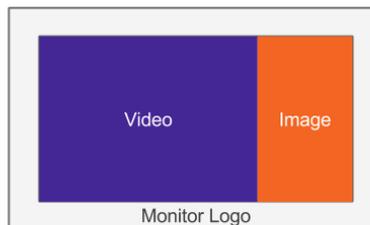
> **Note**
> You can output a composite signal to a converter by selecting the "HDMI" or "Component" **Connector type** and choosing one of the available composite video modes. See this FAQ for more information on generating component and composite signals.

- **Video zone configuration**: Determine how video resources will be divvied up in the presentation:
  - **Standard**: You can have one or two video zones (depending on whether your player model supports dual decode), and these zones can play video files up to the maximum resolution (either HD or 4K) supported by your player model.
  - **Mosaic**: You can have more than two video zones. The maximum number of video zones depends on the **Maximum content resolution** setting in the **Edit > Layout** tab: The smaller the maximum resolution, the more video zones you can add.
- **Enable 4.2.0 10-bit output**:(4Kx42 models only) Check this box to output a 4.2.0 10-bit 4Kp60 or 4Kp50 video signal to the connected display. See the video encoding FAQ for more details on supported 4K color spaces and bit depths.
- **Monitor Orientation**: Choose one of the following:
  - **Landscape**: Content is not rotated.
  - **Portrait – bottom on left**: Content is rotated counter-clockwise 90 degrees. Select this option if the bottom of the monitor is on the left when it is portrait oriented.
  - **Portrait – bottom on right**: Content is rotated clockwise 90 degrees. Select this option if the bottom of the monitor is on the right when it is portrait oriented.

> **Note**
> Choosing a portrait mode will rotate all images, videos, and HTML. However, for HDx20 and LSx22 models, content is not rotated on the player. Instead, you will need to rotate video or images in the source application (e.g. Photoshop, Adobe After Effects) before publishing them to the player.

- **Monitor overscan**: Select an overscan setting to determine how the content fills the display screen.
  - **No overscan – use full screen**: Displays content to the edge of the video signal.
  - **Overscan – action safe**: Restricts the display area to a size that is compatible with most displays.
  - **Overscan – title safe**: Restricts the display area to a size that is much smaller than the generated video signal.

> *Overscan is necessary with some older television screens that cut off content at the edges of the screen.*

Click **Create** when you are finished configuring the presentation. The **Template** window will open. Click the **Full screen** template, then click **Choose**.

Adding Content to the Presentation Playlist

To add content to your presentation, first designate a folder on your computer as your Media Library. This will make it easy to drag and drop image, video, and audio files into your playlist from a scrollable list of thumbnails.

1. Under Media Library, select the **files** tab.
2. Click to open the file browser.
3. Navigate to the folder where your content is stored.
4. Click **OK**.

> **Note**
> If your content folder contains large files, it may take a while for the thumbnail images to appear.
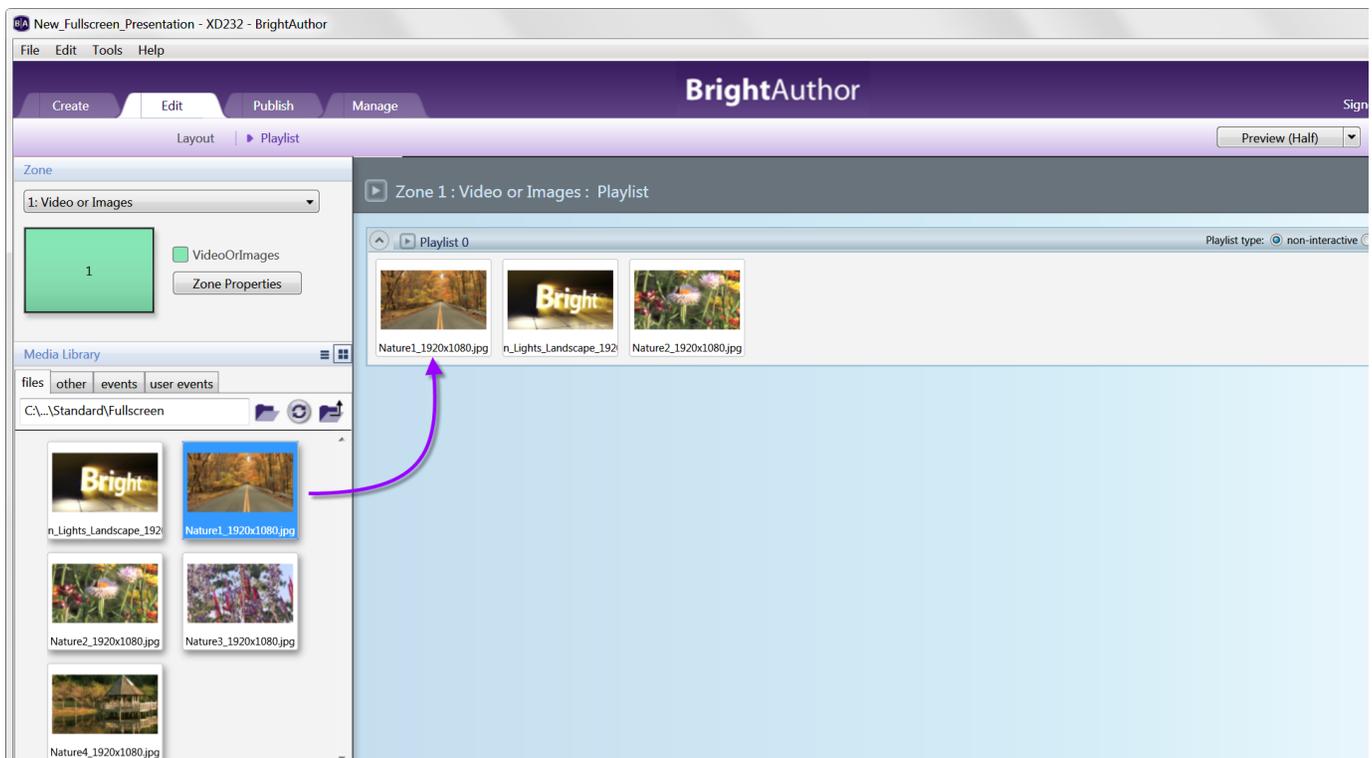
Add media files to your presentation by dragging files from the **Media Library** to the playlist area. You can do the following when adding media files:

- *Select a series of adjacent media files* – Hold the **Shift** key as you select the files in the Media Library.
- *Select a group of non-adjacent files* – Hold the **Ctrl** key as you select the files in the Media Library.
- *Refresh the Media Library* – Click . This will update the Media Library with any changes to the corresponding folder on your computer.
- *Move up to the parent directory of the current folder* – Click .
- *Move to a sub-directory of the current folder* – Click a file thumbnail in the Media Library.

> **Tip**
> You can also drag and drop media files directly into the playlist from a Windows Explorer window.

Once you've added media files to the playlist, you can modify it by doing any of the following:

- *Remove an item from the playlist* – Click an item in the playlist area and press the **Delete** or **Backspace** key.
- *Change the order in which an item plays* – Click and drag an item to a new position in the playlist.
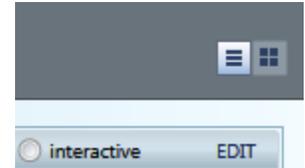- *Rename the playlist* – Click **Edit** in the upper-right corner of the playlist area.
- *Change the playlist view* – Click the list/tile icon in the top-right of the playlist area to change the playlist view. Switching to a list view allows you to see the parameters of all media items and states in the playlist.
- *Replace media files in the playlist* – Go to **File** > **Replace media files**. The **Replace Media Files** window allows you to replace files within media states without having to drag and drop individual files. This is useful if you need to update a large number of media files in your playlist or if you want to ensure the playlist order is preserved.
    - **Replacement Media Folder**: Click **Browse** to select the folder that contains the files you want to add. This can be the same folder as your Media Library, or another folder.
    - **Preserve state names**: Check this box to preserve the names of the media states in the playlist. If this box is unchecked, the current media states will automatically take on the names of the new media files.
    - **Presentation Media Files**: For each file listed under **Current Media Files**, select a new file using the dropdown list beneath **Replacement Media File**.

To edit the playback settings of a media item, double-click the thumbnail in the playlist area (or right-click and select **Edit**), then choose the settings you want to apply to the selected item:

- **Image files**: Specify the following:
    - **Time on Screen**: The amount of time (in seconds) that the image displays on screen before transitioning to the next item.
    - **Transition**: The transition effect that occurs from the previous media item to this image.
    - **Transition Duration**: The duration (in seconds) of the transition effect .
    - **Video files**: Specify the **Volume** of the video.
    - **Audio files**: Specify the **Volume** of the audio track.

To edit settings for multiple items, press the **Ctrl** key and select items in the playlist. On the menu bar, select **Edit > Selected Items**, and then choose the settings you want to apply to the selected items. Note that the selected items must all be the same media or state type for this to work.
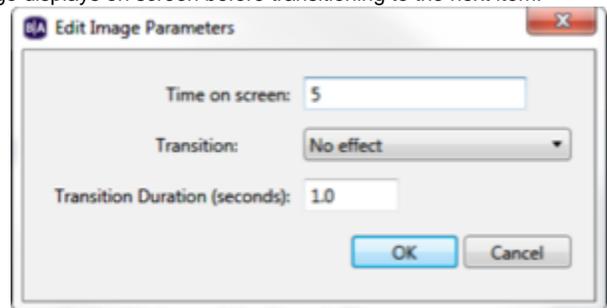
Now that you've created your full screen presentation, save it by navigating to **File > Save [project name]** (make sure you have the **Edit** tab selected). Then, do any of the following:

- *Publish the presentation* – Click the **Publish** tab and select your publishing method. See the Publishing Presentations section for more instructions.
- *Export the presentation* – Navigate to **File > Export [project name]**. This saves the presentation project as a package that can be opened by BrightAuthor instances on other computers.
- *Save the presentation using a new name or location* – Navigate to **File > Save [project name] As**.
- *Create another presentation* – Navigate to **File > New Presentation**.

Multi-Zone Presentations

- BrightAuthor Version 4.6
    - Version 4.4
    - Previous Versions

> **Tip**
> This tutorial video outlines the basic steps for creating multi-zone presentations.

In a multi-zone presentation, BrightAuthor divides the screen into rectangles called *zones*, allowing you to create a different playlist for each zone. BrightAuthor provides a number of multi-zone templates. You can choose one of the system templates or create your own (see the Customizing Zone Layouts page for more details). You can also edit the zone layout at any time after selecting a template.

In multi-zone presentations, the *zone type* restricts the media and state types that can be included in the zone. The color-coded key at the bottom of the **Template** window shows the available zone types. The following list describes the available content types for each zone type:

- **Images**: Displays images and HTML. You can include multiple Images zones in a presentation.
- **Ticker**: Displays RSS feeds or pre-defined text strings. You can include multiple Ticker zones in a presentation.
- **Clock**: Displays the time or date. You can include multiple Clock zones in a presentation.
- **Video or Images**: Displays images, video, and HTML (can also play audio files).
- **Video Only**: Displays video.
- **Audio Only**: Plays audio. You can include multiple Audio Only zones in a presentation.
- **Enhanced Audio**: Plays audio in a cross-faded playlist. You can include only one Enhanced Audio zone in a presentation.
- **Background Image**: Places an image or media feed in the background of your presentation. All other zones appear on top of this zone.

Video Zone Restrictions

BrightSign XT, 4K, and XD models can decode two videos simultaneously, while HD and LS models can only decode a single video. Also, the Background Image zone uses a video decoder to display an image. This leads to the following zone restrictions:

- **XTx43, 4Kx42, XDx33, XDx32, XDx30**: You can include two Video or Images zones, two Video Only zones, one of each, or one of these and a Background Image zone.
- **HDx23, HDx22, LS423, LSx22, HDx20**: You can include a single Video or Images zone, Video Only zone, or Background Image zone.

Creating a New Project

To create a new multi-zone presentation, navigate to **File > New Presentation**.
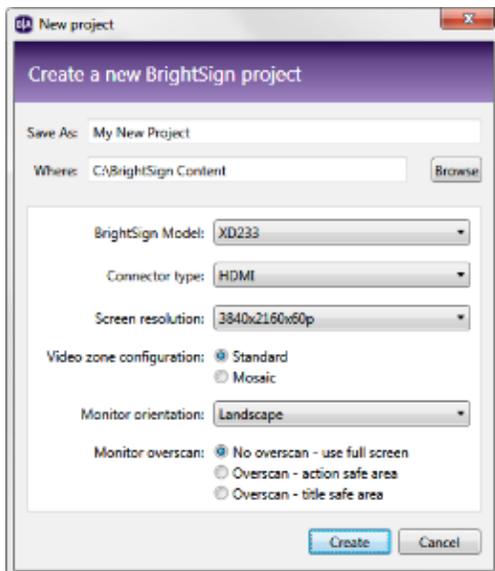
- **Save as**: Enter a name for the presentation project.
- **Where**: Click **Browse** to select the folder where you want to save the presentation project.
- **BrightSign model**: Select the target player model for the presentation. This will determine the options available when creating the presentation in the **Edit** tab.
- **Connector type**: Select the video connector type that connects the player to the display: HDMI, VGA, or Component.
- **Screen resolution**: Choose a resolution that matches the native resolution of your monitor. You can view all available screen resolutions in this FAQ.
- **Video zone configuration**: Determine how video resources will be divvied up in the presentation:
    - **Standard**: You can have one or two video zones (depending on whether your player model supports dual decode), and these zones can play video files up to the maximum resolution (either HD or 4K) supported by your player model.
    - **Mosaic**: You can have more than two video zones. The maximum number of video zones depends on the **Maximum content resolution** setting in the **Edit > Layout** tab: The smaller the maximum resolution, the more video zones you can add.

> **Note**
> Note: You can output a composite signal to a converter by selecting the "HDMI" or "Component" Connector type and choosing one of the available composite video modes. See this FAQ for more information on generating component and composite signals.

- **Enable 4.2.0 10-bit output**:(4Kx42 models only) Check this box to output a 4.2.0 10-bit 4Kp60 or 4Kp50 video signal to the connected display. See the video encoding FAQ for more details on supported 4K color spaces and bit depths.
- **Monitor Orientation**: Choose one of the following:
    - **Landscape**: Content is not rotated.
    - **Portrait – bottom on left**: Content is rotated 90 degrees. Select this option if the bottom of the monitor is on the left when portrait oriented.
    - **Portrait – bottom on right**: Content is rotated 270 degrees. Select this option if the bottom of the monitor is on the right when portrait oriented.

> **Note**
> Choosing a portrait mode will rotate all images, videos, and HTML. However, for HDx20 and LSx22 models, content is not rotated on the player. Instead, you will need to rotate video or images in the source application (e.g. Photoshop, Adobe After Effects) before publishing them to the player.

- **Monitor overscan**: Select an overscan setting to determine how the content fills the display screen.
    - **No overscan – use full screen**: Displays content to the edge of the video signal.
    - **Overscan – action safe**: Restricts the display area to a size that is compatible with most displays.
    - **Overscan – title safe**: Restricts the display area to a size that is much smaller than the generated video signal.

> **Tip**
> Tip: Overscan is necessary with some older television screens that cut off content at the edges of the screen.

Click **Create** when you are finished configuring the presentation. The **Template** window will open.

Selecting a Template

Use the **View** dropdown list to choose between "System Templates" and "User Defined Templates" (see the Customizing Zone Layouts section to learn more about creating User Defined Templates). Select a multi-zone template you wish to use and click **Choose**—Remember that you can edit the zone layout at any time after choosing a template.
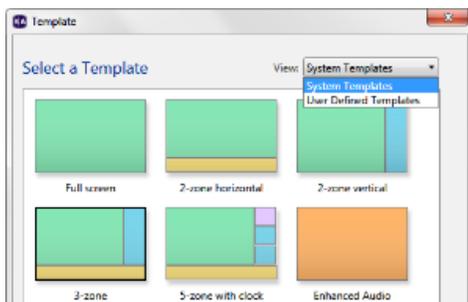
Adding Content to Zones

To add content to your zones, first designate a folder on your computer as your Media Library. This will make it easy to drag and drop image, video, and audio files into a zone playlist from a scrollable list of thumbnails.

1. Under Media Library, select the **files** tab.
2. Click to open the file browser.
3. Navigate to the folder where your content is stored.
4. Click **OK**.

> **Note**
> Note: If your content folder contains large files, it may take a while for the thumbnail images to appear.
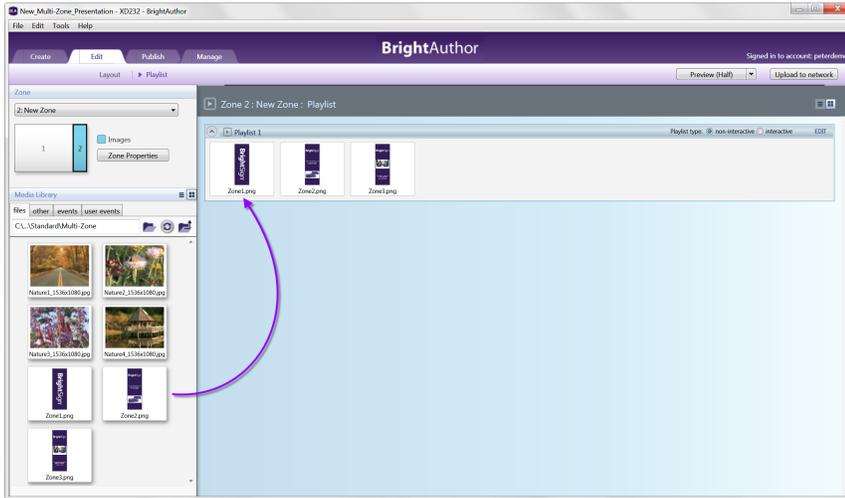
Use the dropdown menu under **Zone** to select a zone, then add media files to the zone by dragging files from the **Media Library** to the playlist area. You can do the following when adding media files:

- *Select a series of adjacent media files* – Hold the **Shift** key as you select the files in the Media Library.
- *Select a group of non-adjacent files* – Hold the **Ctrl** key as you select the files in the Media Library.
- *Refresh the Media Library* – Click . This will update the Media Library with any changes to the corresponding folder on your computer.
- *Move up to the parent directory of the current folder* – Click .
- *Move to a sub-directory of the current folder* – Click a file thumbnail in the Media Library.

> **Tip**
> You can also drag and drop media files directly into the playlist from a Windows Explorer window.

Editing the Zone Playlist

Once you've added media files to a zone, you can modify it by doing any of the following:

- *Remove an item from the playlist* – Click an item in the playlist area and press the **Delete** or **Backspace** key.
- *Change the order in which an item plays* – Click and drag an item to a new position in the playlist.
- *Rename the playlist* – Click **Edit** in the upper-right corner of the playlist area.
- *Change the playlist view* – Click the list/tile icon in the top-right of the playlist area to change the playlist view. Switching to a list view allows you to see the parameters of all media items and states in the playlist.
- *Replace media files in the playlist* – Go to **File** > **Replace media files**. The **Replace Media Files** window allows you to replace files within media states without having to drag and drop individual files. This is useful if you need to update a large number of media files in your playlist or if you want to ensure the playlist order is preserved.

    - **Replacement Media Folder**: Click **Browse** to select the folder that contains the files you want to add. This can be the same folder as your Media Library, or another folder.
    - **Preserve state names**: Check this box to preserve the names of the media states in the playlist. If this box is unchecked, the current media states will automatically take on the names of the new media files.
    - **Presentation Media Files**: For each file listed under **Current Media Files**, select a new file using the dropdown list beneath **Replacement Media File**.

To edit the playback settings of a media item, double-click the thumbnail in the playlist area (or right-click and select **Edit**), then choose the settings you want to apply to the selected item:

- **Image files**: Specify the following:
  - **Time on Screen**: The amount of time (in seconds) that the image displays in a zone before transitioning to the next item.
  - **Transition**: The transition effect that occurs from the previous media item to this image.
  - **Transition Duration**: The duration (in seconds) of the transition effect.
- **Video files**: Specify the **Volume** of the video.
- **Audio files**: Specify the **Volume** of the audio track.
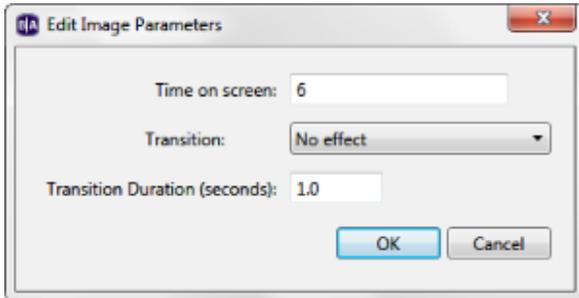
To edit settings for multiple items, press the **Ctrl** key and select items in the playlist. On the menu bar, select **Edit > Selected Items**, and then choose the settings you want to apply to the selected items. Note that the selected items must all be the same media or state type for this to work.

Next Steps

Now that you've created your multi-zone presentation, save it by navigating to **File > Save [project name]** (make sure you have the **Edit** tab selected). Then, do any of the following:

- *Publish the presentation* – Click the **Publish** tab and select your publishing method. See the Publishing Presentations section for more instructions.
- *Export the presentation* – Navigate to **File > Export [project name]**. This saves the presentation project as a package that can be opened by BrightAuthor instances on other computers.
- *Save the presentation using a new name or location* – Navigate to **File > Save [project name] As**.
- *Create another presentation* – Navigate to **File > New Presentation**.

CUSTOMIZING ZONE LAYOUTS

∨ BrightAuthor Version 4.6
- Version 4.4
- Previous Versions

ON THIS PAGE

- Layering Zones
- Adding Mosaic Video Zones
- Saving the Zone Layout as a Template

> **Tip**
> See this tutorial video for an overview of zone layouts.

If the system zone templates do not meet your needs, you can manually edit the zone layout of your presentation. You can then save it as a user-defined template for use with future presentations. Once you have created a presentation project via **File > New Presentation**, click **Layout** (below the **Edit** tab) and customize the zones by doing any of the following:

- *Rename the zone* – Enter a new name for the zone in the Name field.
- *Add a zone* – Click **Add zone**. Enter a **Zone name**, select the **Zone type**, and then click **OK**.
- *Delete a zone* – Click the zone and press the **Delete** key on your keyboard.
- *Change the position of a zone manually* – Click and hold a zone. Then drag it to the desired position.
- *Change the position of a zone using coordinates* – Enter the **Position** information. The **X** and **Y** values correspond to the horizontal and

vertical position (in pixels) of the top-left corner of the zone. Using coordinates to specify the position allows for exact alignment with other zones.

- *Resize a zone manually* – Click and hold one of the marks around the edge of a zone. Then drag it to create the desired zone size and shape.
- *Resize a zone using pixel values* – Specify the **Size** information. The **W** and **H** values correspond to the width and height of the zone (in pixels).
- *Make zones equal in size* – Press **Ctrl** and select the zones you want to resize. On the menu bar, click **Format** > **Make same size** and select a resize option.
- *Align multiple zones* – Press **Ctrl** and select the zones you want to align. On the menu bar, click **Format** > **Align** and select an alignment option.
- *Center one or more zones* – Select a single zone or press **Ctrl** and select the zones you want to center. On the menu bar, click **Format** > **Center in form** and select **Horizontally** or **Vertically**.
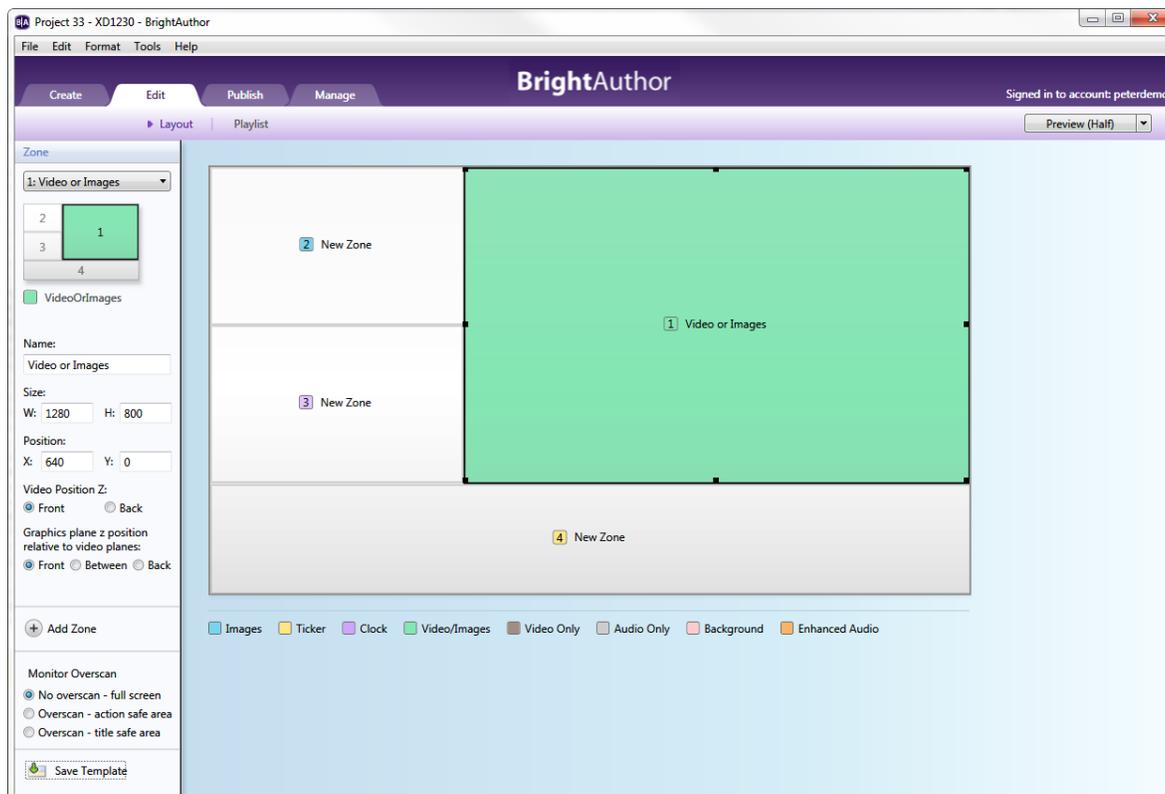
> **Note**
> The preview image is always displayed as landscape. If you're creating a portrait-mode presentation, refer to the portrait image on the left to see a more accurate representation of the screen layout.

Layering Zones

You can place multiple zones in the same screen area and use transparency and z-ordering options to creating layering effects. For example, you can place a Ticker or Clock zone on top of a Video Only zone and then edit the transparency of the Ticker or Clock zone (in the Zone Properties) to control how much of the underlying video shows through.

There can be three layers (or "planes") in a multi-zone presentation. Each of these planes can be ordered in relation to the others:

- Graphics Plane: This plane includes all Ticker, Clock, and Images zones (as well as the Video or Images zone if it's currently displaying an image or HTML page). Note that the layering of graphics zones with respect to each other can be unpredictable, and may change if the player firmware is updated or some other presentation setting is changed.
- Video Plane 1: This plane consists of a Video Only or Background Image zone (or a Video or Images zone if it's currently displaying video). The Background Image zone uses the video decoder to display an image, so it counts as a video plane.
- Video Plane 2: This plane consists of a second Video Only or Video or Images zone (if it's displaying video).

> **Tip**
> If you want to place an image behind a graphics element, use a Background Image zone to display the image.

Use the following options to edit the layering of the three planes:

- **Video Position Z**: (XT, XD, and 4K models only): Edit the z-ordering of one video plane in relation to another.
    - **Front**: Places the zone in front of another Video Only zone or Video or Images zone.
    - **Back**: Places the zone behind another Video Only zone or Video or Images zone.
- **Graphics plane z position**: Edit the z-ordering of the graphics plane in relation to the video plane(s).
    - **Front**: Places the graphics plane (including all Ticker, Clock and Images zones) in front of the video plane(s).
    - **Between**: Places the graphics plane between two video planes. If there is only one video plane, the graphics plane will appear behind it.
    - **Back**: Places the graphics plane behind the video plane(s).

Adding Mosaic Video Zones

If you set the **Video zone configuration** to **Mosaic** when creating your presentation, you will need to perform extra steps when adding Video Only or Video or Images zones:

1. Delete any video zones that were created with the presentation template.
2. Click **Add Zone** and select a Video Only or Video or Images zone.
3. Select a **Maximum Content Resolution**. This will determine the maximum resolution of video files you can add to the zone, as well as the maximum number of video zones you can add to your presentation. The maximum number of zones will also depend on the player model.
4. Use the **Add Zone** button to create additional video zones as desired. For each additional zone, you can select smaller maximum resolutions, but you cannot change the initial maximum resolution unless you remove all video zones from the presentation.
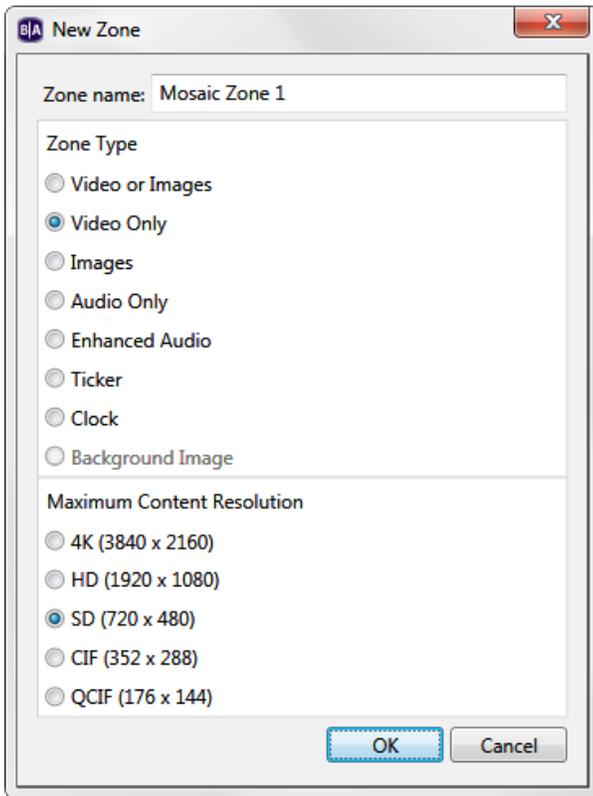
Saving the Zone Layout as a Template

Once you've created a zone layout, you can save it as a user-defined template. To save the layout as a template, click **Save Template** (in the lower-left portion of the screen). Enter a name for the template, and then click **OK**.

To use the customer template when creating a new presentation, click the **View** dropdown list in the upper-right corner of the **Template** window and elect **User Defined Templates** to view your templates.

Interactive Presentations

⌄ BrightAuthor Version 4.6

ON THIS PAGE

Tip
This tutorial video outlines the basic steps for creating an interactive presentation.

You can use BrightAuthor to create interactive presentations. Interactive presentations respond to interactive events, such as input from buttons or other GPIO devices, or from devices connected to a BrightSign communication port. The supported communication methods vary by BrightSign model:

- **USB devices (such as touch screens, mice, keyboards, barcode scanners, IR remote controls)**: XT1143, 4K1042, 4K1142, XD1033, XD1032, XD1132, XD1030, XD1230, HD1023, HD1022, HD1020, LS423, LS322, LS422
- **Networked devices**: All 4K, XD, and LS models, as well as the HD223, HD1023, HD222, HD1022, HD220, HD1020, and AU320
- **RS232 serial devices**: XT1143, 4K1042, 4K1142, XD1033XD1032, XD1132, XD1030, XD1230, HD1023, HD1022, HD1020, and AU320
- **GPIO devices**: All models except the LS423
- **Infrared (IR) devices**: All XT, 4K, and XD models

Creating an Interactive Presentation

Follow these steps to create an interactive playlist in a presentation:

1. Open or create a presentation project. If you haven't created a presentation before, see the Full-Screen Presentations section for details.
2. Under **Media Library**, click the

   button and select a folder that contains the files you want to include in your presentation.
3. Select a zone you want to make interactive.
4. Make the zone interactive: In the upper-right portion of the screen beside **Playlist type**, click **Interactive**.
5. Drag the desired content into the playlist area. This can include media from the **files** tab and states from the **other** tab.

Note
Multi-zone presentations can include both non-interactive and interactive zones.

Choosing a Home Screen

The Home Screen is the first media file in an interactive playlist. It is where the interactive presentation begins (within a particular zone). Home Screens usually include one of the following:

- An attract video that loops until the user provides input
- A list of options from which the user can choose the next action (e.g. an Interactive Menu)

By default, the first item you drag into an interactive playlist will become the Home Screen. It is identified by the

Home icon. You can change the Home Screen at any time by double-clicking the desired file in the playlist and checking the **Set as initial state** box.
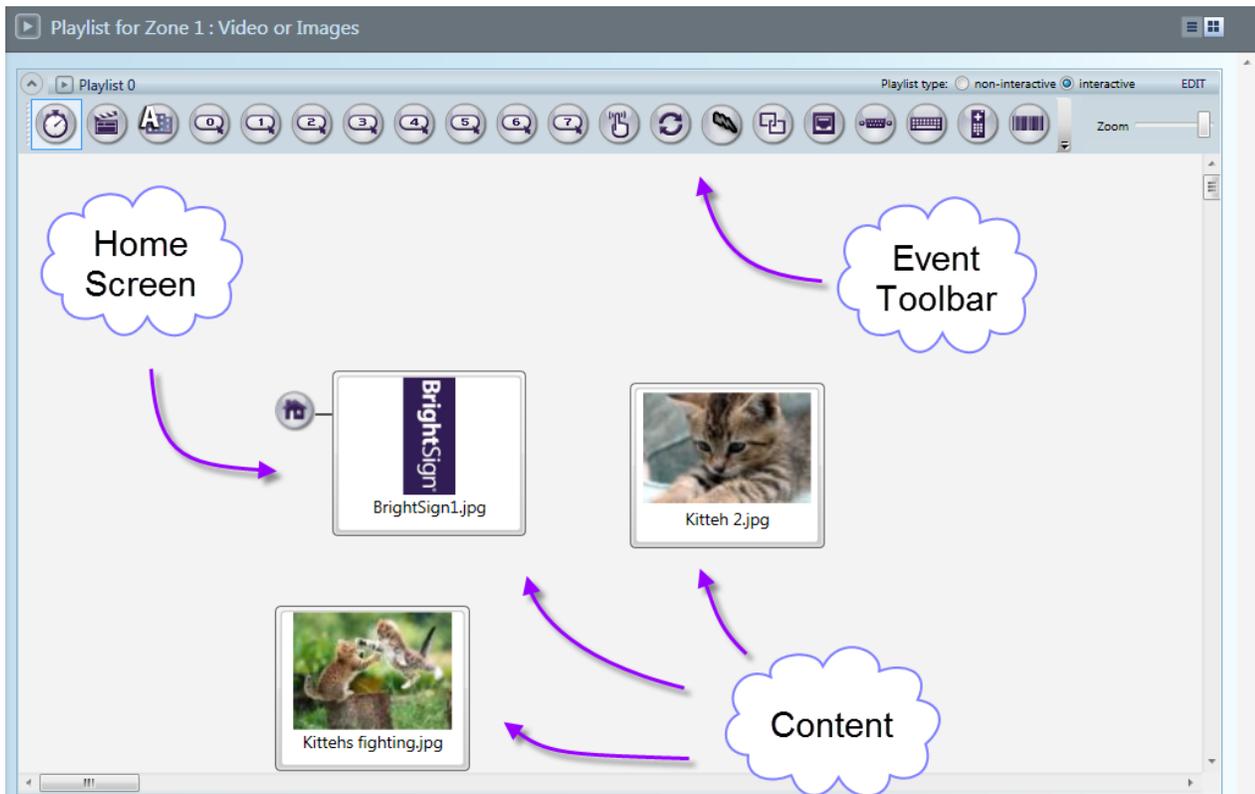
Defining Interactive Events

Interactive events link files in the playlist and determine what must occur before one file transitions to another. In the user interface, files are referred to as "states," where the current file is the "current state," and the file transitioned to is the "next state." We refer to creating and linking interactive events between states will be referred to as "defining events".

The easiest way to define events is to use the **Events Toolbar**, which is located at the top of the playlist area.

1. In the **Event Toolbar**, click the interactive event icon that corresponds to the type of event you want to define. For example, to define what happens when a user presses button 1 on a GPIO button board, click .
2. Click (and hold) the file name below the thumbnail image of the current state.
3. Drag the hand pointer to the thumbnail image of the media file you want to play next (i.e. the next state).

You can also define events using the **events** tab:

1. Select the **events** tab under **Media Library**.
2. Drag the event icon onto the thumbnail of a state. This will be the state that the event transitions away from.
3. An Event window will automatically open. Here, you can specify the state that the event will transition to. See the Editing Interactive Events section for more details.

Interactive events can start with any item and correspond to any other item in the playlist. For example, you can set the first interaction to display an image when the user presses button 1 from the Home screen. By defining a new event with the same event icon, you can set a second interaction to display another media file when the user presses button 1 again.

> **Important**
> Make sure your defined events work in a loop. In the playlist shown below, a user can transition from the Home Screen to the other images by pressing button 1 or button 2. After a set period of time (indicated by the timeout events), the presentation will return to the Home Screen.
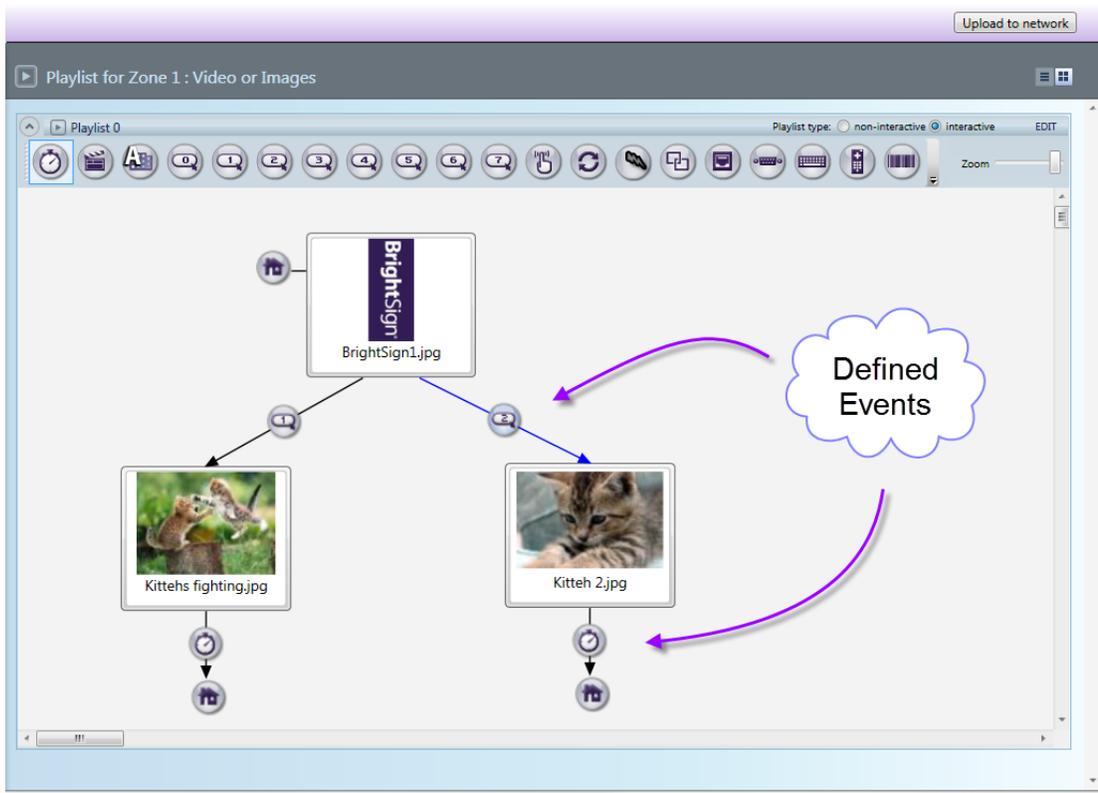
Defining Multiple Events

You can define more than one event at a time. This is useful if you want multiple states to transition to a single state using the same event type.

1. Right-click and drag the cursor within the playlist area to select multiple states. Alternatively, you can pres and hold **Ctrl** to select multiple states.
2. With the states selected, define the interactive event from one media file, and it will then be created for all selected files.

Customizing the Interactive Playlist

In the upper-right portion of the screen, you can use the **Zoom** control to adjust your view of the playlist area. When you switch between multiple interactive zones, BrightAuthor will remember the zoom setting last used for each zone.

If you don't see the event you want in the playlist toolbar, click the arrow to the left of the **Zoom** control. Here, you can add or remove event icon buttons from your toolbar.
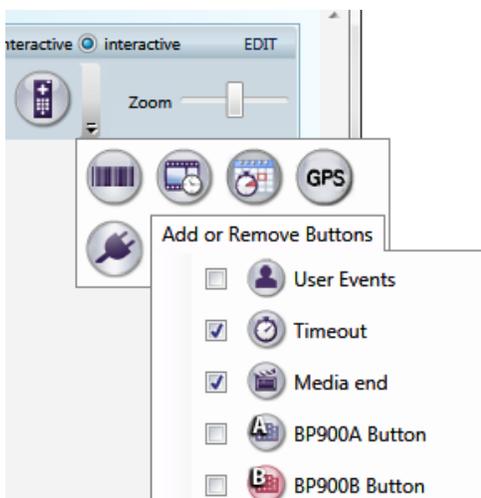
EDITING INTERACTIVE EVENTS

You can further adjust how your media files transition from state to state by double-clicking Event icons (or right-clicking and then clicking **Edit**). For example, if you create an event with the Timeout Event icon, the media file displayed in your presentation will transition to the next state after a certain period of time. You can adjust this time period by double-clicking the Timeout Event icon between the two media files and changing the duration in the **Timeout Event** window.

Double-clicking an event icon opens the Event window, which is the same window that automatically opens when you drag an event icon from the **events** tab onto the playlist. The Event window will present options specific to the type of interactive event chosen, along with the following options:

- **Transition to new state**: The presentation will transition to a new state when the interactive event occurs. Use the dropdown list to specify which state in the playlist will be next.
- **Return to prior state**: The presentation will revert to the previous media file when the interactive event occurs.
- **Remain on current state**: The state will not change when the interactive event occurs. This option is useful when you need to perform actions that are not immediately visible, such as sending a UDP command, altering the value of a user variable, or lowering the volume. These actions are performed by attaching commands to an event; see the Commands page for more details.
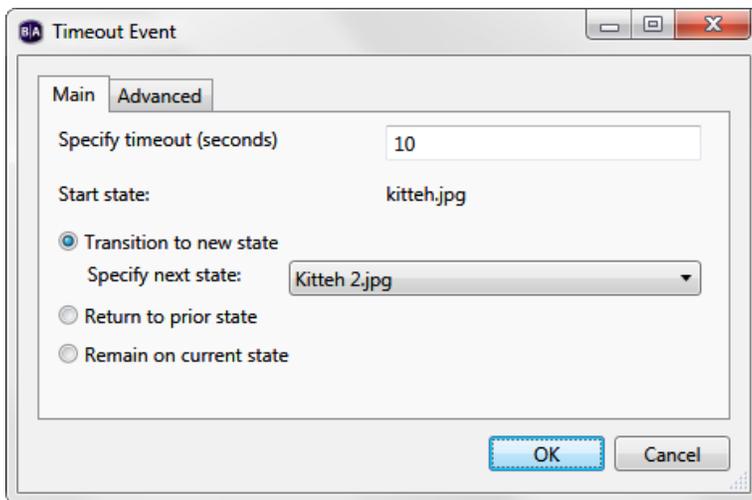
EDITING MEDIA PROPERTIES

You can edit individual files in an interactive playlist by right-clicking the file icon and selecting **Edit**. The **Media Properties** window will open.

- **State name**: The current state name as it appears in the interactive playlist. You can edit the name in this field.
- **Current file**: The filename of the current file associated with the state. This field cannot be edited.
- **Select different file**: Use the dropdown menu to select a different media file to associate with the state. This is useful for preserving events and commands that were defined for the original file. The change *will not go into effect* until the **Update** button is pressed (even if you click **OK**). If you need to replace all instances of a particular media file within your presentation, navigate to **File > Replace Media Files**.
- **Transition**:(Image states only) Use the dropdown list to select a special transition effect that will occur when the image appears on the display.
- **Transition duration**:(Image states only) Specify how long the transition effect will take to complete. This duration should be less than the amount of time the image is displayed on screen.
- **Loop media**: (Video states only) Choose this option to loop the video indefinitely when no Media End event is attached to the state.
- **Hold last video frame**: (Video states only) Choose this option to display the last frame of the video after it ends when no Media End event is attached to the state.

Click the **Advanced** tab to store the image in the cache, set display mode for video files (2D, 3D side-by-side, 3D top-over-bottom), or add commands.
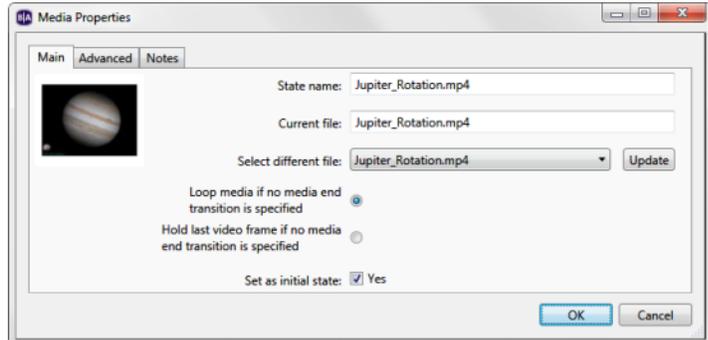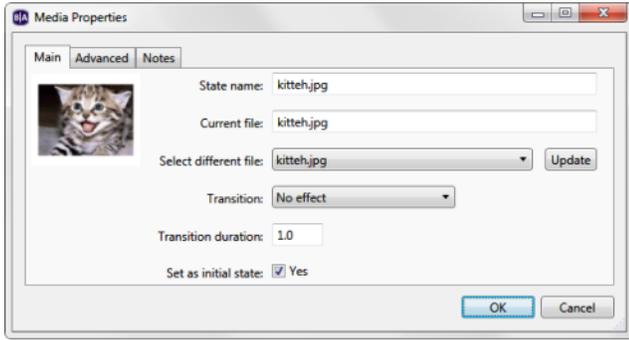
> **Tip**
> You can delete a defined event (or file) at any time by clicking the icon/thumbnail and pressing **Delete** on your keyboard.

COPYING, IMPORTING, EXPORTING STATES

⌄ BrightAuthor Version 4.6
- Version 4.4
- Previous Versions

All states can be copied, exported, and imported. Copying or exporting a state (or set of states) will also copy all commands and notes attached to that state. This process will only preserve events that transition among the set of copied/exported states.

- *Copying*: With a state selected, right-click the state and select **Copy**, navigate to **Edit > Copy**, or press Ctrl+C. You can also copy multiple states by holding down Ctrl while selecting the desired states.
- *Pasting*: Right-click a playlist or Super State canvas and select **Paste**, navigate to **Edit > Paste**, or press Ctrl+V. Note that a pasted state will appear at the same canvas position as the original state; if the original state has not moved, it may be difficult to tell that the paste action occurred.
- *Exporting*: With a state selected, right-click the state and select **Export** or navigate to **Edit > Export**. You can also place multiple states into a single export file by holding down Ctrl while selecting the desired states. The exported state(s) will be saved as a single file with a *.bse* extension in the specified directory.
- *Importing*: Right-click a playlist or Super State canvas and select **Import States**, or navigate to **Edit > Import States**. You will be prompted to select the *.bse* file containing the state(s) you wish to export.

COMMANDS

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ON THIS PAGE
- Adding Commands to an Event
- Adding Commands to a State or Media File
- Command Types
  - Set Audio
  - Connector Volume
  - Zone Volume
  - Send
  - Link
  - Video
  - BrightControl
  - Other

Commands allow you to add extended functionality to your presentations. Commands can help you control displays and devices (Display On, GPIO On, etc.) or perform additional actions when interactive events are performed (Pause Video, Set Volume, etc.).

You can add commands to interactive events or to states. If you add a command to the interactive event, the command will be performed when that event occurs. If you want to add a command to a state, you will need to choose between an **Entry Command** (executed upon entering the state) or an **Exit Command** (executed upon leaving the state). Some Commands (such as Switch Presentation) can only be added to interactive events.
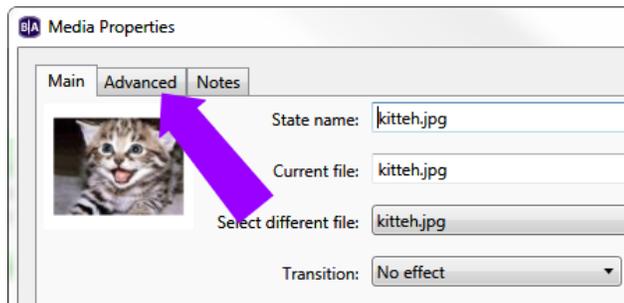
Adding Commands to an Event

Follow these steps to add a command to an interactive event:

1. Double-click the event icon in the playlist area.
2. Click the **Advanced** tab.
3. Click **Add Command**.
4. Use the dropdown list under **Commands** to choose the category of the command.
5. Use further dropdown lists and fields to set additional **Command Parameters**.

Adding Commands to a State or Media File

Follow these steps to add a command to a state or media file:

1. Double-click the media file thumbnail in the playlist area.
2. Click the **Advanced** tab.
3. In the **Entry Commands** or **Exit Commands** section, click **Add Command**.
4. Use the dropdown list to specify a command.
5. Use further dropdown lists and fields to set additional parameters for the command.

Command Types

This section outlines available command categories and types.

Set Audio

Changes the audio settings of a zone. Note that triggering the Set Audio command while an audio/video file is playing will cause playback to freeze (though the player will still respond to Interactive Events like Timeout, UDP Input, etc). You can also use the Set Audio command while displaying an image file, or you can attach the Set Audio command to an interactive event that transitions to or from an audio/video file.

- **Zone**: Specifies the zone to which the audio settings will apply.
- **Audio Output**: Enables or disables the Analog Stereo, HDMI, and SPDIF audio outputs.
  - **Pass through**: Supplies the un-decoded audio signal through the HDMI/SPDIF connector. Use this option if the presentation audio (for example, AC3 Dolby Digital) is being decoded on an external device.
  - **Stereo**: Supplies the decoded audio signal through the HDMI/SPDIF connector.
- **Audio Mixing**: Specifies which part of the audio signal to send.
  - **Stereo**: Sends both left and right audio signals.
  - **Left**: Sends the left audio signal only.
  - **Right**: Sends the right audio signal only.

Connector Volume

Changes the audio volume of a specific connector.

- **Set**: Specifies the volume level. Select the Audio (i.e. analog), HDMI, or SPDIF connector in the dropdown list and enter a volume value between 0 and 100 in the field.
- **Increment**: Specifies how much the volume level increases with each interaction. Select the Audio (i.e. analog), HDMI, or SPDIF connector in the dropdown list.
- **Decrement**: Specifies how much the volume level decreases with each interaction. Select the Audio (i.e. analog), HDMI, or SPDIF connector in the dropdown list.
- **Mute**: Turns the connector audio output off. Use the checkboxes to select among the Audio (i.e. analog), HDMI, and SPDIF connectors.
- **Unmute**: Turns the connector audio output on. Use the checkboxes to select among the Audio (i.e. analog), HDMI, and SPDIF connectors.

Zone Volume

Sets the volume for a zone. Note that the **Connector Volume** settings take precedence over the **Zone Volume** settings when both are active in a presentation.

- **Set**: Specifies an absolute volume level for a zone. Use the dropdown menu to select the zone to which this command applies and enter a volume value between 0 and 100.
- **Increment**: Specifies how much the volume level increases with each interaction. Use the dropdown menu to select the zone to which this command applies and enter an increment amount.
- **Decrement**: Specifies how much the volume level decreases with each interaction. Use the dropdown menu to select the zone to which this command applies and enter a decrement amount.

Send

Sends information using the following interfaces:

- **Send Zone Message**: Triggers a Zone Message event with the same command parameter as the Send Zone Message command.
- **UDP**: Sends a message to a networked device using the UDP protocol. Use the **File > Presentation Properties > Interactive** tab to specify the destination address and port for UDP messages.
- **Send IR Remote**: Sends a command via the 3.5mm IR Out port (XT, 4K, and XD models only).
- **Send IR Remote (Pronto)**: Sends a command using Pronto Hex Code (PHC) via the 3.5mm IR Out port (XT, 4K, and XD models only).
- **Serial string (EOL)**: Sends the specified string to the specified serial port. This command adds a carrier return at the end of the string.
- **Serial string (no EOL)**: Sends the specified string to the specified serial port. This command does not add a carrier return at the end of the string.
- **Serial byte**: Sends the specified byte to the specified serial port. The byte must be entered in decimal format (0-255).
- **Serial bytes (comma separated)**: Sends the specified bytes to the specified serial port in comma-separated format.

> **Note**
> Most standard RS-232 serial devices enumerate on port 0. If you are connecting a USB-serial device, it will enumerate on port 2.

- **Send Plugin Message**: Sends the specified string to a custom script plugin attached to the presentation. Use the dropdown menu to select a desired script plugin. Please see the Parsers and Plugins tech note for more information on creating custom scripts that can receive plugin messages.

Link

Connects presentation zones or synchronizes BrightSign players.

- **Synchronize**: Specifies the Synchronization trigger.
- **Zones**: Specifies the Link Zones trigger.

> **Tip**
> This tutorial video describes how to use Link Zones commands to create a synchronized presentation.

GPIO

Sends a GPIO command.

- **On**: Turns on the specified GPIO output.
- **Off**: Turns off the specified GPIO output.
- **Set State**: Enables you to turn each GPIO line on or off.

Video

Changes the video playback settings:

- **Pause video:** Pauses video playback.
- **Resume video:** Resumes video playback.
- **Enable monitor power save mode:** Turns the monitor's power saving mode on.
- **Disable monitor power save mode:** Turns the monitor's power saving mode off.

BrightControl

Sends commands to monitors and other digital signage displays:

- **Display On:** Turns the display on.

- **Display Off:** Turns the display off.
- **Send Ascii String:** Sends a CEC command. The provided string will be converted to hexadecimal format before being sent to the display.

> **Important**
> BrightControl CEC command strings cannot contain spaces.

- **Set Philips Volume:** Sets the Philips TV volume.

Other

Sends various commands that are not contained within the above categories.

- **Pause:** Pauses presentation playback for a specified number of milliseconds.
- **Reboot:** Reboots the BrightSign player.
- **Set Variable**: Sets a new value for the specified User Variable.
- **Increment Variable**: Increases the value of the specified User Variable by 1.
- **Decrement Variable**: Decreases the value of the specified User Variable by 1.

> **Note**
> The Increment Variable and Decrement Variable commands have the following special rules:
>
> - If the command is used on a number with a decimal value, the number will be converted to an integer by removing the decimal (i.e. the number is always rounded down).
> - If the command is used on a string, the value will be converted to a zero. Then the increment/decrement action will be performed on the zero. Negative numbers are also possible.

- **Reset Variable**: Resets the specified User Variable to its current default value.
- **Reset Variables**: Resets all User Variables to their current default values and all Media Counters to zero.
- **Switch to Presentation**: Switches to a different presentation. Before using this command, you must add additional presentation(s) to the Switch Presentations tab in the **Presentation Properties** window. The following settings of must be identical for both presentations: BrightSign Model, Connector Type, Screen Resolution, Monitor Orientation, and Monitor Overscan.
    - **Specify Presentation**: Choose the presentation to switch to from the dropdown list.
    - **Specify via user variable:** Choose the User Variable that will determine which presentation to switch to. The value of the User Variable must be identical to the name given to the target presentation in the **Switch Presentations** tab.
- **Update Data Feed**: Updates the content of the specified Data Feed.
- **Resize Zone**: Repositions and/or resizes the specified zone. Select the zone you wish to modify. Then enter an **X** and **Y** coordinate (corresponding to the top-left corner of the zone), as well as **W** and **H** (width and height) values for the zone.
- **Hide Zone**: Hides the specified zone from view.
- **Show Zone**: Shows the specified zone if it is hidden.

> **Note**
> The Hide Zone and Show Zone commands do not affect Audio Only, Enhanced Audio, or Background Image zones.

CONDITIONAL TARGETS

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Conditional targets allow you to change the settings of an event transition depending on the value of a User Variable. You can set multiple conditional targets for a single event, and you can specify new commands to occur when the conditional target is met. With this feature, you can change the behavior of a presentation based on a wide array of interactive and networked conditions.
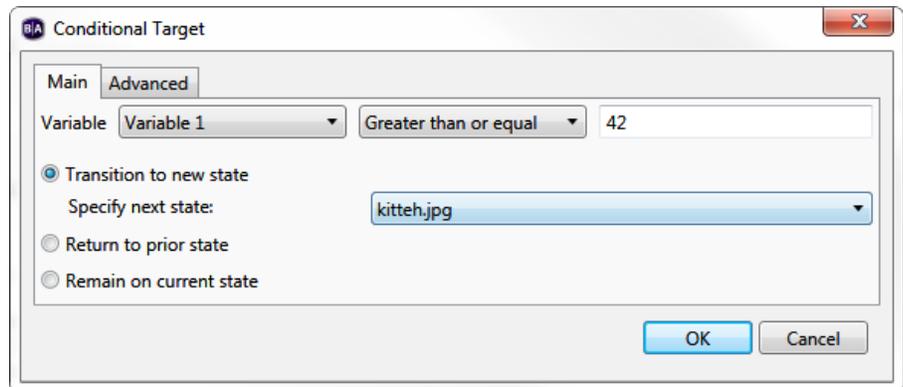
> **Note**
> Conditional Targets are only available if you have created one or more User Variables in the **File > Presentation Properties > Variables** window.

Follow these steps to add a conditional target to an event:

1. Select the **Advanced** tab while creating or editing an event.
2. Click the **Set Conditional Targets** button.

3. Click **Add Conditional Target** in the **Conditional Targets** window (you can also click a preexisting Conditional Target to edit it).
4. In the first dropdown menu, select the User Variable that will trigger the Conditional Target.
5. In the second dropdown menu, select the conditional operator that will compare the current value of the variable against the value set in the field to the right. The transition behavior and Commands you specify in this window will only occur when the entire statement—the variable, the operator, and the target value—is true. These are the conditional operators that are currently available:
   a. Between
   b. Less than (<)
   c. Less than or equal (<=)
   d. Equals (=)
   e. Greater than or equal (>=)
   f. Greater than (>)
6. Determine what will happen if the Conditional Target is met:
   a. **Transition to new state**: The presentation will transition to a new state. Use the dropdown list to specify a new state.
   b. **Return to prior state**: The presentation will return to the previous state.
   c. **Remain on current state**: The state will not change.
7. Select the **Advanced** tab to add Commands to the Conditional Target. Commands will trigger when the target is met. See the Commands page for more information.
8. Click **OK** to save the conditional target.

> **Note**
> In the target value field, you can enter either a fixed integer or the name of another user variable (e.g. "when Variable A is equal to 42" or "when Variable A is equal to Variable B"). For user variables, you must enter the name of a target variable between two sets of dollar signs (e.g. "$$my_variable$$").

DYNAMIC USER VARIABLES

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ON THIS PAGE

- Web Browser
- UDP, Serial Input, and Plugin Message Events

There are several ways to change the values of User Variables in an interactive presentation. See the Variables page for more information about creating User Variables and setting default values.

`Web Browser`

You can view and update User Variables using a web browser. To do this, your computer must be connected to the same local network as the BrightSign player, and you must enable the Local Web Server on the player:

1. Navigate to **Tools > Setup BrightSign Unit**.
2. Check the **Enable local web server** box.
3. Enter a user name and password for the web server if desired.
4. Set the rest of the options in the **BrightSign Unit Setup** window and complete the unit configuration process (see the Setting up BrightSign Players for more information).
5. Wait for the player to complete the entire boot process.
6. Use the address bar of a web browser to navigate to device IP port 8008. For example, if the IP address of your BrightSign player is 192.168.1.2, then you would enter 192.168.1.2:8008. You will be provided with a web page that lists all User Variables and allows you to modify them.

> **Tip**
> If you do not know the IP address of your player, you can obtain it by powering up the player without an SD card inserted: The IP

address, along with other information about the unit, will be displayed on screen once the unit boots.

```
UDP, Serial Input, and Plugin Message Events
```
You can change the value of User Variables using the input from a UDP Input, Serial Input, or Plugin Message event:

1. Create a new UDP Input, Serial Input, or Plugin Message (or edit an existing one).
2. If using a UDP Input event, type <any> into the **Specify UDP input** field. The field can contain either the wildcard designator by itself or additional text with the wildcard designator (e.g. "message_<any>").
3. If you are using a Serial Input or Plugin Message event, enter the <*> wildcard designator into the **Specify serial input** or **Plugin messa ge field**. The field can contain either the wildcard designator by itself or additional text with the wildcard designator (e.g. "message_<*>").
4. Check the box labeled **Assign input to variable**.
   a. Select **Specify fixed variable** if you want to choose a fixed User Variable in the BrightAuthor presentation. Use the dropdown list to choose which User Variable the UDP input will modify. The UDP/serial string must be input in the form of <variable value>.
   b. Select **Input specifies variable** if you want the UDP/serial input string to dynamically specify which User Variable is being modified. The UDP/serial string must be input in the form of <variable name> : <variable value>.
5. Check the box labeled **Assign wildcard to variable** to specify the value of a User Variable using the <any> or <*> wildcard designator. Select the User Variable to modify using the dropdown menu to the right.
6. Press **OK** to save the settings.

> **Note**
> If you select **Input specifies variable**, you can modify more than one User Variable with a single event. Use the following UDP/Serial string: "<variable name> : <variable value> !! <variable name> : <variable value>"

> **Note**
> It is possible to check both **Assign input to variable** and **Input specifies variable** boxes for more complex functionality. For example, you use **Specify fixed variable** to assign the entire UDP string to one variable, while at the same time using **Assign wildcard to variable** to assign a subset of that string to another variable.

Creating Playlists and Feeds

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- Version 4.4
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You can use the **Create** tab to generate media playlists and text feeds that are hosted on the BSN servers. You can edit these playlists/feeds in BrightAuthor or the BrightSign Network WebUI, and the changes will be automatically distributed to all players that use them.

> **Note**
> *A BrightSign Network subscription is required to create Dynamic Playlists and Live Data Feeds.*

Dynamic Playlists

⌄ BrightAuthor Version 4.6
- Version 4.4
- Previous Versions

ON THIS PAGE

- Creating a Dynamic Playlist
- Updating a Dynamic Playlist
- Adding a Dynamic Playlist to your Presentation

Use Dynamic Playlists to easily update media playlists in multiple presentations. For example, if you need to add a set of daily announcements to multiple presentations, and you don't want to update each presentation separately, you can add a single Dynamic Playlist to all of your presentations. When you update the Dynamic Playlist, every presentation that includes the Dynamic Playlist receives the new content. In this way, a single update can reach multiple presentations.

Creating a Dynamic Playlist

> **Tip**
> You can create Dynamic Playlists in the BSN WebUI as well.

Follow these steps to create and upload a Dynamic Playlist:

1. Click the **Create** tab and select **Dynamic Playlist**.
2. On the menu bar, click **File** > **New Dynamic Playlist**.
3. Choose the **Image or Video** or **Audio Only** option for the Dynamic Playlist.
4. Add files to your Media Library by clicking the **Browse** button and selecting a folder that contains the files you want to include in your Dynamic Playlist.
5. Drag the desired media files to the playlist area.
6. Click the **Upload to Network** button in the upper-right portion of the screen.
7. You will be prompted to save the playlist. Click **Yes**. The **Save As** window will open. Type a name for your playlist and click **Save.** The **Save Complete** window will open. Click **OK.** The playlist will now be uploaded onto the BrightSign Network.

> **Note**
> Dynamic Playlists containing audio can be added to Audio Only, Enhanced Audio, Video or Image, and Video Only zones, while Dynamic Playlists containing image/video content can be added to Images, Video or Images, or Video Only zones.

Updating a Dynamic Playlist

You can change the content of the Dynamic playlist at any point by opening the playlist (**File** > **Open Dynamic Playlist**) from the **Create** tab. Once you've edited the playlist, click **Upload to Network** to update it. All players using the Dynamic Playlist will be updated in real time.

Adding a Dynamic Playlist to your Presentation

Follow these steps to add a Dynamic Playlist to a presentation:

1. Navigate to the **Edit** tab.
2. Click the **other** tab under **Media Library**
3. Drag a **Media RSS** item into the playlist area.
4. When prompted to select a Data Feed, click **Add Data Feed**.
5. Enter a **Feed name**. This does not need to be the same name given to the Dynamic Playlist.
6. Under **Feed specification**, select **Dynamic Playlist** and choose the playlist from the dropdown menu.
7. Under **Data feed content usage**, select **MRSS Feed**.
8. Use the **Update Interval** dropdown menu to determine how often the player should check in with the BrightSign Network servers to update the Dynamic Playlist.
9. Click **OK**.

Live Data Feeds

∨ BrightAuthor Version 4.6
- Version 4.4
- Previous Versions

ON THIS PAGE

- Creating a Live Data Feed
- Adding a Live Data Feed to Your Presentation

Similar to an RSS feed, a Live Data Feed consists of an indexed list of Titles and Values: Each Title has an associated Value. Live Data Feeds can have numerous applications in a presentation. They can be used as updatable text feeds in Ticker zones or as individual text widgets in a Live Text state. They can even be used to remotely update the values of User Variables.

Creating a Live Data Feed

> **Tip**
> You can create Live Data Feeds in the BSN WebUI as well.

Follow these steps to create and upload a Live Data Feed.

1. Click the **Create** tab and select **Live Data Feed**.
2. On the menu bar, navigate to **File** > **New Data Feed**.
3. Click the **Add Item** button to create a new feed entry.
4. Enter a **Title** for the feed entry. The title, as well as the index number, allows you to pick a specific entry to display when using RSS feeds in Live Text.
5. Enter a **Value** for the feed entry. This is the portion of the feed that will be displayed on screen.
6. Use the up and down arrows to reorder the list of entries. You can also use the **X** button to delete an entry.
7. When you are finished adding entries, click the **Upload to network** button in the upper-right portion of the screen (you must be connected to the BrightSign Network). You will be prompted to save the feed as an XML file before uploading it to the network. The name you give to this XML file will be the name associated with this feed on the BrightSign Network.

You can save a copy of the feed any time by navigating to **File > Save New Feed** or **File > Save New Feed As**. You can later retrieve the feed by navigating to **File > Open Live Data Feed**.

Adding a Live Data Feed to Your Presentation

Follow these steps to add a Live Data Feed to you presentation:

1. While in the **Edit** tab, navigate to **File > Presentation Properties > Data Feeds**.
2. Click **Add Data Feed**.
3. Enter a **Feed name**. This does not need to be the same name given to the Live Data Feed.
4. Under **Feed Specification**, select **Live Data Feed** and choose the feed from the dropdown menu.
5. Under **Data feed content usage**, select **Text**.
6. Use the **Update Interval** dropdown menu to determine how often the player should check in with the BrightSign Network servers to update the Live Data Feed.
7. Click **OK**.

You can now add the text of the Live Data Feed to your presentation via Live Text and RSS Feed states.

Tagged Playlists

∨ BrightAuthor Version 4.6
  - Version 4.4
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Tagged Playlists allow you to create BrightSign Network playlists based on customizable media tags. You can use this feature to define a flexible set of rules to dynamically build a playlist based on a wide range of intuitive conditions.

> **Example**
> You are managing networked BrightSign players at a dozen different retail locations. Each player requires some unique media to match its retail location, and some locations, depending on the region, have more media files in common than others. Instead of creating a dozen different presentations (and managing each presentation separately), you can create a single Tagged Playlist with location, region, and event tags (or any other tags you need; they're completely customizable) to ensure the right media gets played in the right place at the right time.
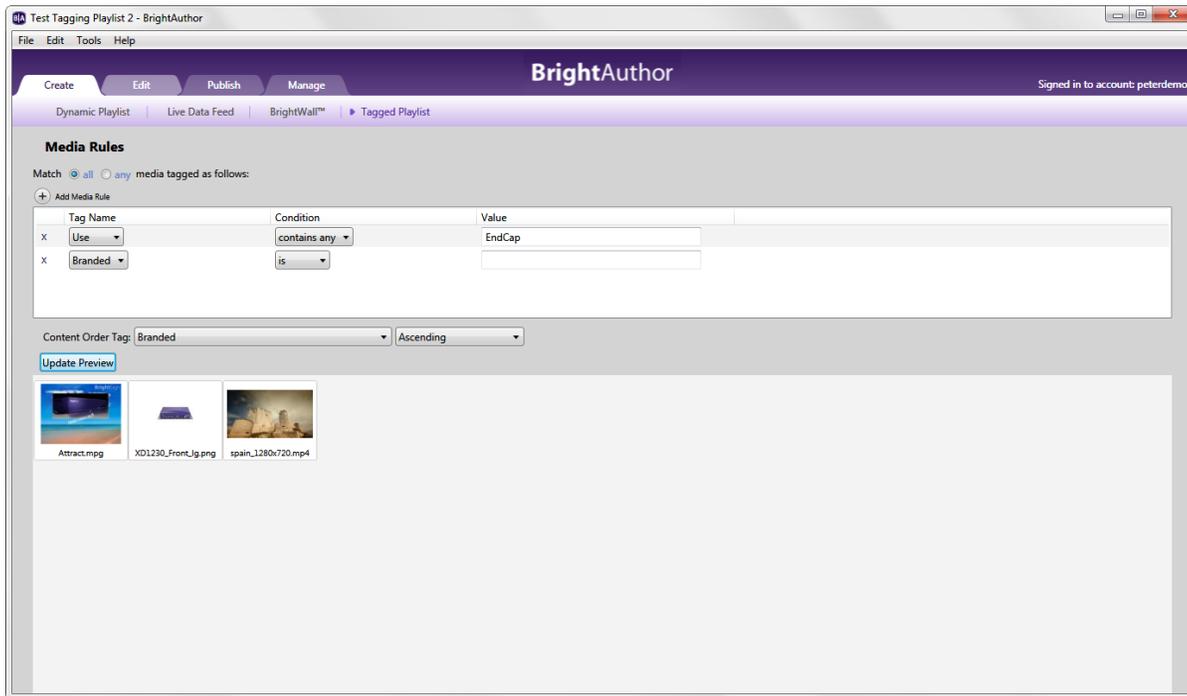
> **Note**
> You may want to tag media files before creating a Tagged Playlist. This will allow you to view which media files are included in the Tagged Playlist while you define the tagging rules.

1. Click the **Create** tab.
2. Select **Tagged Playlist** in the secondary task bar.
3. Under **Media Rules**, select whether you want the playlist to match **all** tags or **any** tag:
    a. **All**: For a media file to be included in this Tagged Playlist, it must match *all* conditions you define in the **Media Rules** section. The more conditions you add, the more *exclusive* the playlist will tend to be.
    b. **Any**: For a media file to be included in this Tagged Playlist, it only needs to match one of the conditions you define in the **Media Rules** section. The more conditions you add, the more *inclusive* the playlist will tend to be.
4. Click **Add Media Rule** to add a tagging condition:
    a. **Tag Name**: Select a tag from the dropdown menu. The list includes all media tags you've defined in your BSN library, as well as a set of default media attribute tags (FileName, FileSize, UploadDate, etc.) that apply to all media files.
    b. **Condition**: Select a rule to match media with the specified tag:
        i. **is**: Tagged media that equals the specified **Value** will be matched.
        ii. **is not**: Tagged media that does not equal the specified **Value** will be matched.
        iii. **contains all**: Tagged media that contains all of the specified values for the tag will be matched. If a tag for a media file contains additional values beyond the matched list of values, that media file will still be matched. Separate each tag value using a comma without spaces (e.g. "NewDeals,DailyDeals,Promotions").
        iv. **contains any**: Tagged media that contains any of the specified values for the tag will be matched. Separate each tag value using a comma without spaces (e.g. "appetizers,drinks,specials").
        v. **contains**: Tagged media that has one or more values containing the specified sequence of (case-insensitive) characters will be matched: For example, specifying a **Value** of "deal" will match "deals", "Deals", and "New_Deals" values.
        vi. **does not contain**: Tagged media that has no values containing the specified sequence of (case-insensitive) characters will be matched: For example, specifying a **Value** of "day" will exclude "DayOfWeek", "Monday", and "0days" values.
        vii. **begins with**: Tagged media that has one or more values beginning with the specified sequence of (case-insensitive) characters will be matched: For example, specifying a **Value** of "day" will match "DayOfWeek", but not "Monday".
        viii. **ends with**: Tagged media that has one or more values ending with the specified sequence of (case-insensitive) characters will be matched: For example, specifying a **Value** of "day" will match "Monday", but not "DayOfWeek".
        ix. **is less than**:(file size only) Media with a file size (in bytes) smaller than the specified value will be matched.
        x. **is greater than**:(file size only) Media with a file size (in bytes) larger than the specified value will be matched.
        xi. **is in the range**:(file size, upload date, last modified date only) Media with a file size (in bytes), upload date, or last modified date within the range of values will be matched.
        xii. **is not in the range**:(file size, upload date, last modified date only) Media with a file size (in bytes), upload date, or last modified date outside the range of values will be matched.
        xiii. **is after**:(upload date, last modified date only) Media that was uploaded or last modified after the specified date will be matched.

xiv. **is before**:(upload date, last modified date only) Media that was uploaded or last modified before the specified date will be matched.

xv. **in the last**:(upload date, last modified date only) Media that was uploaded or last modified in the amount of time before the specified date will be matched. Specify an amount of time (in days, months, or years), along with the target date.

xvi. **not in the last**:(upload date, last modified date only) Media that was not uploaded or last modified in the amount of time before the specified date will be matched. Specify an amount of time (in days, months, or years), along with the target date.

   c. **Value**: Enter a value to match with the tag value using one of the above conditions.

5. Use the **Content Order Tag** dropdown list to determine how media files should be automatically ordered in the playlist. Use the first dropdown menu to select a tag: The values of this tag will be used as the ordering criteria. Use the second dropdown menu to determine if the order should be ascending (**ASC**) or descending (**DESC**) alphabetically/numerically.

6. Click the **Update Preview** button to see how changing the media rules modifies the contents of the Tagged Playlist.

7. Reorder the playlist if needed by dragging and dropping media files. If newly tagged media is included in the playlist later on, it will be added to the end of the playlist using the **Content Order Tag** settings outlined above.

8. Select **File > Save** to save the playlist to your BSN account.

9. Enter a **Tagged playlist name** and click **OK**.

You can also use the **File** menu to rename the Tagged Playlist (**Save [playlist name] As..**), retrieve a Tagged Playlist from your BSN account for editing (**Open Tagged Playlist**), or create a new Tagged Playlist (**New Tagged Playlist**).

> **Tip**
> Use the **Presentation Properties > Data Feeds** tab to add a Tagged Playlist to a BrightAuthor presentation.

Presentation States

∨ BrightAuthor Version 4.6

- Version 4.4
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In its simplest form, a presentation can contain image, video, and/or audio files. However, BrightAuthor also features a number of presentation *states* that allow you to expand the functionality and versatility of your projects. For example, if you want to have dynamic, remotely updatable media in your playlist, you can add a Media RSS Feed state to your playlist and point it at a hosted feed URL.

To add a state to your presentation, click the **other** tab under Media Library and drag the desired state into the playlist area.

> **Note**
> You can add any state to an interactive playlist, but some states cannot be used in non-interactive playlists because they require interactive input.
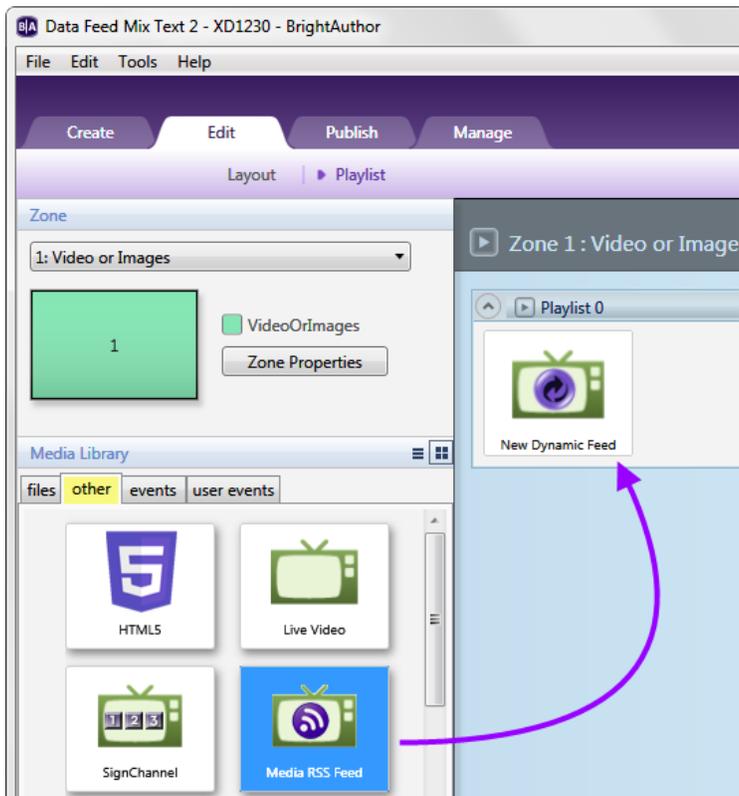
Non-Interactive States

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Non-interactive states can be used in both interactive and non-interactive playlists. The following are non-interactive states:

- Media RSS Feed
- Local Playlist
- RSS Feed and Static Text
- Twitter
- SignChannel
- HTML5
- Video Stream
- Mjpeg Stream
- Audio Stream
- Live Video
- RF In (ATSC)
- Tuner Scan

Note
Though HTML5 states are not interactive, the HTML pages themselves feature full JavaScript interactivity: The JavaScript of a page can interact with BrightSign hardware interfaces using BrightScript-JavaScript objects.

MEDIA RSS FEED

⌄ BrightAuthor Version 4.6

- Version 4.4
- Previous Versions

You can use Media RSS Feed states to display the content in Dynamic Playlists or MRSS feeds. An MRSS feed can be hosted on a third-party

server or the BrightSign Network (using the Live Media feature). MRSS feeds can be used to display image, video, audio, or HTML content.

Follow these steps to add an MRSS feed to your presentation:

1. Click the **Other** tab below **Media Library**.
2. Drag the **Media RSS Feed** icon to the playlist area.
3. Select a Data Feed from the dropdown list. If you have not added a Data Feed to the presentation yet, click **Add Data Feed** and follow these steps:
   a. Enter a **Feed name**.
   b. Under **Feed specification**, do one of the following:
      i. To add an MRSS feed that's hosted on a third-party server, select **Url** and enter the URL for the MRSS feed.
      ii. To add a BSN Live Media feed, select **Live Media Feed** and choose the feed from the dropdown list.
      iii. To add a BSN Dynamic Playlist, select **Dynamic Playlist** and choose the feed from the dropdown list.
   c. Under **Data feed content usage**, select **MRSS Feed**.
   d. Use the **Update Interval** dropdown menu to determine how often the player should check in with the server to update content in the feed.
   e. Click **OK** to add the MRSS feed to your presentation.
4. Click **OK**.

> **Important**
> If you are using the Media RSS Feed in an Audio Only or Enhanced Audio zone, ensure that the MRSS feed contains audio files only.

LOCAL PLAYLIST

⌄ BrightAuthor Version 4.6
  - Version 4.4
  - Previous Versions

A Local Playlist allows you to customize which Dynamic Playlist is used in a presentation depending on the player. For example, if you are using BrightSign players at a dozen different locations, and the locations require the same content except for variations in the content of the Dynamic Playlists, you only need to create, edit, and update one presentation that uses a Local Playlist rather than a dozen that use different Dynamic Playlists.
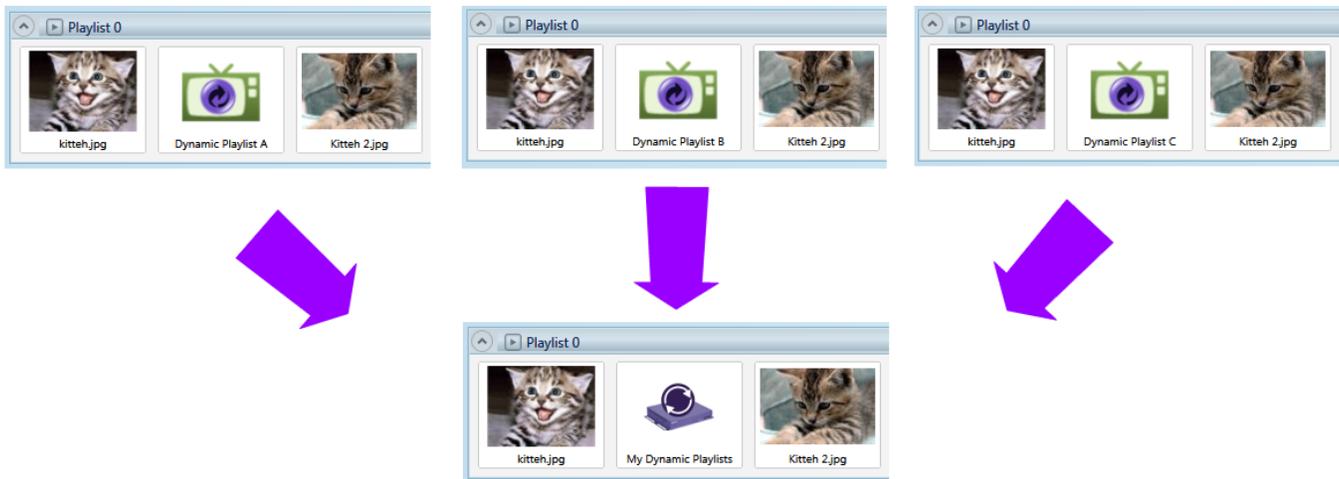
> **Tip**
> To use a Local Playlist, you first need to sign in to the BrightSign Network and add Dynamic Playlists to your presentation (via File > Presentation Properties > Data Feeds).

To add a Local Playlist to your presentation, click the **Other** tab in the **Media Library**. Then drag and drop the Local Playlist icon where you would normally add a Dynamic Playlist.

- **State name**: Enter a unique name for the Local Playlist state.
- **Default playlist**: Specify a default Dynamic Playlist for players to use. If a player enters the Local Playlist sate and does not have a Dynamic Playlist assigned to it, it will use the default Dynamic Playlist instead. If the default is set to **None** and a player is set to **Use default playlist**, then the player will skip the Local Playlist state and play the next item in the presentation playlist.
- **Playlist**: Assign a Dynamic Playlist to each player connected to your BrightSign Network Account.

RSS FEED AND STATIC TEXT

Ticker zones can be used to display dynamic text (RSS feeds) or static text feeds. You can also use a Live Text state to display text over an image or video.

RSS Feeds

RSS feeds are updated each time the BrightSign player connects to the specified RSS URL. An RSS Feed state can display either Live Text Data or a third-party RSS feed. Follow these steps to add an RSS Feed to your presentation:

1. Select a Ticker zone in your presentation.
2. Click the **RSS** tab and drag the **New RSS Feed** icon onto the playlist.
3. Select a Data Feed from the dropdown list.
4. If you have not added the RSS feed to the presentation yet, click **Add Data Feed**. Do the following:
   a. Enter a **Feed name**.
   b. Under **Feed Specification**, select **Url** and enter the URL for the RSS feed.
   c. Under **Data feed content usage**, select **Text**.
   d. Click **Validate** to ensure the RSS URL is working correctly.
   e. Use the **Update Interval** dropdown menu to determine how often the player should check in with the BrightSign Network servers to update the Live Data Feed.
   f. Click **OK** to add the **Data Feed** to your presentation.
5. Click **OK**.

Text Feeds

Text Feeds are static text files located on the local storage of the player. Follow these steps to add a Text Feed to your presentation:

1. Create a *.txt* file (using Notepad or a similar program) that contains the text you wish to display.
   a. Insert a line break between each text item in the .txt file.
   b. Save the text file and place it in your Media Library folder.
2. Select a Ticker zone in your presentation.
3. Click the **Text** tab in the **Media Library**.
4. Drag the text file into the playlist.

TWITTER

> **Tip**
> This tutorial video shows the basics of adding a Twitter state to a Ticker zone.

You can use your Twitter account to create a data feed from a remote source. Twitter feeds can only be used in a Ticker zone. To add your Twitter feed to a presentation, select a Ticker zone, click the **RSS** tab, and drag the **Twitter** icon onto the playlist.

- **Twitter User Name**: Enter your Twitter user name and click **Authenticate**. When prompted to authorize BrightSign to use your Twitter account, enter your Twitter account login information and click **Authorize app**.
- **Update Interval**: Use the dropdown list to specify how often the player should check your Twitter feed for updates.
- **Only show the most recent number of tweets**: Check this box if you want to limit the tweets displayed in the Ticker zone to only the most recent. Specify in the field how many recent tweets can be displayed.

SIGNCHANNEL

To add a SignChannel state, select a Video Only zone or a Video or Images zone. Under the **Other** tab, drag the **SignChannel** icon to the playlist area.

> **Note**
> You can only use one zone per presentation to display SignChannel content.

HTML5

∨ BrightAuthor Version 4.6
- Version 4.4
- Previous Versions

You can use the BrightSign XT, 4K, XD, HDx23, and HDx22 models to display HTML web pages, including video, image, text, and JavaScript elements. For a full explanation of how to create and publish HTML content for BrightSign players, please see the HTML5 Development section.

> **Important**
> BrightSign models are not designed to be used as general-purpose web browsers. Many web pages have elements that will not display correctly on a BrightSign player. Make sure to thoroughly test a web page before using it as digital signage.

- **State name**: Specify a name for the HTML state.
- **HTML5 Site**: Select an HTML site from the dropdown menu. To populate this list with sites, navigate to **File > Presentation Properties > HTML Sites**.
- **Enable external data**: Check this box if your HTML page uses assets from multiple locations.
- **Enable mouse and touch events**: Check this box if you want to enable interaction with the HTML5 page (clicking on links, interacting with JavaScript elements, etc.).
- **Display cursor**: Check this box to display a cursor whenever a USB mouse is connected to the player.
- **Custom fonts**: Click **Add Font** to add custom TrueType Font (.*ttf*) files to the HTML page. When the presentation is published, the font file(s) will act as though they are located in the same file directory as the *index.html* file (i.e. they can be accessed with the standard font-family attribute in HTML/CSS). If no custom fonts are specified, text in an HTML page is displayed using the default system font.
- **Enable native video plane playback**: Check this box to enable HWZ mode on all `<video>` elements contained within the page. This increases the frame rate and quality of HTML video playback, but can also cause problems with CSS page transforms and other page elements. By default, it will place the video on top of all other video and graphics in the presentation.
- **Specify user stylesheet**: Specifies a user stylesheet for the HTML page associated with the state. Use the **Browse** button to select the .*css* file you wish to utilize as the user stylesheet. Every HTML5 state can have a different user stylesheet, even if the states are being used to display the same HTML5 page.
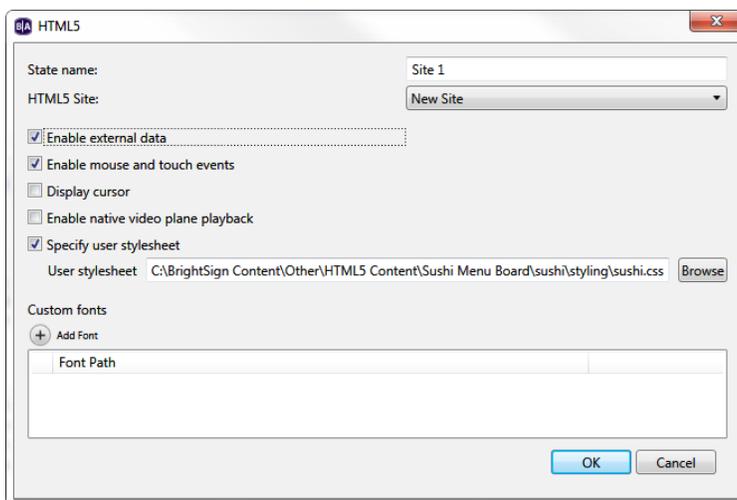
> **Note**
> HTML video content will play even if it is embedded in an Images zone.

VIDEO STREAM

∨ BrightAuthor Version 4.6
- Version 4.4
- Previous Versions

This state allows you to play an IP stream. All networked players can play streaming video. See this FAQ to learn more about supported video formats and codecs for IP streaming.

- **State Name**: Specify a unique name for the stream state.
- **URL for video stream**: Enter a valid URL for the stream. The URL can also include a number of optional parameters:
    - Specify a User Variable to replace all or part of the URL. To include the Value of the variable in the URL, enter the variable Name between two sets of dollar signs (e.g. "http://www.example.com/streams/$$my_URLvar$$").
    - Append the "?latency=[value_in_ms]" parameter to modify the default latency (see this FAQ for more details).
    - Append the "?buffersize=[size_in_bytes]" parameter to modify the default streaming buffer size (see this FAQ for more details).
- **Time on screen**: Specify the duration (in seconds) that the stream will be played. This option is only available in non-interactive presentations. To customize the duration of a stream in an interactive presentation, use a Timeout or Media End event.

MJPEG STREAM

⌄ BrightAuthor Version 4.6
- Version 4.4
- Previous Versions

All networked players can play streaming Mjpeg video. See this FAQ to learn more about supported video streaming formats and codecs.

> **Note**
> Unlike other video types, there is no limit on the amount of Mjpeg streams you can display on screen. However, adding more than a certain number of windows (depending on the player model and stream quality) will begin to reduce the framerate of the videos.

- **State Name**: Specify a unique name for the stream state.
- **URL for video stream**: Enter a valid URL for the stream. The URL can also include a number of optional parameters:
    - Specify a User Variable to replace all or part of the URL. To include the Value of the variable in the URL, enter the variable Name between two sets of dollar signs (e.g. "http://www.example.com/streams/$$my_URLvar$$").
    - Append the "?latency=[value_in_ms]" parameter to modify the default latency (see this FAQ for more details).
    - Append the "?buffersize=[size_in_bytes]" parameter to modify the default streaming buffer size (see this FAQ for more details).
- **Rotation**: Specify the clockwise rotation of the streaming video.
- **Time on screen**: Specify the duration (in seconds) that the stream will be played. This option is only available in non-interactive presentations. To customize the duration of a stream in an interactive presentation, use a Timeout or Media End event.

AUDIO STREAM

⌄ BrightAuthor Version 4.6
- Version 4.4
- Previous Versions

All networked players can stream audio from a remote source. For more information on supported formats, codecs, and bitrates, please see the Audio Streaming Support FAQ.

- **State Name**: Specify a unique name for the stream state.
- **URL for video stream**: Enter a valid URL for the stream. The URL can also include a number of optional parameters:
    - Specify a User Variable to replace all or part of the URL. To include the Value of the variable in the URL, enter the variable Name between two sets of dollar signs (e.g. "http://www.example.com/streams/$$my_URLvar$$").
    - Append the "?latency=[value_in_ms]" parameter to modify the default latency (see this FAQ for more details).
    - Append the "?buffersize=[size_in_bytes]" parameter to modify the default streaming buffer size (see this FAQ for more details).
- **Time to play**: Specify the duration (in seconds) that the stream will be played. This option is only available in non-interactive presentations. To customize the duration of a stream in an interactive presentation, use a Timeout or Media End event.

LIVE VIDEO

⌄ BrightAuthor Version 4.6
- Version 4.4
- Previous Versions

The 4K1142, XD1132, and XD1230 models support Live Video through the HDMI Input port. To add a Live Video state, select a Video or Images or Video Only zone, click the **Other** tab, and drag the **Live Video** icon to the playlist area.

- **Volume**: Specify the volume of the video input (between 0 and 100).
- **Time on screen**: Specify the amount of time the video input is displayed on screen.
- **Overscan**: Check this box to display the video input beyond the edges of the zone. Use this option if the source video signal is using an overscan setting.

> **Note**
> We do not recommend displaying a Live Video state at the same time as an RF In state (in two different video zones, for example).

RF IN (ATSC)

> **Note**
> The RF In state was changed significantly in BrightAuthor version 3.7.0.12. If you have an RF In project from an earlier version of BrightAuthor, you will need to recreate the presentation with a new version of BrightAuthor.

This state displays live video that is passed to the BrightSign player through the RF Input. This feature is available only on the XD1230. Before you can display video from the RF Input, you must first perform a channel scan on the player while it is connected to the cable source: You can do this prior to publishing the presentation (via the RF Channel Scan interface) or during the presentation (via the Tuner Scan state).

If you've already performed a channel scan on the player, you can use the "ScannedChannels.xml" file generated by the scan on the SD card to enable the **Channel name** and **Select different virtual channel** options:

1. Click the **Browse** button next to **Specify RF channel scan file**.
2. Locate the SD card or USB flash drive you used to perform a channel scan on the player.
3. Open the "ScannedChannels.xml" file located in the root directory.
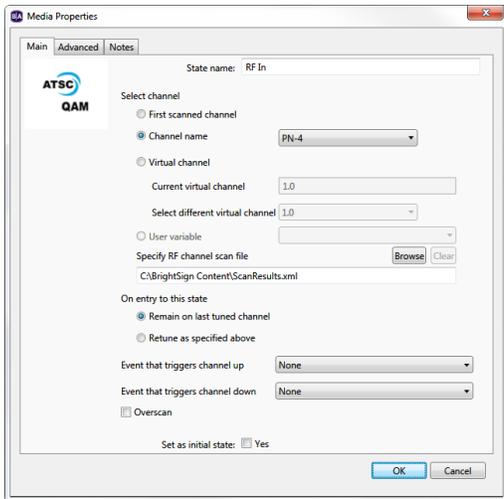
Specify the following:

- **Select channel**: Determine which channel will be played upon entering the RF In state:
  - **First scanned channel**: Displays the first channel detected during the channel scan (i.e. the smallest detectable channel number).
  - **Channel name**: Displays the channel with the specified name. To use this option, you must first specify a "ScannedChannels.xml" file in the **Specify RF channel scan file** field.
  - **Virtual channel**: Displays the channel based on its virtual number:
    - **Current virtual channel**: Manually enter the virtual number of the channel. You should only use this number if you are familiar with the channel map of the cable source.
    - **Select different virtual channel**: Select the virtual number of the channel based on the results of the channel scan. To use this option, you must first specify a "ScannedChannels.xml" file in the **Specify RF channel scan file** field.
  - **User variable**: Displays the channel based on the value of a User Variable. The system software can recognize both channel name and virtual channel number as the value of a User Variable. Before you can enable this option, you must first designate one or more User Variables.
- **On entry to this state**: Determine what should happen when playback enters the RF In state:
  - **Remain on last tuned channel**: The player remains on the same channel that was displayed the last time the presentation was in the RF In state. The state will use your **Select channel** settings if it is the first time the presentation is entering the RF In state.
  - **Retune as specified above**: Choose this option if you would like the player to retune using your **Select channel** settings every time the presentation enters the RF In state.
- **Event that triggers channel up**: Specify an event trigger that will flip up through channels.
- **Event that triggers channel down**: Specify an event trigger that will flip down through channels.
- **Overscan**: Check this box to display the video input beyond the edges of the zone. Use this option if the source video signal is using an overscan setting.

> **Tip**
> A Media End event will trigger on an RF In state only if the video bit rate of the tuner input drops to 0Mbs.

> **Note**
> We do not recommend displaying an RF In state at the same time as a Live Video state (in two different video zones, for example).

TUNER SCAN

˅ BrightAuthor Version 4.6
- Version 4.4
- Previous Versions

You can use the Tuner Scan state to perform a channel scan of the cable source while an interactive presentation is running. Use a Media End event to exit this state once the channel scan concludes. If you use another interactive event (e.g. Serial Input, UDP Input) to exit the Tuner Scan state before it concludes, the scan will be canceled and the results will not be written to the player.

- **Channel Map**: Select QAM, ATSC, or ATSC and QAM (consult your service provider for details).
- **Modulation Type**: Select QAM 64, QAM 256, or QAM 64 and QAM 256 (consult your service provider for details).
- **First RF Channel** (optional): You can choose to limit the range of the channel scan by selecting the first channel to scan.
- **Last RF Channel** (optional): You can choose to limit the range of the channel scan by selecting the last channel to scan.

> **Note**
> Each channel takes approximately one second to scan. Specifying upper and lower limits will reduce the amount of time it takes to perform the scan. You should only use these two options if you are familiar with the channel map of the cable source.
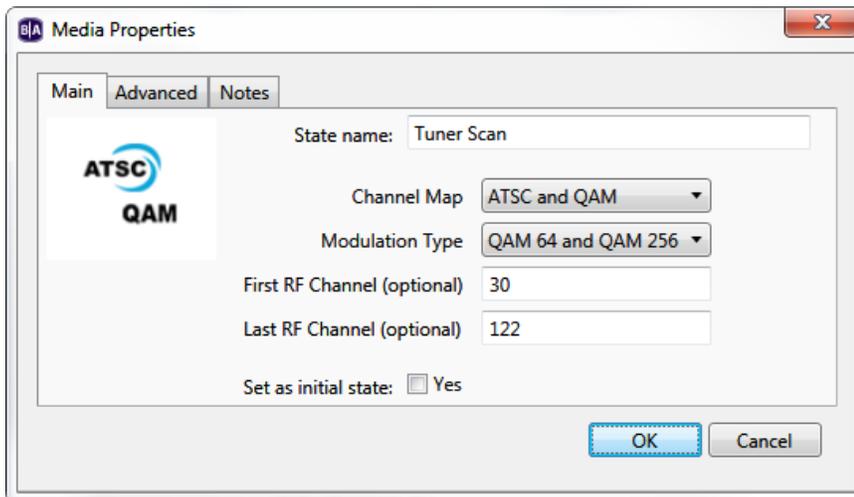
Interactive States

˅ BrightAuthor Version 4.6
- Version 4.4
- Previous Versions

Interactive states can be used in interactive playlists only. The following are interactive states:

- Media List, Video List, Image List, Audio List
- Video Play File, Image Play File, Audio Play File
- Live Text
- Interactive Menu
- Event Handler
- Super State

MEDIA LIST, VIDEO LIST, IMAGE LIST, AUDIO LIST

The Media List, Video List, Image List, and Audio List states are convenient tools for defining interactive events with many files. They allow you to compile your files into one group that appears as a single thumbnail in your playlist area. By default, each time the playlist transitions to a list state, the next file in the list will play and exit the list after a timeout (images) or when the file finishes playing (video and audio). Alternatively, you can set the list to shuffle files or cycle through every file in the list before exiting and transitioning to the next state.

You can edit properties of these states under **File** > **Presentation Properties** > **Media List**.
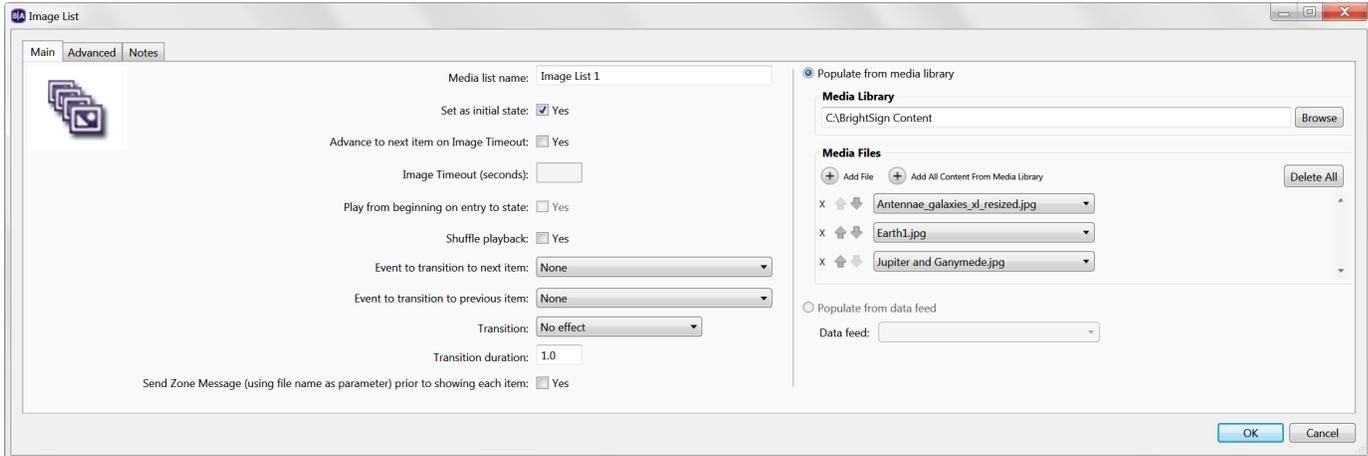
First, make sure your playlist is set to **Interactive**. Then, drag a Media List, Video List, Image List, or Audio List icon onto the playlist area. You can then set the following parameters for your list:

- **Media list name**: Create a unique name for the list.
- **Set as initial state**: Check this box to make the list your Home Screen.
- **Advance to next item on Media End event**:(Media Lists, Video Lists, Audio Lists) Check this box to have the list cycle to the next file after an audio/video file ends. If you leave this box unchecked, the list will play one audio/video file each time it is transitioned to, remaining on that file until the playlist transitions away from the list.
- **Advance to next item on Image Timeout**:(Media Lists, Image Lists) Check this box to have the list cycle to the next file after an image times out. If you leave this box unchecked, the list will display one image each time it is transitioned to and then transition away when the **Image Timeout** interval is reached.

> **Note**
> An Audio List in an Enhanced Audio zone cycles through all files in the list by default, so the **Advance to next item on media end** event option is not available for Enhanced Audio zones. In an Enhanced Audio zone, a Media End event attached to an Audio List will only trigger once all files in the list have been played.

- **Image Timeout (seconds)**: (Media Lists, Image Lists) Specify the length of time each image remains on screen. You can also use decimal values to specify the image timeout in milliseconds (for example, 1.500 = 1500msec).
- **Play from beginning on entry to state**: Check this box to have the list start from the beginning each time it is transitioned to. This box is only enabled if you have checked the above **Advance to next item on Media End event** box (unless you are using an Enhanced Audio zone) or **Advance to next item on Image Timeout** box. If you leave the **Play from beginning on entry to state** box unchecked, subsequent transitions to the list will play the next file in the list.
- **Start Index**: Specify which item in the list should count as the beginning of the list. When the list plays from the beginning (see the **Play from beginning on entry to state** option above), it will play from the item index specified here. When non-shuffled playback reaches the end of the list, it will loop back to the top of the list (i.e. start index 1), rather than the specified **Start Index**.
- **Shuffle playback**: Check this box to randomize the order of media items in the list each time it is transitioned to.
- **Event to transition to next item**: Select an interactive event that allows the user to transition to the next file in the list. After selecting the event type, you must specify a trigger.
- **Event to transition to previous item**: Select an interactive event that allows the user to transition to the previous file in the list. After selecting the event type, you must specify a trigger.

> **Note**
> Like the Synchronize event, commands for the **Synchronize** trigger must be sent from another player on the local network.

> **Note**
> If you leave event transitions on "None", audio/video files will transition at media end and images will transition at timeout.

- **Transition:** (Media Lists, Image Lists) Specify the transition effect that will occur when the image timeout triggers.
- **Transition duration:** (Media Lists, Image Lists) Specify how long the image-transition effect will take to complete. This duration should be less than the amount of time the image is displayed on screen.
- **Send Zone Message (using file name as parameter) prior to showing each item:** Check this box to send a Zone Message command every time there is a file transition in the list. The Zone Message string will consist of the filename (without the file extension) of the media item that is being transitioned to.
- **Populate from media library**: Select this option to populate the list using content stored on your computer.
    - **Media Library**: Click **Browse** to select the folder that contains all the files you want to include in the list.
    - **Media Files**: Add individual files to the list by clicking the **Add File** button and using the dropdown list. Only files contained in the folder you selected above will be available in the dropdown list. Alternatively, you can click **Add All Content From Media Library** to add all compatible media files from the directory specified in the **Media Library** field. Once you've added the desired files to the list, you can customize playback order using the up and down arrows. You can also remove individual files using the **X** buttons, or remove all files using the **Delete All** button.
- **Populate from data feed**: Select this option to populate the list using media files specified in an RSS feed (this feature does not support MRSS feeds). You will first need to add the RSS feed to your presentation by navigating to File > Presentation Properties > Data Feeds. When adding the Data Feed, you must set the **Data feed content usage** to **Content for Image List, Audio List, Video List, or PlayFile**. Upon playing the presentation, the player will retrieve the media from the download URLs specified in the **Value** field of each item in the Data Feed (i.e. the RSS `<description>` field).

```
▼<rss version="2.0">
  ▼<channel>
    <title>Content DL Feed 2</title>
    <description>Content DL Feed 2</description>
  ▼<item>
      <title>Image 1</title>◄        Item title
    ▼<description>
        http://brightsign.biz/files/cache/d9d30310981df0922753268e6f62489e_f415.jpg◄   Media download URL
      </description>
    </item>
  ▼<item>
      <title>Image 2</title>◄        Item title
    ▼<description>
        http://brightsign.biz/files/cache/acd11772ef536e4e920e259c20347251_f421.jpg◄   Media download URL
      </description>
    </item>
  </channel>
</rss>
```

VIDEO PLAY FILE, IMAGE PLAY FILE, AUDIO PLAY FILE

⌄ BrightAuthor Version 4.6

- Version 4.4
- Previous Versions

Play Files allow you to combine media files into a single state in the playlist area. You can then use the interactive event that transitions to the Play File to conditionally determine which file in the playlist should be played.

Play Files can only be transitioned to using input from BP900/BP200, UDP, Serial, Keyboard, or USB devices. The input data from the controller will determine which media item in the Play File will be played: For example, you can use a Keyboard Input event to playback "Video 1" if the "A" key is pressed, "Video 2" if the "B" key is pressed, "Video 3" if the "C" key is pressed, etc. Any type of event can transition out of a Play File state and into a new state.

> **Note**
> For BP200/BP900 events, you must specify each **Key** using both the panel enumeration and button number: For example, if you have a single BP200/BP900 panel connected to the player and want button 3 to trigger an image, you would specify the **Key** as "0-3"; on the other hand, if you have a second BP200/BP900 panel connected to the player and want button 3 on the second panel to trigger the image, you would specify the **Key** as "1-3".
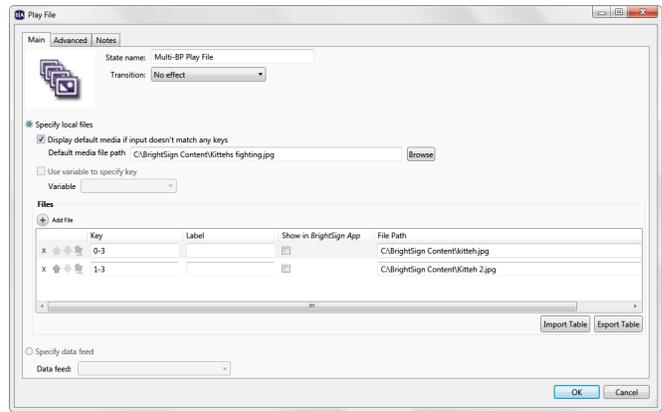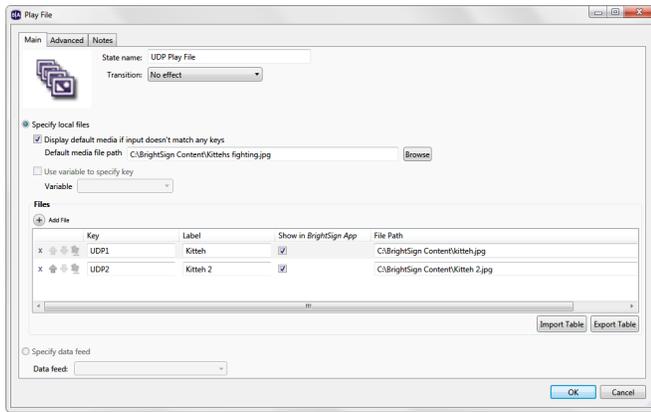
Make sure you use zones that match the Play File type you want to use. After setting your zone to **Interactive** and dragging a Play File icon to the playlist area, the Play File window will automatically open. Here you can set the parameters for your Play File list.

- **State name**: Create a unique name for the Play File state.
- **Transition** (Image Play Files only): Use the dropdown list to create a special effect when the playlist transitions to an item in the Play File state.
- **Specify Local Files**: Select this option if you would like to create the Play File using files from your computer. If you choose this option, the Play File table will remain static when it is published to the player; the only way to change it is to republish the presentation. The **Specify data feed** option (described below) allows for dynamic Play File tables.
    - **Display default media if input does not match any keys**: Check this box to display the specified media file when the input data does not match any existing keys in the Play File state. If this box is not checked, nothing will happen when the input data does not match an existing key.
    - **Use variable to specify key**: Check this box to have a User Variable specify the media-file key. The input data from the controller will be ignored, though input of some kind must be received to trigger the interactive event. For example, if a Keyboard event is attached to a Play File state and this option is enabled, any key press will initialize a transition to the Play File state; the value of the specified User Variable will then be checked against the keys in the Play File to determine which file, if any, should be played.

> **Note**
> If you attach a command that modifies the User Variable value (e.g. Set Variable, Increment Variable) to an event that transitions to the Play File state, the media-file keys will still be compared against the old variable value. However, if the **Display default media** option is enabled, the new User Variable value will be used instead.

    - **Add File**: Click this button to add media items to the Play File.
    - **Files**: This list displays files added to your Play File. Each file has a **Key** and **File Path**.
        - **Key**: The value that will trigger playback if it is matched by the input from the interactive event. Because you define the triggers with the keys in the Play File, you do not need to specify the triggers again when creating a transition to the Play File. For example, if you define a USB Input event that links an item to the Play File, the option to **Specify USB Input** will be disabled and replaced with "<any>". When a user performs an event via USB that matches a key, the corresponding file will play.
        - **Label**: The label of the interactive button as it will appear in the BrightSign App.
        - **Show in _BrightSign App_**: Check this box if you want to display the media item as a button in BrightSign App instances that connect to the player. The button will only appear in the app if a UDP Input event transitions to the Play File state.
        - **File Path**: The location of the media file on your computer. Click the **Browse** button to locate the file you wish to use.
        - **Display Mode** (Video Play Files only): By default, files are set to 2D, but if you are using a 3D video, you can select **3D side-by-side** or **3D top-over-bottom** when adding your files.
    - **Import Table**: Click this button to import a previously created Play File table (_.csv_ file). Navigate to your saved table and click **Open** to add the files to your Play File list. This table must have the "Key", "File Path", "File Name", and "Video Display Mode" (if applicable) properly outlined. You can use a table that was exported from another Play File state with the **Export Table** function, or you can create a Play File table using Notepad or Excel.
    - **Export Table**: Click this button to create a _.csv_ file that includes information about the current Play File table. This file can then be imported to other Play File states that use the same media type.
- **Specify data feed**: Select this option if you would like to populate the Play File using media files specified in an RSS feed. You will first need to add the RSS feed to your presentation by navigating to File > Presentation Properties > Data Feeds. You will also need to set the **Data feed content usage** for use with Play Files. When playing the presentation, the player will retrieve the media from the download URLs specified in the `<description>` field of each item in the RSS feed, and the Play File will use the value in the `<title>` field to determine the key that triggers the media item to play.

```
▼<rss version="2.0">
  ▼<channel>
    <title>Keyboard Play File Feed 3</title>
    <description>Keyboard Play File Feed 3</description>
  ▼<item>
    <title>A</title>          Play File key value
   ▼<description>
      http://brightsign.biz/files/cache/d9d30310981df0922753268e6f62489e_f415.jpg    Media download URL
    </description>
   </item>
  ▼<item>
    <title>W</title>          Play File key value
   ▼<description>
      http://brightsign.biz/files/cache/acd11772ef536e4e920e259c20347251_f421.jpg    Media download URL
    </description>
   </item>
  </channel>
 </rss>
```

LIVE TEXT

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- Selecting the Item Type
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- Live Text with Video

BrightAuthor Version 4.6

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A Live Text state consists of an image overlaid with various text fields and/or media. You can layer both static text and updatable RSS and MRSS content on top of images and customize the position/size of items in relation to the background. You can even use Live Text to overlay content on top of a video in another zone.

To add a Live Text state to your presentation, drag the Live Text icon from the **Other** tab to the playlist area and set the following parameters:

- **State name**: Enter a unique name for the Live Text state.
- **Set as initial state**: Check this box to make the Live Text state your Home Screen.
- **Background Image**: Click **Browse** to locate and select a background image for your Live Text.

Note
Image Mode settings that would normally crop displayed images (i.e. "Center Image" and "Scale to Fill and Crop") are not applied to the background image of a Live Text state. To get consistent performance between images and Live Text states, you will need to resize images accordingly.

- **Update Live Text Data**: Click this button to have all Live Text Data fields display their current value.

```
Changing the Size/Positioning of a Live Text Item
```
Click the
⊕
Add Item button to add a new text/media item to the Live Text canvas. You can then edit the size and positioning of the item:

- **Size**: Adjust the size of a text field or item.
    - **W**: The width of the text field or item
    - **H**: The height of the text field or item
- **Position**: Adjust the position of a text field or item.
    - **X**: The position of the text field or item on a horizontal axis
    - **Y**: The position of the text field or item on a vertical axis.
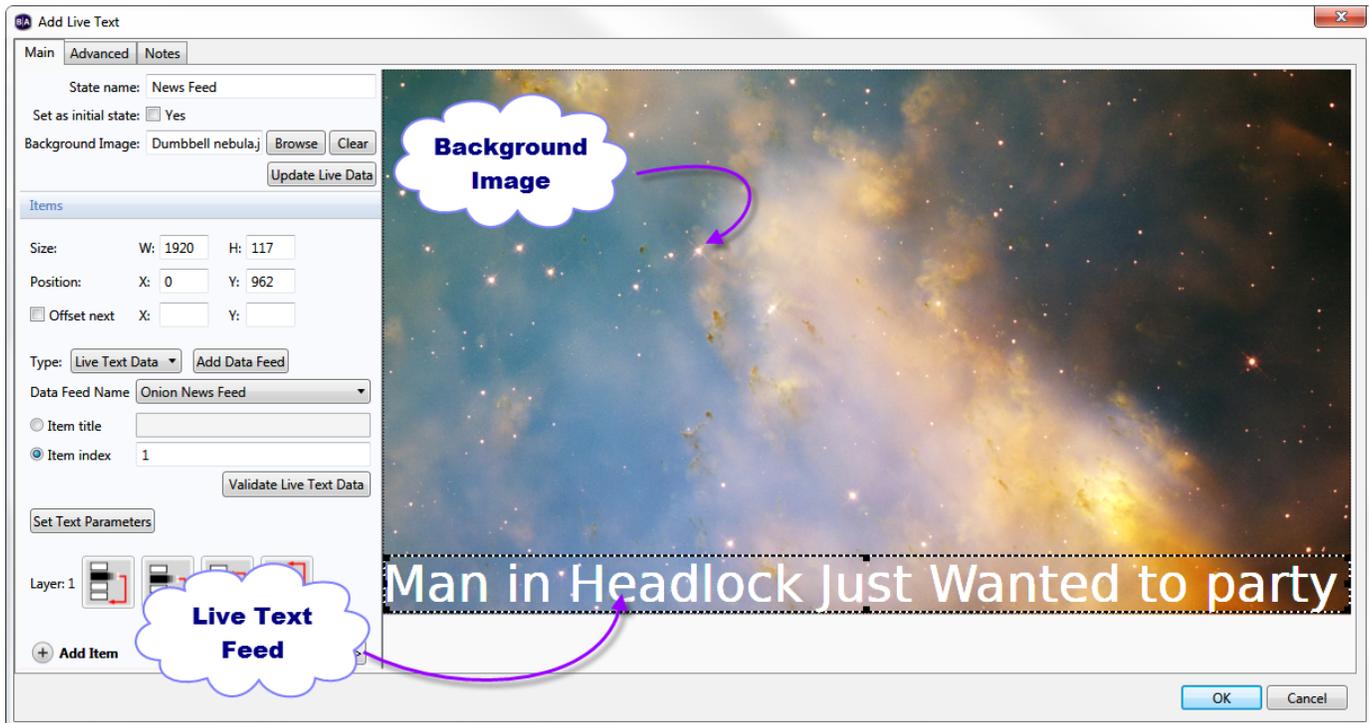
Note

You can also click and drag the text fields in the preview area to adjust sizing and position.

- **Offset next**: Check this box to set an initial position for new items in relation to the most recently created item. Input the offset distance for the next text item in the **X** and **Y** fields.

Selecting the Item Type

Use the **Type** dropdown menu to select the source of the content in the selected item:

- **Fixed Text**: Displays simple, static text. A text field will appear below **Text Type**, where you can type your customized text. As you type, you can view the text in the preview image.
- **System Variable**: Displays the device serial number, firmware version, script version, or other System Variable value. Use the dropdown list to determine which value you would like to display.
- **Live Text Data**: Displays content from a Data Feed in the text field. The displayed Data Feed item will remain fixed and will not cycle through feed items like an RSS ticker (use the RSS Feed type for this functionality). However, you can still update the text in real time by modifying the feed on the server and changing the description associated with the item title or index.
  - **Add Data Feed**: Click this button to add a Data Feed to your presentation. You can use any feed type (RSS, Live Data Feed, MRSS, Dynamic Playlist) as Live Text Data, but you must specify the **Data feed content usage** as **Text** when adding the Data Feed.
  - **Data Feed Name**: Select the desired Data Feed from the dropdown menu.
  - **Item title**: Specify the feed item to display using the Title/Name of the item.
  - **Item index**: Specify the feed item to display using the index number of the item.

Note

When you use the **Item index**, subsequent RSS text fields will automatically contain the next item in the index (i.e. the previous index number + 1).

- **Media Counter**: Displays how many times a file in the presentation has played. Each Media Counter field must correspond to a specific file. Use the dropdown list to pair the **Media Counter** field with a file in the presentation. To use this feature, Media Counters must first be enabled: Navigate to **File** > **Presentation Properties** > **Variables** and check the box labeled **Automatically create media counter variables**.
- **User Variable**: Displays the current value of a User Variable. Use the dropdown list to specify a User Variable for the text field. To use this feature, you must first create a User Variable.
- **RSS Feed**: Displays content from an RSS feed. To edit the amount of time each RSS item is displayed, click **Set Text Parameters** and modify the **Time to Display Each Line** field.

- **Update RSS URL List**: Click this button to create a list of Data Feeds to use as RSS sources.
- **Display RSS title**: Check this box to display the title of the RSS item.
- **Display RSS description**: Check this box to display the description of the RSS item.
- **Media RSS Feed**: Displays content from a Media RSS (MRSS) feed.
    - **Update Media RSS URL List**: Click this button to create a list of Data Feeds to use as MRSS sources.
    - **Display Media RSS title**: Check this box to display the title of the MRSS item.
    - **Display Media RSS description**: Check this box to display the description of the MRSS item.
    - **Display Media RSS media**: Check this box to display the media item associated with the MRSS item.
    - **Custom fields**: If your MRSS feed contains custom text fields, this section will allow you to show or hide the custom fields as required.
- **Image**: Select this option to display an image over the background image. Select Browse to locate an image file to use in this item.
- **Validate Live Text Data**: Click this button to verify that the source URL for the selected Live Text Data item is valid.

Customizing the Text Parameters

Click the **Set Text Parameters** button to customize the parameters for a selected field.

- **Alignment**: Use the dropdown list to set whether the text is left aligned, right aligned, or centered.
- **Foreground text color**: Click **Choose** to select a color for the text.
- **Background text color**: Check this box to include a background color for text fields. Click **Choose** and set a default color for the backgrounds.
- **Transparency**: Drag the bar to set the transparency for the background text color.

> **Note**
> Transparency does not appear in the Live Text image preview or in Presentation Preview. You will need to publish the presentation to a BrightSign player to view the level of transparency.

- **Font**: Click **Browse** to locate and select a font for the text. You can use any TrueType font. Click **Reset to System Font** to reset the font to the default.

> **Important**
> The LS422, HD120, HD220, and HD1020 models support a limited number of Live Text items with custom font. If you need to display many items simultaneously, either display them with the system font or upgrade to another player model: The XT, 4K, XD, HDx23, and HDx22 models support any practical number of text items with custom font.

- **Font size**: Select **Automatic** to fit the text to the height of the text field, or select **Fixed point size** to enter a value for the font size (1 - 500).

Note that the default parameters of a text item will differ depending on how it is created:

- The first text item will use the default text parameters set in the **Edit Preferences** window (**Edit > Preferences > Live Text**).
- If you create a text item while another text item is selected, the new text item will inherit the parameters of the selected text item.
- If you create a text item without another text item selected, the new text item will inherit the parameters of the last created text item.

> **Note**
> If you choose to include a **Background Text Color**, the **Transparency** setting will be enabled, allowing you to edit the transparency of the Background Text Color. If you choose not to include a **Background Text Color**, characters in the text fields will appear over the elements beneath it.

Layering Items

Use the **Layer** buttons to determine the layering of your Live Text elements. The background image is always displayed behind all elements.
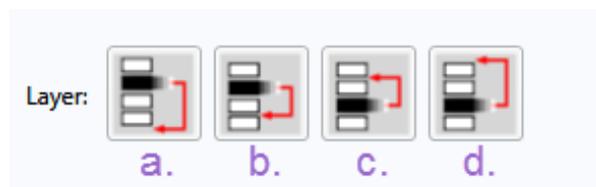
a. Sends the selected element behind all other elements.

b. Sends the selected element behind the element that is directly beneath it.

c. Sends the selected element in front of the element that is directly in front of it.

d. Sends the selected element to the front of all other elements.

```
Live Text with Video
```

You can use a Live Text state to layer text and images over video. To do so, you must add the Live Text state to a Video or Images or Images zone, and place it on top of a Video Only zone. To help you position text over the video, we recommend using a screenshot from the video you want to use. Complete the following steps:

1. Under **Layout**, click **Add Zone**.
   a. Click **Add Zone** to add a Video Only zone.
   b. Click **Add Zone** again to add an Images or Video or Images zone.
   c. Set the **Graphics plane z position** of the Images zone to **Front**.
   d. Resize the Images zone so that it completely covers the Video Only zone.
2. Click the **Playlist** tab and select your Video Only zone.
   a. Drag the desired video file from the **Media Library** to the playlist area.
   b. Make the zone **Interactive**.
3. Use the dropdown list to select the Images zone.
   a. Make the zone **Interactive**.
   b. Drag the **Live Text** icon from the **Other** tab to the playlist area.
4. Click the **Live Text** icon to open the **Add Live Text** window.
   a. Click **Browse** beside **Background Image**.
   b. Locate and select the screenshot image file taken from the video file used in the Video Only zone.
5. Click **Add Text Item**.
   a. Adjust the **Size** and **Position** of your text field by clicking and dragging over the preview image or inputting exact numbers in the corresponding fields.
   b. Select your **Text Type** and input the desired text.
   c. Click **Set Text Parameters** and edit text parameters as desired.
   d. Click **OK** when finished.
6. Repeat step 5 for each text field you wish to add.
7. When all text fields are in place, click **Clear** next to **Background Image**.
8. Click **OK**.

Clearing the Background Image removes the image from the zone. The text fields will appear directly over the video. By temporarily including a Background Image taken from the video, you can better position the text fields in relation to the video playing behind the Images zone.

INTERACTIVE MENU

- BrightAuthor Version 4.6
  - Version 4.4
  - Previous Versions

Interactive Menus are DVD-style menus that users can navigate with interactive events. By linking media to items to the Interactive Menu, you can allow users to interactively transition to a new state of their choice. Because Interactive Menus can serve as a bridge to many media items and outline all selections available to the user, they make great Home Screens.

To create an Interactive Menu, add a Video or Images zone to your presentation. Set the zone to **Interactive** and drag the Interactive Menu icon from the **Other** tab to the playlist area.

```
General
```

This tab allows you to select an image for your Interactive Menu and define how a user navigates it.

- **State name**: Create a unique name for your Interactive Menu state.
- **Background Image**: Click **Browse** to select an image to use as the menu display.

> **Important**
> The background image is not simply a background for menu items; it must contain all images and text you want displayed in the menu.

- **Set as initial state**: Check this box to set the Interactive Menu as the Home Screen.

The **Navigation** section is where you define how a user navigates among items in the menu. Click the dropdown menu for each option (Up, Down, Left, Right, Enter, Back, Next clip, Previous clip) and select the interactive input that will trigger this action (GPIO Event, Serial input, etc.). A second dropdown menu or text field will appear. Specify the button or input you want to correspond to the action.

Let's say you want to define how to move **Up** in the menu, and you want to use the "U" key on the connected keyboard. In the **Up** dropdown list, select **Keyboard Input**. A text field will appear below where you can specify a button. Type "U" in the text field. Now, when a user presses "U" on a keyboard, the cursor will move up along the menu items. If you don't wish to define an action, you can simply leave the dropdown list on the default **None**.

The following actions can be defined in the Navigation section:

- **Up, Down, Left, Right**: These are the primary actions a user will perform to navigate from one menu item to the next.
- **Enter**: When a user enters the defined input on a menu item, a media file you have chosen in the **Menu Items** tab will play.
- **Back**: The user can enter the defined input to return to the menu at any point.
- **Next clip**: If a user is viewing a media file associated with a menu item, using the defined input will play the media file that corresponds to the next menu item.
- **Previous clip**: If a user is viewing a media file associated with a menu item, using the defined input will play the media file that corresponds to the previous menu item.
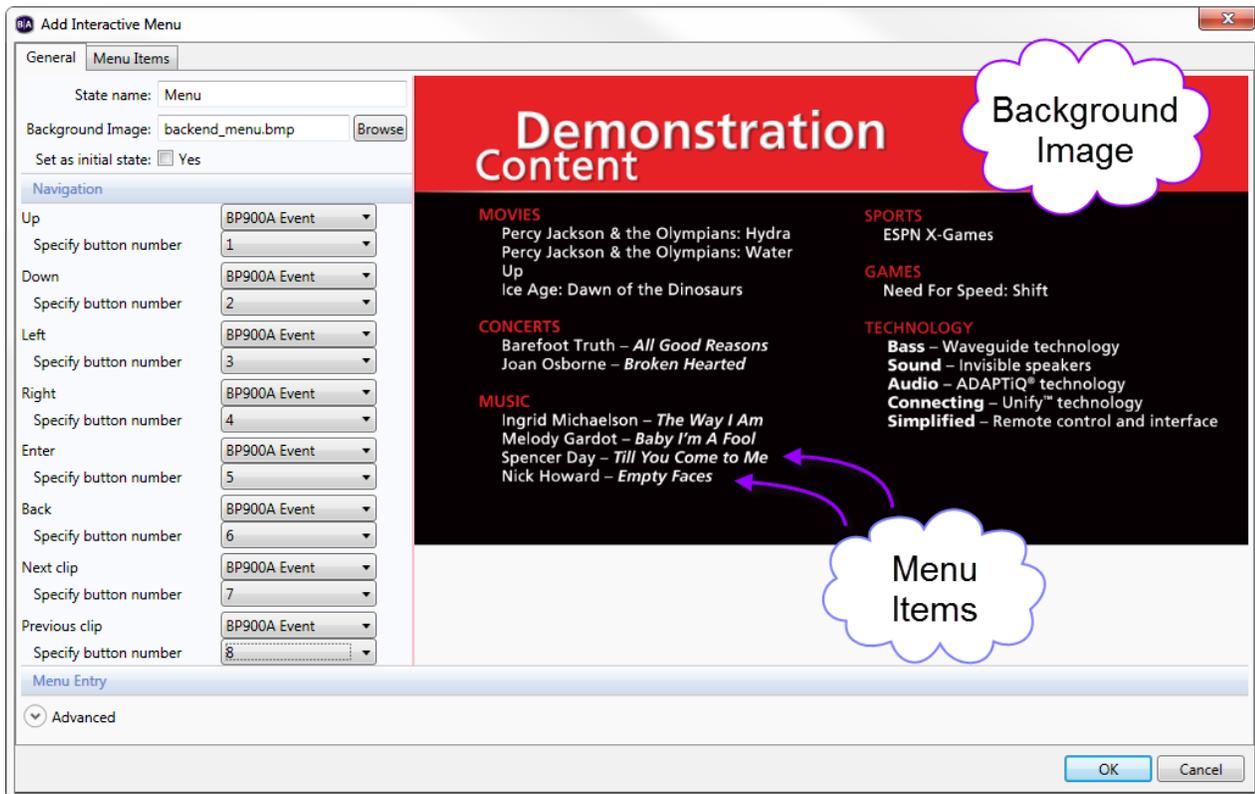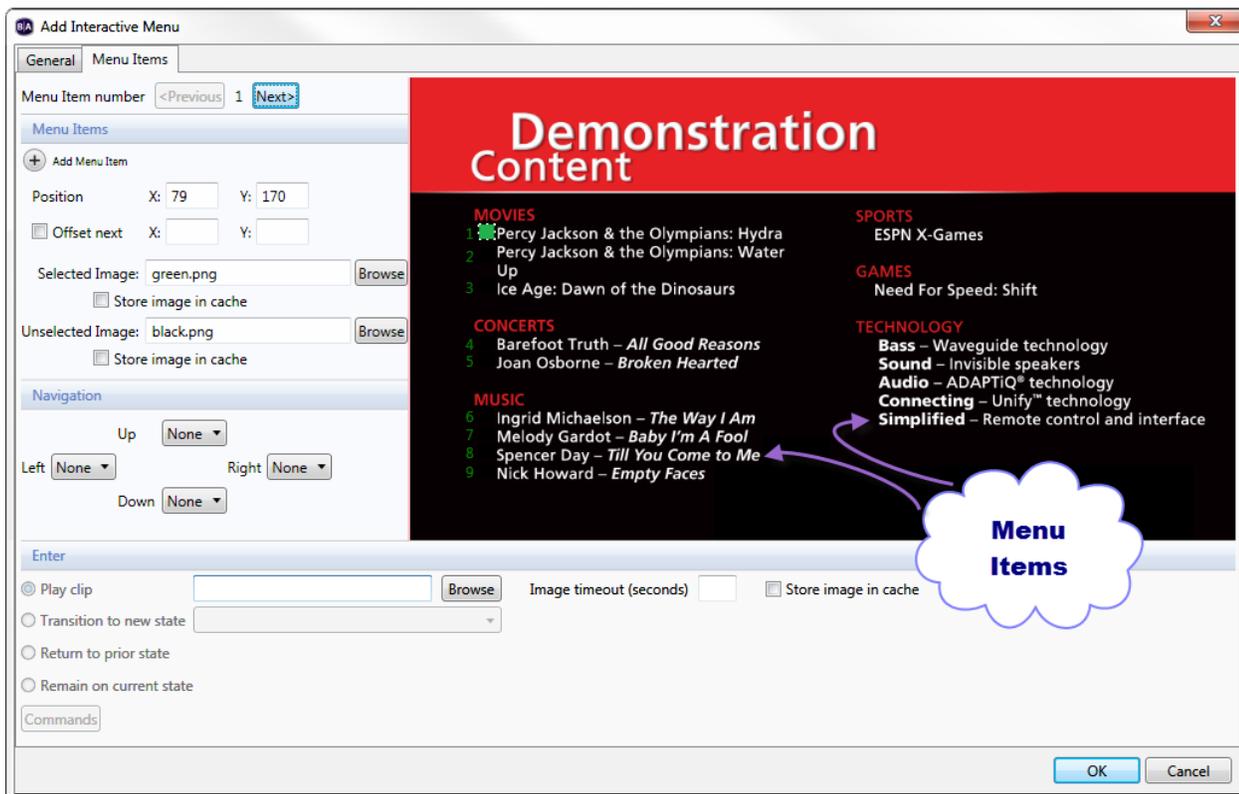

Menu Items

This tab allows you to create menu items and specify how a user navigates around the menu.

- **Menu Item Number**: Every menu item has a unique menu item number: The first item you create is 1, the second is 2, and so on. Here you can navigate among the menu items you have created by clicking the **Previous** and **Next** buttons. All other options below correspond to the menu item you have selected.
- **Add Menu Item**: Click to create a new menu item. The **Add Menu Item** window will open.
  - **Active Image**: This image serves as a cursor to visually inform the user what menu item is currently selected.
  - **Inactive Image**: This image appears beside the menu item when the user has another menu item selected.

- **Position**: Adjust the position of your menu item by inputting specific numbers. Alternatively, you can click the active image in the preview image and drag it to the desired position. The inactive image will appear in the same spot when the menu item is not selected.
  - **X**: The position of the menu item on the horizontal axis.
  - **Y**: The position of the menu item on the vertical axis.
- **Offset next**: Check this box to specify an initial position for new menu items in relation to the most recent menu item.
  - **X**: The amount of offset on the horizontal axis.
  - **Y**: The amount of offset on the vertical axis.
- **Selected Image**: Click **Browse** to change the active image.
- **Unselected Image**: Click **Browse** to change the inactive image.
- **Store image in cache**: Check this box to store the corresponding image in the player cache. This ensures that the image will load quickly when switching between active/inactive states. Note that the player cache is limited—see this FAQ for more details.

Navigation

The **Navigation** section is where you determine how a user moves from one menu item to the next. Although the actions were previously defined in the **General** tab, this is where you specify how actions navigate among the specific menu items. The possible actions are **Up**, **Down**, **Left**, and **Right**. Each action has a dropdown list that displays the menu item number for each created menu item. By default, **None** is selected for each.

Selecting a number in the dropdown list will allow the user to navigate from the current menu item to the specified menu item by performing the corresponding action. Let's say you are editing menu item number 1. If you click the dropdown list for the **Down** action and select 2, the user can now navigate from Menu item 1 to Menu item 2 by pressing the **Down** button. Remember, the buttons correspond to whatever you previously defined in the **Navigation** section of the **General** tab.

Enter

The **Enter** section is where you determine what happens when a user presses the **Enter** button on a particular Menu item. Select one of the following:

- **Play clip**: Plays the specified media item when the user presses the **Enter** button. Use the **Browse** button to select a media item. If you select an image, the following options will be available:
  - **Image timeout (seconds)**: Specify how long the image should be displayed before returning to the interactive menu.
  - **Store image in cache**: Check this box to store the image in the player cache. This will ensure that the image loads quickly. Note

that the player cache is limited—see this FAQ for more details.

- **Transition to new state**: Transitions out of the Interactive Menu state and into a new state when the user presses the **Enter** button. Use the dropdown list to select a state from the presentation playlist.
- **Return to prior state**: Returns to the previous state (i.e. the state that transitioned to the Interactive Playlist) when the user presses the **Enter** button.
- **Remain on current state**: Does not change states when a user presses the **Enter** button. However, you can add commands to specify changes that occur while remaining on the Interactive Menu. Click the **Advanced** tab to reveal the Commands menu.
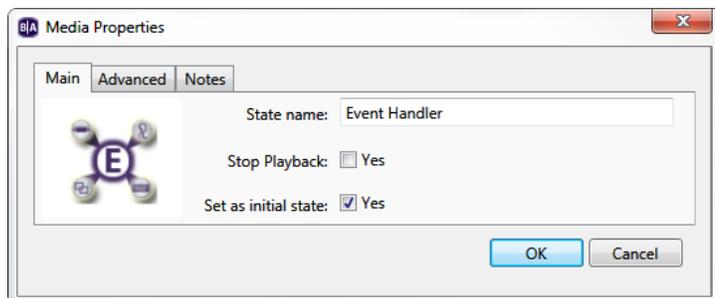
EVENT HANDLER

- ⌄ BrightAuthor Version 4.6
  - Version 4.4
  - Previous Versions

In some scenarios, you might want your presentation to sit at a blank screen. The Event Handler fills the role of an empty placeholder in your presentation. Here are a few cases where an Event Handler would be useful:

- You want a blank screen for a Home Screen so no content will play until the presentation is activated.
- You want to add a command that is performed before the first file in the presentation plays.
- You want the presentation to sit at a blank screen when finished, instead of looping.

Although Event Handlers contain no content, you can add commands and interactive events into and out of them. For example, if you set an Event Handler state as the Home Screen and define a BP900 event linked from the Event Handler state to the first presentation item, the display will sit at a blank screen until a user presses the BP900 button, and then the first item will begin playing. Alternatively, if you set an Event Handler as the Home Screen and add a Synchronize command to it, you can synchronize your presentations and/or displays before the first files begin playing.

To use an Event Handler, click the **Other** tab under Media Library and drag the icon into the playlist area.

- **State Name**: Enter a unique name for the Media Handler state.
- **Stop Playback**: Check this box if you would like audio/video playback to end once a media file transitions to the Event Handler state. If this box is left unchecked, audio/video playback will continue after a transition to the Event Handler state.
- **Set as initial state**: Check this box to make the Event Handler the Home State of the presentation.

Define interactive events into and out of the Event Handler as you would with any other state. If you define a Media End event after a video and link it to an Event Handler, the presentation will sit at a blank screen when the file finishes playing.

SUPER STATE

- ⌄ BrightAuthor Version 4.6
  - Version 4.4
  - Previous Versions

If you need to create large, complex interactive playlists, you will likely run into two problems: You'll find yourself having to create a large number of redundant events, and it will become difficult to keep track of numerous branching states and conditions. Super States are implemented to alleviate these problems and make complex interactive presentations manageable.
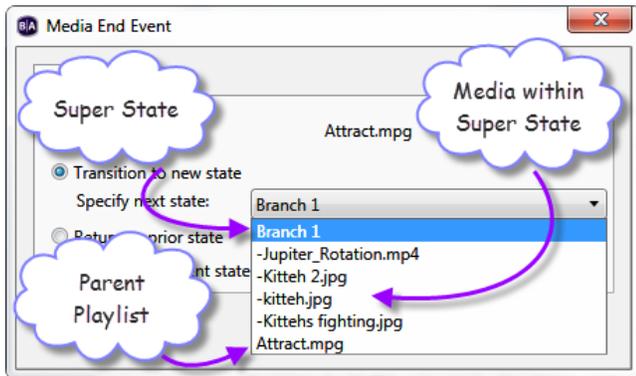
The primary mechanic of the Super State is that it functions as both a state and a self-contained interactive playlist. A Super State can be transitioned into and out of using any event, but clicking on it will reveal a new interactive playlist canvas contained within the original. There are several behaviors that are unique to this state:

- *Each Super State contains a Home State*: A transition to a Super State will point to the initial state within the Super State by default. However, you can point the transition to any other state within the Super State by opening the event and selecting the desired state from the **Specify next state** dropdown menu.
- *Super States can be nested inside other Super States*: You can use the breadcrumb trail above the playlist area to keep track of where you are within the hierarchy of Super States.
- *Super States can have Entry and Exit Commands*: Entry Commands are triggered when any state within the Super State is transitioned to. If a Super State is contained within one or more other Super States, a transition to or from that Super State will trigger Entry/Exit commands on all other Super States that will need to be moved through for the transition to reach its destination. Commands will be executed in sequential order, depending on whether the transition is ascending or descending through a hierarchy of Super States.
- *You can copy, paste, export, and import Super States*: All events, states, commands, and other Super States contained within the Super State will be copied over as well.
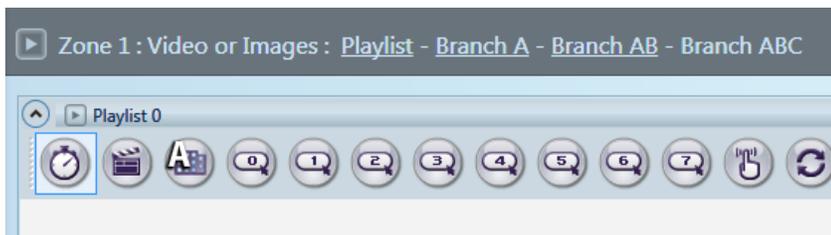
Interactive Events

˅ BrightAuthor Version 4.6
- Version 4.4
- Previous Versions

Interactive events link states in the playlist and determine what must occur before one state transitions to another. See the Interactive Presentations page to learn how to add events to your interactive playlist.

User Defined Events

˅ BrightAuthor Version 4.6
- Version 4.4
- Previous Versions

ON THIS PAGE

- Creating and Editing User Defined Events
- Adding User Defined Events to your Playlist
- Importing and Exporting User Defined Events

This feature allows you to save interactive events you use often so that you can access them more readily in the future. User Defined Events save both the event type and event parameters. For example, if you frequently use a 5 second Timeout event, you can create a User Defined Event with this specification. In the future, instead of having to set each Timeout event to 5 seconds, you can use your previously created User Defined

Event.

Additionally, you can group multiple events into a User Defined Event. Any event within the User Defined Event will cause the desired transition. This will save you time by eliminating the need for defining multiple events that perform the same transition.
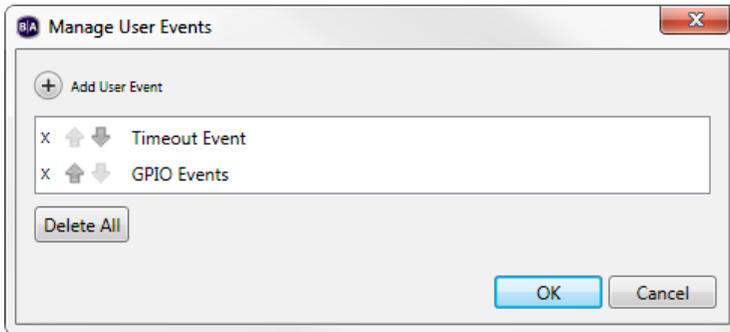
Creating and Editing User Defined Events

To create or edit a User Defined Event, select the **user events** tab under **Media Library** and click **Manage**. The **Manage User Events** window will open. This window contains a list of all previously created User Defined Events. Do any of the following:

- *Create a new User Defined Event*: Click **Add User Event**. When prompted, type a unique name for your User Defined Event. Click **Add Event** and use the dropdown list to select an interactive event. Repeat for each event you want included in the User Defined Event. Click **OK** when you are finished.
- *Edit a User Defined Event*: In the **Manage User Events** window, click the name of the User Defined Event you wish to edit. Make the desired changes in the **User Event** window.
- *Organize User Defined Events*: Click the arrows to arrange the order of the list by moving a User Defined Event up or down.
- *Delete User Defined Events*: Click the **X** beside a name in the list to delete a single User Defined Event, or click **Delete All** to erase the entire list.

Adding User Defined Events to your Playlist

To add a User Defined Event to your interactive playlist, select the **User Events** tab under **Media Library**. Drag the desired event icon from the list onto a state. In the **Events** window, specify the desired transition behavior. You can also add commands to a User Defined Event after it has been assigned to a state.

Importing and Exporting User Defined Events

You can import and export your User Defined Events. Since User Defined Events are created on a per-presentation basis, the import/export feature allows you to save your User Defined Events and transfer them to new presentations as needed.

To import or export, click **File > Import User Events** or **File > Export User Events**. If you are importing, browse to the location where the events definition XML file is stored. If you are exporting, browse to a location where you want to export all User Defined Events currently defined for your presentation.
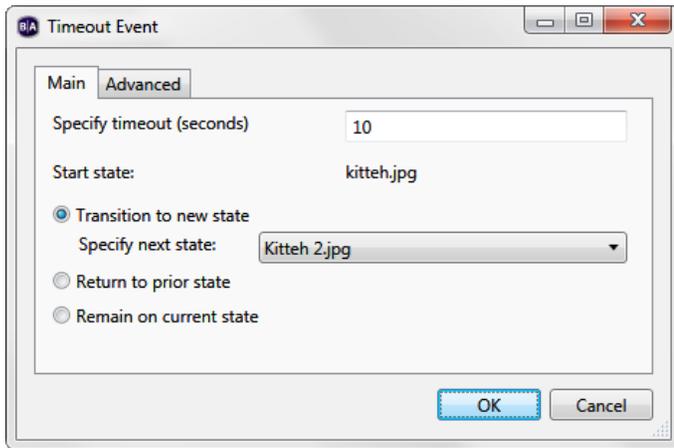
Timeout

- BrightAuthor Version 4.6
  - Version 4.4
  - Previous Versions

The Timeout event displays a state for a predetermined period of time before an action occurs. In the **Specify timeout (seconds)** field, specify the number of seconds the state should display before the action occurs.
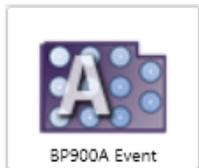
Media End

The Media End event specifies the action that occurs when a video file or audio file reaches the end of playback. Media End events can also be applied to the following states: Video List, Audio List, Video Playfile, Audio Playlist, Media RSS, and Signchannel.

BP900/BP200

The BP900 and BP200 events specify the action that occurs when a specific BP900 or BP200 button is pressed. The BP900 and BP200 button panels are LED-based touch devices that allow you to add interactivity to your BrightAuthor presentations. These button panels are compatible with any BrightSign player that has a USB port.

Enumeration

There are a total of six event icons: BP900A, BP900B, BP900C, BP200A, BP200B, and BP200C. The letters A, B, and C correspond to USB ports. If the event you are defining is for a button pad connected to USB port 1, use A. If it is for a button pad connected to the second port, use B. Let's say you are using an XD1132 and, therefore, have two available USB ports. If you want to connect two button boards, a BP900 and a BP200, you would use the BP900A and BP200B icons to define events for each.

Defining BP900 and BP200 Events

Once you've added a BP900/BP200 event to your presentation, determine the parameters that will activate it:
- **Specify Button Number**: Select a button on the button pad that you want the user to press to transition to the next state.

> **Important**
> Selecting **Any Button** will enable only the button numbers used in other BP200 or BP900 events in the presentation (or numbers enabled in the **File > Presentation Properties > Buttons** window): For example, if you have defined BP900 events for buttons 1 and 4,

- **Press (First Touch)**: Select this option to have the transition occur the moment the button is pressed.
- **Press Continuous**: Select this option to have the transition occur only after the button is continually pressed for a certain interval of time. Specify the repeat interval (in milliseconds).
- **Transition to new state**: Select this option to have the presentation transition to a new state when the event occurs. Use the dropdown list to specify a new state.
- **Return to prior state**: Select this option to have the presentation return to the previous state when the event occurs.
- **Remain on current state**: Select this option to have the state remain unchanged when the event occurs.
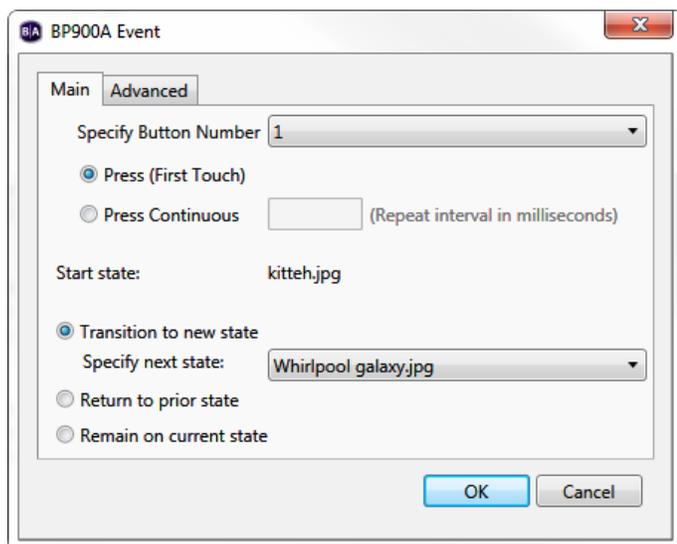
Rectangular Touch

∨ BrightAuthor Version 4.6

- Version 4.4
- Previous Versions

The Rectangular Touch event specifies the action that occurs when the user presses a region on a touch screen that is connected to the BrightSign player.

- **Size**: Use the size parameters to set an exact size for the touch region. Alternatively, you can click and drag the marks surrounding the touch rectangle to change its size.
    - **W**: Enter the width of the touch region.
    - **H**: Enter the height of the touch region.
- **Position**: Use the position parameters to set an exact position for the touch region. Alternatively, you can click and drag the rectangle to a different area.
    - **X**: Enter the horizontal position (in pixels) of the top-left corner of the touch region.
      Y: Enter the vertical position (in pixels) of the top-left corner of the touch region.
- **Save as User Event**: Check this box to save this Rectangular Touch event as a User Event. Enter the name of the new User Event in the **Name** field.
- **Add Touch Region**: Click to add another touch region to the event. All touch regions in a Rectangular Touch event will trigger the same transition and commands. To define different touch transitions, add additional Rectangular Touch events to a state.

USB Input

∨ BrightAuthor Version 4.6

- Version 4.4

USB Input

The USB Input event sets the action that occurs when a BrightSign player receives the specified input from a connected USB device.

In the **Specify USB input** field, enter the USB input string that will trigger the event.

Keyboard Input

Keyboard Input

The Keyboard Input event sets the action that occurs when a BrightSign player receives the specified input from a connected keyboard.

In the **Specify keyboard input** field, enter the keyboard input that will trigger the event.

GPIO Event

GPIO Event

The GPIO Event specifies the action that occurs when a specific GPIO button is pressed or input is received. By default, the playlist toolbar includes several GPIO buttons that you can use to define interactions.

- **Specify button number**: Specify the number of the GPIO button. These numbers also correspond to the 8 bi-directional GPIO pins on the DA15 connector. See the Hardware section corresponding to your BrightSign player model for details.
- **Trigger Event on Button**: Specify whether the event should trigger when the button is depressed (**Down**) or when it is released (**Up**). If you've selected **Down**, choose one of the following behaviors:
    - **Press (First Touch)**: The event triggers the moment the button is depressed.
    - **Press Continuous**: The event triggers the moment the button is depressed, then continues triggering at the specified intervals as long as the button is depressed.

Serial Input
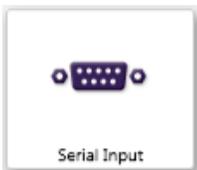
Serial Input

The Serial Input event specifies the action that occurs when the BrightSign player receives input from a device connected to a serial port.

- **Specify port**: Enter the port number of the input device. Most standard RS-232 serial devices enumerate on port 0. If you are connecting a USB-serial device, it will enumerate on port 2. To configure the serial port, navigate to **File > Presentation Properties > Interactive**.
- **Specify serial input**: Enter the serial input string that will trigger the event. You can also use the <*> wildcard to match some or all of the serial input (i.e. entering "<*>" in this field will match any input, while entering "mycommand_<*>" will match any input message that begins with "mycommand_").

Modifying User Variables

You can use the Serial Input event to modify the values of User Variables. To enable these options, click the **Advanced** tab:

- **Assign input to variable?**: Check this box to assign the content of the serial input to a User Variable.
    - **Input specifies variable**: The serial input string will dynamically specify which User Variable to modify. The serial input string must be sent in the form of <variable name> : <variable value>.
    - **Specify fixed variable**: The serial input string will modify a fixed User Variable. Use the dropdown list to choose which User Variable the serial input will modify. The serial input string must be sent in the form of <variable value>.

> **Tip**
> You can use the **Input specifies variable** option to modify more than one User Variable with a single event. Use the following serial input string: <variable name> : <variable value> !! <variable name> : <variable value>

- **Assign wildcard to variable?**: Check this box to specify the value of a User Variable using the <*> wildcard. Select the User Variable to modify using the dropdown menu to the right. The **Specify serial input** field must contain the <any> wildcard, either by itself or with additional text (e.g. "message_<any>").

> **Note**
> It is possible to check both **Assign input to variable** and **Input specifies variable** boxes for more complex functionality. For example, you can use **Specify fixed variable** to assign the entire serial input string to one variable, while at the same time using **Assign wildcard to variable** to assign a subset of that string to another variable.

Remote Input

∨ BrightAuthor Version 4.6

- Version 4.4
- Previous Versions

Remote Input

The Remote Input event sets the action that occurs when the BrightSign player receives the specified input from an IR remote control.

In the **Specify remote input** field, enter the remote control command value that will trigger the event. BrightAuthor supports the following NEC remote control codes:

- WEST
- EAST
- NORTH
- SOUTH
- SEL
- EXIT
- PWR
- MENU
- SEARCH
- PLAY
- FF
- RW
- PAUSE
- ADD
- SHUFFLE

- REPEAT
- VOLUP
- VOLDWN
- BRIGHT

GPS

∨ BrightAuthor Version 4.6
- Version 4.4
- Previous Versions

The GPS event specifies the action that occurs when a BrightSign player, connected to a compatible USB GPS device, enters or exits a defined geographical region.

- **Event Direction**: Determine how the event should trigger in relation to the defined region.
    - **Enter Region**: The event triggers when the device moves from outside the defined region to inside of it.
    - **Exit Region**: The event triggers when the device moves from inside the defined region to outside of it.
- **Region**: Define the size and shape of the circular region.
    - **Radius**: Specify the radius of the circular region. Use the dropdown menu to specify the units in **Miles** or **Kilometers**.
    - **Latitude (degrees)**: Define the center of the circular region as a latitudinal coordinate.
    - **Longitude (degrees)**: Define the center of the circular region as a longitudinal coordinate.
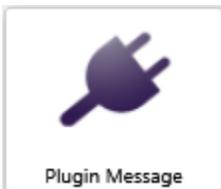
> **Tip**
> You can create more than one entry or exit region by adding multiple GPS events to a single state.

Plugin Message

∨ BrightAuthor Version 4.6
- Version 4.4
- Previous Versions

The Plugin Message event specifies the action that occurs when a message is received from a custom script plugin that is attached to the presentation. See the Parsers and Plugins tech note for more information on creating custom scripts that send plugin messages.

- **Plugin name**: Use the dropdown menu to determine which plugin the event can receive messages from. You can also use the <*> wildcard to match some or all of the plugin message string (i.e. entering "<*>" in this field will match all plugin messages, while entering "mycommand_<any>" will match any plugin message that begins with "mycommand_").
- **Plugin message**: Enter the message string that will trigger the event.

Modifying User Variables

You can use the Plugin Message event to modify the values of User Variables. To enable these options, click the **Advanced** tab:

- **Assign input to variable?**: Check this box to assign the content of the plugin message to a User Variable.
    - **Input specifies variable**: The plugin message string will dynamically specify which User Variable to modify. The plugin message string must be sent in the form of <variable name> : <variable value>.
    - **Specify fixed variable**: The plugin string will modify a fixed User Variable. Use the dropdown list to choose which User Variable the plugin message will modify. The plugin message string must be sent in the form of <variable value>.

- **Assign wildcard to variable?**: Check this box to specify the value of a User Variable using the <any> wildcard. Select the User Variable to modify using the dropdown menu to the right. The **Plugin Message** field must contain the <any> wildcard, either by itself or with additional text (e.g. "message_<any>").

UDP Input

˅ BrightAuthor Version 4.6

- Version 4.4
- Previous Versions

UDP Input

The UDP Input event specifies the action that occurs when the BrightSign player receives a UDP (User Datagram Protocol) message from another device on the local network. Source devices can include, but are not limited to, tablets running the BrightSign App, other BrightSign players, and PCs/Macs.

- **Specify UDP Input**: Enter the UDP message string that will trigger the event. You can also use the <any> wildcard to match some or all of the UDP message string (i.e. entering "<any>" in this field will match all UDP messages, while entering "mycommand_<any>" will match any UDP message that begins with "mycommand_").
- **Label**: Specify a label for the UDP command button in the BrightSign App. By default, the command label will be the same as the UDP message string.
- **Show in BrightSign App**: Check this box to have the command button corresponding to the UDP Input event appear in the BrightSign App.

Modifying User Variables

You can use a UDP Input event to modify the values of User Variables. To enable these options, click the **Advanced** tab:

- **Assign input to variable?**: Check this box to assign the content of the UDP message to a User Variable.
  - **Input specifies variable**: The UDP message string will dynamically specify which User Variable to modify. The UDP message string must be sent in the form of <variable name> : <variable value>.
  - **Specify fixed variable**: The UDP string will modify a fixed User Variable. Use the dropdown list to choose which User Variable the UDP input will modify. The UDP string must be sent in the form of <variable value>.

- **Assign wildcard to variable?**: Check this box to specify the value of a User Variable using the <any> wildcard. Select the User Variable to modify using the dropdown menu to the right. The **Specify UDP Input** field must contain the <any> wildcard, either by itself or with additional text (e.g. "message_<any>").

Synchronize

The Synchronize event synchronizes playback with other BrightSign players on the same local network using UDP. This event is useful for synchronizing playback according to user input. If you want frame-accurate video synchronization (e.g. for video walls), we recommend creating a BrightWall presentation instead.

This event triggers when a Synchronize command with the same keyword as the Synchronize event is used on another player on the local network. When the **Synchronize Event** window opens, enter the keyword that corresponds to the Synchronize command in the **Specify synchronization keyword** field.

> **Note**
> A separate Synchronize event and command must be defined for each transition you want synchronized.

For Synchronize events to work, you must ensure UDP communication is configured correctly in **File > Presentation Properties > Interactive**.

Link Zones

Use the Link Zones event, combined with the Link Zones command, when you require close, millisecond-level synchronization of content between zones on the same player (as opposed to synchronizing across multiple players).

In the **Specify link keyword** field, enter the message that is sent by the corresponding Link Zones command.

> **Note**
> A separate Link Zones event and command must be defined for each zone transition you want synchronized.

Zone Message
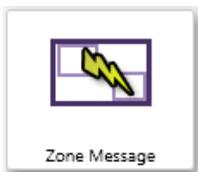
Use the Zone Message event, combined with the Send Zone Message command, to affect changes from one zone to another across multiple synchronized players with multi-zone presentations.

In the Specify zone message field, enter the message that is sent by the corresponding Send Zone Message command.

> **Note**
> A separate Zone Message event and command must be defined for each zone transition you want synchronized.

Time/Clock

The Time/Clock event specifies the action that occurs at a specific time and date or at regular intervals on a recurring schedule.

- **Single date/time event**: Select this option to specify a one-time-only event.
  - **Date**: Specify the date by entering it into the field or selecting it from the calendar view.
  - **Time**: Specify the time using the dropdown menu. If you want the event to occur at an exact minute, type the desired time directly into the field.
  - **Specify with user variable**: Select this option if you want to use the value of a User Variable to specify the date and time. Choose a variable from the dropdown list. The value of the variable must be in this format: "yyyy-mm-ddThh:mm:ss". For example, if you would like the event to occur on December 20, 2016 at 3:45PM, then you would use the value "2016-12-20T15:45:00".
- **Daily timeout event**: Select this option to specify a recurring event.
  - **Once per day**: Select this option to have the event occur once per day. Specify the **Time** using the dropdown menu (or, if you want the event to occur at an exact minute, type the desired time directly into the field).
  - **Periodic throughout the day**: Select this option to have the event occur at intervals throughout the day.
    - **Interval between events (minutes)**: Determine the frequency of the event.
    - **Active between**: Use the dropdown menus to specify the period during which the event can occur. The first event will occur at the beginning of the active period.
  - **Set the days the timeout is active**: Use the checkboxes to select which days the time/clock event is active.

Video Time Code

The Video Time Code event performs commands at specific times during video file playback. If you want to trigger a transition at a certain point in the video, use the Timeout event instead.

Click the **Add Time Code** button to add a new time-code command. Enter the **Timeout** interval for the command (in milliseconds), and then select the **Command** and **Parameters** from the corresponding lists.

Audio Time Code

The Audio Time Code event performs commands at specific times during audio file playback. If you want to trigger a transition at a certain point during audio playback, use the Timeout event instead.

Click the **Add Time Code** button to add a new time-code command. Enter the **Timeout** interval for the command (in milliseconds), and then select the **Command** and **Parameters** from the corresponding lists.

BrightWall Presentations

- ⌄ BrightAuthor Version 4.6
    - Version 4.4
    - Previous Versions

The BrightWall™ feature allows you to easily create, publish, and edit video-wall deployments. Video walls are created by synchronizing the playback of a number of players, each connected to a different screen on the wall, over a local network connection. Simple looping video playlists are the only presentation type supported by BrightWall. Images and interactive playlists are not supported: Use this FAQ to compare the capabilities of different synchronization options.

The process of publishing BrightWall presentations differs from publishing standard presentations. See the Publishing a BrightWall page for more information.

VIDEO REQUIREMENTS

For best results, we recommend using the *.mp4* or *.mov* container for video files that make up a BrightWall presentation. Transport Stream (*.ts*) files are also supported, but they must begin with a presentation timestamp (PTS) offset of zero. Program Stream (MPEG-PS) files *are not* supported.

> **Note**
> It is possible to create a seamlessly looping video wall if the video files are formatted appropriately. See the Seamless Looping FAQ for more details.

Creating a BrightWall Presentation

- ⌄ BrightAuthor Version 4.6
    - Version 4.4
    - Previous Versions

    ON THIS PAGE

    - Creating a Configuration File
    - BrightWall Presentation Properties
        - Main
        - Audio

To create a new BrightWall presentation, navigate to **Create > BrightWall™** (if the **Create a new Video Wall** window doesn't open automatically, click **File > New BrightWall™**). A BrightWall presentation requires a BrightWall Configuration file to set the platform, dimensions, and layout of the video wall. Once you create a BrightWall Configuration file, you can use that file to quickly generate BrightWall presentations with the same video-wall setup.

- **Save As**: Enter the name of the new BrightWall project.
- **Where**: Choose where to save the BrightWall *project file*. Note that the *project file* is different from the *presentation files* that will actually be published to the players.
- **Configuration file**: If you have created a BrightWall Configuration file, you can use it to generate settings for the BrightWall project.
- **Create BrightWall Configuration**: Click this button to create a new BrightWall Configuration file. Use this option if you haven't created a BrightWall Configuration file yet, or if you would like to create an additional BrightWall Configuration file with new settings.

Creating a Configuration File

Clicking the **Create BrightWall Configuration** button will open the **BrightWall Configuration** window, which provides the following options.

- **BrightSign Model**: Choose the BrightSign player model that will display the video wall. All players that are part of the video wall must be of the same model type.
- **Connector type**: Choose the connector (HDMI, VGA, Component) that each player will use to connect to its display. All players that are part of a video wall must use the same connector.

- **Screen resolution**: Choose the resolution of each screen in the video wall. All video wall screens must have the same resolution. You can view all available screen resolutions in this FAQ.

> **Note**
> Individual screens only support video files in landscape mode.

- **Monitor orientation**: Choose one of the following:
  - **Landscape**: Content is not rotated.
  - **Portrait – bottom on left**: Video is rotated counter-clockwise 90 degrees. Select this option if the bottom of each monitor is on the left when it is portrait oriented.
  - **Portrait – bottom on right**: Video is rotated clockwise 90 degrees. Select this option if the bottom of the each monitor is on the right when it is portrait oriented.

> **Note**
> The portrait modes apply to Stretched BrightWall presentations only. If you select a portrait mode, you will be limited to creating Stretched presentations with this BrightWall Configuration file.

Portrait - bottom on left	Landscape	Portrait - bottom on right
Video / Monitor Logo	Video / Monitor Logo	Video / Monitor Logo
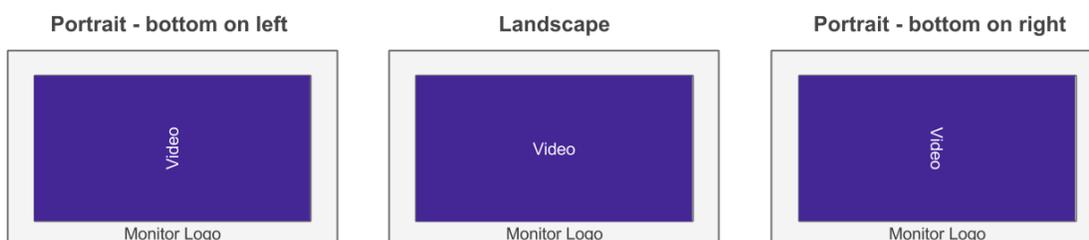
- **Monitor overscan**: Select an overscan setting to determine how each video fills the display screen.
  - **No overscan – use full screen**: Displays video to the edge of the video signal.
  - **Overscan – action safe**: Restricts the image display to an area that is compatible with most displays.
  - **Overscan – title safe**: Restricts the image display to an area that is much smaller than the image generated by the video signal.
- **Number of rows**: Specify the vertical length of the video wall (in number of screens).
- **Number of columns**: Specify the horizontal length of the video wall (in number of screens).
- **Domain**: Specify a domain number (between 0 and 127) for the video wall. This number must be unique for each video wall on the local network. This will ensure that multiple video walls can run on the same local network without synchronization messages interfering with each other.
- **Bezel Width and Height**: Account for the bezel size of the monitors that make up the video wall. This allows for better alignment of videos in the video wall. These measurements only apply to *Stretched* BrightWall presentations. For *Regular* presentations, bezel width and height will need to be accounted for in the content creation application.

  - **By percentage**: Enter the bezel width and height as percentages. Use the following calculation to determine bezel percentages:
    - **Width**: The width of the bezel between active screens (i.e. the total of both left and right bezels) divided by the width of an active screen. The result is multiplied by 100. For example, a video wall made up of screens with a width of 42 inches and a 1 inch bezel on each side would be calculated as follows: (2"/42")*100=5%
    - **Height**: The height of the bezel between active screens (i.e. the total of both top and bottom bezels) divided by the height of an active screen. The result is multiplied by 100. For example, a video wall made up of screens with a height of 23.625 inches and a 1 inch bezel on each side would be calculated as follows: (2"/23.625")*100=8%

> **Note**
> Bezel width and height percentages must be specified as integers (i.e. whole numbers that are positive).

  - **By measurement**: Enter the bezel width, bezel height, screen width, and screen height in millimeters (mm). BrightAuthor will make the calculations automatically.
- **Save As**: Click this button to save the BrightWall Configuration file. It will then be used as the Configuration File for the BrightWall presentation.

Once you've created or selected a BrightWall Configuration file, click **Create BrightWall Presentation**. The **BrightWall™ Presentation Properties** window will open.

BrightWall Presentation Properties

The **BrightWall™ Presentation Properties** window is divided into two tabs: **Main** and **Audio**.

```
Main
```

- **Type**: Choose whether the BrightWall presentation is *Regular* or *Stretched*:
  - **Regular**: Each panel of the BrightWall presentation is made up of a different video file. To create a single video surface out of multiple screens, video assets will need to be tailored for the video wall using the source application (e.g. Adobe After Effects): You will need to split the videos into their respective screens and adjust for bezel width before adding the assets to BrightAuthor.
  - **Stretched**: The video wall is made up of a single video. BrightAuthor automatically splits the video among the screens. This option allows you to display video files, as well as Streaming Video, Live Video, and RF Input.
- **View mode**: Choose the view mode of the presentation. In *Regular* presentations, this option applies to videos on individual screens, similar to the **View Mode** option found in the Zone Properties menu. In *Stretched* presentations, this option applies to the entire wall. The following descriptions apply to *Stretched* presentations only:
  - **Scale to Fill**: The video will be stretched over all screens in the video wall. If the aspect ratio of the video wall does not match the ratio of the video content, the video will likely appear stretched or distorted.
  - **Letterboxed and Centered**: The video will not be stretched. Instead, it will appear at the center of the video wall at its original resolution, which may cover one or multiple screens. Areas of the video wall that are not filled by the video will display the background color of the presentation.
  - **Fill Screen and Centered**: The video will be stretched to the height or width of the video wall (whichever length is greater). If the aspect ratio of the video wall does not match the ratio of the video content, the video will be cut off at the height or the width (whichever length is lesser).

> **Note**
> The **Scale to fit** and **Fill screen and centered** options will not remove letterboxing if it's part of the video file.

- **Display screen layout information when presentation starts**: Check this box to have screens in the BrightWall display positioning information for a few moments when the presentation starts scheduled playback. If this box is not checked, the presentation will begin immediately without displaying positioning information.

```
Audio
```

- **Audio Output**: Enables or disables the Analog, HDMI, and SPDIF audio outputs. In BrightWall presentations, only the master unit (i.e. the player driving Screen 1) outputs audio, so these settings do not affect any of the slave units in the presentation.
  - **Pass through**: Supplies the un-decoded audio signal through the HDMI connector. Use this option if the zone audio (for example, AC3 Dolby Digital) is being decoded on an external device.
  - **Stereo**: Supplies the audio as a stereo signal.
- **Audio Mixing**: Enables the stereo, left-only, or right-only audio signal.

Editing a BrightWall Presentation

- BrightAuthor Version 4.6
  - Version 4.4
  - Previous Versions

ON THIS PAGE

- Main
- Configuration
- Audio

To configure a BrightWall presentation, navigate to **File > BrightWall™ Properties**.

Main

- **Type**: Choose whether the BrightWall presentation is *Regular* or *Stretched*:
  - **Regular**: Each panel of the BrightWall presentation is made up of a different video file. To create a single video surface out of multiple screens, video assets will need to be tailored for the video wall using the source application (e.g. Adobe After Effects): You will need to split the videos into their respective screens and adjust for bezel width before adding the assets to BrightAuthor.
  - **Stretched**: The video wall is made up of a single video. BrightAuthor automatically splits the video among the screens. This option allows you to display video files, as well as Streaming Video, Live Video, and RF Input.
- **View mode**: Choose the view mode of the presentation. In *Regular* presentations, this option applies to videos on individual screens, similar to the **View Mode** option found in the Zone Properties menu. In *Stretched* presentations, this option applies to the entire wall. The following descriptions apply to *Stretched* presentations only:

- **Scale to Fill**: The video will be stretched over all screens in the video wall. If the aspect ratio of the video wall does not match the ratio of the video content, the video will likely appear stretched or distorted.
- **Letterboxed and Centered**: The video will not be stretched. Instead, it will appear at the center of the video wall at its original resolution, which may cover one or multiple screens. Areas of the video wall that are not filled by the video will display the background color of the presentation.
- **Fill Screen and Centered**: The video will be stretched to fit the height or width of the video wall (whichever length is lesser). If the aspect ratio of the video wall does not match the ratio of the video content, the video will be cropped.
- **Display screen layout information when presentation starts**: Check this box to have screens in the BrightWall display positioning information for a few moments when the presentation starts scheduled playback. If this box is not checked, the presentation will begin immediately without displaying positioning information.

Configuration

- **Configuration file**: Use the **Browse** button to locate and select a preexisting BrightWall Configuration file to use with the BrightWall project.
- **Edit BrightWall Configuration**: Edit the selected BrightWall Configuration file.
- **Create BrightWall Configuration**: Create a new BrightWall Configuration file. See the Creating a BrightWall Presentation page for more details.

Audio

- **Audio Output**: Enables or disables the Analog, HDMI, and SPDIF audio outputs. In BrightWall presentations, only the master unit (i.e. the player driving Screen 1) outputs audio, so these settings do not affect any of the slave units in the presentation.
  - **Pass through**: Supplies the un-decoded audio signal through the HDMI connector. Use this option if the zone audio (for example, AC3 Dolby Digital) is being decoded on an external device.
  - **Stereo**: Supplies the audio as a stereo signal.
- **Audio Mixing**: Enables the stereo, left-only, or right-only audio signal.

Adding Video to a BrightWall Presentation

BrightAuthor Version 4.6
- Version 4.4
- Previous Versions

The process of creating a video playlist for a BrightWall will differ depending on whether you created a *Regular* or *Stretched* presentation.

For a Regular BrightWall

Each screen in a video wall has a distinct playlist. You can switch among screens by selecting them in the **Screen** section.

To create a regular BrightWall, you will need to add a different video file (or Streaming/Live Video state) to each screen. The **Media Library** of a Regular BrightWall has special properties that help streamline playlist creation:

- A video with a file name in the format *"VideoName_Number"* appears only in the **Media Library** of the screen corresponding to its number.
- Adding a video with a *"VideoName_Number"* file name to a screen will add all other videos with the same format to their respective screen playlists. This behavior will only occur if the quantity of *"VideoName_Number"* files corresponds to the number screens in the BrightWall presentation.

Example
Your BrightWall project consists of four screens. The video is split into four files, each file representing ¼ of the entire wall: "Intro_1.mpg", "Intro_2.mpg", "Intro_3.mpg", and "Intro_4.mpg". Only "Intro_1" will appear in the **Media Library** of Screen 1. Adding "Intro_1" to Screen 1 will automatically add "Intro_2" to Screen 2, "Intro_3" to Screen 3, and "Intro_4" to Screen 4. If your BrightWall project is expanded to six screens, then adding "Intro_1" will not affect the playlists of the other screens because there are only four "Intro" video files.
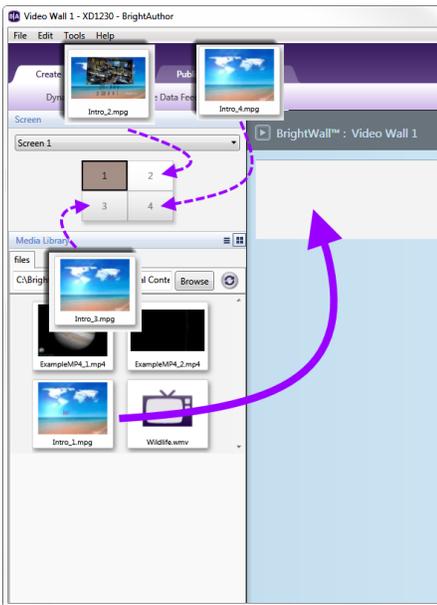
For a Stretched BrightWall

The entire video wall has the same playlist. Adding a video file, Streaming Video, Live Video, or RF Input to the playlist will split the video among the screens during playback.

Completing a BrightWall Presentation

⌄ BrightAuthor Version 4.6

- Version 4.4
- Previous Versions

Before you can publish a BrightWall presentation, you will need to save it by navigating to **File > Save** or **Save As**. If you would like to publish a BrightWall presentation using the BrightSign Network, click the **Upload to network** button once you've signed into your account. You can also export a BrightWall presentation for use on another computer by navigating to **File > Export**.

When you're ready to publish to your video wall, navigate to the Publish tab and click the **BrightWall Presentations** option.

Creating a BrightWall on BSN

⌄ BrightAuthor Version 4.6

- Version 4.4
- Previous Versions

Creating a BrightWall and distributing a BrightWall presentation to it via the BrightSign Network requires several steps within BrightAuthor. Follow these steps to create a BrightWall group, create a BrightWall within the BrightWall group, and publish your presentation to the BrightWall group:

1. Sign in to your BrightSign Network account by navigating to **Tools > Sign In to BrightSign Network**.
2. After creating your BrightWall presentation, click the **Upload to network** button in the top-right. This will upload both the BrightWall presentation and BrightWall configuration file to the BrightSign Network.
3. Navigate to the **Manage > Status** tab.
4. Expand the **BrightWall Groups** section at the bottom of the screen.
5. Click **Add BrightWall Group**.
6. Enter a **BrightWall group name** and select a **Bright Wall configuration**. The BrightWall configuration will be applied to every BrightWall created within the group. Click **OK** when finished.
7. Once you've created a BrightWall group, you will need to set up players as part of the BrightWall configuration:

   a. Navigate to **Tools > Setup BrightSign Unit**.
   b. Select the **BrightWall Group** option under **Networked with the BrightSign Network**.
   c. Use the **BrightWall Group** dropdown list to select the BrightWall group created in steps 5 and 6.
   d. Click the **Add BrightWall** button to add a new BrightWall to the BrightWall group. Enter a **BrightWall name** and click **OK**.

e. Use the **Screen Number** dropdown list to specify the section of the BrightWall to which the player belongs. Screens are numbered by row, starting from the top-left section of the BrightWall (the example diagram to the right shows the numbering of a 4x3 BrightWall).

f. Enter the rest of the player configuration settings as desired and set up the player—see the BrightSign Network Setup page for more details.

8. Repeat steps **7a** through **7f** to set up every player in the BrightWall—make sure to use the same **BrightWall Group** and **BrightWall Name** for all players in the BrightWall.

9. Navigate to the **Publish > BrightSign Network** tab.

10. Select the **BrightWall Presentations** option.

11. Under **Select BrightWall Group to Schedule**, select the BrightWall group you created in steps 5 and 6.

12. Add one or more BrightWall presentations to the schedule—see the BrightSign Network publishing section for more details on scheduling.

13. Click **Publish schedule**. Make sure all the players in the BrightWall are powered up and connected to the Internet. Allow time for the players to download the content, reboot, and synchronize playback.

Adding a New BrightWall to the Group

Use the **Add BrightWall** option during unit setup to add additional BrightWall(s) to the BrightWall group. A new BrightWall will use the same configuration and be scheduled with the same presentations as other BrightWall(s) in the group.

Using Configuration Files

Each BrightWall presentation within a BrightWall group must use the same configuration file. If you want to create additional BrightWall presentations with different configuration files, you will need to create additional BrightWall groups in the **Manage > Status** tab.

Retrieving Configuration Files from BSN

If you don't have the original configuration file (for example, if the user who created the original configuration file is on a different PC), you will need to retrieve it from BSN:

1. Navigate to the **Manage > Presentations** tab.
2. Expand the **BrightWall Configurations** section.
3. Right-click the original configuration file and select **Download** to save the file to your hard drive.
4. When creating a new BrightWall presentation, use the **Browse** button to locate and select this configuration file.

Publishing Presentations

⌄ BrightAuthor Version 4.6

- Version 4.4
- Previous Versions

After you create and save a presentation, you're ready to publish it to your BrightSign player or players. You can use one of the following methods to publish a presentation:

- Local Storage
- BrightSign Network
- Simple File Network
- Local File Network

The method you use to publish will depend on several factors, such as whether your player is networked, what kind of network you have access to, and how many players you have.

> **Note**
> You can use any of the above methods to publish a BrightWall presentation as well. See the Publishing a BrightWall Presentation page for more details.

Local Storage

> **Tip**
> This tutorial video provides an overview of publishing via local storage.

Publishing a presentation using Local Storage lets you copy your presentations to an SD card or USB flash drive. When you want to update your scheduled presentations, you must save the updated content on the SD card or USB flash drive and insert it into your BrightSign player.

Unless you are updating content, an SD card or flash drive should always remain connected to the BrightSign player. However, if your BrightSign player has a USB port, we recommend that you create setup files with an SD card, leave it in the player permanently as internal storage, and use a USB flash drive whenever you need to update content. You can publish updated content to the USB flash drive, insert it into the player to update the SD card, and then remove the flash drive.

To publish via Local Storage, complete the following steps:

1. Save the presentations you want to publish by clicking **File** > **Save… As**. You will also be prompted to save a presentation if there are unsaved changes to the presentation when you switch to the **Publish** tab.
2. Click the **Publish** tab.
3. Click **Local Storage** (below the **Publish** tab).
4. Choose whether you want to publish **Presentations** or **BrightWall™ Presentations**.
5. Click **Browse** under **Presentations** to navigate to and select the folder where your presentations are stored.

Adding Presentations to Your Schedule

Follow these steps to add presentations to the player schedule:

1. Select a presentation from the list in the **Presentations** section.
2. Drag the presentation to a time slot during which you want it to play.
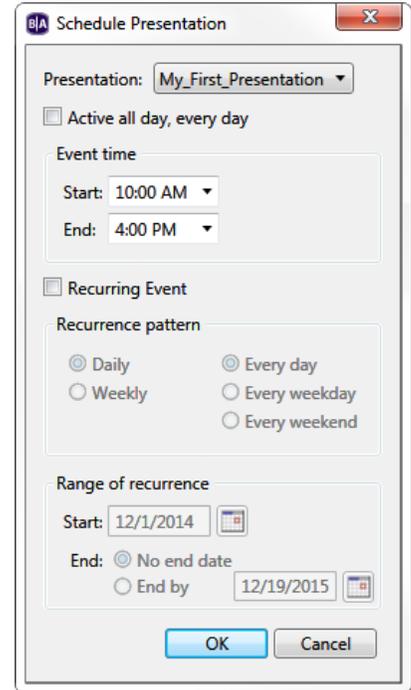3. Click and drag the selection handles to adjust playing time within one day.

> **Note**
> Alternatively, you can schedule a presentation by double-clicking a blank area on the schedule to open the **Schedule Presentation** window.

If you want the presentation to be a recurring event, double-click the presentation timeframe in the calendar. In the **Schedule Presentation** window, set the following parameters:

- **Presentation**: Specify which presentation you want to use in this schedule block.
- **Active all day, every day**: Check this box if you want the presentation to play at all times (i.e. without day parting).
- **Event time**: Specify a timeframe during the day when you want the presentation to play:
  - **Start**: Use the dropdown list to select a time when the presentation should begin
  - **End**: Use the dropdown list to select a time when the presentation should end.
- **Recurring Event**: Check this box to have the presentation recur during specified days. If you don't check this box, the **Event time** will only apply to the single day selected in the schedule.
  - **Recurring pattern**: Specify the frequency of the recurrence.
    - **Daily**: Specify **Every day**, **Every weekday**, or **Every weekend** for playback.

- **Weekly**: Check the boxes corresponding to the individual days of the week when you want the presentation to play.
- **Range of recurrence**: Use this option to limit the recurrence of the scheduled presentation.
  - **Start**: Specify the start date of the scheduled recurrence. This date defaults to the currently selected date in the schedule.
  - **End**: Select **No end** to have the presentation recur indefinitely, or select **End by** and specify the end date of the scheduled recurrence.
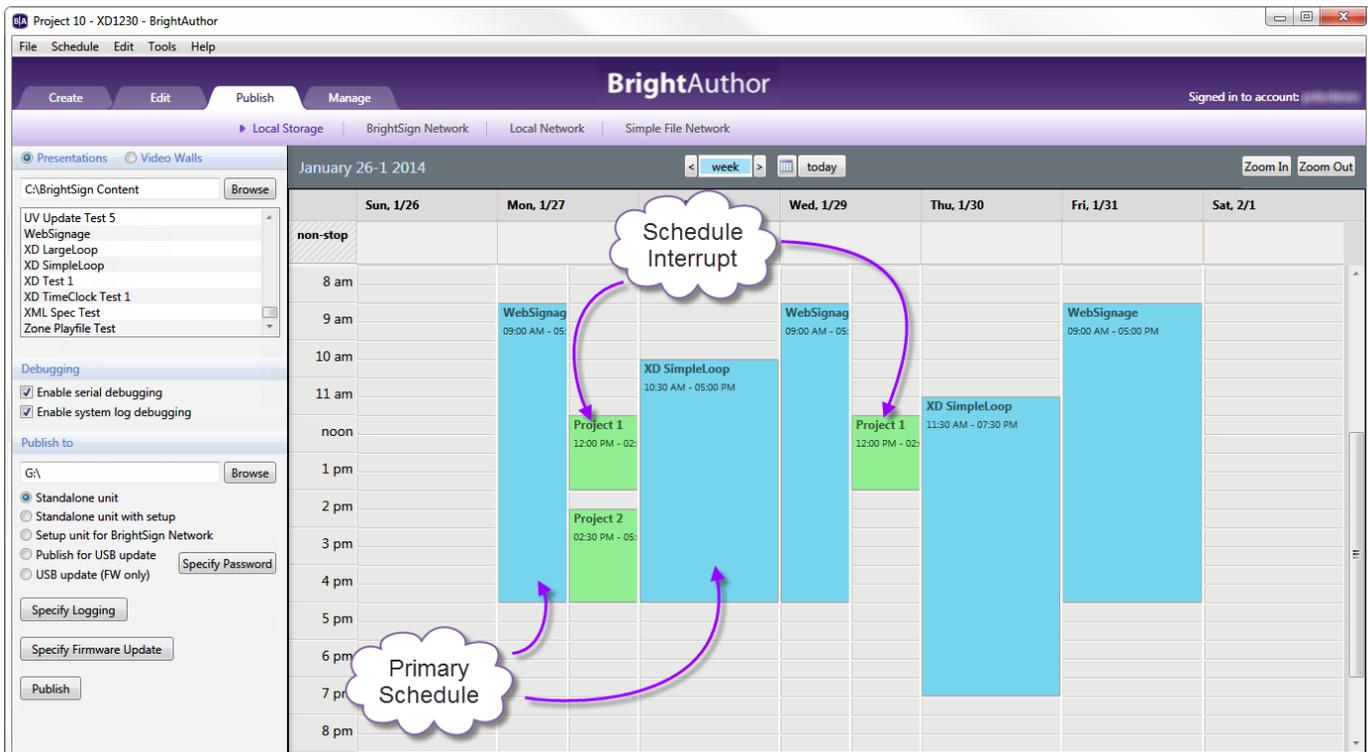
Schedule Interrupts

You can create a day-parted schedule by scheduling presentations in separate time slots of a single day (or a set of recurring days). Later on, you may need to schedule a new presentation in an occupied time slot. This is where *schedule interrupts* are useful.

If you would like to interrupt a scheduled presentation with another presentation, drag and drop the new presentation into an occupied time slot (you can also schedule an overlap in the **Schedule Presentation** window). A **Schedule Conflict** window will appear, providing the following options:

- **Keep existing events, cancel new event**: Cancels the new schedule presentation action.
- **Keep existing events, adjust new event**: Opens the **Schedule Presentation** window, allowing you to schedule the new presentation in an empty time slot. If you schedule the presentation in an occupied time slot, the **Schedule Conflict** window will appear again.
- **Remove existing events, use new event**: Completely removes the presentation currently occupying the time slot.
- **Interrupt existing events with new event**: Schedules an interrupt in the presentation currently occupying the time slot. The date field will be split into two columns: The left column shows the primary scheduled presentation in blue; the right column shows the interrupting presentation in green. Primary scheduled presentations can be interrupted with multiple presentations, but interrupting presentations cannot overlap with each other.

Debugging

Under **Debugging**, you may optionally enable the following:

- **Enable serial debugging**: The autorun script will output debugging information related to the presentation to the RS-232 serial port (as well as over Telnet and SSH if these features are enabled).
- **Enable system log debugging**: The autorun script will output debugging information related to the presentation to the **Log** tab in the Dia

gnostic Web Server.

Publishing Options

Select among the following publishing options:

- **Standalone Unit:** Publishes the scheduled presentation(s) to the player using an SD card.
    - **Specify Password**:(Optional) Click this button to set up, change, or remove password protection for USB content updates. The password protection feature ensures that a player cannot be updated with the **Publish for USB update** option unless the correct password is supplied.
        - **Keep Password**: Leaves the current content update password for the player unchanged.
        - **Set New Password**: Sets a new content update password for the player. Enter the new password in the field.
        - **Clear Password**: Removes the content update password. This allows USB updates to be published to the SD card without restrictions.

- **Standalone unit with setup**: Publishes both the scheduled presentation(s) and player setup files at the same time. When you click the **Publish** button, the **BrightSign Unit Setup** window will open, prompting you to configure the player for Standalone use.
- **Setup unit for BrightSign Network**: Includes player setup files for the BrightSign Network with the scheduled presentation(s). This option is useful if you want to ensure that a newly set up player will run a presentation even if it cannot initially connect to the BrightSign Network. Once the player connects to the BrightSign Network, it will update to the current presentation and schedule for its assigned group. When you click **Publish**, you will be prompted to set up the player for the BrightSign Network.
- **Publish for USB update**: Publishes the scheduled presentation(s) to a USB flash drive. You can then insert the flash drive into a BrightSign player to update the SD card on the player. This allows you to update content on a Standalone player without ever needing to remove the SD card. USB updates only work with players that are configured for Standalone publishing.
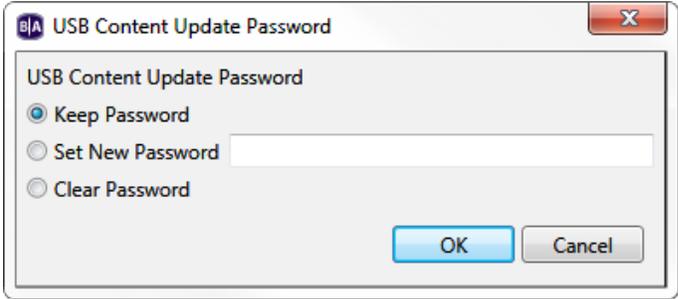
> **Important**
> A schedule must already be published to the SD card for the USB update to work. Publish an initial schedule via the SD card first; you can then use the USB update feature for subsequent publishing operations.

- **Specify Password:** Click this button if you are publishing a USB content update to a player or set of players with password protection. Enter the **USB Content Update Password**. You must enter the same upgrade password designated for the player or else the player content upgrade will fail. You can choose the password when you set the player up for standalone use or when you use the **Set New Password** feature (see step **5a** above).

> **Note**
> If no update password is currently set for the player, entering a phrase in this field will designate it as the new update password.

- **USB update (FW only)**: Publishes a firmware update file to a USB flash drive. You can use this feature to update the firmware on a player without ever needing to remove the SD card or publish a new schedule to the player. Use the **Specify Firmware Update** button (described below) to determine the update version.

Logging

Click **Specify Logging** to enable/disable logs on the player:

- **Enable playback logging**: Records playback start and end times, zone names, media types, and file names.
- **Enable event logging**: Records timestamps, state names, zone names, event types, and event data.
- **Enable state logging**: Records current and last state names, timestamps, and media types.
- **Enable diagnostic logging**: Records timestamps, firmware and script versions, and the current presentation.
- **Enable Variable logging**: Records the current and default values of all User Variables in the presentation. This log is only generated when logs are uploaded to custom log handler URL.

Firmware Updates

Click **Specify Firmware Update** to include a firmware update file with the published schedule. In the **Firmware Update** window, locate the section corresponding to your BrightSign model and select one of the following:

- **Production Release**: The current official release of BrightSign firmware
- **Beta Release**: The current beta release of BrightSign firmware
- **Minimum Compatible Release**: The minimum firmware version that supports presentations created by your version of BrightAuthor. The minimum compatible firmware will likely not support all features provided by a contemporary version of BrightAuthor.
- **Select specific file**: Use the **Browse** button to select a *.bsfw* firmware update file from your hard drive. The other options will download the update file from BrightSign when the presentation schedule is published.

You can use the **Update type** dropdown menu to determine the behavior of the firmware update:

- **Standard**: The firmware update is applied, the player reboots, and the *.bsfw* update file deletes itself from the local storage.
- **Different**: The update will only be applied if the version of the *.bsfw* update file does not match the current firmware version of the player. The file is not deleted after the update process is completed.
- **Newer**: The update will only be applied if the version of the *.bsfw* update file is newer than the current firmware version of the player. The file is not deleted after the update process is completed.
- **Save**: The firmware update is applied, but the *.bsfw* update file is not deleted. The device will only reboot once the storage device containing the update file is removed.

Publishing the Scheduled Presentation(s)

Once you've created the presentation schedule and configured the publishing options, follow these steps to publish the schedule to your BrightSign player(s):

1. Insert an SD card or USB flash drive into your computer.
2. Under **Publish to**, click **Browse**. Navigate to and select the drive where your storage device is located. Make sure to select the *root folder* of the SD card or USB flash drive (e.g. "SD:/").
3. Click **Publish**. When the **Publish complete** window opens, click **OK**.
4. Update your BrightSign player:
   a. Turn off the BrightSign player by unplugging the power adapter (or Ethernet cable if the player is being powered by PoE).
   b. Insert the storage device into the player.
   c. Turn on the BrightSign unit by reconnecting the power.

> **Note**
> If an SD card is already in the player and you are updating it via USB, you don't need to turn off the player. Insert the USB flash drive into the player, wait until the **Update Complete** message appears on the display, and then remove the flash drive.

BrightSign Network

The BrightSign Network allows you to distribute presentations to your BrightSign players over the Internet.

The BrightSign Network requires a subscription, so you must first contact BrightSign to obtain an account name, user name, and password. Once your BrightSign players are set up with the BrightSign Network, you can upload your presentations and assign schedules to groups. Your players will then update their content automatically when they connect to the server.

The BrightSign Network distributes presentations and schedules to groups instead of players. Groups can contain any number of players, and you can move BrightSign players from one group to another at any point. See Managing Your Network for details. To publish with BrightSign Network, complete the following steps:

1. Sign into BrightSign Network by clicking **Tools** > **Sign in to BrightSign Network**.

2. Open the presentation you wish to publish by selecting **File** > **Open presentation**.
3. Click **Upload to network** (in the upper-right portion of the screen) to upload the presentation to the server.:
4. Click the **Publish** tab.
5. Select **BrightSign Network**(above the calendar).
6. Choose whether you want to publish **Presentations** or **BrightWall™ Presentations**.
7. Under **Selected Group to Schedule**, use the dropdown list to specify the group to which you want to publish.

Adding Presentations to Your Schedule

Follow these steps to add presentations to the group schedule:

1. Select a presentation from the list in the **Presentations** section.
2. Drag the presentation to a time slot during which you want it to play.
3. Click and drag the selection handles to adjust playing time within one day.

> **Note**
> Alternatively, you can schedule a presentation by double-clicking a blank area on the schedule to open the **Schedule Presentation** window.
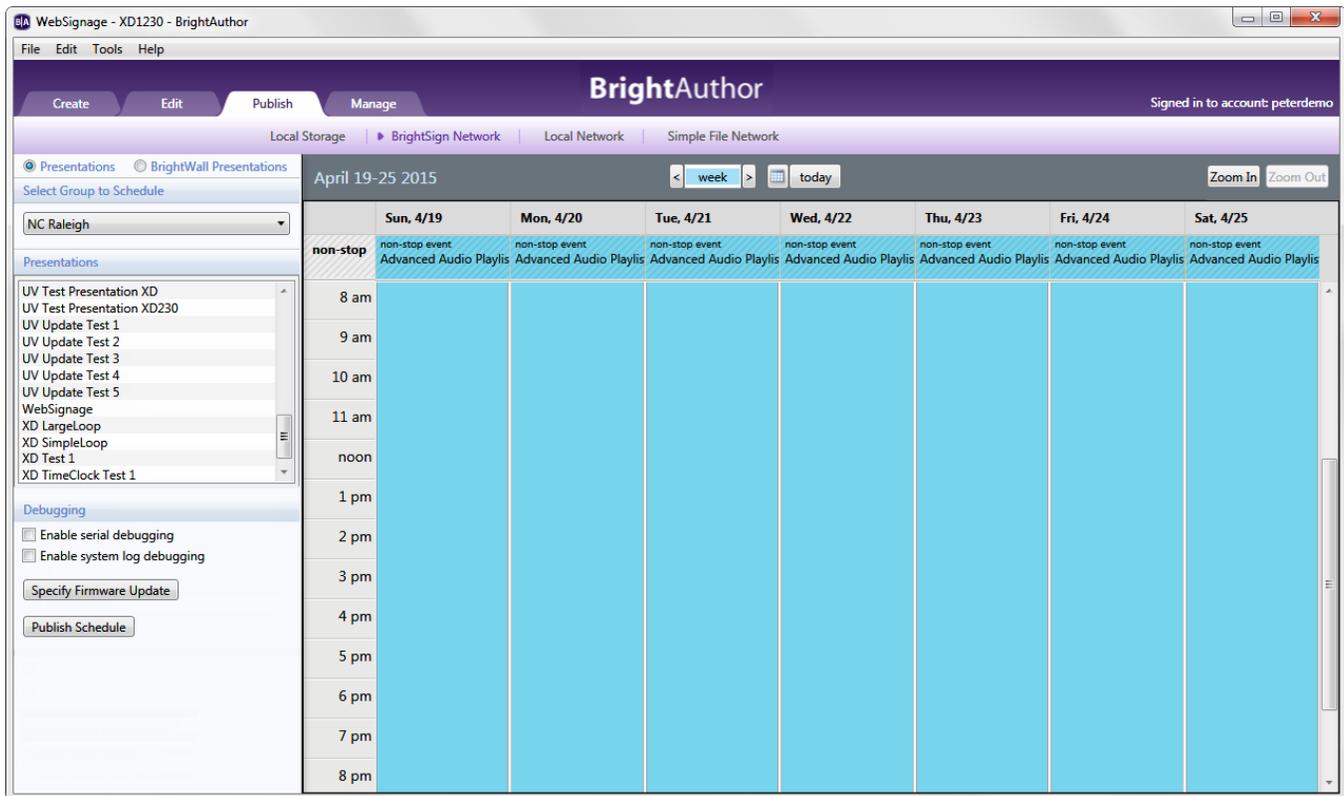
If you want the presentation to be a recurring event, double-click the presentation timeframe in the calendar. In the **Schedule Presentation** window, set the following parameters:

- **Presentation**: Specify which presentation you want to use in this schedule block.
- **Active all day, every day**: Check this box if you want the presentation to play at all times (i.e. without day parting).
- **Event time**: Specify a timeframe during the day when you want the presentation to play:
    - **Start**: Use the dropdown list to select a time when the presentation should begin
    - **End**: Use the dropdown list to select a time when the presentation should end.
- **Recurring Event**: Check this box to have the presentation recur during specified days. If you don't check this box, the **Event time** will only apply to the single day selected in the schedule.
    - **Recurring pattern**: Specify the frequency of the recurrence.
        - **Daily**: Specify **Every day**, **Every weekday**, or **Every weekend** for playback.
        - **Weekly**: Check the boxes corresponding to the individual days of the week when you want the presentation to play.
    - **Range of recurrence**: Use this option to limit the recurrence of the scheduled presentation.
        - **Start**: Specify the start date of the scheduled recurrence. This date defaults to the currently selected date in the schedule.
        - **End**: Select **No end** to have the presentation recur indefinitely, or select **End by** and specify the end date of the scheduled recurrence.

Schedule Changes

If you drag and drop the new presentation into an occupied time slot (or schedule an overlap in the **Schedule Presentation** window), a **Schedule Conflict** window will appear, providing the following options:

- **Keep existing events, cancel new event**: Cancels the new schedule presentation action.
- **Keep existing events, adjust new event**: Opens the **Schedule Presentation** window, allowing you to schedule the new presentation in an empty time slot. If you schedule the presentation in an occupied time slot, the **Schedule Conflict** window will appear again.
- **Remove existing events, use new event**: Completely removes the presentation currently occupying the time slot.

Debugging

Under **Debugging**, you may optionally enable the following:

- **Enable serial debugging**: The autorun script will output debugging information related to the presentation to the RS-232 serial port (as well as over Telnet and SSH if these features are enabled).
- **Enable system log debugging**: The autorun script will output debugging information related to the presentation to the **Log** tab in the Diagnostic Web Server.

Firmware Updates

Click **Specify Firmware Update** to update the group firmware along the schedule. In the **Firmware Update** window, locate the section corresponding to the BrightSign model type in the group and select one of the following:

- **Production Release**: The current official release of BrightSign firmware
- **Beta Release**: The current beta release of BrightSign firmware
- **Minimum Compatible Release**: The minimum firmware version that supports presentations created by your version of BrightAuthor. The minimum compatible firmware will likely not support all features provided by a contemporary version of BrightAuthor.
- **Select specific file**: Use the **Browse** button to select a *.bsfw* firmware update file from your hard drive. The other options will use update files stored on the BrightSign Network servers.

Publishing the Scheduled Presentation(s)

Once you've created the presentation schedule and configured the publishing options, click **Publish Schedule**. When the **Publish Complete** window appears, click **OK**.

Simple File Network

- BrightAuthor Version 4.6
  - Version 4.4
  - Previous Versions

Simple File Networking allows you to distribute presentations to your BrightSign players using a web server. To use this publishing method, players must be set up for Simple File Networking with the correct **URL for web folder**.

1. In BrightAuthor, save the presentation(s) you want to publish by clicking **File** > **Save… As**
2. Click the **Publish** tab.
3. Select the **Simple File Network** option(above the Calendar).
4. Choose whether you want to publish **Presentations** or **BrightWall Presentations**.
5. Under **Presentations**, click **Browse** to navigate to and select the folder where your presentations are stored.

Adding Presentations to Your Schedule

Follow these steps to add presentations to the player schedule:

1. Select a presentation from the list in the **Presentations** section.
2. Drag the presentation to a time slot during which you want it to play.
3. Click and drag the selection handles to adjust playing time within one day.

> **Note**
> Alternatively, you can schedule a presentation by double-clicking a blank area on the schedule to open the **Schedule Presentation** window.

If you want the presentation to be a recurring event, double-click the presentation timeframe in the calendar. In the **Schedule Presentation** window, set the following parameters:

- **Presentation**: Specify which presentation you want to use in this schedule block.
- **Active all day, every day**: Check this box if you want the presentation to play at all times (i.e. without day parting).
- **Event time**: Specify a timeframe during the day when you want the presentation to play:
  - **Start**: Use the dropdown list to select a time when the presentation should begin
  - **End**: Use the dropdown list to select a time when the presentation should end.
- **Recurring Event**: Check this box to have the presentation recur during specified days. If you don't check this box, the **Event time** will only apply to the single day selected in the schedule.
  - **Recurring pattern**: Specify the frequency of the recurrence.
    - **Daily**: Specify **Every day**, **Every weekday**, or **Every weekend** for playback.
    - **Weekly**: Check the boxes corresponding to the individual days of the week when you want the presentation to play.
  - **Range of recurrence**: Use this option to limit the recurrence of the scheduled presentation.
  - **Start**: Specify the start date of the scheduled recurrence. This date defaults to the currently selected date in the schedule.
  - **End**: Select **No end** to have the presentation recur indefinitely, or select **End by** and specify the end date of the scheduled recurrence.
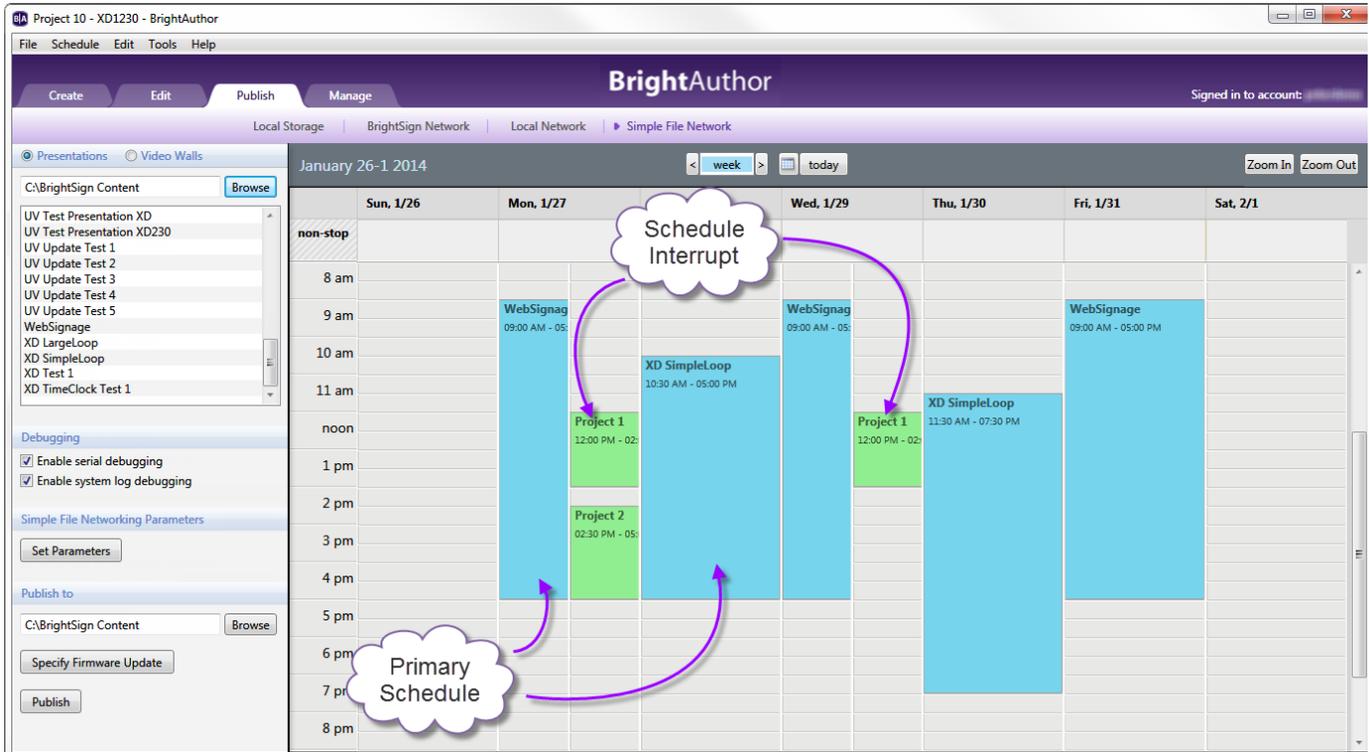
Schedule Interrupts

You can create a day-parted schedule by scheduling presentations in separate time slots of a single day (or a set of recurring days). Later on, you may need to schedule a new presentation in an occupied time slot. This is where *schedule interrupts* are useful.

f you would like to interrupt a scheduled presentation with another presentation, drag and drop the new presentation into an occupied time slot (you can also schedule an overlap in the **Schedule Presentation** window). A **Schedule Conflict** window will appear, providing the following options:

- **Keep existing events, cancel new event**: Cancels the new schedule presentation action.
- **Keep existing events, adjust new event**: Opens the **Schedule Presentation** window, allowing you to schedule the new presentation in an empty time slot. If you schedule the presentation in an occupied time slot, the **Schedule Conflict** window will appear again.
- **Remove existing events, use new event**: Completely removes the presentation currently occupying the time slot.
- **Interrupt existing events with new event**: Schedules an interrupt in the presentation currently occupying the time slot. The date field will be split into two columns: The left column shows the primary scheduled presentation in blue; the right column shows the interrupting presentation in green. Primary scheduled presentations can be interrupted with multiple presentations, but interrupting presentations cannot overlap with each other.

Debugging

Under **Debugging**, you may optionally enable the following:

- **Enable serial debugging**: The autorun script will output debugging information related to the presentation to the RS-232 serial port (as well as over Telnet and SSH if these features are enabled).
- **Enable system log debugging**: The autorun script will output debugging information related to the presentation to the **Log** tab in the Diagnostic Web Server.

Simple File Networking Parameters

If you wish to reconfigure some of the device parameters, click the **Set Parameters** button. These changes will only affect players that receive the presentation schedule.

- **URL for the web folder**: Specify a new location from which the player will download content updates. Do not use trailing slashes in your URL; some web servers do not support trailing slashes.

- **Content Check Frequency**: Set how often you want the player to check your server for updates.
- **Simple File Networking Authentication**:(Optional) Enter a **User name** and **password** to enable digest authentication between the BrightSign player and the web server.
    - **Enable basic authentication**: Check this box to have the player pass credentials to the web server in unsecured packets. Use this option only if it is absolutely required by the configuration of your web server.
- **Logging**: Check the boxes to enable any of the following:
    - **Enable playback logging**: Records playback start and end times, zone names, media types, and file names.
    - **Enable event logging**: Records timestamps, state names, zone names, event types, and event data.
    - **Enable state logging**: Records current and last state names, timestamps, and media types.
    - **Enable diagnostic logging**: Records timestamps, firmware and script versions, and the current presentation.
    - **Enable Variable logging**: Records the current and default values of all User Variables in the presentation. This log is only generated when logs are uploaded to custom log handler URL.
    - **Upload logs**: Check either of the following:
        - **On startup**: Uploads log files each time the player is powered on.
        - **At specific time each day**: Uploads log files daily at the specified time. Use the dropdown lists to pick a time.
- **Enable remote snapshot**: Check this box to enable the Remote Snapshot feature, which allows you to remotely monitor the contents of the presentation display.

Note
The Remote Snapshot feature is not available for the LS422, HD220, or HD1020.

- **Remote snapshot every [ ] minutes**: Specify how often the player should take a snapshot of the presentation display.
- **Save up to [ ] images (1 - 100) on local storage**: Specify how many JPEG snapshot images can be stored on the local storage of the player.
- **JPEG quality level [ ] (0 - 100)**: Specify the quality level (and thus the file size) of each image file.
- **Display snapshots in portrait mode**: Check this box to have the player rotate the snapshots to portrait mode before saving and uploading them.

Firmware Updates

Click **Specify Firmware Update** to include a firmware update file with the published schedule. In the **Firmware Update** window, locate the section corresponding to your BrightSign model and select one of the following:

- **Production Release**: The current official release of BrightSign firmware
- **Beta Release**: The current beta release of BrightSign firmware
- **Minimum Compatible Release**: The minimum firmware version that supports presentations created by your version of BrightAuthor. The minimum compatible firmware will likely not support all features provided by a contemporary version of BrightAuthor.
- **Select specific file**: Use the **Browse** button to select a *.bsfw* firmware update file from your hard drive. The other options will download the update file from BrightSign when the presentation schedule is published.

You can use the **Update type** dropdown menu to determine the behavior of the firmware update:

- **Standard**: The firmware update is applied, the player reboots, and the .bsfw update file deletes itself from the local storage.
- **Different**: The update will only be applied if the version of the .bsfw update file does not match the current firmware version of the player. The file is not deleted after the update process is completed.
- **Newer**: The update will only be applied if the version of the .bsfw update file is newer than the current firmware version of the player. The file is not deleted after the update process is completed.
- **Save**: The firmware update is applied, but the .bsfw update file is not deleted. The device will only reboot once the storage device containing the update file is removed.

Publishing the Scheduled Presentation(s)

Under **Publish to**, click **Browse** to navigate to and select the location where you want to store the files.

- If you have a mapped drive or shortcut that points to your web folder, publish to that location.
- If you use FTP to transfer files to your web folder, publish to a folder on your computer and then use FTP software to copy the files to your web folder.

Click **Publish**. When the **Publish Complete** window opens, click **OK**.

Local File Network

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Local File Networking allows you to publish presentations to your BrightSign players without requiring a remote server or an Internet connection. This is convenient if you only have a small number of BrightSign players that are all on the same local network. With Local Networking, BrightSign players do not poll a remote web server to receive updates. Instead, you select one or more BrightSign players in BrightAuthor and publish presentations directly to them. Updates will then be sent to the BrightSign player immediately.

1. Save the presentation you want to publish by clicking **File** > **Save As**
2. Click the **Publish** tab.
3. Click **Local Network** (above the Calendar).
4. Choose whether you want to publish **Presentations** or **BrightWall Presentations**.
5. Under **Presentations**, click **Browse** to navigate to and select the folder where your presentations are stored.

Adding Presentations to the Schedule

Follow these steps to add presentations to the player schedule:

1. Select a presentation from the list in the **Presentations** section.
2. Drag the presentation to a time slot during which you want it to play.
3. Click and drag the selection handles to adjust playing time within one day.

> **Note**
> Alternatively, you can schedule a presentation by double-clicking a blank area on the schedule to open the **Schedule Presentation** window.

If you want the presentation to be a recurring event, double-click the presentation timeframe in the calendar. In the **Schedule Presentation** window, set the following parameters:

- **Presentation**: Specify which presentation you want to use in this schedule block.
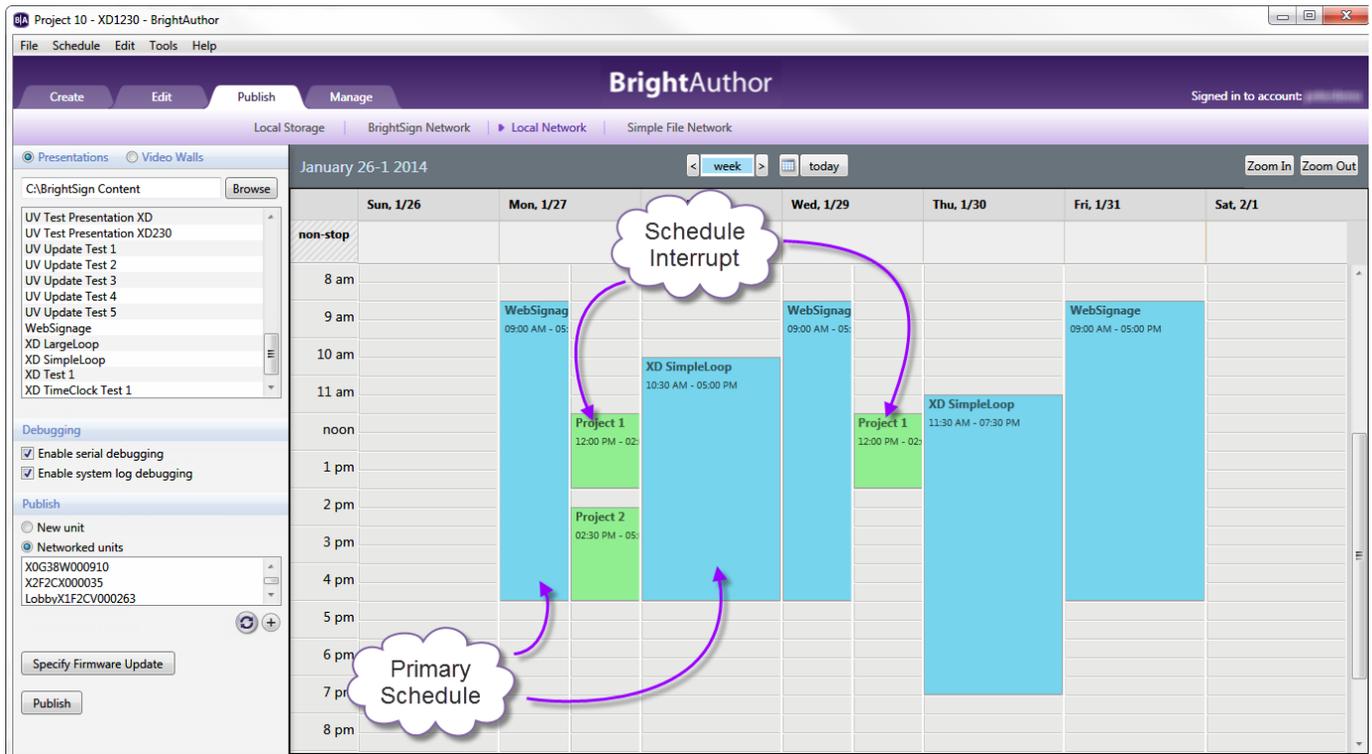
- **Active all day, every day**: Check this box if you want the presentation to play at all times (i.e. without day parting).
- **Event time**: Specify a timeframe during the day when you want the presentation to play:
  - **Start**: Use the dropdown list to select a time when the presentation should begin
  - **End**: Use the dropdown list to select a time when the presentation should end.
- **Recurring Event**: Check this box to have the presentation recur during specified days. If you don't check this box, the **Event time** will only apply to the single day selected in the schedule.
  - **Recurring pattern**: Specify the frequency of the recurrence.
    - **Daily**: Specify **Every day**, **Every weekday**, or **Every weekend** for playback.
    - **Weekly**: Check the boxes corresponding to the individual days of the week when you want the presentation to play.
  - **Range of recurrence**: Use this option to limit the recurrence of the scheduled presentation.
    - **Start**: Specify the start date of the scheduled recurrence. This date defaults to the currently selected date in the schedule.
    - **End**: Select **No end** to have the presentation recur indefinitely, or select **End by** and specify the end date of the scheduled recurrence.

Schedule Interrupts

You can create a day-parted schedule by scheduling presentations in separate time slots of a single day (or a set of recurring days). Later on, you may need to schedule a new presentation in an occupied time slot. This is where *schedule interrupts* are useful.

 If you would like to interrupt a scheduled presentation with another presentation, drag and drop the new presentation into an occupied time slot (you can also schedule an overlap in the **Schedule Presentation** window). A **Schedule Conflict** window will appear, providing the following options:

- **Keep existing events, cancel new event**: Cancels the new schedule presentation action.
- **Keep existing events, adjust new event**: Opens the **Schedule Presentation** window, allowing you to schedule the new presentation in an empty time slot. If you schedule the presentation in an occupied time slot, the **Schedule Conflict** window will appear again.
- **Remove existing events, use new event**: Completely removes the presentation currently occupying the time slot.
- **Interrupt existing events with new event**: Schedules an interrupt in the presentation currently occupying the time slot. The date field will be split into two columns: The left column shows the primary scheduled presentation in blue; the right column shows the interrupting presentation in green. Primary scheduled presentations can be interrupted with multiple presentations, but interrupting presentations cannot overlap with each other.

Debugging

Under **Debugging**, you may optionally enable the following:

- **Enable serial debugging**: The autorun script will output debugging information related to the presentation to the RS-232 serial port (as well as over Telnet and SSH if these features are enabled).
- **Enable system log debugging**: The autorun script will output debugging information related to the presentation to the **Log** tab in the Diagnostic Web Server.

Firmware Updates

Click **Specify Firmware Update** to include a firmware update file with the published schedule. In the **Firmware Update** window, locate the section corresponding to your BrightSign model and select one of the following:

- **Production Release**: The current official release of BrightSign firmware
- **Beta Release**: The current beta release of BrightSign firmware
- **Minimum Compatible Release**: The minimum firmware version that supports presentations created by your version of BrightAuthor. The minimum compatible firmware will likely not support all features provided by a contemporary version of BrightAuthor.
- **Select specific file**: Use the **Browse** button to select a *.bsfw* firmware update file from your hard drive. The other options will download the update file from BrightSign when the presentation schedule is published.

You can use the **Update type** dropdown menu to determine the behavior of the firmware update:

- **Standard**: The firmware update is applied, the player reboots, and the *.bsfw* update file deletes itself from the local storage.
- **Different**: The update will only be applied if the version of the *.bsfw* update file does not match the current firmware version of the player. The file is not deleted after the update process is completed.
- **Newer**: The update will only be applied if the version of the *.bsfw* update file is newer than the current firmware version of the player. The file is not deleted after the update process is completed.
- **Save**: The firmware update is applied, but the *.bsfw* update file is not deleted. The device will only reboot once the storage device containing the update file is removed.

Publishing the Scheduled Presentation(s)

Under **Publish**, select a BrightSign player. You can publish to multiple players at once by holding down the **Ctrl** key while clicking each player.

- *If Bonjour is enabled in BrightAuthor*: The player should appear in the **Publish** list automatically. If the player does not appear, ensure

that it is set up for Local File Networking and that it contains an SD card or USB flash drive. Power cycle the unit, wait a minute, and click to refresh the list. If you're still having trouble, see the Bonjour FAQ for further troubleshooting steps.

- *If Bonjour is disabled in BrightAuthor*: You will need to add the player manually. Click to open the **Add BrightSign Unit** window. Enter IP address of the new BrightSign unit, and click **OK**. The player will be added to the **Publish** list permanently (unless the player IP address changes).

Select one of the following publishing options:

- **New unit**: The **BrightSign Unit Setup** window will open when you publish the presentation schedule, allowing you to configure (or reconfigure) device properties associated with the player(s). See the Local File Network Setup page for more details.
- **Networked units**: The presentation schedule will be published without modifying the device properties associated with the player(s).

Click **Publish**. When the **Publish Complete** window opens, click **OK**.

Publishing a BrightWall Presentation

- ⌄ BrightAuthor Version 4.6
  - Version 4.4
  - Previous Versions

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  - Adding BrightWall Presentations to Your Schedule
  - Schedule Interrupts
  - Publishing the Scheduled BrightWall Presentation(s)
    - Local Storage
    - BrightSign Network
    - Local Network
    - Simple File Network

To publish a BrightWall™ presentation, navigate to the **Publish** tab, choose your desired publishing option (BrightSign Network, Standalone, etc.), and select **BrightWall™ Presentations** in the top left. Note that BrightWall presentations and standard presentations cannot be placed on the same schedule.

Adding BrightWall Presentations to Your Schedule

Follow these steps to add BrightWall presentations to the player schedule:

1. Select a BrightWall presentation from the list in the **Presentations** section.
2. Drag the BrightWall presentation to a time slot during which you want it to play.
3. Click and drag the selection handles to adjust playing time within one day.

If you want the BrightWall presentation to be a recurring event, double-click the presentation timeframe in the calendar. In the **Schedule Presentation** window, set the following parameters:

- **Presentation**: Specify which BrightWall presentation you want to use in this schedule block.
- **Active all day, every day**: Check this box if you want the BrightWall presentation to play at all times (i.e. without day parting).
- **Event time**: Specify a timeframe during the day when you want the BrightWall presentation to play:
  - **Start**: Use the dropdown list to select a time when the BrightWall presentation should begin
  - **End**: Use the dropdown list to select a time when the BrightWall presentation should end.
- **Recurring Event**: Check this box to have the BrightWall presentation recur during specified days. If you don't check this box, the **Event time** will only apply to the single day selected in the schedule.
  - **Recurring pattern**: Specify the frequency of the recurrence.
    - **Daily**: Specify **Every day**, **Every weekday**, or **Every weekend** for playback.

- **Weekly**: Check the boxes corresponding to the individual days of the week when you want the BrightWall presentation to play.

- **Range of recurrence**: Use this option to limit the recurrence of the scheduled presentation.
  - **Start**: Specify the start date of the scheduled recurrence. This date defaults to the currently selected date in the schedule.
  - **End**: Select **No end** to have the presentation recur indefinitely, or select **End by** and specify the end date of the scheduled recurrence.

Schedule Interrupts

You can create a day-parted schedule by scheduling BrightWall presentations in separate time slots of a single day (or a set of recurring days). Later on, you may need to schedule a new BrightWall presentation in an occupied time slot. This is where *schedule interrupts* are useful.

If you would like to interrupt a scheduled BrightWall presentation with another presentation, drag and drop the new BrightWall presentation into an occupied time slot (you can also schedule an overlap in the **Schedule Presentation** window). A **Schedule Conflict** window will appear, providing the following options:

- **Keep existing events, cancel new event**: Cancels the new schedule presentation action.
- **Keep existing events, adjust new event**: Opens the **Schedule Presentation** window, allowing you to schedule the new BrightWall presentation in an empty time slot. If you schedule the BrightWall presentation in an occupied time slot, the **Schedule Conflict** window will appear again.
- **Remove existing events, use new event**: Completely removes the BrightWall presentation currently occupying the time slot.
- **Interrupt existing events with new event**: Schedules an interrupt in the BrightWall presentation currently occupying the time slot. The date field will be split into two columns: The left column shows the primary scheduled presentation in blue; the right column shows the interrupting presentation in green. Primary scheduled presentations can be interrupted with multiple presentations, but interrupting presentations cannot overlap with each other.

Publishing the Scheduled BrightWall Presentation(s)

Local Storage

Once you have finished scheduling your BrightWall presentation(s), click the **Publish** button to bring up the **Publish BrightWall** window:

- **Publish each screen in a subfolder of a parent folder**: The project and media files for each screen will be published in separate subfolders of the specified parent folder. Use this option if you don't want to publish to the SD cards of all the BrightWall players while in BrightAuthor. This option is also useful if you'd like the entire BrightWall presentation contained in a package that can be easily transported between directories, computers, etc.
- **Publish each screen individually**: You will be given a separate prompt for publishing the project files of each screen. Use this option if you want to immediately set up the SD cards for players in the video wall.

BrightSign Network

Select a BSN BrightWall Group using the dropdown menu under **Select BrightWall Group to Schedule**. The BrightWall configuration file assigned to the group determines which presentations are available in the **BrightWall Presentations** list: A BrightWall presentation will not appear in this list if it uses a different configuration file from the group.

If you haven't created a BrightWall Group yet, navigate to the **Manage > Status** tab to create one. Once you've created a BrightWall Group, return to the **Publish > BrightSign Network** tab and click to refresh the dropdown list. See the page for a complete outline of the BSN BrightWall process.

Once you've selected a BrightWall Group, click **Publish Schedule** to assign the schedule to the BrightWall Group.

Local Network

Once you have finished scheduling your BrightWall presentation(s), click the **Publish** button to bring up the **Publish BrightWall** window:

1. Select a networked player next to each **Screen Name**. Make sure the specified players correspond to the correct screen-location numbers in the video wall. The screen-location numbers are shown in the screen layout window of the BrightWall presentation.
2. Click **Refresh** to refresh the dropdown lists of players currently active on the local network.

3. Click **Add** to add new networked players to the dropdown lists of players on the local network.
4. Once all of the target players have been specified, click **Publish** to publish the video wall.\
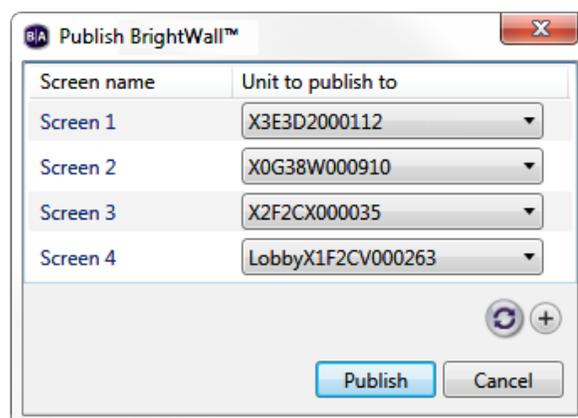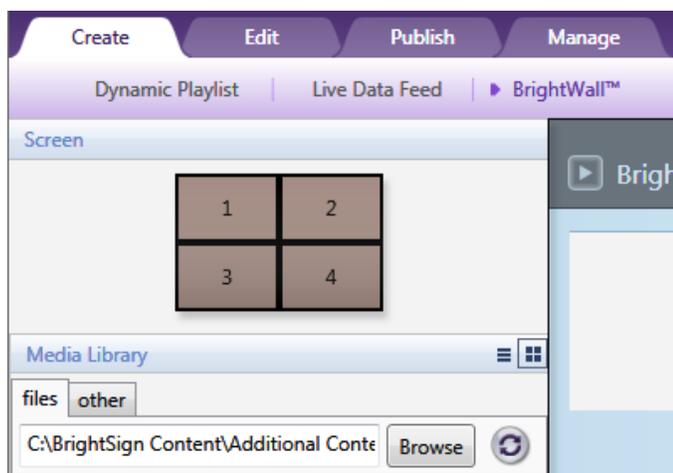

```
Simple File Network
```

Once you have finished scheduling your BrightWall presentation(s), click the **Publish** button to bring up the **Publish BrightWall** window:

- **Publish each screen in a subfolder of a parent folder**: The project and media files for each screen will be published in separate subfolders of the specified parent folder. You will then need to upload the parent file to your file server.

Editing Zones

- BrightAuthor Version 4.6
  - Version 4.4
  - Previous Versions

This section describes how to edit zone properties. Follow these steps to open the **Zone Properties** menu for a zone:

1. Open a presentation project by clicking **File** > **Open Presentation**.
2. Click the **Edit** tab and select **Playlist**.
3. Under **Zone** in the upper-left portion of the screen, select the zone you wish to edit.
4. Click **Zone Properties**. Different options will appear depending on the type of zone that is selected (see the sub-pages for details).
5. Repeat steps 2 – 4 for each zone you want to edit in your presentation.
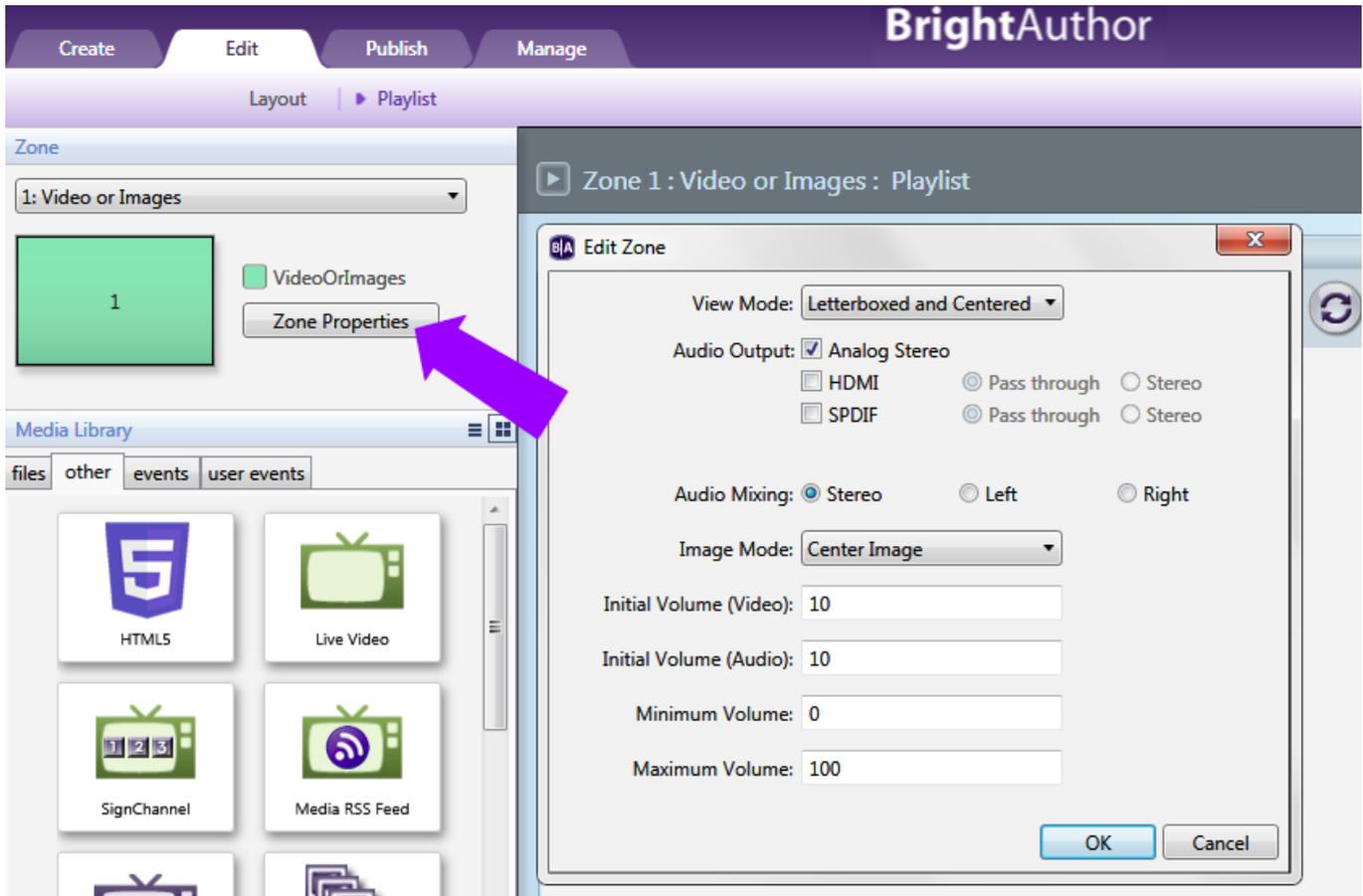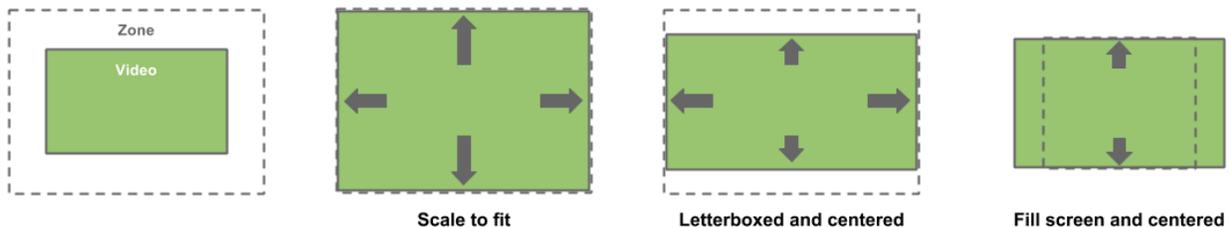
Video or Images Zones

- BrightAuthor Version 4.6
  - Version 4.4
  - Previous Versions

Use the **Zone Properties** window of a Video or Images Zone to edit the following:

- **View mode**: Determines how videos will be scaled to fit in the zone. This option has no effect if the video and the zone are the same size.
  - **Scale to fit**: Scales the video to fill the zone without maintaining the aspect ratio. The video may appear stretched.
  - **Letterboxed and centered**: Centers the video and adds black borders on the top and bottom. The aspect ratio is maintained.
  - **Fill screen and centered**: Centers the video and fills the zone. The aspect ratio is maintained, so the video may be cropped if required.

> **Note**
> The **Scale to fit** and **Fill screen and centered** options will not remove letterboxing if it's part of the video file.

- **Audio Output**: Configure audio outputs for the zone.

> **Note**
> The **Analog Stereo** and and **SPDIF** outputs are only available on certain player models.

- **Analog Stereo**: Check this box to enable audio output via the 3.5mm audio connector (or USB Type C connector on the LS423).
- **HDMI**: Check this box to enable audio output via the HDMI connector.
    - **Pass through**: Supplies the un-decoded audio signal through the HDMI connector. Use this option if the zone audio (for example, AC3 Dolby Digital) is being decoded on an external device.
    - **Stereo**: Supplies the decoded audio signal through the HDMI connector.
- **SPDIF**: Check this box to enable audio output via SPDIF.
    - **Pass through**: Supplies the un-decoded audio signal through the SPDIF connector. Use this option if the zone audio (for example, AC3 Dolby Digital) is being decoded on an external device.
    - **Stereo**: Supplies the decoded audio signal through the SPDIF connector.
- **Audio Mixing**: Choose the mixing of the audio output:
    - **Stereo**: Outputs both left and right audio signals.
    - **Left**: Outputs the left audio signal only.
    - **Right**: Outputs the right audio signal only.
- **Image mode**: Use the dropdown list to specify a setting for images.
    - **Center image**: Centers the image without scaling. This may result in cropping if the image is too large.
    - **Scale to fit**: Scales the image to fit the zone. The image is displayed as large as possible while keeping the correct aspect ratio.
    - **Scale to fill and crop**: Scales the image to completely fill the zone while maintaining the aspect ratio.
    - **Scale to fill**: Scales the image to fill the zone without maintaining the aspect ratio.
- **Initial volume (Audio)**: Sets the initial volume for audio files (0-100).
- **Initial volume (Video)**: Sets the initial volume for video files (0-100).
- **Minimum Volume**: Sets the minimum volume for the zone (0-100).
- **Maximum Volume**: Sets the maximum volume for the zone (0-100).

> **Note**
> The **Maximum Volume** setting will be overridden by other volume settings in a presentation, including the **Initial Volume** setting for the zone and volume commands attached to events or states.
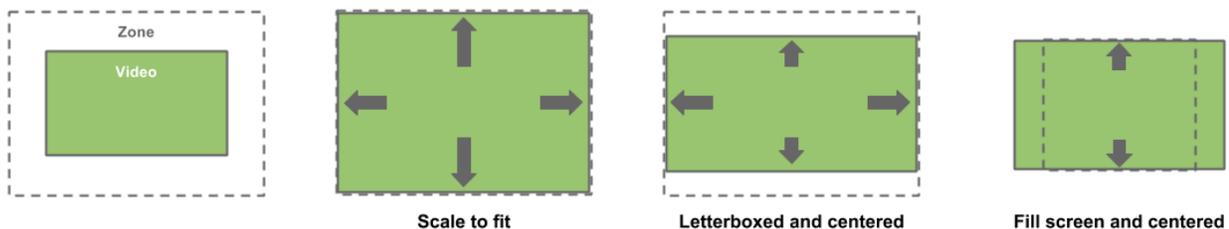
Video Only Zones

∨ BrightAuthor Version 4.6
- Version 4.4
- Previous Versions

Use the **Zone Properties** window to edit settings for a Video Only zone.

- **View mode**: Determines how videos will be scaled to fit in the zone. This option has no effect if the video and the zone are the same size.
    - **Scale to fit**: Scales the video to fill the zone without maintaining the aspect ratio. The video may appear stretched.
    - **Letterboxed and centered**: Centers the video and adds black borders on the top and bottom. The aspect ratio is maintained.
    - **Fill screen and centered**: Centers the video and fills the zone. The aspect ratio is maintained, so the video may be cropped if required.

> **Note**
> The **Scale to fit** and **Fill screen and centered** options will not remove letterboxing if it's part of the video file.

Scale to fit   Letterboxed and centered   Fill screen and centered

- **Audio Output**: Configure audio outputs for the zone.

> **Note**
> The **Analog Stereo** and and **SPDIF** outputs are only available on certain player models.

  - **Analog Stereo**: Check this box to enable audio output via the 3.5mm audio connector (or USB Type C connector on the LS423).
  - **HDMI**: Check this box to enable audio output via the HDMI connector.
    - **Pass through**: Supplies the un-decoded audio signal through the HDMI connector. Use this option if the zone audio (for example, AC3 Dolby Digital) is being decoded on an external device.
    - **Stereo**: Supplies the decoded audio signal through the HDMI connector.
  - **SPDIF**: Check this box to enable audio output via SPDIF.
    - **Pass through**: Supplies the un-decoded audio signal through the SPDIF connector. Use this option if the zone audio (for example, AC3 Dolby Digital) is being decoded on an external device.
    - **Stereo**: Supplies the decoded audio signal through the SPDIF connector.
- **Audio Mixing**: Choose the mixing of the audio output:
  - **Stereo**: Outputs both left and right audio signals.
  - **Left**: Outputs the left audio signal only.
  - **Right**: Outputs the right audio signal only.
- **Initial volume (Audio)**: Sets the initial volume for audio files (0-100).
- **Initial volume (Video)**: Sets the initial volume for video files (0-100).
- **Minimum Volume**: Sets the minimum volume for the zone (0-100).
- **Maximum Volume**: Sets the maximum volume for the zone (0-100).

> **Note**
> The **Maximum Volume** setting will be overridden by other volume settings in a presentation, including the **Initial Volume** setting for the zone and volume commands attached to events or states.

Images Zones

BrightAuthor Version 4.6
  - Version 4.4
  - Previous Versions

Use the **Image Mode** dropdown list to determine how images will be displayed in the zone:

- **Center image**: Centers the image without scaling. This may result in cropping if the image is too large.
- **Scale to fit**: Scales the image to fit the zone. The image is displayed as large as possible while keeping the correct aspect ratio.
- **Scale to fill and crop**: Scales the image to completely fill the zone while maintaining the aspect ratio.
- **Scale to fill**: Scales the image to fill the zone without maintaining the aspect ratio.

Audio Only Zones

BrightAuthor Version 4.6
  - Version 4.4
  - Previous Versions

Use the **Zone Properties** window of an Audio Only zone to edit the following:

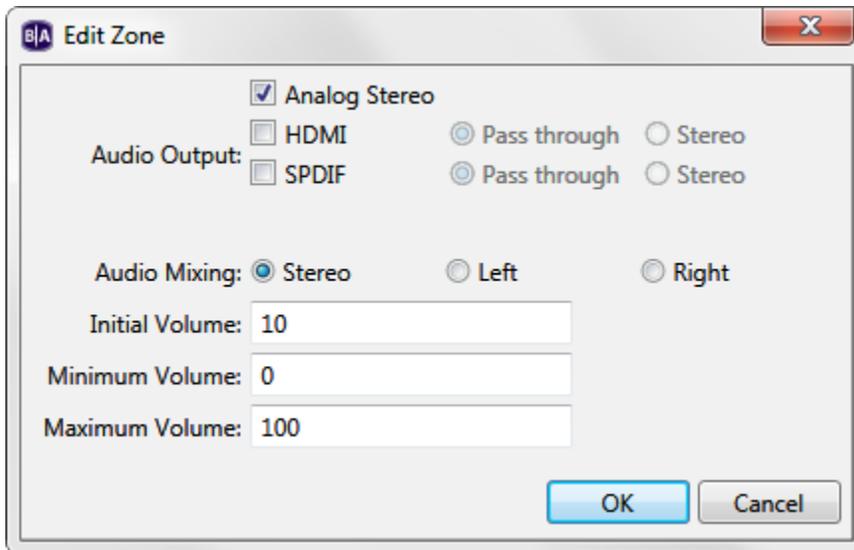- **Audio Output**: Configure audio outputs for the zone.

> **Note**
> The **Analog Stereo** and and **SPDIF** outputs are only available on certain player models.

  - **Analog Stereo**: Check this box to enable audio output via the 3.5mm audio connector (or USB Type C connector on the LS423).
  - **HDMI**: Check this box to enable audio output via the HDMI connector.
    - **Pass through**: Supplies the un-decoded audio signal through the HDMI connector. Use this option if the zone audio (for example, AC3 Dolby Digital) is being decoded on an external device.
    - **Stereo**: Supplies the decoded audio signal through the HDMI connector.
  - **SPDIF**: Check this box to enable audio output via SPDIF.
    - **Pass through**: Supplies the un-decoded audio signal through the SPDIF connector. Use this option if the zone audio (for example, AC3 Dolby Digital) is being decoded on an external device.

- **Stereo**: Supplies the decoded audio signal through the SPDIF connector.
- **Audio Mixing**: Choose the mixing of the audio output:
  - **Stereo**: Outputs both left and right audio signals.
  - **Left**: Outputs the left audio signal only.
  - **Right**: Outputs the right audio signal only.
  - **Initial Volume**: Set the initial volume for audio files (0-100).
- **Minimum Volume**: Sets the minimum volume for audio files (0-100).
- **Maximum Volume**: Sets the maximum volume for audio files (0-100).

> **Note**
> The Maximum Volume setting will be overridden by other volume settings in a presentation, including the Initial Volume setting for the zone and volume commands attached to events or states.

Enhanced Audio Zones

- BrightAuthor Version 4.6
  - Version 4.4
  - Previous Versions

Enhanced Audio zones provide similar functionality Audio Only zones, but allow cross-fading between audio files in the playlist: Fading occurs from silence at the beginning of the audio playlist and to silence at the end of the audio playlist, while cross-fading occurs between audio files.

> **Important**
> Cross-fading will not work between audio tracks if they have different sampling rates (for example, if the first file is sampled at 48kHz and the second is sampled at 44kHz).

Use the **Zone Properties** window of an Enhanced Audio zone to edit the following:

- **Audio Output**: Configure audio outputs for the zone.

  > **Note**
  > The **Analog Stereo** and and **SPDIF** outputs are only available on certain player models.

  - **Analog Stereo**: Check this box to enable audio output via the 3.5mm audio connector (or USB Type C connector on the LS423).
  - **HDMI**: Check this box to enable audio output via the HDMI connector.
    - **Pass through**: Supplies the un-decoded audio signal through the HDMI connector. Use this option if the zone audio (for example, AC3 Dolby Digital) is being decoded on an external device.
    - **Stereo**: Supplies the decoded audio signal through the HDMI connector.
  - **SPDIF**: Check this box to enable audio output via SPDIF.
    - **Pass through**: Supplies the un-decoded audio signal through the SPDIF connector. Use this option if the zone audio (for example, AC3 Dolby Digital) is being decoded on an external device.
    - **Stereo**: Supplies the decoded audio signal through the SPDIF connector.

- **Audio Mixing**: Choose the mixing of the audio output:
    - **Stereo**: Outputs both left and right audio signals.
    - **Left**: Outputs the left audio signal only.
    - **Right**: Outputs the right audio signal only.
- **Initial Volume**: Set the initial volume for audio files (0-100).
- **Minimum Volume**: Sets the minimum volume for audio files (0-100).
- **Maximum Volume**: Sets the maximum volume for audio files (0-100).

> **Note**
> The Maximum Volume setting will be overridden by other volume settings in a presentation, including the Initial Volume setting for the zone and volume commands attached to events or states.

- **Fade(in seconds)**: Sets the duration of cross-fading between audio files, as well as the fade in and fade out durations at the beginning and ending of a playlist.
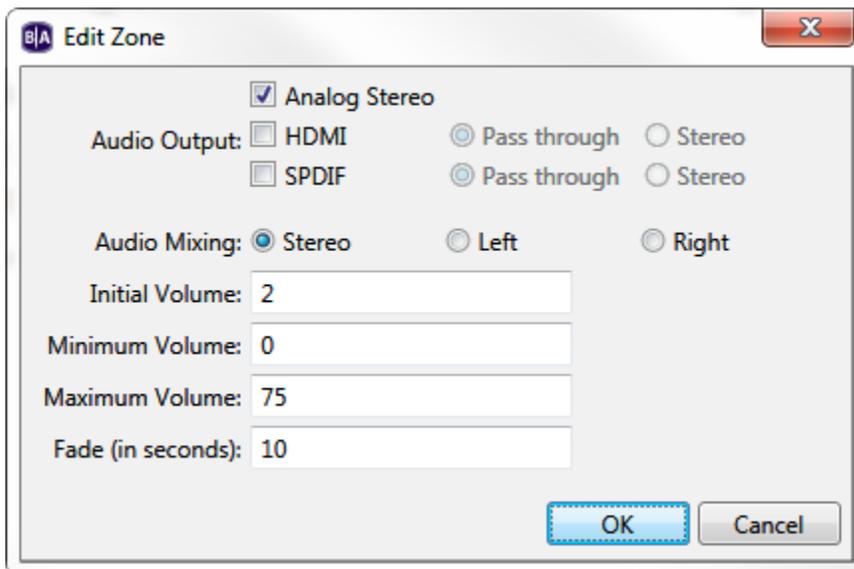
Ticker Zones

Use the **Zone Properties** window of a Ticker zone to edit the following:

- **Number of lines**: Set the number of text lines in the Ticker zone.
- **Time to display each line**: Set how long each line displays in the Ticker zone (in seconds).
- **Rotation**: Use the dropdown list to select the rotation of text in the Ticker zone.
- **Alignment**: Use the dropdown list to set whether text is left aligned, right aligned, or centered in the Ticker zone.

> **Note**
> If you're using a right-to-left language (such as Hebrew or Arabic) in your ticker zone, the right/left alignment settings will be inverted. For example, setting a ticker zone with an Arabic RSS feed to "Right aligned" will actually align the text to the left side of the zone.

- **Text appearance**: Specify how the text will appear on screen:
    - **Animated**: Text appears on screen from left to right (similar to a Teletype-style ticker).
    - **Static Text**: Lines of text appear without any animation.
    - **Scrolling**: Text scrolls across the screen (similar to a news or stock ticker). This option is only available for 4Kx42, XDx32, XDx30, and HDx22 models. If this option is selected, the **Number of Lines** parameter will be limited to 1 and the **Time to Display Each Line** parameter will have no effect.

        > **Note**
        > The text can scroll from right to left, as well as left to right with firmware versions 6.1.37 and later: This scrolling

direction depends on the language of the first text item used in the Ticker zone (e.g. Spanish text will set the ticker to right-to-left, while Arabic text will set the ticker to left-to-right).

- **Scroll speed**:(Scrolling text only) Use the slider to set the scroll speed to 100%, 200%, 300%, or 400% of normal.
- **Foreground text color**: Click **Choose** to select a color for the text in the Ticker zone.
- **Background text color**: Click **Choose** to select a color for the text background in the Ticker zone.
- **Transparency**: Use the slider to set the transparency of the text-background color: 0% is fully opaque, while 100% is fully transparent.
- **Font**: Click **Browse** to select a font for text in the Ticker zone. You can use any TrueType font. Click **Reset to System Font** to reset the font.

Advanced

Click the **Advanced** arrow to reveal the following options:

- **Background bitmap**: Click **Browse** to navigate to and select a file for a background image.
    - **Stretch to Fit**: Select **Yes** if you want to stretch the image to fill the zone. Otherwise, select **No**.
- **Safe text region**: Define the dimensions of the text region in the zone. If this region is not defined, the text will be displayed to the edge of the zone.
    - **X**: The horizontal coordinate (in pixels) of the top-left corner of the safe text region.
    - **Y**: The vertical coordinate (in pixels) of the top-left corner of the safe text region.
    - **Width**: The width of the safe text region (in pixels).
    - **Height**: The height of the safe text region (in pixels).

Clock Zones

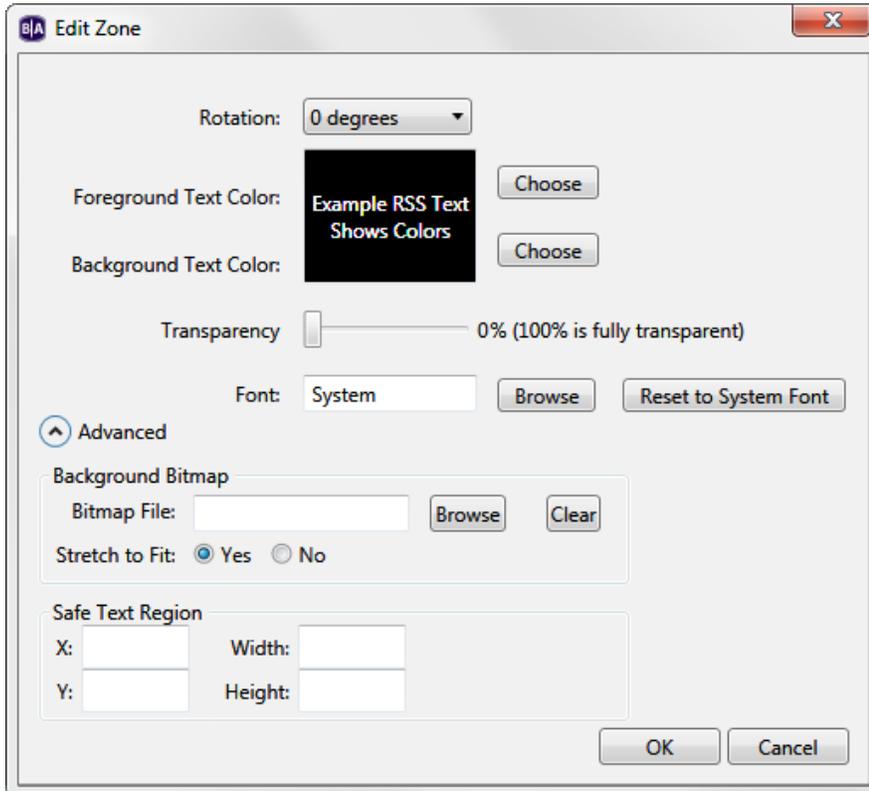- BrightAuthor Version 4.6
    - Version 4.4
    - Previous Versions

Use the **Zone Proprties** window of a Ticker zone to edit the following:

- **Rotation**: Use the dropdown list to select the angle of text rotation in the Clock zone.
- **Foreground text color**: Click **Choose** to select a color for the text in the Clock zone.
- **Background text color**: Click **Choose** to select a color for the text background in the Clock zone.
- **Transparency**: Use the slider to set the transparency of the text-background color: 0% is fully opaque, while 100% is fully transparent.
- **Font**: Click **Browse** to select a font for text in the Clock zone. You can use any TrueType font. Click **Reset to System Font** to reset the font.

Advanced

Click the **Advanced** arrow to reveal the following options:

- **Background bitmap**: Click **Browse** to navigate to and select a file for a background image.
    - **Stretch to Fit**: Select **Yes** if you want to stretch the image to fill the zone. Otherwise, select **No**.
- **Safe text region**: Define the dimensions of the text region in the zone. If this region is not defined, the time/date text will be displayed to the edge of the zone.
    - **X**: The horizontal coordinate (in pixels) of the top-left corner of the safe text region.
    - **Y**: The vertical coordinate (in pixels) of the top-left corner of the safe text region.
    - **Width**: The width of the safe text region (in pixels).
    - **Height**: The height of the safe text region (in pixels).

Background Image Zones

You cannot edit the **Zone Properties** for a Background Image zone. If you only want a background color (instead of an image), do not add a Background Image zone. Instead, change the background screen color in the **File > Presentation Properties > Main** tab.

Presentation Properties

You can use the **Presentation Properties** window to edit a range properties for the current presentation. To edit presentation properties, open a presentation project and navigate to **File** > **Presentation Properties**.

Main

The **Main** tab contains general presentation settings:

- **Connector type**: Use the dropdown list to indicate the type of connector you are using for your display.
- **Screen resolution**: Use the dropdown list to set a resolution supported by your display.
- **Force Resolution**: Check this box to have the player output the selected **Screen resolution** even if the display reports over HDMI/VGA that it does not support this resolution. If this box is unchecked, the player will attempt to use the selected **Screen resolution** first, but will then fall back to the highest resolution supported by the display if it is unsupported.
- **Enable 4.2.0 10-bit output**:(XTx42, 4Kx42 models only) Check this box to output a 4.2.0 10-bit 4Kp60 or 4Kp50 video signal to the connected display. See the video encoding FAQ for more details on supported 4K color spaces and bit depths.
- **Background screen color**: Click **Choose** to select a background color for the presentation. This color will show through if there's no content on an area of the screen, or if the content has some level of transparency (and is not located on top of other content).

- **Language**: Use the dropdown list to select a language for your presentation. This option affects the time/date display of Clock zones only, and can be customized in the **Edit > Preferences > Clock** tab.
- **RF channel scan file**: Choose an RF channel scan XML file to associate with the presentation. All RF In states in the presentation will use this channel scan file. If you specify a different channel scan file in an RF In state, the RF channel scan file in this tab will change as well.

> **Note**
> A player can only contain a single RF channel manifest at any one time. Playing the presentation associated with the RF channel scan file will overwrite any previous RF channel configuration on the player. Furthermore, if you use a Tuner Scan state to create a new RF channel manifest while the presentation is running, the RF channel manifest specified in **Presentation Properties** will be overwritten.

- **Delay schedule change until current media item completes playback**: Check this box to have a player wait until a media item completes playback to switch to a new scheduled presentation. For multi-zone presentations, the first media item to complete playback, no matter the zone, will trigger the scheduled presentation change. If this box is unchecked, a player will switch from one scheduled presentation to another at the specified time, without taking into account where playback is in the current presentation.
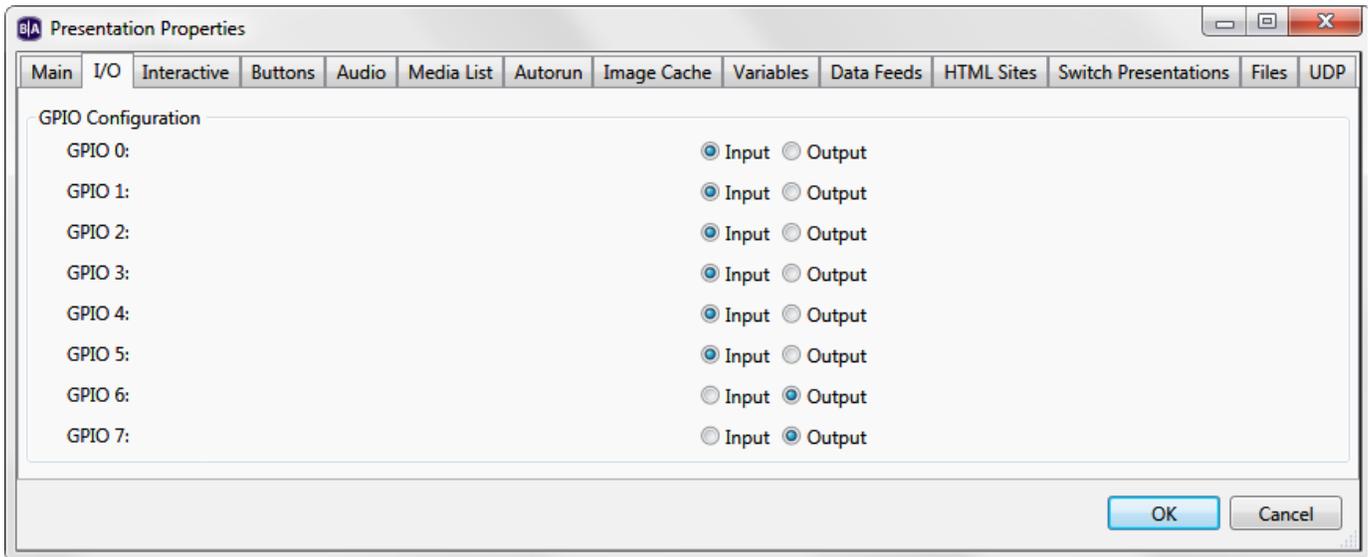

I/O
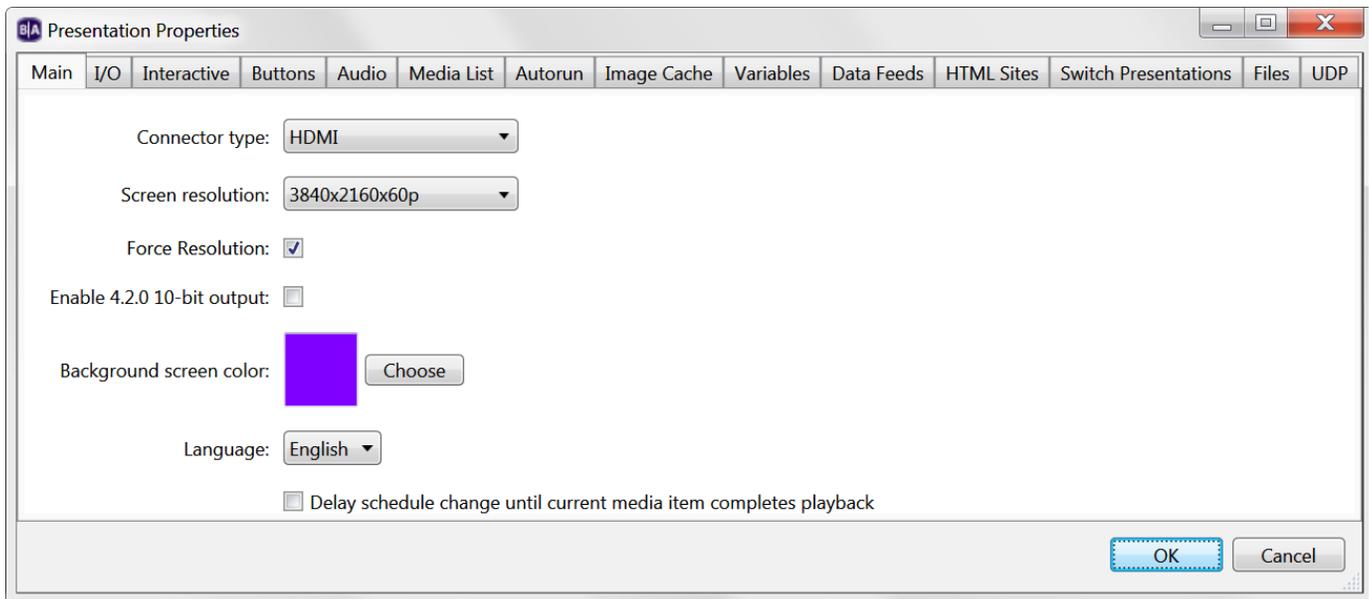
- BrightAuthor Version 4.6
    - Version 4.4
    - Previous Versions

Many BrightSign models feature a DA15 GPIO port for device communication and interactive input/output. Select **Input** or **Output** for each GPIO port to indicate whether the port should be used to receive or send information.
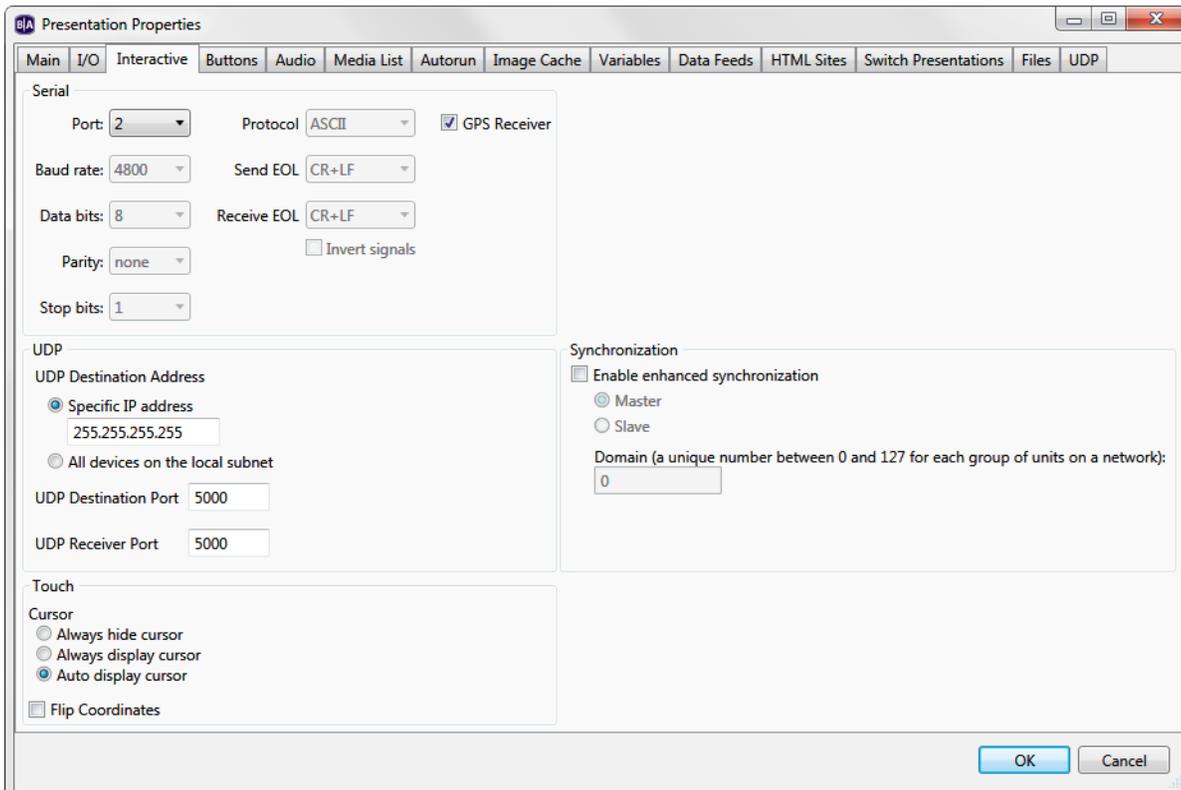
Interactive

ON THIS PAGE

- Serial
- UDP
- Synchronization
- Touch

Use the **Interactive** tab to configure settings for serial, USB, and UDP communications.

Use this section to configure serial port communications:

- **Port**: Select a serial port to configure. Most standard RS-232 serial devices enumerate on port 0. If you are connecting a USB-serial device (such as a GPS receiver), it will enumerate on port 2.
- **GPS Receiver**: Check this box if the port is being used to connect a USB-serial GPS device to the player.
- **Baud rate**: Set the baud rate for serial communications on the port.
- **Data bits**: Set the number of data bits.
- **Parity**: Set the parity.
- **Stop bits**: Select the number of stop bits.
- **Protocol**: Determine whether the serial data is formatted as **Binary** or **ASCII**.
- **Send EOL**: Select the end-of-line character when sending data to a serial device.
- **Receive EOL**. Select the end-of-line character when receiving data from a serial device.
- **Invert Signals**: Check this box to invert the send pin and receive pin of the serial port.

Use this section to configure UDP communications:

- **UDP Destination Address**: Specify where UDP commands generated by the presentation should be sent:
    - **Specific IP Address**: Enter a single destination IP address in dotted quad form.
    - **All devices on the local subnet**: Select this option to broadcast UDP messages to all devices on the local subnet.
- **UDP Destination Port** : Specify the destination port for UDP messages generated by the presentation.
- **UDP Receiver Port**: Specify the port used by the player to receive UDP messages (for triggering UDP Input events on the player).

Check the **Enable enhanced synchronization** box to use a player synchronization scheme similar to the BrightWall™ feature. When this feature is enabled, interactive presentations using Synchronize events can be easily linked by a master/slave scheme: The presentation sending a Synchronize command acts as the master, while the presentation(s) using Synchronize events act as slaves. Synchronize events associated with slave presentations will trigger within a few milliseconds of the Synchronize command associated with the master presentation.

- **Master**: Select this option to have the presentation send Synchronize commands. A master presentation cannot contain Synchronize events (i.e. you cannot chain one master presentation to another).
- **Slave**: Select this option to have the presentation receive Synchronize commands (via Synchronize events).
- **Domain**: Enter a domain number between 0 and 127. This number needs to be unique for each set of master/slave presentations on the local network. This will ensure that multiple groups of synchronized presentations can operate on the same local network without synchronization messages interfering with each other.

Use this section to configure Rectangular Touch events:

- **Cursor**: Select a mouse display option for Rectangular Touch events:
    - **Always hide cursor**: The mouse cursor will never appear with Rectangular Touch events.
    - **Always display cursor**: The mouse cursor will always appear with Rectangular Touch events
    - **Auto display cursor**: The mouse cursor will be present only if there is more than one touch region on the screen.
- **Flip coordinates**: Check this box to reverse the coordinates of the touchscreen input.

Buttons

- BrightAuthor Version 4.6
    - Version 4.4
    - Previous Versions

Use the **Button Panel** dropdown list to select the type of button panel (BP200 or BP900) you wish to configure. The A, B, and C letters specify which device is enumerated first; the B and C letters are only applicable if you are connecting more than one BP device of the same model number to the player.

Choose one of the following:

- **Automatically configure which buttons are enabled**: Only buttons that are configured with BP200/BP900 events in the presentation will be enabled. All other buttons will not light up or react to button presses
- **Specify which buttons are enabled**: Only the specified buttons will be enabled regardless of whether there are BP200/BP900 events in the presentation that are configured to use them. If this option is selected, a BP200/BP900 event set to the **Any Button** option will only react to button numbers that have been enabled.
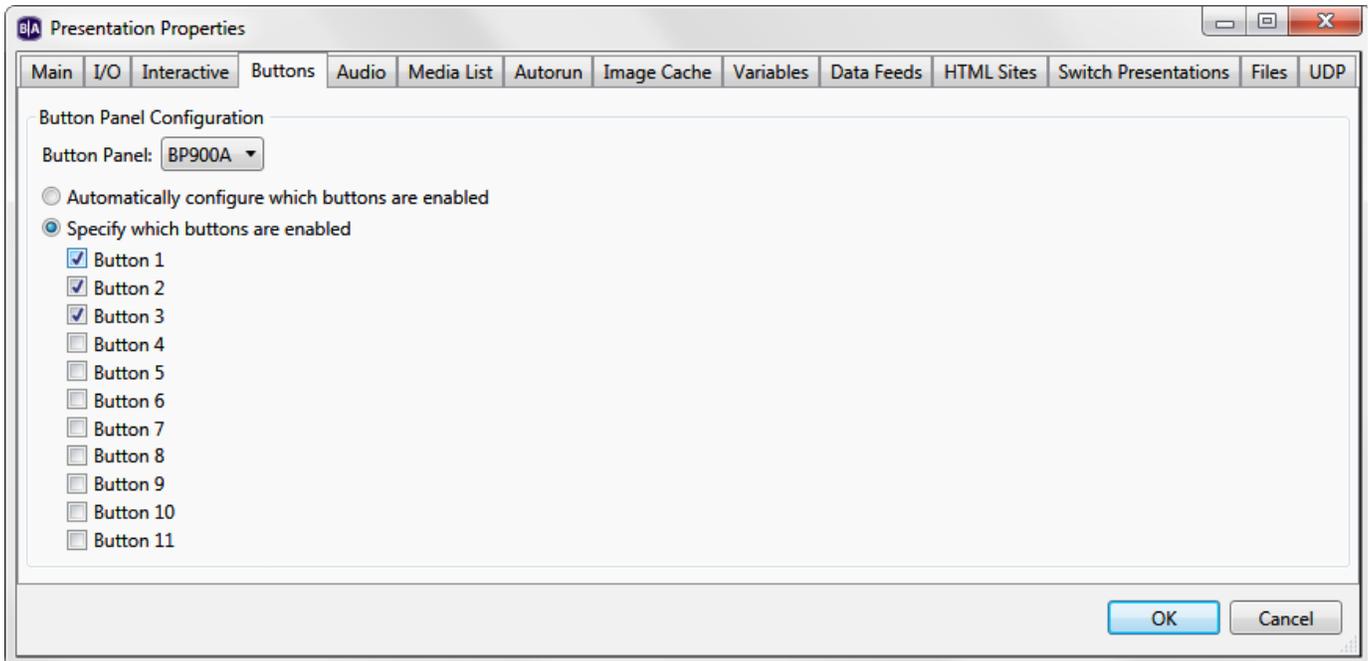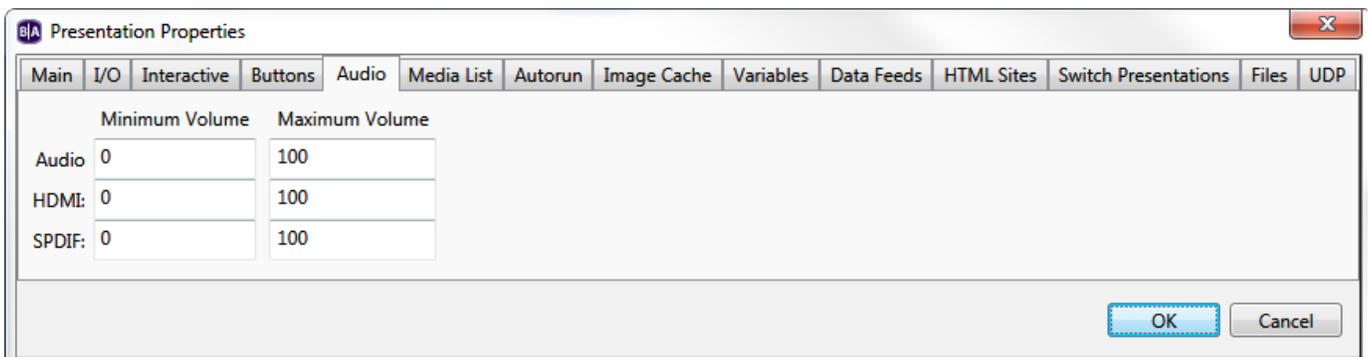

Audio

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Set any of the following:

- **Audio**: Set the **Minimum Volume** and **Maximum Volume** for the audio output (0 – 100).
- **HDMI**: Set the **Minimum Volume** and **Maximum Volume** for the HDMI output (0 – 100).
- **SPDIF**: Set the **Minimum Volume** and **Maximum Volume** for the SPDIF output (0 – 100).

> **Note**
> The **Maximum Volume** settings for **Audio**, **HDMI**, and **SPDIF** will be overridden by other volume settings in a presentation, including the **Initial Volume** setting for a zone and volume commands attached to events or states.


Media List

These settings pertain to Images List, Audio List, and Video List states:

- **Return to start after inactivity**: Check the **Yes** box to have Media List states play from the beginning upon reentry after a designated period of inactivity. In this case, "inactivity" is defined as any time not spent within the Media List state.
- **Inactivity timeout (seconds)**: Specify the period of inactivity before Media List states restart. If the presentation spends longer than this amount of time outside the Media List, it will play from the beginning of the list upon reentry.
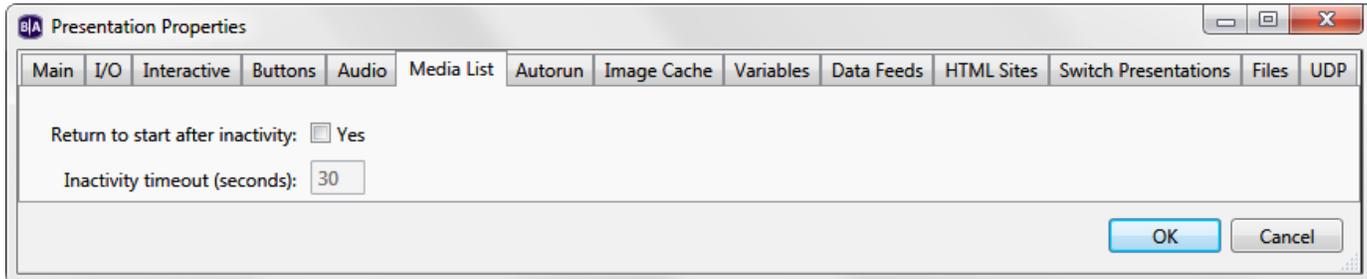

Autorun

If you would like to specify a different autorun file for the presentation, click **Select custom Autorun**. Click **Browse** to locate and select the autorun file.

Click **Add Script Plugin** to add a custom script to your BrightAuthor presentation. Script plugins are custom pieces of BrightScript code that extend the functionality of BrightAuthor. Please see the BrightAuthor Plugins and Parsers tech note for more information.

> **Note**
> Because you must edit custom autoruns every time the firmware version changes, we recommend using script plugins (which are mostly immune to changes in the system software) for advanced presentation development.
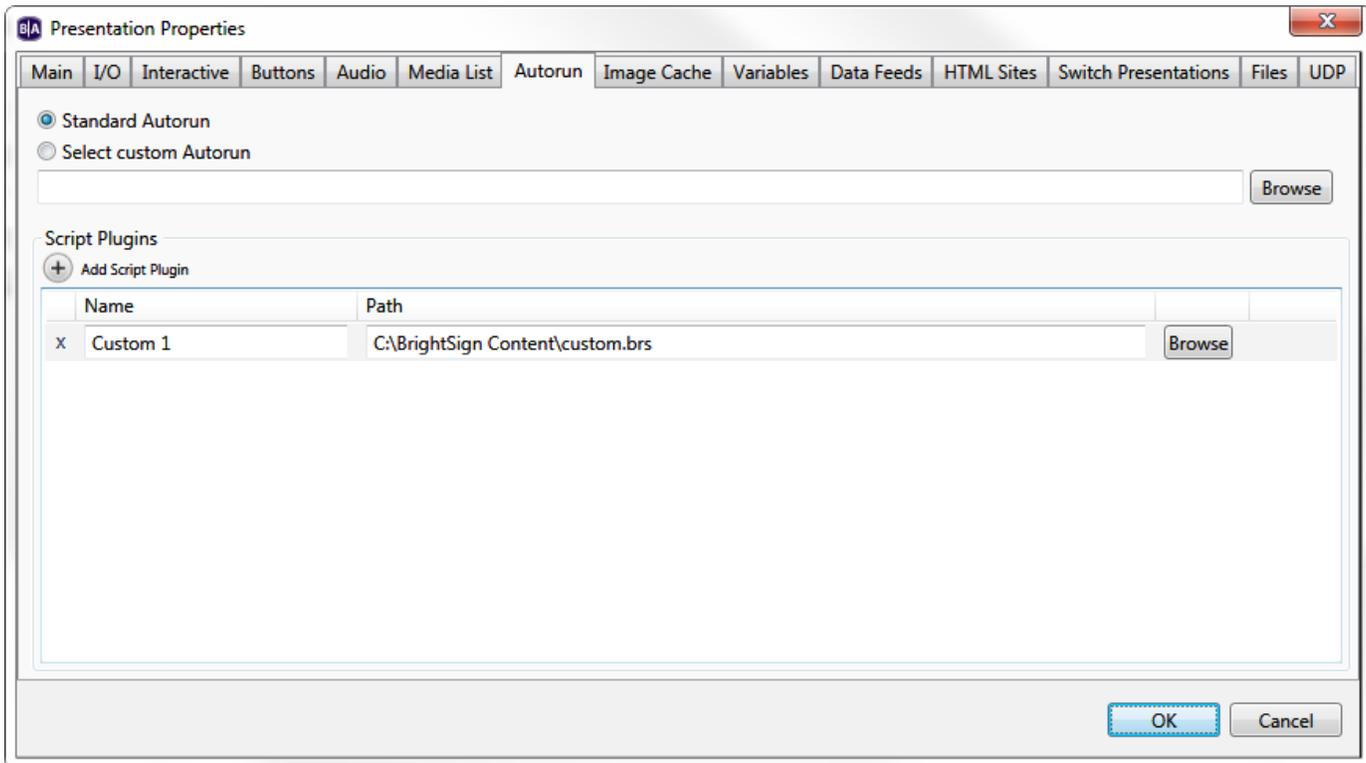
Image Cache

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The Image Cache tab displays a list of all image files in your presentation. Selecting an image will preload it into player memory–it will then load and display much faster during playback. Note that the **Available cache** space is displayed below–you cannot exceed the allowed space with cached images.

> **Important**
> Cached images are always displayed at their full resolution–they cannot be scaled up or down. Make sure the size of the image matches the size of the zone.

You can preload up to 16MB of images. If an image is compressed (e.g. *.jpeg*, *.png*), then it will use more memory than its reported file size in Windows/Mac, and BrightAuthor will show this larger file size when you add it to the **Image Cache** list. Since Bitmaps (*.bmp*) are not compressed, the reported file size of a Bitmap image accurately represents how much memory it will use.
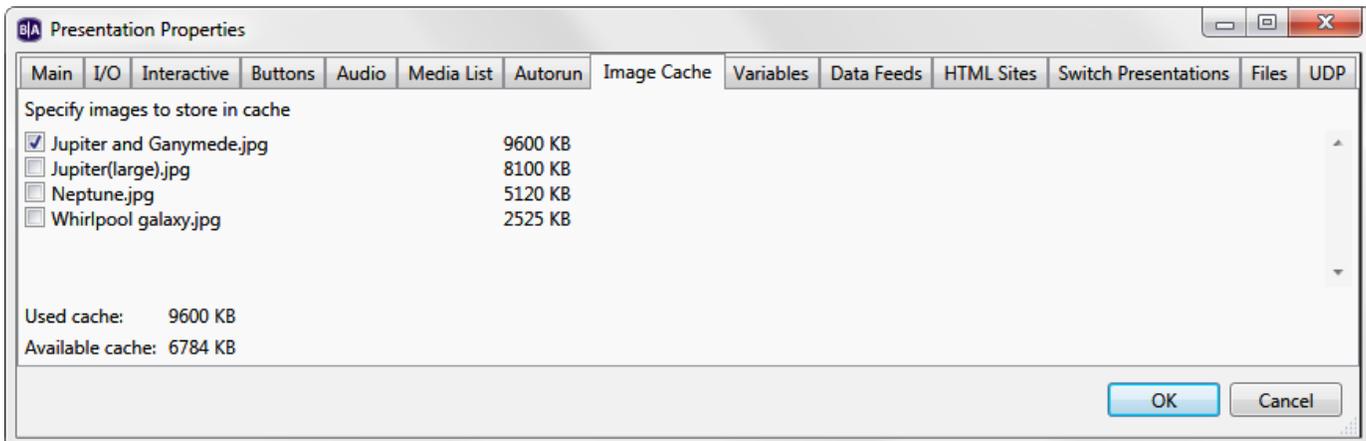
Variables

Use this tab to configure the device web page, enable Media Counters, and create User Variables.

Device Web Page Display

The device web page allows you to view and edit User Variables over your local network. In order to display a standard or custom device web page, you must first enable the Local Web Server during player setup.

- **No device web page**: Choose this option if you would like to enable the Local Web Server but do not want the User Variables webpage to be accessible.
- **Standard device web page**: Choose this option to enable the default device web page, which lists all User Variables and their default/current values on a sparsely formatted page.
- **Custom device web page**: Choose this option to use a device web page with custom appearance, formatting, and functionality. See the Creating a Custom Device Web Page tech note for more information.
- **Alphabetize variable names**: Check this box to list variables on the Device Web Page alphabetically, rather than by order of creation.

User Variables

User Variables are customizable values that can be used in commands, Live Text states, and Conditional Targets. When used in Live Text, User Variables display the current value of the variable. The value can also be changed during a presentation using the Set Variable or Reset Variable commands.

- **Automatically create media counter variables**: Check this box to create Media Counters for all media files in the presentation. Media Counters record how many times a file has played in a presentation. They can be displayed in Live Text or extracted from the BrightSign player via USB. For details on retrieving Media Counters via USB, see the Using Advanced Tools page.
- **Reset variables to their default value on presentation start**: Check this box to reset all User Variables to their default values whenever the presentation begins. If this box is unchecked, User Variable values will be preserved on the SD card after the device reboots, the presentation is switched, etc.
- **Update frequency for networked variables**: Use the dropdown list to determine how often networked User Variables should be refreshed by Data Feeds that are assigned to the presentation.

Adding User Variables

Click **Add Variable** to add a new User Variable to your presentation. Then, specify the following:

- **Name**: Enter a unique name for the User Variable.
- **Default Value**: Specify an initial value for the User Variable. Whenever a User Variable is reset (via the Reset Variable command), it will return to this default value.

> **Note**
> Setting a new **Default Value** and republishing the presentation will not set the value of that variable to the new default value. Instead, the variable will retain whatever value it had before the publish operation. To set variables to their new default values, you will need to check the **Reset variables to their default value on presentation start** box before publishing the presentation. To set a single variable to its new default value, use the Reset Variable command.

- **Access**: Select **Shared** to make the User Variable accessible to other presentations scheduled on the player. If two presentations use a variable with the same name, the value of the variable with the **Shared** attribute will be used for the variable with the **Private** attribute.
- **Type**: Select a User Variable type:
  - **Local**: Local variables can be changed with the Set Variable/Reset Variable commands or via the Local Web Server. They can also be set with properly formatted serial, UDP, and Plugin Message commands.

- **Networked**: Networked variables are set and modified using Data Feeds (RSS, Live Data, or Dynamic Playlists). To create a networked User Variable, you must first specify the Data Feed it will be linked to. Select the desired Data Feed from the dropdown list and click **Validate** to ensure the link is operational and has correct RSS formatting.

 > **Note**
  > Every RSS entry has a <title> value and a <description> value: use the <title> value to designate the name of the User Variable being modified; use the <description> value to change the value of the User Variable.

- **SystemVariable**: System variables are not determined by the user, but by independent system parameters, such as firmware/autorun version number, IP address, RF channel count, and various types of EDID (extended display identification data) information received from the display over HDMI.

  > **Note**
  > Displays will often lack a complete set of EDID parameters. Make sure to test the EDID values of a certain display model before using them in a presentation.

To delete a User Variable, click the **X** beside the appropriate variable. You can also use the **Delete Unused User Variables** button to delete all user variables that are not currently in use by Live Text states, commands, events, conditional targets, etc.
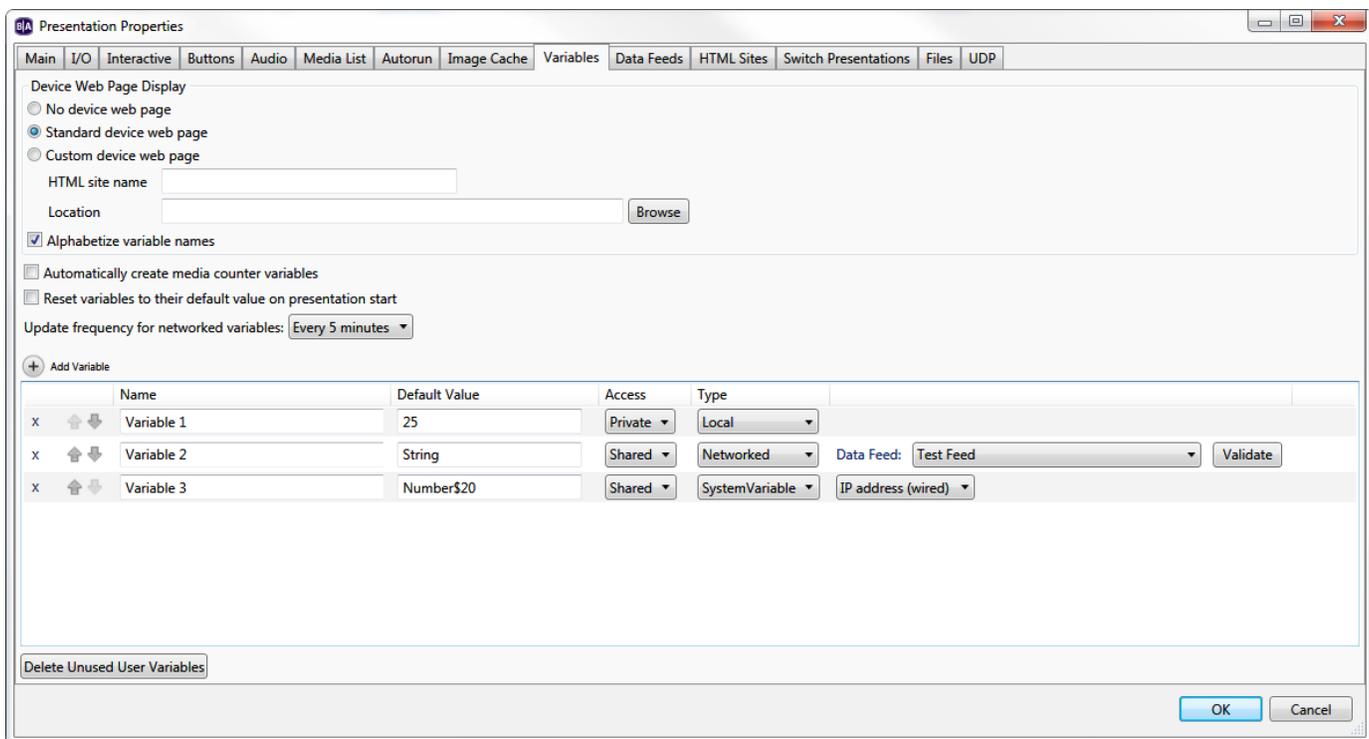
Integrating User Variables with Commands

User Variables can be used to dynamically set the parameters of many commands: Set Volume, Increment Volume, Decrement Volume, Send UDP, Serial-send string (EOL), Serial-send string (no EOL), Serial-send byte, Serial-send bytes (comma separated), Synchronize, Send Zone Message, Link Zones, GPIO On, GPIO Off, GPIO Set State, BrightControl – Send Ascii String, BrightControl – Philips Set Volume, and Pause.

For example, if you add a Set Volume command to your presentation and use a static value like 50, the volume will always be set to 50 when the command occurs. If you use a User Variable instead, the volume will be set to the current value of the variable, which could be any value based on Set Variable commands and any number of other factors.

To utilize a User Variable in a command, first add the command (see the Commands page for details). Then, in the **Parameters** field, enter the name of the variable between two sets of dollar signs (e.g. "$$variable1$$"). BrightAuthor will not recognize the variable without these dollar signs.

Data Feeds

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Use this tab to create and edit data feeds, which you can use to populate Live Text, RSS, and Media RSS / Dynamic Playlist states. Data feeds can also be used to generate Networked User Variables.

Adding Data Feeds

To add a new data feed, click **Add Live Data Feed** and specify the following:

- **Feed Name**: Specify a name for the data feed. You will be able to locate the data feed by this name when you are creating a Live Text element, specifying an RSS, MRSS, or Dynamic Playlist feed state, or creating a Networked User Variable.
- **Feed Specification**: A data feed can originate from one of several sources. Select one of the following:
    - **Url**: If you have an RSS or MRSS feed hosted on a third-party server, enter the web address of the feed into this field. If you want the presentation to retrieve a feed from an RSS *.xml* file on the SD card, use the "file:///path" URL format (e.g. "file:///filename.xml").
    - **Live Data Feed**: If you have a BrightSign Network subscription, you can host RSS feeds on the BSN servers using the Live Data Feed feature. See the Live Text FAQ for more information.
    - **Live Media Feed**: If you have a BrightSign Network subscription, you can host MRSS feeds on the BSN servers using the Live Media Feed feature.
    - **Dynamic Playlist**: If you have a BrightSign Network subscription, you can use Dynamic Playlists as media feeds.
    - **Tagged Playlist**: If you have a BrightSign Network subscription, you can use Tagged Playlists as media feeds.
        - **Match Player Tags**: Check this box to match media tags in the Tagged Playlist against player tags for players that are assigned this presentation: When this box is checked, a player must have the same tag name and value as a media file in the Tagged Playlist; otherwise, that media file will not be played.
- **Refresh**: Click this button to update the content of the **Live Data Feed**, **Live Media Feed**, and **Dynamic Playlist** dropdown lists.
- **Data feed content usage**: Determine how you wish to utilize the data downloaded from the feed:
    - **Text**: The feed will be displayed as text in a Ticker zone or Live Text feed.
    - **MRSS Feed**: The feed will be used to download and play media in a Media RSS or Live Text state.
        - **Support 4K images**: Check this box if you wish to use the MRSS feed to download and display 4K images. This feature is only supported on 4Kx42 players. Displaying 4K images will use the 4K video decoder on the device (i.e. you cannot display a 4K image and a 4K video at the same time).
    - **Content for Image List, Video List, Audio List, or Play File**: The player will download and store media files specified in the Data Feed. You can then play back the media files using a Media List or Play File state. Each media file must be specified as a download URL in a <description> field of the RSS feed. Note that this mechanism is not compatible with the download and playback features of MRSS feeds and Dynamic Playlists.
- **Validate**: Click this button to ping the feed you specified in the **Url**, **Live Data Feed**, **Live Media Feed**, or **Dynamic Playlist** field. Use this feature to check whether you entered the URL correctly, or whether the selected BSN feed still exists.
- **Update Interval**: Specify how often you want the player to check the feed URL to determine if there are any updates.

> **Important**
> If the amount of time it takes to cycle through all the entries in the Data Feed is longer than the **Update Interval**, the presentation will never display all items in the feed. Make sure to specify an **Update Interval** that is long enough to display the entire feed.

- **Plugin Script**: Use the dropdown list to select a plugin script–you can add plugin scripts to your presentation using the **Add Parser Plugin** button (see below).

- **Optimize Feed Updates**: Check this box to have the player make an HTTP HEAD request before retrieving the contents of a feed (unless it's the first time a feed is downloaded). This option will reduce network traffic related to feed downloads as long as the feed host has implemented the HTTP header functionality.
  - If the `Last-Modified` value has changed, or the server does not respond to the HTTP HEAD request, the player will make an HTTP GET request to download the feed.
  - If the `Last-Modified` value in the HTTP header has not changed since the last time the player checked in, the player will not attempt to download the feed.

    > **Note**
    > The player ignores milliseconds when comparing the `Last-Modified` values.

- **Automatically generate User Variables from Data Feed:** You can use Data Feeds to populate a set of User Variables for HTML5 pages. The User Variables can then be retrieved using JavaScript. Use the `<title>` tag of the Data Feed to specify the Name of a variable and the `<description>` tag to specify its default value.
  - **Access**: Select **Shared** to make the User Variable accessible to other presentations scheduled on the player. If two presentations use a variable with the same name, the value of the variable with the **Shared** attribute will be used for the variable with the **Private** attribute.

Adding a Parser Plugin

This is an advanced feature: You may optionally choose to have an RSS or MRSS feed parsed by custom BrightScript code. This occurs after the feed is retrieved from the network and before it is provided to Live Text states, Media RSS Feed states, and other presentation features.

Click the **Add Parser Plugin** button to add a parser plugin to your presentation.

- **Parser Script**: Click **Browse** to locate and select the BrightScript (*.brs*) parser file.
- **Feed Parser**: Enter the name of the feed-parser function in the script.
- **User Agent String**: Enter the name of the parser function for user-agent strings.
- **User Variable Parser**: Enter the name of the user-variable parser function in the script.

HTML Sites

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> **Important**
> If you want to use the application cache for HTML5 sites (which allows the player to cache remote HTML content on the local storage), you will need to enable the **Limit storage space by function** option in **Edit > Preferences > Storage**. HTML5 sites must be configured properly for caching to work.

Use this tab to add HTML5 sites to your presentation. You must add sites in this tab before you can include HTML5 states in the playlist.

Adding an HTML Site

To add an HTML5 site, click **Add HTML Site** and specify the following:

- **HTML site name**: Enter a name for the HTML5 site.
- **Local Content**: Select this option to display HTML5 content using files located on the local storage of your computer. Click the **Browse** button to locate the *.html* file that you wish to display.
- **URL**: Select this option if you wish to play an HTML5 page from a web address.
- **Query string (optional)**: Enter a query string to be appended to the site URL using the following format: "http://www.example.com/over/there?my_query_string". You can specify the query spring as either a static value or a User Variable. To utilize a User Variable, enter the name of the variable between two sets of dollar signs (e.g. "$$variable1$$"). BrightAuthor will not recognize the variable without these dollar signs.
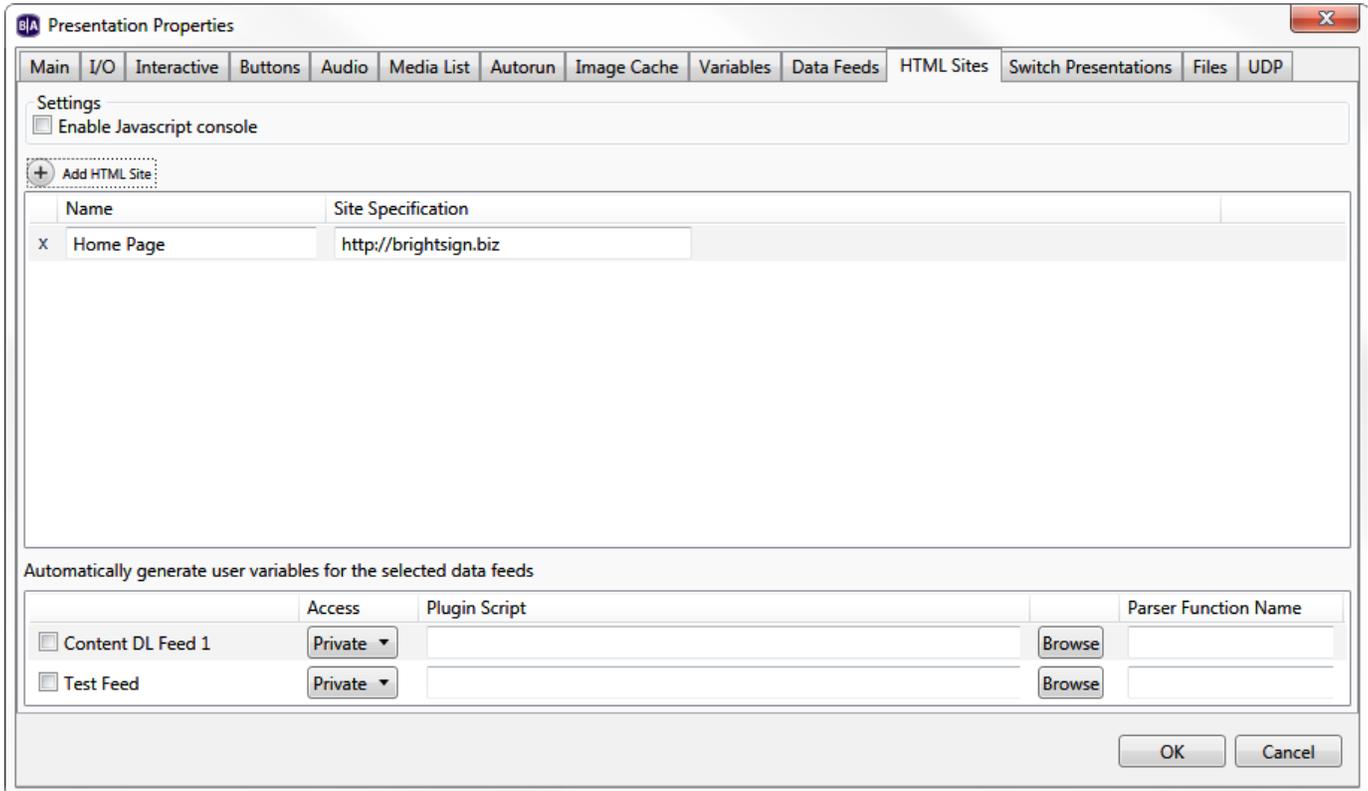
Settings

- **Enable Javascript console**: Check this box to enable the JavaScript console for HTML sites. To access the JavaScript console while the player is running, open a web browser on a device connected to the same local network as the player. Then, enter the IP address of the player, followed by port number 2999 (for example, "http://10.1.0.154:2999"). You will be able to inspect any page added to the **HTML Sites** tab, not just those currently running.
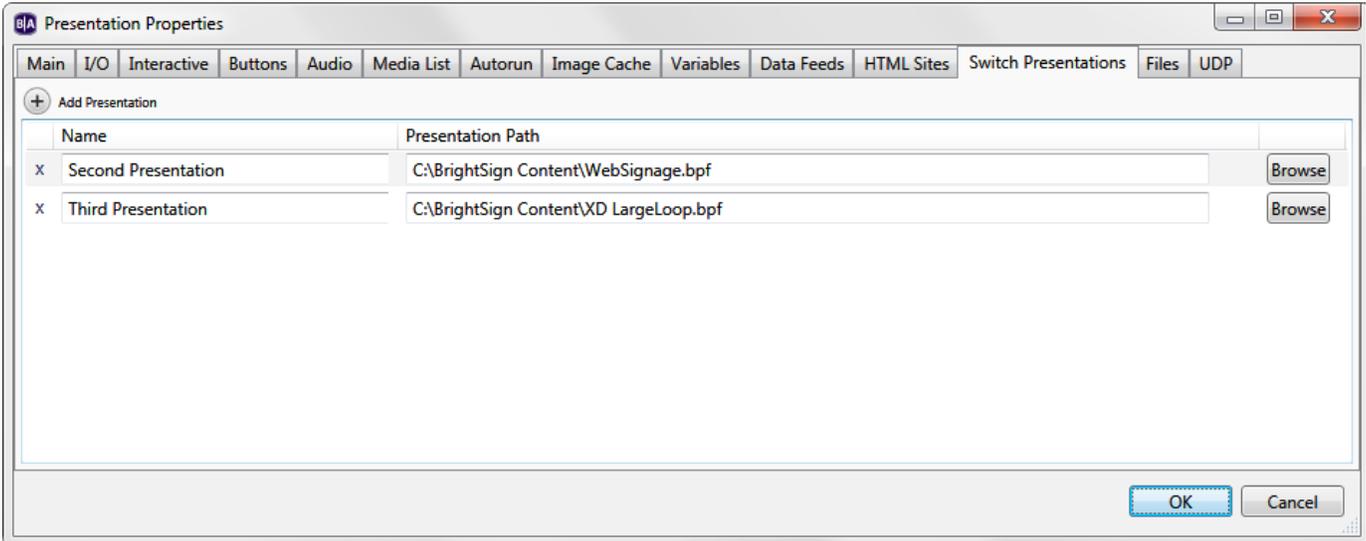
> **Note**
> You must use a WebKit-based browser (e.g. Chrome, Safari) to access the JavaScript console.

Switch Presentations

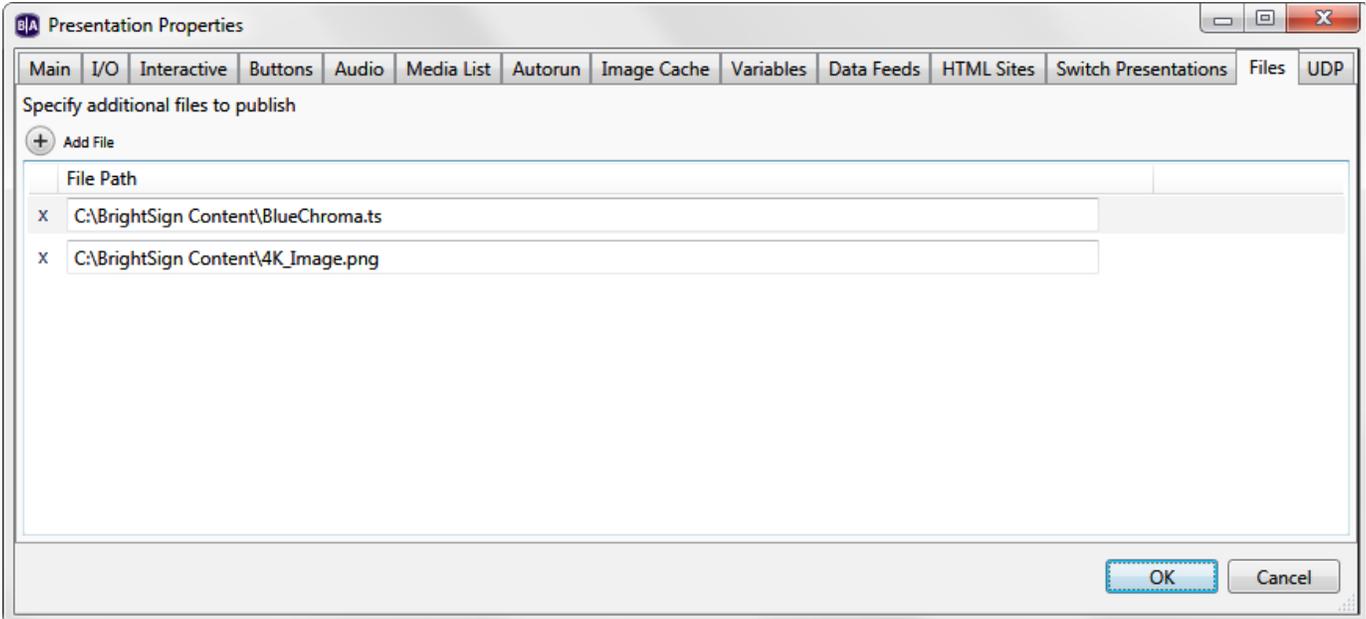∨ BrightAuthor Version 4.6

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Use this tab to publish additional presentations to the SD card along with the primary presentation. You can use the Switch to Presentation command to switch to another presentation while a presentation is running.

Files

Use this tab to publish additional files to the SD card along with the presentation. This feature is useful if you frequently publish files that are not used in the presentation itself (for example, a media file being played by a custom script) and you want to automate the process of publishing both presentation files and custom files.

UDP

This tab provides an easy way to keep track of all UDP events within an interactive presentation. You can also edit the **Label** and change the **Show in BrightSign App** option within individual UDP Input events.
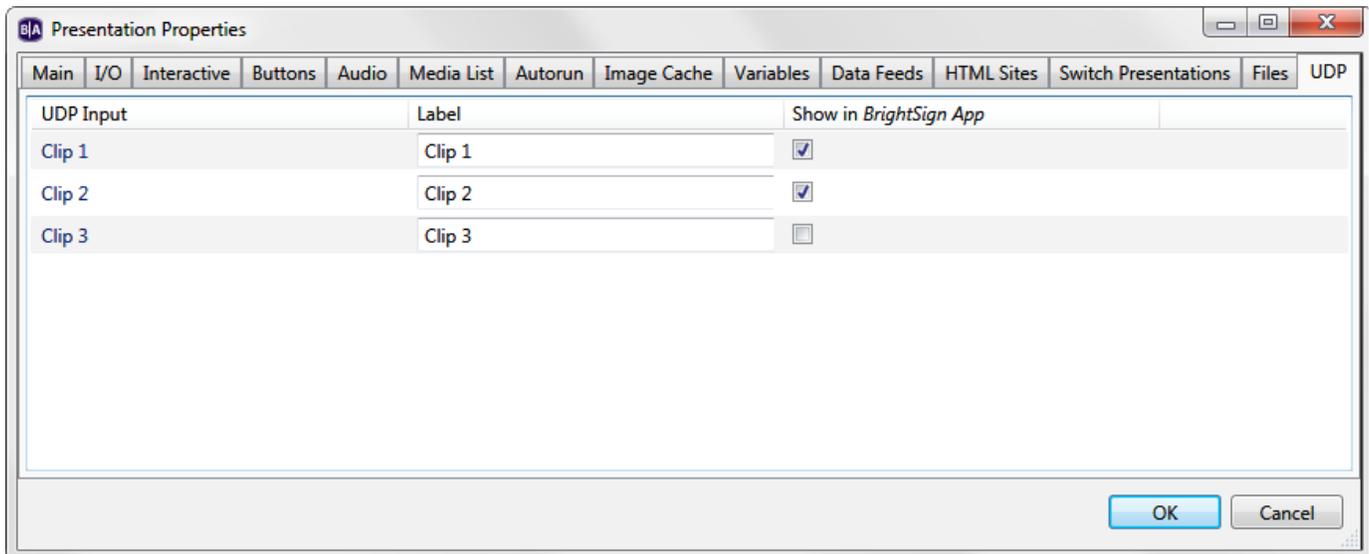
Editing Preferences

Whenever you create a new project, various presentation properties will be set using the default settings. If you often use the same set of properties, you can save time by changing the default settings to what you use most often. To edit default settings, navigate to **Edit > Preferences** on the menu bar.

Changing default settings in the Video, Images, Interactive, Clock, and Live Text tabs does not adjust values in the current project. The Networking, UI, Backups, and Storage tabs are related to other aspects of the publishing process, and will therefore apply to the current presentation as well.

VIDEO

The **Video** tab allows you to specify default settings for video states.

- **Volume**: Specify a default value between 0 and 100.
- **Live video – time on screen**: Set a default period for live videos to remain on screen (in seconds).

IMAGES

The **Images** tab allows you to specify default settings for image states.

- **Slide transition**: Use the dropdown list to set an effect for image transitions.
- **Slide delay interval**: Set how long each image displays (in seconds).

Use the **Interactive** tab to set a default timeout period for media files (in seconds).

Use the dropdown list to link the date and time format to a language. This option affects the date/time display in Clock zones. To customize the format, click **Customize** to open the **Clock Localization** window.

- **Date**: Use the **Edit** field to customize the date format on the player (refer to the chart of terms for different abbreviation styles). Use the **P review date** button to see an example of how the date format will look. You can also customize how months and days are displayed in both **Short** and **Long** form.
- **Time**: Use the **Edit** field to customize how time is displayed on the player (refer to the chart of terms for different measurements). Use the **Preview time** button to see an example of how the time format will look. You can also customize how the AM and PM abbreviations are formatted.

> **Note**
> A BrightSign Network account can only have one date/time format setting: Changing the date/time format for one presentation, and then uploading it to the BrightSign Network, will change the date/time format for all presentations on your account. Similarly, a standalone player can only have one date/time format, even if there are multiple presentations scheduled on the player.

Use the **Live Text** tab to edit default preferences for text fields in Live Text states:

- **Alignment**: Use the dropdown list to set whether the text is left aligned, right aligned, or centered.
- **Foreground text color**: Click **Choose** to select a color for the text.
- **Background text color**: Check this box to include a background color for text fields. Click **Choose** and set a default color for the backgrounds.
- **Transparency**: Drag the bar to set the transparency for the background text color.

> **Note**
> Transparency does not appear in the Live Text image preview or in Presentation Preview. You will need to publish the presentation to a BrightSign player to view the level of transparency.

- **Font**: Click **Browse** to locate and select a font for the text. You can use any TrueType font. Click **Reset to System Font** to reset the font to the default.
- **Font size**: Select **Automatic** to fit the text to the height of the text field, or select **Fixed point size** to enter a value for the font size (1 - 500).
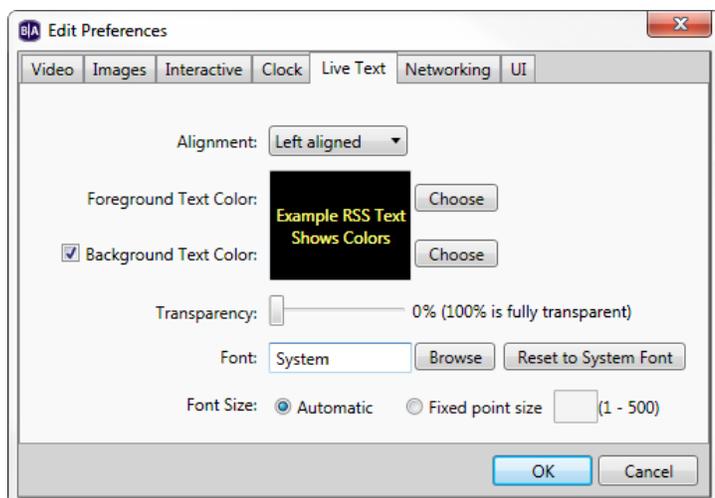
NETWORKING

The **Networking** tab allows you to enable and disable networking options in BrightAuthor.

- **Enable BrightSign Network**: Check this box to enable BSN features in the **Create**, **Publish** and **Manage** tabs, as well as the **BrightSign Unit Setup** window.
- **Enable BrightSign Local Networking**: Check this box to enable Local File Networking (LFN) options in the **Publish** and **Manage** tabs, well as the **BrightSign Unit Setup** window..
  - **Enable Bonjour**: Check this box to enable Bonjour. BrightAuthor uses Bonjour to detect LFN players on the local network; if Bonjour is disabled, you will need to enter the IP address of each LFN player manually to publish to it and manage it. See this FAQ to learn more about installing Bonjour for Windows.
- **Enable Simple File Networking**: Check this box to enable Simple File Networking (SFN) options in the **Publish** tab and **BrightSign Unit Setup** window.
- **Use Proxy Server**: Check this box if BrightAuthor needs to communicate through a proxy server to reach the Internet. Enter the **Address** and **Port** of the proxy server. If the proxy server requires authentication, you will be prompted to enter login credentials. If the proxy uses a Windows domain for authentication, you will also need to specify a domain name.

UI

The **UI** tab allows you to edit various options related to the BrightAuthor playlist UI.

Content

- **Show Image File Resize dialog?**: Displays a dialog box whenever you add an image that is larger than the maximum image size allowed by the player model. It will give you the option to either cancel the action or create a downscaled copy of the image to use in the playlist.
- **Resize image files for BrightSign**: Automatically creates a downscaled copy whenever the original size of the added image is too large.

Publishing

- **Show file overwrite dialog?**: Displays a dialog box asking whether you want to overwrite preexisting files when publishing a presentation.
- **Copy and replace duplicate files when publishing locally?**: Overwrites media files with the same name when publishing locally.
- **Show Save Schedule dialog?**: Displays a dialog box when you exit the **Publish** tab, asking if you would like to save the schedule as a separate file. You can then use this schedule file with any presentation by navigating to **Schedule > Open** while in the **Publish** tab.
- **Show read/write file system warnings dialog?**: Displays a warning whenever you attempt to publish to a file system that is not fully supported.
- **Show read only file system warnings dialog?**: Displays a warning whenever you attempt to publish to a file system that does not allow file writes on the BrightSign player. Player logs and network updates are not supported on read-only file systems.

Save Properties

- **Show Save Properties dialog**: Displays a dialog box whenever you exit the **Presentation Properties** window having made changes to the settings. The dialog box will ask you whether you want to apply the new settings to the current presentation or to all future presentations in addition to current presentation.

Content Update Password Cleared Warning

- **Show Content Update Password Cleared Warning dialog**: Displays a dialog box whenever you publish a content update that will clear the Content Update Password.

Transitions

- **Display Mode**: Determine how BrightAuthor draws event connections between states in the interactive playlist area:
  - **Automatic**: Displays either a line or a label, depending on the current playlist layout.
  - **Always display line**: Displays event lines between states.
  - **Always display label**: Displays numbered event labels that show connections between states.
- **Label Location**: Determine where numbered event labels are located:
  - **Bottom**: Numbered event labels are located below states.
  - **Right**: Numbered event labels are located to the right of states.

This option refers to the **Where** save destination folder in the **New Project** window. Select one of the following:

- **Last Folder Used**: The destination defaults to the last folder used to save a presentation project.
- **My Documents**: The destination defaults to the *My Documents* folder.

BACKUPS

The **Backups** tab allows you to configure automated backup saves for projects (in case BrightAuthor closes without saving the presentation project).

- **Automatically backup BrightAuthor presentation files**: Check this box to enable automated saving of BrightAuthor presentation files. Specify how often you want backup saves to occur.
- **Backup a maximum of this number of backups**: Specify how many backup copies of a single presentation can exist. Once this limit is reached, BrightAuthor will begin overwriting backup copies, beginning with the oldest file.

STORAGE

Checking the **Limit storage space by function** box allows you to divide the presentation storage device (SD card, USB drive, etc.) into different segments. You can then allot maximum sizes to those segments to ensure that a certain type of data does not take up too much space on the storage device.

Note that, if you select **Specify absolute size**, it is possible to specify a combined set of segments that is larger or smaller than the absolute size of your storage device. If you select **Specify percentages**, you will need to ensure that the percentages add up to 100% (which is equivalent to the absolute size of the storage device).

The segment types are specified as follows:

- **Published data**: The maximum size allotted to all presentation and content files that are written to the storage device during the publish process. This includes audio, video, images, text, and HTML content files.
- **Dynamic data**: The maximum size of all dynamic content, including Dynamic Playlists and MRSS feeds. When this segment runs out of space, dynamic content files will be deleted to create space, starting with the oldest files first.
- **HTML data**: The maximum size of the HTML application cache.
- **HTML local storage**: The maximum size of all JavaScript variables and data.
- **HTML IndexedDB**: The maximum amount of storage allocated to the IndexedDB web database application.
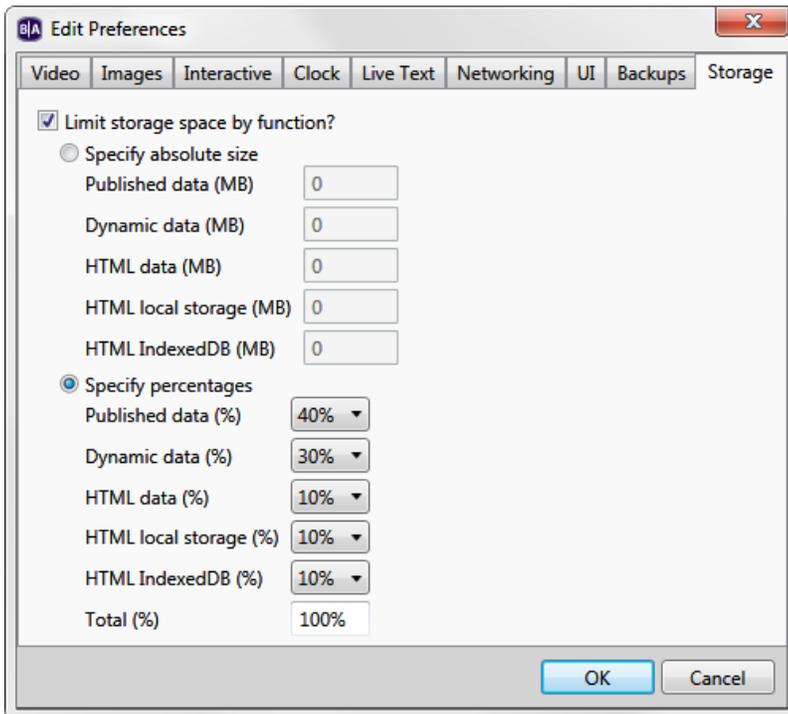
Advanced Features

This section outlines advanced features offered by BrightAuthor.

IMPORTING AND EXPORTING

There are three types of import/export actions available from the **File** menu: Export Presentation, Import/Export User Variables, and Import/Export User Events.

Export Presentation

Exporting a BrightAuthor presentation makes it easier to transfer that project between different PCs and versions of BrightAuthor. Navigate to **File > Export…** and select a folder for export. All relevant presentation files, including media files and user defined events, will be placed in the target folder. You can open the project by double-clicking the *.bpf* file that was exported.

Import/Export User Variables

You can transfer the User Variable set of one presentation to another. This saves time when you are creating multiple presentations that use the same set of User Variables. The User Variable set is exported as a *.buv* file, which is also an editable XML document.

Note that importing networked User Variables to a new presentation does not import the Data Feeds to which those variables are linked. If you import networked User Variables, you will need to recreate the associated feeds in the **Presentation Properties > Data Feeds** tab and reassign them to the variables.

Import/Export User Events

These actions allow you to transfer User Defined Events between presentations. This is useful when creating multiple presentations that use many of the same or similar events.

PRESENTATION TREE VIEW

The Presentation Tree View feature allows you to view a presentation as a set of expandable/collapsible zones, states, events, and commands. You can use this feature to easily navigate all state information in a presentation without double-clicking numerous icons and navigating through tabs. You can access this feature by navigating to **File > View Presentation Tree**.

RF CHANNEL SCANNING

Before you can use the RF In state to display live video, you will first need to perform a channel scan. You can perform a channel scan either as an independent action (similar to setting up a player) or as a state in an interactive presentation. The user interface for the **Scan Setup** window is the same for both methods. See the Tuner Scan page for more information about using channel scanning in an interactive presentation.

Follow these steps to perform a channel scan as an independent action:

1. Navigate to **Tools > Setup RF Channel Scan**.
   a. **Channel Map**: Select QAM, ATSC, or ATSC and QAM (consult your service provider for details).
   b. **Modulation Type**: Select QAM 64, QAM 256, or QAM 64 and QAM 256 (consult your service provider for details).
   c. **First RF Channel** (optional): You can choose to limit the range of the channel scan by selecting the first channel to scan.
   d. **Last RF Channel** (optional): You can choose to limit the range of the channel scan by selecting the last channel to scan.
2. Click **OK** and write the channel scan settings to an SD card or USB drive.
3. Power off your BrightSign XD1230.

4. Insert the SD card or USB drive into the player and power it back on. The progress of the channel scan will be displayed on screen.
5. Once the scan is complete, the channel settings will be written to the internal registry of the player (i.e. the non-removable storage). You can now use the RF In state to tune to any virtual channels that were detected in the channel scan.

> Each channel takes approximately one second to scan. Specifying **First RF Channel** and **Last RF Channel** will reduce the amount of time it takes to perform the scan. You should only use these two options if you are familiar with the channel map of the cable source.
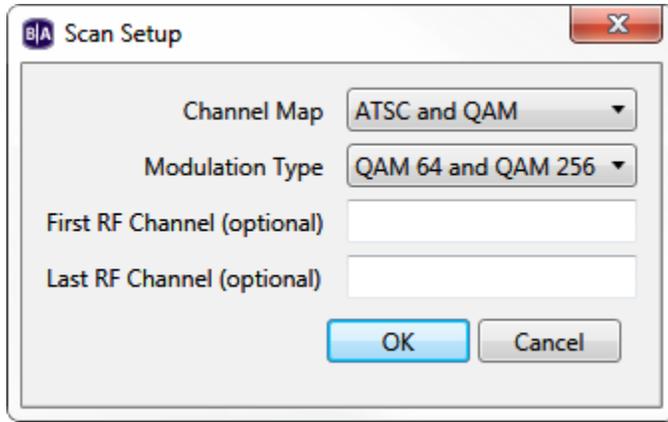
Publishing Channel Scan Results

If you are connecting multiple XD1230 players to the same cable source, you can transfer the results of a channel scan from one player to another during the setup process.

1. After performing a channel scan, reinsert the SD card or USB drive into your PC.
2. In BrightAuthor, navigate to **Tools > Setup BrightSign Unit**.
3. Specify device settings as desired (see the Setting up BrightSign Players for more details).
4. Under **RF Channel Scan Data (optional)**, click browse and locate the "ScannedChannels.xml" file in the SD card or USB drive directory. Click **Open**.
5. Publish the setup files to the player. The player will now have the same channel configuration as the original XD1230.

Managing Your Network

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You can use the BrightAuthor **Manage** tab to manage players on your BrightSign Network account, as well as the players on your local network. The **Advanced Tools** window (accessible by navigating to **Tools > Advanced**) offers additional player management options.

If you don't see BrightSign Network features in the **Manage** tab or **Advanced Tools** window, ensure that the BrightSign Network is enabled in Edit > Preferences > Networking and sign in by navigating to **Tools** > **Sign in to BrightSign Network**.

Status

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- Version 4.4
- Previous Versions

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- Groups
- BrightWall Groups
  - Creating a BrightWall Group

The **Status** section allows you to view the statuses of players and groups on your BrightSign Network account.

Groups

You can use groups to distribute presentations to a set of BrightSign players. Publishing a presentation to a group delivers it to all BrightSign players within that group. BrightAuthor includes two default groups: *Default* and *LocalTest*. However, you can create additional groups as needed:

- *To create a group*: Click **Add Groups** (beneath the **Groups** window). Type a name for the group and click **OK**.
- *To delete a group*: Right-click a group and click **Delete**.
- *To move a player to a different group*: Click the arrow next to the group that contains the player. Then click and drag the player to the new group.

Click the arrow beside a group to view details about players within that group:

- **Status**: A range of colors (green, yellow, red) used to indicate the status of a BrightSign player. Please see this FAQ for more information on what each color means.
- **Name**: The name of the player
- **Description**: The description given to the player
- **Active Presentation**: The name of the current presentation being run on the player
- **Last connection**: The last time the player checked in with the BrightSign Network servers
- **Checks for content every**: The interval for synchronizing with the BrightSign Network servers to determine if there is new content to download. This interval can be modified by right-clicking the player and selecting **Edit**.

Right-click a player to access options associated with it:

- **View Remote Snapshots**: Opens a window that allows you to view Remote Snapshot images taken by the player. When the window opens, the latest snapshot will be displayed. Past snapshots are displayed as thumbnails below. Double click a snapshot thumbnail to view it as a full size image. The number, quality, and frequency of snapshots is determined during the Unit Setup process.

> **Note**
> The Remote Snapshot feature is not available for the LS422, HD220, or HD1020.

  - **Refresh**: Click this button to get the most up-to-date snapshot(s) from the player.
  - **Date/Time**: The timestamp indicating when the snapshot was taken. The timestamp is formatted as follows: yyyy:mm:dd hh:mm:ss
  - **Serial Number**: The serial number of the player taking the snapshot
  - **Model**: The model number of the player taking the snapshot
  - **Firmware**: The firmware version of the player taking the snapshot
- **Edit**: Opens the **Edit Unit** window, which allows you to edit many of the parameters set during the Unit Setup process, including the name/description, group, and Remote Snapshot settings.
- **Tags**: Opens the **Device Tags** window, which allows you to add tags to the player. You can use player tags to conditionally filter media in Tagged Playlists on a player-by-player basis. See this section in the BSN WebUI documentation for more information about player tags.
- **Delete**: Removes the player from the BrightSign Network. The player will continue playing content, but it can no longer be updated or monitored.
- **Info**: Provides details about the player hardware, software, networking, and subscription status.
- **Download Progress**: Displays the progress of the most recent content synchronization action.
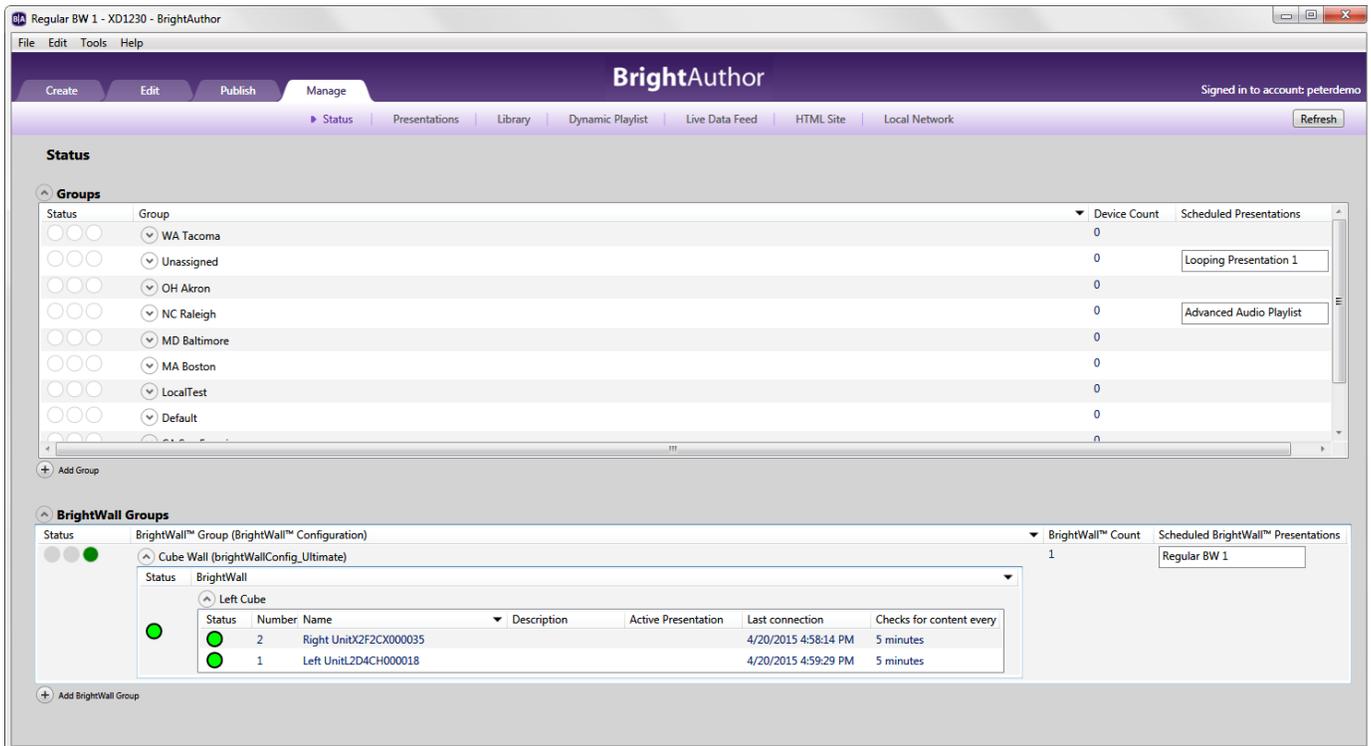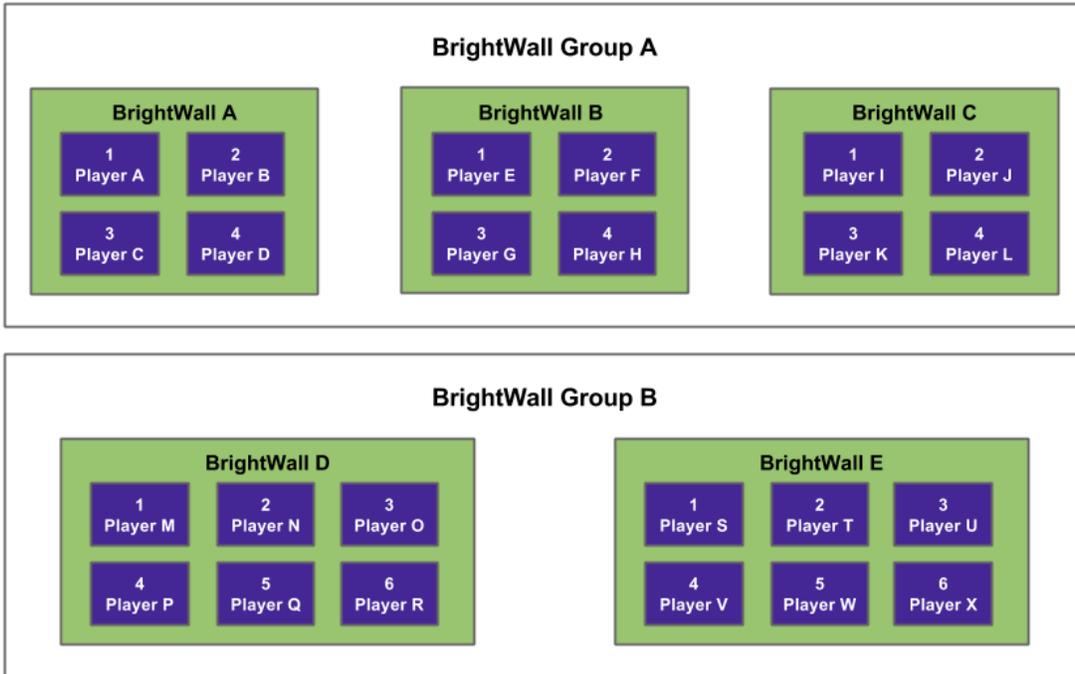
BrightWall Groups

Use the **BrightWall Groups** section to manage players that are assigned to BrightWall video walls.

Note some important differences between BSN BrightWall groups and standard BSN groups:

- *Each player is part of a BrightWall*: It has a **Number** indicating the section of the BrightWall to which it belongs. Screens are numbered by row, starting from the top-left section of the BrightWall (the example diagram to the right shows the numbering of a 4x3 BrightWall).
- *Each BrightWall consists of a number of players*: The **Status** will only display green if all players in the BrightWall are green, or red if all players in the BrightWall are red. If the players are a mix of red, green, or yellow, the **Status** will display yellow.
- *Each BrightWall group consists of one or more BrightWall(s)*: BrightWall(s) within the same BrightWall group use the same Configuration File. This means that each BrightWall group represents a certain BrightWall configuration (for example, a 3x2 video wall using HDMI, with a 3% bezel ratio). Like standard BSN groups, BrightWall(s) within the same BrightWall group are assigned the same schedule.

Note in the diagram below how each BrightWall within a BrightWall group has the same configuration, and how each player can only be assigned to one BrightWall at a time.

Creating a BrightWall Group

To create a BrightWall group, click **Add BrightWall Group** (located below the **BrightWall Groups** window) and enter the following:

- **BrightWall group name**: The name of the BrightWall group
- **BrightWall configuration**. The BrightWall Configuration file that will be associated with the BrightWall group. To add a BrightWall Configuration file to the list, upload a BrightWall presentation that uses the configuration file to the BrightSign Network in the **Create > BrightWall** tab.

Players and BrightWall(s) are added to a BrightWall group during the Unit Setup process.

Presentations

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- Presentations
- BrightWall Presentations
- BrightWall Configurations

The **Presentations** section allows you to view all presentations, BrightWall presentations, and BrightWall configuration files uploaded to the BrightSign Network.

Presentations

Click the down arrow next to **Presentations** to view a list of all presentations uploaded to the BrightSign Network:

- **Active**: A checkmark will be displayed in this field if the presentation is currently assigned to one or more groups. Use the button to view the **Current Active Groups** list.
- **Name**: The name of the presentation
- **Date modified**: The last time the presentation was modified in BrightAuthor or uploaded via the BrightSign Network WebUI

Right-click a presentation to perform an action:

- **Delete**: Removes the presentation from your BrightSign Network account. This action cannot be performed if the presentation is currently assigned to a group.
- **Download**: Downloads the presentation file and assets to the specified folder. You cannot download presentations that were created with the WebUI.

BrightWall Presentations

Click the down arrow next to **BrightWall Presentations** to view a list of all BrightWall presentations uploaded to the BrightSign Network:

- **Active**: A checkmark will be displayed in this field if the BrightWall presentation is currently assigned to one or more BrightWall groups. Use the button to view the **Current Active BrightWall™ Groups** list.
- **Name (BrightWall Configuration)**: The name of the BrightWall presentation, as well as the configuration file used for that presentation
- **Date modified**: The last time the BrightWall presentation was modified in BrightAuthor

Right-click a BrightWall presentation to perform an action:

- **Delete**: Removes the BrightWall presentation from your BrightSign Network account. This action cannot be performed if the BrightWall presentation is currently assigned to a BrightWall group.
- **Download**: Downloads the BrightWall presentation file, configuration file, and assets to the specified folder.

BrightWall Configurations

Click the button next to **BrightWall Configurations** to view a list of all BrightWall Configuration files uploaded to the BrightSign Network:

> **Note**
> Currently, the only way to upload a BrightWall Configuration file to BSN is to upload a BrightWall presentation that uses the configuration file.

- **Active**: A checkmark will be displayed in this field if the configuration file is being used for one or more BrightWall presentations. Use the button to view the **Current Active BrightWall™ Groups** list.
- **Name**: The name of the BrightWall Configuration file
- **Creation date**: The date that the BrightWall Configuration file was created in BrightAuthor

Right-click a configuration file to perform an action:

- **Delete**: Removes the BrightWall Configuration file from your BrightSign Network account. This action cannot be performed if a BrightWall presentation that uses the configuration file is currently assigned to a BrightWall group.
- **Download**: Downloads the BrightWall Configuration file to the specified folder.

Library

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The **Library** section allows you to see all content files (images, audio, video) that have been uploaded to your BrightSign Network account. Files with a green check mark are currently active. You can perform any of the following actions:

- *Switch between thumbnail and list views*: Click the icons in the upper-right portion of the screen.
- *Refresh the library*: Click the **Refresh** button in the upper-right portion of the screen.
- *View item info*: Right-click a file and click **Info**. Here you can view the file size, type, date modified, and date uploaded, as well as all presentations and all Dynamic Playlists using the file.
- *Delete an item*: Right-click a file and click **Delete**. Keep in mind that you can only delete files that aren't currently active.
- *Edit Media Tags*: Right-click a file and click **Edit Tags** to add or remove media tags from that media item. You can switch between editing **System** and **User** tags:
    - **System tags** have values that are defined by the BrightSign Network (such as the media file size and upload date); you cannot edit the title or value of these tags.
    - **User tags** have customizable titles and text values.
- *Copy Media Tags*: Right-click a file and click **Copy Tags**. Select one or more target media files for copying and click **Save**. This will copy all tags that are associated with the original file; it will also overwrite any tags associated with the target media file(s).

The screenshot shows the BrightAuthor application with the Library tab open under Manage.

Used	Name	Size	Type	Date modified
✓	Neptune.jpg	792 KB	image	1/9/2013 12:36:21 PM
✓	MaleFig_resized.jpg	466 KB	image	1/27/2014 4:24:39 PM
✓	Kittehs fighting.jpg	10 KB	image	2/15/2012 3:28:34 PM
✓	kitteh.jpg	149 KB	image	12/13/2012 4:21:02 PM
✓	Kitteh 2.jpg	102 KB	image	2/15/2012 3:29:23 PM
✓	Jupiter_Rotation.mp4	14,757 KB	video	4/18/2013 3:57:31 PM
✓	Jupiter(large).jpg	138 KB	image	4/7/2014 2:14:53 PM
✓	Jupiter and Ganymede.jpg	181 KB	image	4/24/2013 11:46:06 AM
✓	earth_1280x720.mov	149,824 KB	video	4/24/2013 3:36:03 PM
	BSAV.png	17 KB	image	11/21/2012 9:16:13 AM
✓	Andromeda(1200by1600).jpg	542 KB	image	6/12/2014 2:02:37 PM

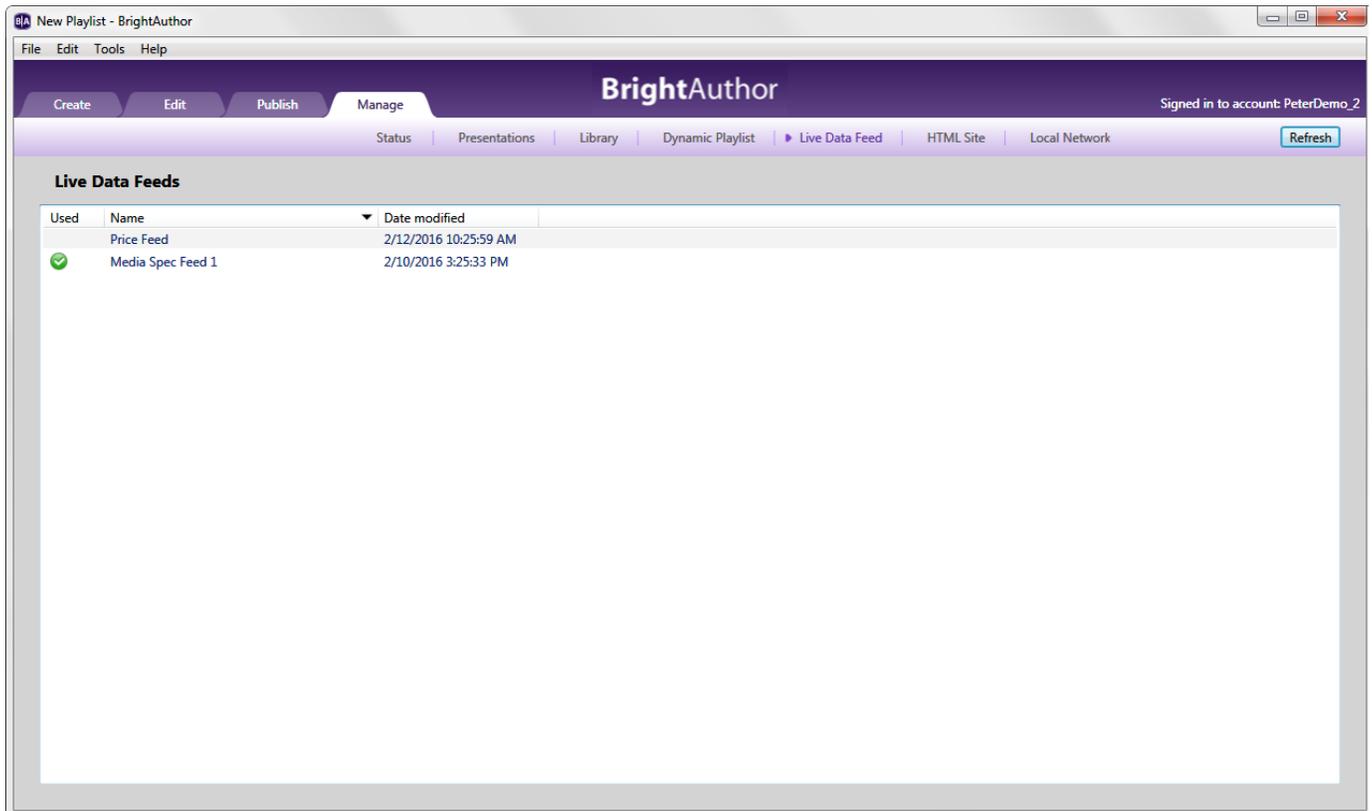# Live Data Feed

BrightAuthor Version 4.6

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- Previous Versions

The **Live Data Feed** tab allows you to view all Live Data Feeds on your BrightSign Network account, as well as the presentations that contain Live Data Feeds and the time/date when they were last modified. Live Data Feeds with a green checkmark are currently part of a presentation. You can perform any of the following actions:

- *Delete a feed*: Right-click a Live Data Feed and select **Delete**.
- *Download a feed*: Right-click a Live Data Feed and select **Download**. Choose a save destination for the *.xml* data-feed file and click **Save**.
- *View info*: Right-click a Live Data Feed and select **Info**. A window will display when the Live Data Feed was last modified, along with a list of all presentations that contain the Live Data Feed.
- *Sort the list*: Click the column you want to use as the sort criteria. For example, click the **Name** column to sort by name, then click it again to switch between ascending and descending order.
- *Refresh the list*: Click the **Refresh** button in the upper-right portion of the screen.

Dynamic Playlist

The **Dynamic Playlist** tab allows you to view all Dynamic Playlists on your BrightSign Network account, as well as the presentations that contain Dynamic Playlists and the time/date when they were last modified. Dynamic Playlists with a green checkmark are currently part of a presentation. You can perform any of the following actions:

- *Delete a playlist*: Right-click a Dynamic Playlist and then select **Delete**.
- *View info*: Right-click a Dynamic Playlist and then click **Info**. A window will display when the Dynamic Playlist was last modified, along with a list of all presentations that contain the Dynamic Playlist.
- *Sort the list*: Click the column you want to use as the sort criteria. For example, click the **Name** column to sort by name, then click it again to switch between ascending and descending order.
- *Refresh the list*: Click the **Refresh** button in the upper-right portion of the screen.
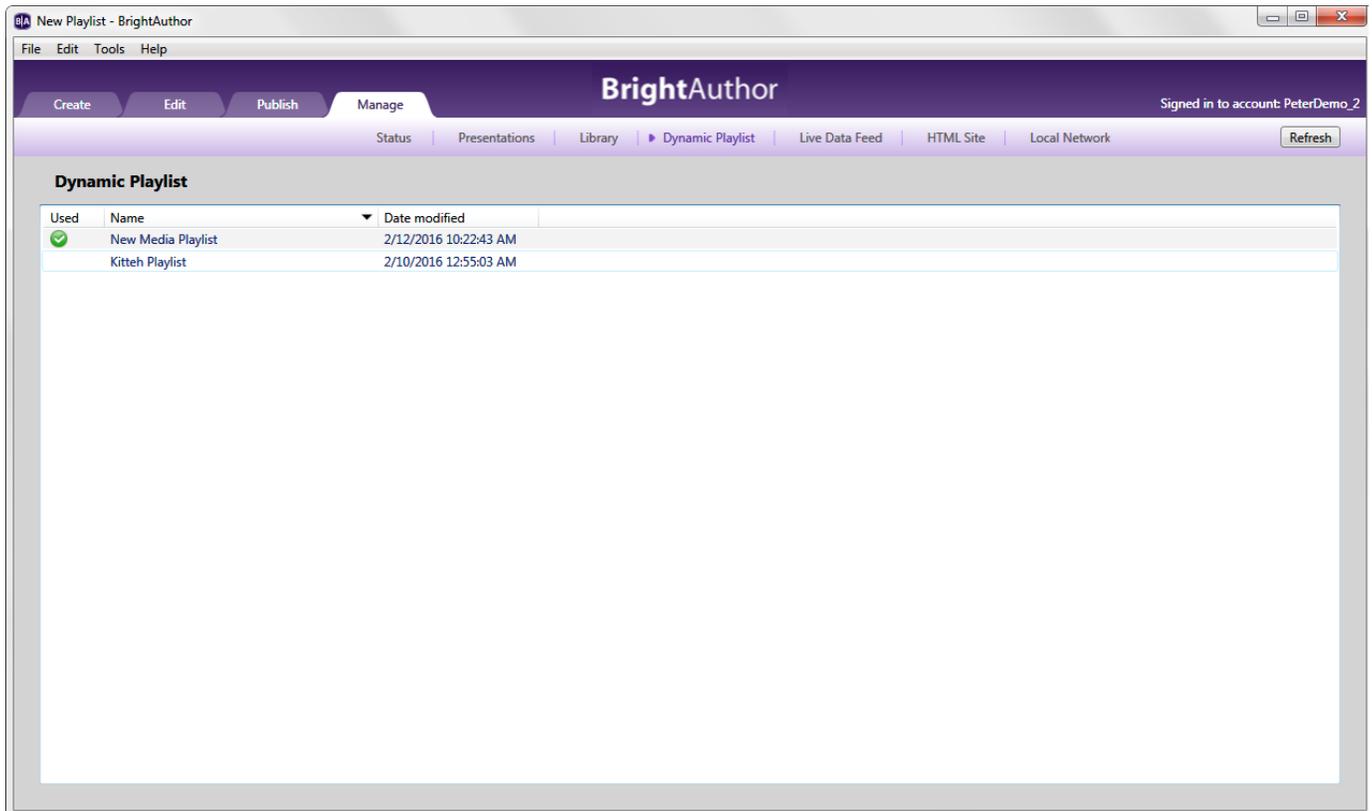
HTML Site

BrightAuthor Version 4.6

- Version 4.4
- Previous Versions

The **HTML Site** section allows you to view all HTML sites that have been uploaded to your BrightSign Network account, as well as the presentations that contain the sites and the time/date when they were last modified. HTML sites with a green checkmark are currently part of a presentation. You can perform any of the following actions:

- *Delete a site*: Right-click an HTML site and select **Delete**.
- *View site info*: Right-click an HTML site and select **Info**. A window will display when the site was last modified, as well as a list of all presentations that contain the site.
- *Sort the list*: Click the column you want to use as the sort criteria. For example, click the **Name** column to sort by name, then click it again to switch between ascending and descending order.
- *Refresh the list*: Click the **Refresh** button in the upper-right portion of the screen.
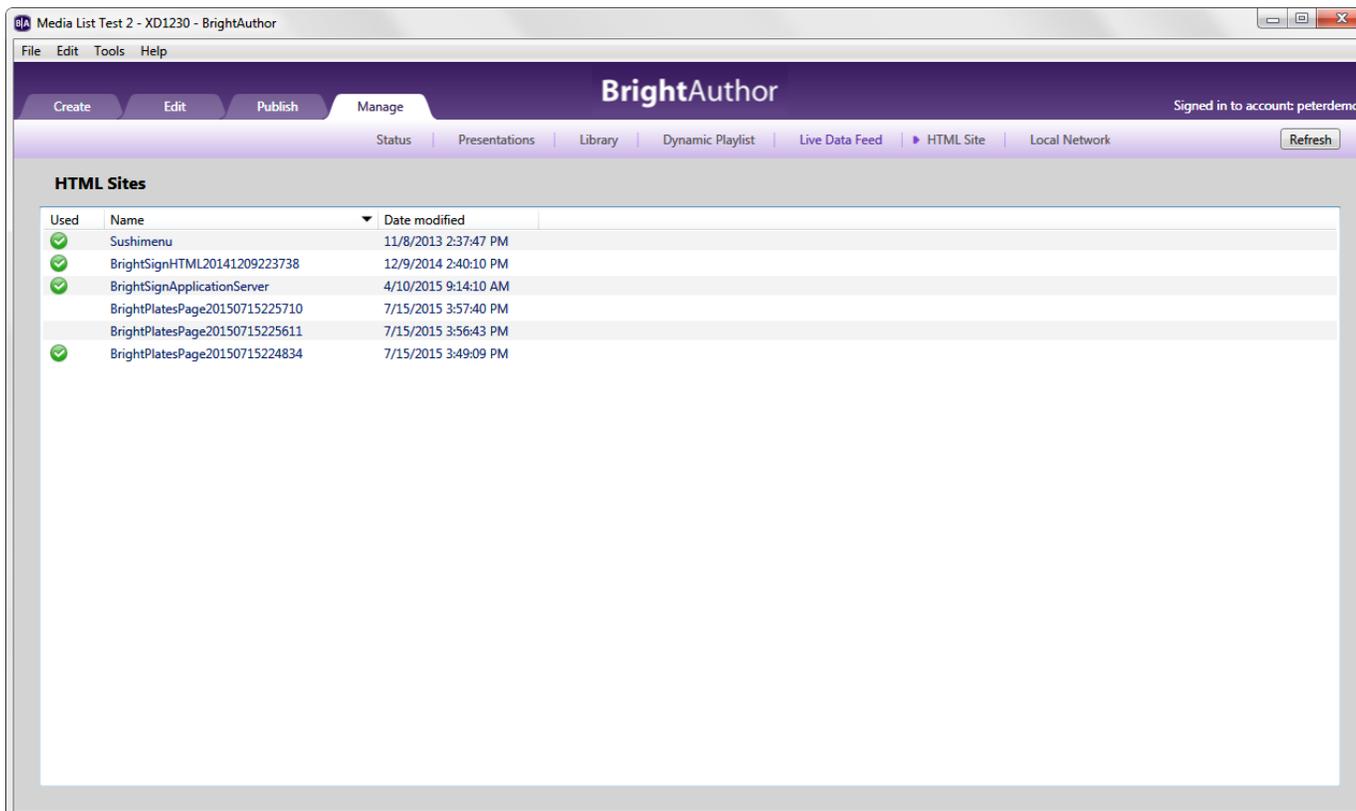
Local Network

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The **Local Network** section allows you to perform a number of remote operations on players located on your local network. If Bonjour has been installed on your PC and enabled in the **Edit > Preferences > Networking** tab, then players set up for Local File Networking will be discovered automatically (see this FAQ for more details). If Bonjour is not enabled, you can populate the list of players by clicking the **Add BrightSign** button in the bottom left and entering the IP address of the player.

> **Note**
> If you do not know the IP address of your player, you can obtain it by powering up the player without an SD card inserted: The IP address, along with other information about the unit, will be displayed on screen once the unit boots.

To perform an operation, select a player from the list (or select multiple players by holding down **Shift**) and right-click the selection:

- **View Remote Snapshots**: Opens a window that allows you to view Remote Snapshot images taken by the player. When the window opens, the latest snapshot will be displayed. Past snapshots are displayed as thumbnails below. Double click a snapshot thumbnail to view it as a full size image. The number, quality, and frequency of snapshots is determined during the Unit Setup process.

> **Note**
> The Remote Snapshot feature is not available for the LS422, HD220, or HD1020.

- **Refresh**: Click this button to get the most up-to-date snapshot(s) from the player.
- **Date/Time**: The timestamp indicating when the snapshot was taken. The timestamp is formatted as follows: yyyy:mm:dd hh:mm:ss
- **Serial Number**: The serial number of the player taking the snapshot.
- **Model**: The model number of the player taking the snapshot.
- **Firmware**: The firmware version of the player taking the snapshot.
- **Remove Unit(s)**: Removes one or more players from the Local Network list. This action only affects the BrightAuthor UI; it does not change the settings of players in any way.
- **Show All Units**: Adds back all players that have been removed from the list using the **Remove Unit(s)** command.
- **Info**: Displays information about the selected player, including the **Unit ID** (i.e. serial number), **IP address**, **Model**, **Firmware version**,

and **Autorun version**.

- **Specify User Name / Password**: Attempts to access the player to obtain further information about it. This action should be used when the player **Name** is listed as "Access to [player IP address] denied".
- **Access Diagnostic Web Server**: Opens a web browser window or tab to access the player Diagnostic Web Server.
- **Access Device Web Page**: Opens a web browser window or tab to access the player Device Web Page (i.e. Local Web Server).

Using Advanced Tools

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- Setup USB Drive
- Update Autorun
- Unit Control

Advanced tools (accessible by navigating to **Tools** > **Advanced**) let you remotely control units on your BrightSign Network account or set up a USB flash drive to retrieve device data and perform device actions. The **Advanced Tools** window is divided into three tabs: the **Setup USB Drive** tab, as well as the **Update Autorun** and **Unit Control** tabs, which are only available if you have a BrightSign Network account.

Setup USB Drive

The **Setup USB Drive** tab allows you to configure a USB flash drive to extract data or perform specified actions (e.g. reboot the player) on a BrightSign player. The following checkboxes determine what actions will occur when the USB flash drive is inserted into the player:

- **Copy variables database**: Extracts the data for all User Variables and Media Counters.
- **Copy log files**: Extracts all log files.
- **Delete log files**: Deletes all log files on the BrightSign player.
- **Reset Variables**: Resets all User Variables to their default values.
- **Reboot**: Reboots the BrightSign player.
- **Display status on screen during data capture**: Displays the status of the above actions on the display while the USB flash drive is inserted into the BrightSign player.

Once you've selected the desired USB actions, follow these steps to carry them out:

1. Click **Setup drive** and navigate to the location of the USB flash drive on your computer. Click **OK**.
2. When the **Setup Complete** window opens, click **OK**.
3. Remove the USB flash drive from your computer and insert it in the player.
4. If you are extracting data from the player, reinsert the USB flash drive into your computer to retrieve the data.

> **Note**
> You can retrieve data from multiple players using a single USB flash drive. The filename of each variable, media counter, and log record will include the serial number of the applicable player, so the number of unique player records you can put on a USB flash drive is limited only by storage space.

Update Autorun

Use the **Update Autorun** tab to update the Autorun on players linked to your BrightSign Network account. Check the boxes corresponding to the groups you wish to update. Then click **Update now** to update the Autorun version for players in the group(s).

See this FAQ to learn how to distribute custom Autorun scripts using the BrightSign Network.
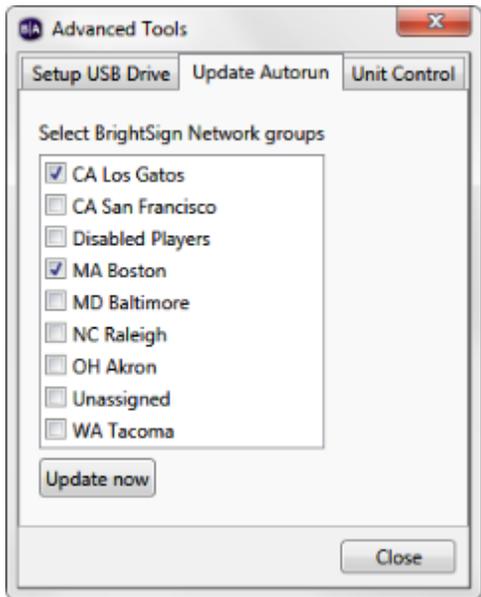
Unit Control

Use the **Unit Control** tab to send commands to players linked to your BrightSign Network account.

1. In the **Serial Number** field, type the serial number of the player you want to control.
2. Click the **Action** dropdown list to select the action you want the player to perform.
   a. **Reboot unit**: Restarts the player.
   b. **Upload logs**: Uploads the current log files on the player (based on the **Logging** settings selected when setting up the unit.). Log files can then be retrieved in the BrightSign Network WebUI.
   c. **Recover – reformat**: Puts the player into recovery mode and reformats its storage device.
   d. **Recover – don't reformat**: Puts the player into recovery mode and downloads the latest Autorun script to the storage card without reformatting it.
3. Click the **Add action** button to have the player perform the action the next time it checks in with the BSN servers.

You can add multiple actions to a single player. You can also use the **Remove action** button to cancel an action before the next check-in.
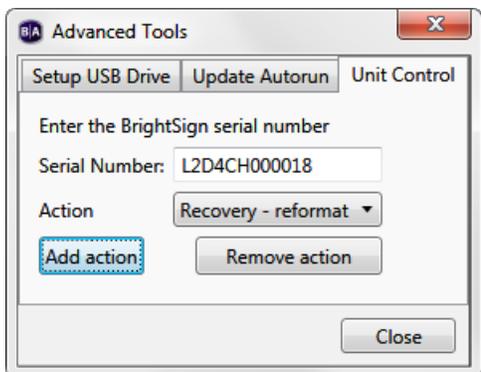
Using the Diagnostic and Local Web Servers

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   - Previous Versions

The Diagnostic Web Server gives you the ability to perform various system functions—such as rebooting the player, changing display settings, and retrieving log files—from a web browser.

The Local Web Server is necessary for Local File Networking. It also gives you access to the User Variables webpage, which allows you to modify User Variables using a web browser or the BrightSign App. Both features are enabled during the player setup process.

Follow these steps to connect to the Diagnostic Web Server and User Variables webpage using a web browser: Note that your PC or mobile device must be connected to the same local network as the BrightSign player.

1. Power off the BrightSign player.
2. Remove the SD card and USB drive (if applicable).
3. Power on the player and wait several minutes. The IP address of the player, along with the serial number and firmware version, will appear on the display.
4. To access the Diagnostic Web Server, enter the displayed IP address into the address bar of the browser on your PC or mobile device (for example, "10.0.1.199"). To access the User Variables web page, enter the displayed IP address plus port 8008 (for example, "10.0.1.199:8008").
5. Enter your user name and password (if applicable).

Frequently Asked Questions

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For additional Frequently Asked Questions, visit the BrightSign Support website.

Can I use BrightAuthor 4.0 or later with the HD210, HD410, HD810, HD1010, HD1010w, or TD1012?

No, these legacy models are only supported by BrightAuthor versions 3.8 and earlier.

Can I open the autoplay.xml file using BrightAuthor?

No. The autoplay.xml file that is generated when you publish a presentation is a playlist file. This file includes only the information required for playback on a BrightSign player. It is not the same as a presentation project file.

How do I use a different font?

To use a different font, browse to a folder on your computer that has a true type font (e.g. in a Ticker zone, click **Zone Properties**, and then click **Browse** beside font). This font will be copied to the SD card when you publish the presentation. You can use your own custom fonts or download free TrueType fonts from the web.

Can I export a template?

Yes. Although there isn't a template export option, you can save a presentation project with the desired template layout, and then transfer it to another computer. You can then open the project in BrightAuthor, and then save the template (**Layout** > **Save Template**).

Why does BrightAuthor take a long time to process my folder?

If the folder you selected has a large number of images and videos, the Media Library may take a few minutes to update. Please be patient.

Why can't BrightAuthor locate my files when I try to publish my presentation?

If you copy a presentation project from one computer to another, or move or rename files used in a BrightAuthor project, BrightAuthor cannot locate the files, and you will receive an error message when you try to publish. To resolve the error, you must remove the files from each zone's playlist in the presentation and then add them again.

Why are some of my videos missing thumbnails in the Files tab?

The thumbnails are generated by codecs installed on your computer. You can download codecs to resolve the problem. For example, if you're missing thumbnails for your transport streams, you can try downloading a codec such as K-Lite.

What do I do if BrightAuthor crashes while I'm using it?

For any errors or crashes you encounter while using BrightAuthor, please post a description of the problem in the forums (http://support.brightsign .biz/hc/en-us/community/topics) or send us an email at support@brightsign.biz and include the following information:

- Steps to duplicate the problem (or indicate that you can't duplicate it)
- Any error dialogs you saw, including text in the dialog
- The contents of your event log right after the crash. You can find the log in this folder:
  C:\Users\Owner\AppData\Local\BrightSign\BrightAuthor\
    - Look for a subfolder named after the BrightAuthor version number, such as 2.4.0.
- A copy of the presentation project where you experienced the problem