



System Administrator's Guide



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System and Video Streaming Library

1 Introduction

Thank you for choosing SAFARI Montage. This manual contains configuration instructions for your SAFARI Montage system.

Contact SAFARI Montage Technical Support with questions regarding the instructions in this manual. SAFARI Montage Technical Support is available Monday - Friday from 8 a.m. to 6 p.m. Eastern Time and may be contacted by telephone at 800-782-7230 or online via <https://www.safarimontage.com/support>



This document addresses both SAFARI Montage On-Premises and Cloud-Hosted solutions. Some settings and features are unique to environments with physical server hardware. Wherever you see this icon, it is indicating a feature only found on on-premises hardware.

2 First-Time Installation

The instructions below describe how to access your SAFARI Montage system for the first time. These instructions assume that you have connected your SAFARI Montage server to the network, and it is powered on according to the instructions provided with the hardware.

Note: SAFARI Montage LOR Cloud users may skip to section 2.2 First-Time Login unless configuring an on-premises device for use with their main cloud-hosted site.

2.1 Finding Your Hardware on The Network



SAFARI Montage is factory-configured to use the Dynamic Host Configuration Protocol (DHCP). On power-up, SAFARI Montage will attempt to retrieve network configuration parameters from a DHCP host (if available) on your network. These configuration parameters include IP address, gateway address, subnet/netmask address, and DNS addresses. The instructions below assume that you have left SAFARI Montage in its default factory configuration and you have not modified any network settings or disabled DHCP.

Note: You may receive communication from SAFARI Montage Support indicating your system has been preconfigured with a static IP address and/or host name. If so, use the address and credentials supplied

Option 1 - Default Host Name: Enter the SAFARI Montage default host name into a web browser. SAFARI Montage is factory-configured to use a default host name of SVN<SerialNo>.local

Replace <SerialNo> with the six-digit serial number of your SAFARI Montage server. Your serial number can be found on the back cover of your printed Setup Guide, on the back of the SAFARI Montage rack unit, or inside the case door of the SAFARI Montage tower. For example, if your serial number were 000123, you would enter the following address into your web browser:

<http://SVN00123.local>

Option 2 - IP Address: Enter SAFARI Montage's IP address into a web browser. To find out what IP address is assigned to SAFARI Montage, you may ping the default hostname. To ping the default hostname, enter the following command into a command prompt, replacing <SerialNo> with the six-digit serial number found on the back cover of your printed Setup Guide, on the back of the SAFARI Montage rack unit, or inside the case door of the SAFARI Montage tower:

```
ping SVN<SerialNo>.local
```

The ping command will display the IP address of SAFARI Montage. You may enter the IP directly into the address bar of your web browser, for example:

<http://192.168.1.78>

If DHCP fails or a static IP has not been assigned, SAFARI Montage assigns itself an IP of 192.168.1.251.

Option 3 - The SAFARI Montage Console: With a monitor and keyboard connected to the SAFARI Montage server, a text-based console interface displays the network information at the top of the screen. Note the IPv4 Address on the fourth line and enter this IP address directly into the address bar of your web browser, as described above.

```
SAFARI Montage
Host (FQDN).....: 
Serial Number...: 
Version.....: 008.008.046 (220517180003)
IPv4 Address....: 
IPv4 Address....: eml down
-----
1 : Network Settings...
2 : UPS Monitor...
3 : Advanced...
4 : Update SAFARI Software...
6 : System Configuration...
-----
```

2.2 First-Time Login

2.2.1 On-Premises

Enter the host name or IP address of the SAFARI Montage system identified above into your web browser's navigation bar to access the SAFARI Montage login screen. Enter the provided username and password into the appropriate fields and click the **Log in** button.

2.2.2 LOR Cloud

After being notified by SAFARI Montage that your Cloud Site is ready, you may log in using the administrator account provided to you by Technical Support. Navigate to the URL provided by Technical Support and enter the provided username and password into the appropriate fields before clicking the **Log in** button.

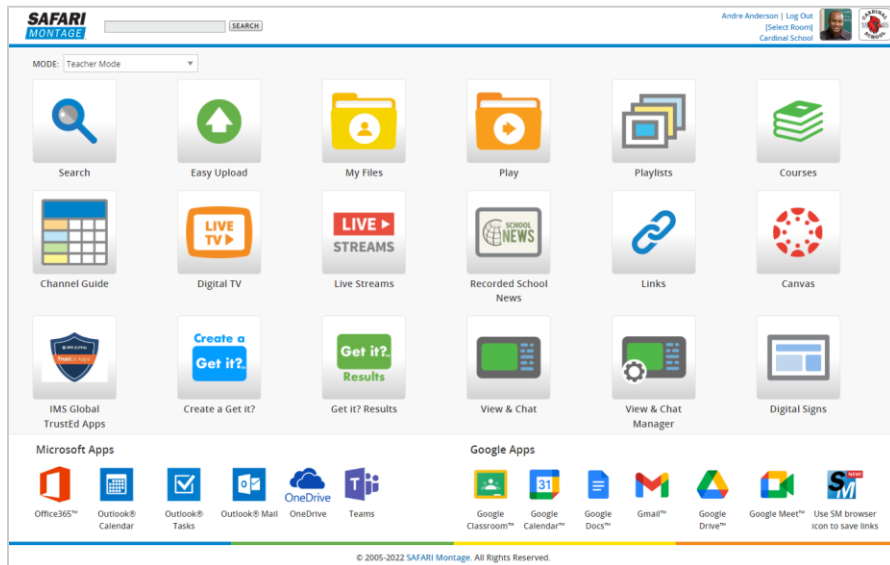
A login form with two input fields and a button. The first field is labeled 'Username:' and contains the text 'admin'. The second field is labeled 'Password:' and contains six dots. To the right of the password field is a button labeled 'Log in'.

2.3 Navigating the System

This section introduces a variety of basic navigation workflows within SAFARI Montage.

2.3.1 Dashboard

The SAFARI Montage Dashboard provides users with one click access to various features and is customized for each user based on licensing, individual user role, and district administration preferences. System administrators will find direct access to system administration features available via the Admin dashboard icon.



Detailed information on each feature is available in our [User Guide for the SAFARI Montage Learning Object Repository](#).

2.3.2 Top Navigation Bar

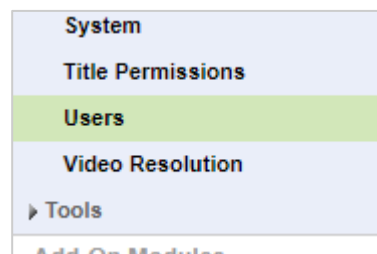


On pages other than the dashboard, a navigation bar is available and provides access to the following:

- Dashboard – Returns the user to the Dashboard
- Search – Navigates to the Search page
- Standards – Navigates to the Standards Search page
- Playlists – Provides access to My, School and District Playlists
- Courses – Navigates to LOR Lesson Presenter (if available)
- Modules – Provides navigation to SAFARI Montage features dependent on the user's role and licensing
- Preferences – Opens the individual's User Account Preferences page
- Admin – Navigates to System Administration
- Help – Provides access to self-guided trainings, tutorials, user guides, and other system information

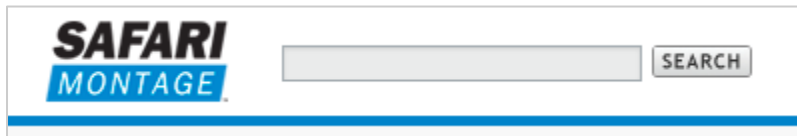
2.3.3 Left Navigation Bar

The Playlists, Modules, Preferences, and Admin headings include a left-hand navigation bar for accessing topics within those contexts. This is the primary method for accessing the various administrator settings outlined in this guide.



2.3.4 Returning to the Dashboard

At any time, you may return to the Dashboard by clicking the SAFARI Montage logo in the upper left.

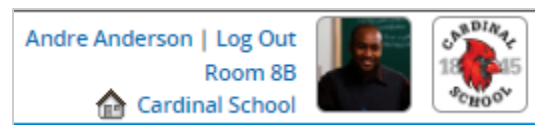


2.3.5 Quick Search

The Quick Search feature is present on all pages, allowing instant access to a simple keyword search from anywhere in the system.

2.3.6 User Information

The right-hand side of the navigation includes basic user information. Clicking the name link or the user's profile image will load the User Account Preferences page. Clicking **Log Out** will end the SAFARI Montage session and return the user to the login screen.



2.3.6.1 User Preferences

On this page, users can alter their personal user account preferences. Available settings vary based on type of account, user role, and active licenses.

2.4 Change Password

After logging in for the first time, we strongly recommend changing the SAFARI Montage provided password to something memorable and secure.

2.4.1 On-Premises

1. Navigate to **Admin > Settings > System**
2. Click the *Change Password* link next to the **Administrator Password** field
3. Enter a new password conforming to the following rules:
 - a. Minimum of 8 characters
 - b. At least one of each uppercase, lower case, numeric, and special character
4. Click the 'Update' button

2.4.2 LOR Cloud

1. In the upper right corner of the screen, click the account name to the left of the 'Log Out' link
2. Click 'Change Password' on the subsequent page
3. Enter a new password conforming to the following rules:
 - a. Minimum of 8 characters
 - b. At least one of each uppercase, lower case, numeric, and special character
4. Click the 'Update' button

2.5 Configuring a Static IP Address



SAFARI Montage recommends configuring your SAFARI Montage on-premises hardware with a static IP address. Before beginning these steps, ensure the static IP you are about to assign is available on your network. Configuring a duplicate IP address on a network can lead to problems. Check with your school or district's networking team to determine the IP address, gateway, DNS servers, search domain, and host name to assign your SAFARI Montage system.

1. Navigate to **Admin > Settings > Network** by clicking the **Admin** tile on the Dashboard and, under the **Settings** heading, selecting **Network** from the left-navigation bar
2. Input the appropriate settings for a **static IP address** configuration in the fields
3. Ensure **DHCP** is unchecked
4. Once the settings are set and accurate, save the configuration by clicking the **Set** button

The server will restart and may be unavailable for up to ten minutes. Once the server has restarted, confirm the system is accessible by navigating to both the **static IP address** and the **host name** you just configured. From here you are ready to continue configuring and using your new SAFARI Montage system.

Additional networking configuration options are covered in section [6.7 Network, Network Services, SNMP, and SSL](#).

[Hosts File](#) | [Add/Remove LAGG Interface](#) | [Add/Remove NAT Address](#) | [Export Settings \(CSV File\)](#)

Network Information

Host: **Override?** ☐

Domain:

The **Hostname** is the unique name by which your SAFARI Montage server is known on your network. On most networks, hostname is usually a single word, for example, `montage1`. With certain other network configurations your hostname may need to be fully qualified using its entire domain name. For example, if the hostname of this server is `montage1` and the domain on which it resides is called `myschool.edu`, the hostname above would be `montage1.myschool.edu`. Enable **Override** to use the server's IP address instead of this hostname for all communications with this server.

IPv4 Gateway: Enter the default router as an IP address. example: 10.10.0.1

Name Servers: Enter the DNS (Domain Name Servers) one per line in the order in which they should be used. Enter the name servers as an IP address. example: 10.10.240.10

Search Domains: Enter the Search Domains one per line in the order in which they should be used. example: myschool.edu

igb0 igb1

Interface: UP • igb0 • • autoselect (1000baseT <full-duplex>)

DHCP: ☐ ← Ensure this setting is not set.

IPv4 Address: format: 192.168.0.23

Netmask: format: 255.255.0.0

Other Network Settings

Web Proxy (if required):

SMTP Server (if required):

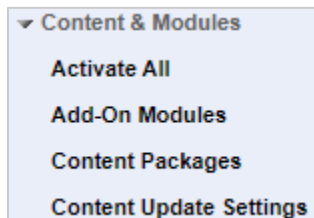
Set Cancel

Changing the settings on this page will require a restart of SAFARI Montage. During the restart, SAFARI Montage will not be accessible for up to 10 minutes.

3 Content & Add-on Module Licensing

3.1 Add-On Module and Content Package Licensing

Licensing for Add-On Modules and Content Package govern access to various SAFARI Montage features and content. Add-On Modules such as the Learning Object Repository, Selective Video Streaming, and WAN Manager add functionality to your system. Similarly, Content Package licenses determine the paid and free (Open Education Resources or OERs) content to which your district has access. As needs grow, your Account Executive can help you determine what modules and packages will best serve your specific district needs.



3.1.1 License Information

Each page displays a table of information regarding each license and its status.

Column	Context	Description
ID	Both	The internal license ID number used by SAFARI Montage
Name	Both	The common name of the license
Active	Both	Displays a green check if this module or package is active
Title Count	Content Packages	Displays the number of titles in this content package
Licenses Available	Both	Displays the total number of licenses available to assign to schools for licenses that are school-specific
Licenses Assigned	Both	Displays how many licenses are assigned to schools vs. licenses available
Expiration Date	Both	Displays the earliest expiration date for the license. Expiration dates may vary for each school based on the date a license was assigned to each school. Some licenses do not have expiration dates.

3.1.2 First-Time License Activation

In most cases, SAFARI Montage will activate and assign licenses during the initial configuration of your SAFARI Montage system. However, there may be situations where you may need to activate new licenses yourself.

3.1.3 Activate All Licenses

Activate All may be used at any time to check with the licensing system for all available licenses and activate them immediately. Read through and acknowledge the terms and conditions, fill in the details in the form, and click next to start the activation process. This process will take some time. When complete, you will be automatically returned to the Content Packages page.

After activation finishes, please take the time to verify the schools to which content is assigned. License school assignments can be viewed on the Add-On Modules and Content Packages pages by clicking on individual licenses. For systems with WAN Manager, you may additionally view each school's licenses by

navigating to **Admin > WAN Manager > Schools** and clicking the **Content Packages** link. For systems without WAN Manager, licenses may be viewed on the **Admin > System > School** page.

3.1.4 Individual Activation

To the right of each license is a link called **activation** that allows management of the activation status of the individual license.

- **Activate** – Checks the SAFARI Montage licensing system for this license and updates the expiration date and available school license count with any changes.
- **Manual** – Used by technical support for manual activation of a license if the SAFARI Montage system cannot contact the licensing system.
- **Deactivate** – Deactivates the license on your SAFARI Montage system.
- **Cancel** – Return to the previous page.

When a license is closed within the licensing system, the activation link changes to **clear**. Click clear to remove the inactive license from the list of active licenses.

3.1.5 Advanced Functions

Above the license list are three additional license management functions.

Link	Description
Show Inactive Content Packages	Displays a full list of all licenses available to activate on your SAFARI Montage server. This is used for activation of new individual licenses and should only be necessary when requested by technical support
Show Assigned Schools	Expands all licenses that support individual school assignment and displays their assignment status by checkmark and their individual expiration dates. To save changes to school assignment, click Save when finished.
Generate Assignment Report	Produces a CSV file with licensing assignments for all schools.

3.2 Assigning Licenses to Schools

Once active, content licenses and some add-on module licenses are assigned to specific schools. Licenses assigned this way will have numbers in the **Licenses Available** and **Licenses Assigned** columns of the Content Packages and Add-on Modules pages. School assignments can be changed in two ways: directly from the Content Packages and Add-on Modules pages, or through the WAN Manager.

Note: Select add-on licenses such as the Classroom Portal license are assigned per-device. These licenses are assigned when configuring the device and cannot be assigned from the Add-on Modules page.

3.2.1 Assigning Licenses from the Content Packages/Add-on Modules Page

1. Navigate to **Admin > Content & Modules > Content Packages** or **Add-on Modules** page

- Click the name of the license you wish to assign to expand the school list

SAFARI Montage LOR Lesson Presenter - Unlimited Department	✓	21	2	activation
<div>Save Select All Deselect All</div>				
Cardinal School				<input checked="" type="checkbox"/>
Chestnut Elementary School				<input checked="" type="checkbox"/>

- Use the checkboxes to select which schools to assign this license, and click **Save**

Packages may only be assigned if there are unassigned licenses available for that package. Once all available licenses are assigned, any unselected checkboxes will be greyed out. Consult with your SAFARI Montage Account Executive before assigning licenses to ensure licenses are available for your new school.

Clicking a school name in this list opens the WAN Manager license assignment page for that school. (See the following section.)

3.2.2 Assigning Licenses from the WAN Manager

Once a school has been created, content packages can be assigned by clicking the **content packages** link for that school under **Admin > WAN Manager > Schools**, or by clicking the school's name as described in the previous section. Packages may only be assigned if there are unassigned licenses available for that package. Consult with your SAFARI Montage Account Executive before assigning licenses to ensure licenses are available for your new school.

Licenses can be assigned individually by clicking the checkbox next to each license. Alternatively, buttons for **Select All**, **Deselect All**, **Invert Selection**, and **Match Selection** (matches the assignment to an existing school) allow assigning large numbers of licenses at the same time. When you are satisfied with the license assignments, click **Save** to save changes.

Cardinal School

Select the Content Packages & Add-On Modules below that you wish to assign to this school. Each assignment will use a new license unless unavailable.

Save Cancel

Content Packages & Add-On Modules

Select All Deselect All Invert Selection Match Selection

Name	Licenses	Licenses Available	Expiration Date
<input checked="" type="checkbox"/> Career Clips Content Package	100	88 new • 8 old	
<input checked="" type="checkbox"/> G111305 Additional Schlessinger Media K-8 Content Package	100	92 new • 5 old	December 13, 2022

3.3 Content Update Settings



This page allows adjusting how SAFARI Montage content updates are distributed to the SAFARI Montage system.

- Allow Content Updates from SAFARI Montage – Enable or disable periodic content updates for the SAFARI Montage system.
- Limit Transfer Speed – Restrict the transfer rate of content updates.
- Schedule Times – Restrict timing of content updates.
- Ignore Download Schedule – Allow content updates to be downloaded as soon as they become available.

After making any changes, click **Update** to save the changes.

4 User Provisioning and Authentication

4.1 Provisioning Options

SAFARI Montage offers two primary methods of provisioning user accounts: LDAP and IMS Global OneRoster®. Please refer to the guides linked below for information on these methods and how to configure them.

[SAFARI Montage LDAP Configuration Guide](#)

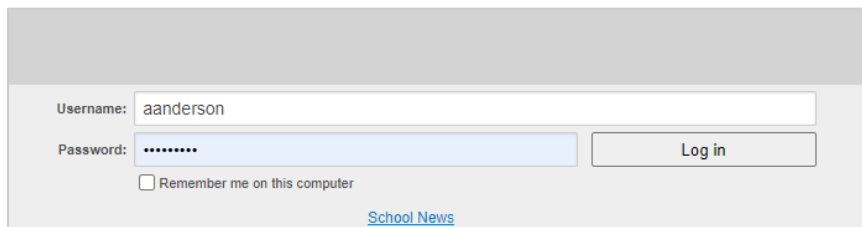
[SAFARI Montage OneRoster® Configuration Guide](#)

4.2 Authentication Options

SAFARI Montage offers five methods of authenticating your provisioned users. These include native binding with school or district LDAP servers and single sign-on options through several types of identity providers.

4.2.1 LDAP

LDAP can also be used to authenticate users via direct login, independent of its use in provisioning. Using this method, users navigate to your SAFARI Montage system and enter their LDAP

A screenshot of the SAFARI Montage login interface. It features a light gray background. At the top, there's a header area. Below it, the login form is centered. It includes a 'Username:' label followed by a text input field containing 'aanderson'. Below that is a 'Password:' label followed by a password input field with masked characters. To the right of the password field is a 'Log in' button. Below the password field is a checkbox labeled 'Remember me on this computer'. At the bottom right of the form area is a link labeled 'School News'.

credentials into the login page. See the [SAFARI Montage LDAP Configuration Guide](#) for more information on configuring LDAP authentication.

4.2.2 SAML

SAFARI Montage additionally supports SAML authentication, allowing delegation of the authentication process to ADFS or other SAML-compliant sources. Unlike LDAP-authentication, users must be pre-provisioned in SAFARI Montage to support SAML authentication. Speak with your SAFARI Montage Systems Engineer for further information on implementing and utilizing SAML-based authentication with SAFARI Montage.

4.2.3 Sign in with Google

Google environments may choose to utilize Google Single Sign-On to log into SAFARI Montage. Users must have an active Google account and an account provisioned in SAFARI Montage with a matching e-mail address. See the [SAFARI Montage Google Integration Guide](#) for more information on configuring this option.

4.2.4 Sign in with Microsoft

The Microsoft 365 Integration offers Microsoft environments a method of Single Sign-On using their Microsoft credentials. Like the Google Integration above, this requires an appropriate Active Directory login and an account provisioned within SAFARI Montage with a matching e-mail address. See the [SAFARI Montage Microsoft Integration Guide](#) for more information on configuring this option.

4.2.5 LTI

Utilizing the IMS Global® Learning Tools Interoperability® standard (LTI), SAFARI Montage can accept single sign-on information from any LTI-compliant third-party system.

5 Settings

The settings options are accessible from the left navigation and contain numerous options for adjusting the function of your SAFARI Montage system.

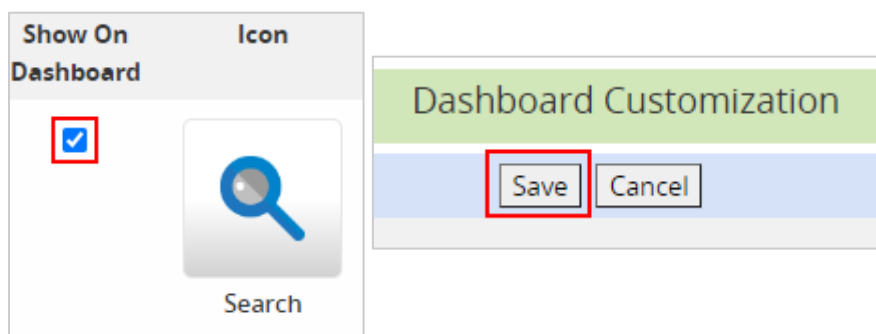
5.1 Academic Standards

This allows for relevant state and national academic standards to be activated for your SAFARI Montage system and manage system-level standards preferences. See the SAFARI Montage [LOR Curriculum Admin Guide](#) and [Standards Administrator Configuration Guide](#) for specific details about standards management.

5.2 Customize Dashboard

Here you can select which SAFARI Montage dashboard icons appear on the dashboard and restrict which user types can see them in which schools.

Check or uncheck the Show On Dashboard box to determine if the dashboard icon is available. Once you have enabled or disabled each icon you wish to use, click **Save**.



By default, icons are visible in all schools and to all valid user types. Click the **Edit School & User Types** link to edit these settings.

Select individual schools to show or hide the icon by using the associated checkbox. Click **All** or **None** to select or deselect all schools.

Set the minimum user type that can see the icon using the dropdown on the right. The topmost dropdown can be used to set all schools to the same minimum user type.

All Schools (Selections will change for all Schools)	All None	Select User Type for All Schools
Aberdeen Elem	<input type="checkbox"/>	All User Types

When you have made your changes, click **Save**.

5.3 Customize Portal Links

Like Customize Dashboard, Customize Portal Links allows you to select links to show on the dashboard and portal links page. Portal links include both links that are provided out of the box with pre-packaged third-party integrations and links added by districts themselves. Portal links may be displayed directly on the dashboard or on the Portal Links page.

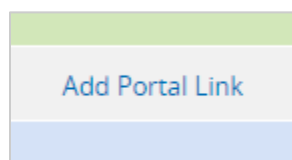
The portal link configuration interface is similar the Customize Dashboard interface, listing all portal links and whether each should be shown on the portal links page, dashboard, or both. Click the link to the right to edit the settings of a portal link.

[Edit Portal Link](#)

Note that portal link permissions regarding school, district, user permissions, and other permission settings control which users will see the portal link.

Portal links related to 3rd party integrations are configured under **Admin > Interoperability Support > Services**. Clicking the link in **Customize Portal Links** will take you to the schools and user type management page for an integration's portal link.

[Edit Interoperability Service](#)



To add a new portal link, click **Add Portal Link** at the top of the page to navigate to the web link upload interface. After saving the new web link, click **Information/Rights** in the left navigation. Under the **Rights Management** tab, check the **Portal Links** or **Additional Links** box to add the web link to the appropriate section of the Portal Links page. You may also add the item to the dashboard by checking the **Show on Dashboard** box.

A screenshot of the "Rights Management" tab in the portal link configuration interface. It shows options for "Expiration" (Never Expires checked), "Portal Links" (checked), "Additional Links" (unchecked), and "Show on Dashboard" (unchecked).

5.4 District

Customize your district name, state, ZIP code, district logo, and SIS ID in the District menu. The state setting informs default standards, and the ZIP code is used when determining the location for any digital signs displaying the weather widget. The SIS ID is used to support OneRoster provisioning and should match the district *sourcedId* in the OneRoster *orgs* dataset. See the [SAFARI Montage LOR OneRoster Provisioning Guide](#) for more information.

A screenshot of the "District" configuration form. It includes fields for District Name (Metropolitan Public Schools), State (Florida), ZIP Code (60616), and SIS ID. There is also a section for the District Logo with a "Choose File" button and "No file chosen" text.

5.5 LDAP

The LDAP menu contains tools to add, edit, and remove LDAP servers for LDAP provisioning and authentication. For detailed information on configuring LDAP integration, see the SAFARI Montage [LDAP Configuration Guide](#).

5.6 Login UI

The Login UI menu allows customizing the login image and background color displayed on the SAFARI Montage login page.

5.7 Network, Network Services, SNMP, and SSL

The following four settings pages are unique to on-premises systems.

5.7.1 Network



Network settings allow system administrators to configure how the server operates on the network, including IP addresses, host name, gateway, and DNS servers.

Each network interface can be assigned IPv4 addresses using the tabs at the bottom of the menu. Each interface is treated as separate unless configured as a LAGG Interface.

igb0 igb1 igb2 igb3

Interface: UP • igb0 • bc:30:5b:f0:eb:94 • autoselect (1000baseT <full-duplex>)

DHCP: ☐

IPv4 Address: format: 192.168.0.23

Netmask: format: 255.255.0.0

5.7.1.1 LAGG



Link aggregation permits multiple network ports to act as a single combined interface, balancing load and providing redundancies should one or more of the network ports fail. Before beginning a LAGG configuration, it is important to ensure the network switch has been properly configured. To complete the LAGG configuration from the SAFARI Montage web interface:

1. Click the **Add/Remove LAGG Interface** link at the top of the page
2. Click the **New LAGG Interface** link
3. Enter the **IPv4 Address** and the **Netmask** of the LAGG in the appropriate fields, and select which network interfaces to associate with the LAGG
4. Verify the settings are correct and that the system may be shut down. Once the settings are applied, **the system will restart and be unavailable for up to 10 minutes.**
5. Click the **Set** button to apply the settings. The SAFARI Montage system will restart, and the changes will take effect during the reboot.

Link Aggregation and link failover interface

lagg0

Interface: DOWN • lagg0

Protocol: lACP

lACP: Supports the IEEE 802.3ad Link Aggregation Control Protocol (LACP) and the Marker Protocol. LACP will negotiate a set of aggregable links with the peer in to one or more Link Aggregated Groups. Each LAG is composed of ports of the same speed, set to full-duplex operation. The traffic will be balanced across the ports in the LAG with the greatest total speed, in most cases there will only be one LAG which contains all ports. In the event of changes in physical connectivity, Link Aggregation will quickly converge to a new configuration. LACP balances outgoing traffic across the active ports based on hashed protocol header information and accepts incoming traffic from any active port. The hash includes the Ethernet source and destination address, and, if available, the VLAN tag, and the IPv4/IPv6 source and destination address.

IPv4 Address: format: 192.168.0.23

Netmask: format: 255.255.0.0

A lagg requires 2 or more interfaces to be attached. Make sure there are 2 or more selected below.

Interface: ☐ em0

Interface: ☐ em1

Set
Cancel

Changing the settings on this page will require a restart of SAFARI Montage.

During the restart, SAFARI Montage will not be accessible for up to 10 minutes.

5.7.2 Network Services



Here you can enable or disable various network communication services. In most cases, these should be left as their default values unless technical support or your SAFARI Montage Systems Engineer requests they be altered.

OOS: Enables the generation of thumbnails for supported document types and the generation of PDF versions of uploaded documents.

Xvfb: Enables the generation of thumbnails for websites and web video.

Clamd: Enables the ClamAV virus scanner service for uploaded files.

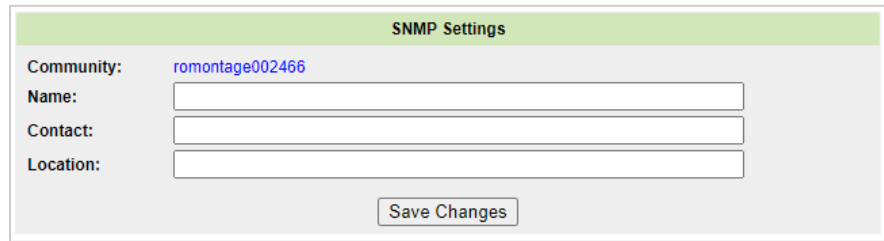
cAV: Instructs your SAFARI Montage system to regularly check for ClamAV virus definition updates.

SMB: Provides the option of utilizing SAMBA process to support content playback for older systems and content drives. This is not available on versions 8.8.24 and above and should generally be disabled.

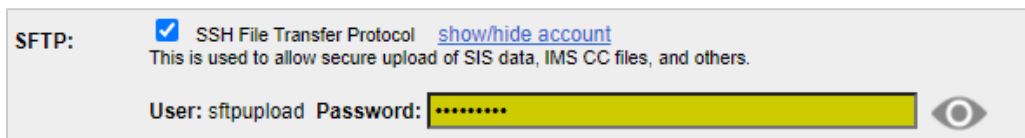
FTP: Enables unencrypted FTP service for certain applications, such as uploading OneRoster CSV files and IMS Common Cartridge files.

mDNS: Provides Multicast Domain Name Service functions for small networks without a dedicated DNS system. This should be disabled in environments with DNS systems.

SNMP: Enables SNMP monitoring to detect system status using the community string provided. To configure your SNMP platform, consult your vendor's documentation for platform-specific instructions. For more details on using SNMP with SAFARI Montage, see the section below.

A screenshot of the 'SNMP Settings' configuration page. It has a light green header with the title 'SNMP Settings'. Below the header, there are four labeled input fields: 'Community:' with the value 'romontage002466', 'Name:', 'Contact:', and 'Location:'. At the bottom right of the form is a 'Save Changes' button.

SFTP: Allows for secure FTP transfer and is primarily used for uploading

A screenshot of the SFTP configuration section. It shows a checkbox labeled 'SSH File Transfer Protocol' which is checked. To its right is a link 'show/hide account'. Below this is a descriptive text: 'This is used to allow secure upload of SIS data, IMS CC files, and others.' Further down, there are labels for 'User:' with the value 'sftpupload' and 'Password:' followed by a masked password field (dots) and an eye icon to toggle visibility.

OneRoster CSV files and IMS Common Cartridge files for processing. Click show/hide account to view the username and set a password after enabling. This username and password can be used with the SFTP client of your choice for uploading.

5.8 SNMP



Simple Network Management Protocol (SNMP) is a widely supported application-layer protocol that supports basic system management and monitoring.

By default the SNMP port is 161 and TRAP/ INFORM uses SNMP port 162 for communication.

5.8.1 Enabling SNMP

1. Navigate to **Admin > Settings > Network Services**
2. **Enable** the SNMP setting, and click **Set**
3. Navigate to **Admin > Settings > SNMP**, which will now be visible after enabling SNMP in the previous step
4. Fill out the **Name**, **Contact**, and **Location** with information appropriate to the district environment, and copy the **Community** String for use in the network management system

5.8.2 SNMP Management Information Base (MIB)

SAFARI Montage does not publish or maintain an MIB specific to SAFARI Montage and the Systems Administrator may choose which sensors they are interested in from four general MIBs that encompass the sensor OIDs accessible on a SAFARI Montage server:

- HOST-RESOURCES-MIB
- RFC1213-MIB
- SNMPv2-MIB
- SNMPv2-SMI

Open each of these MIBs and you will see over 1,300 OIDs available. Some examples include: System Information, Uptime, Network Interfaces, Partitions, Memory, Processes, Sockets, and Network Connections. There are two objects specific to the SAFARI Montage software:

- syscontact – The email address of the SAFARI Montage Admin user (configured under Admin > Settings > System)
- syslocation – The server name field under Admin > Settings > System, which can be changed by the Admin

Most SNMP management applications will have a search feature for finding the appropriate OIDs.

5.9 TLS/SSL



SAFARI Montage utilizes TLS for secure communication between devices. With a TLS certificate installed, web traffic in SAFARI Montage is encrypted via HTTPS, except for select pages supporting live streams that may only be available via HTTP. Additionally, third-party integrations such as LMS, Portal, and LTI integrations require TLS to be configured.

5.9.1 Generating a Certificate Signing Request

Note: If you already have a certificate and private key pair and do not need to generate a new CSR, skip to the section “Installing or Updating a Certificate from an Existing Certificate/Key Pair”

1. Navigate to **Admin > Settings > SSL**
2. Select **Create Certificate Signing Request (CSR) for Commercial Certificate** from the dropdown



3. Fill in the fields with the appropriate information. For most installations, a **Digest Method** of *sha512* and **Bit Length Key** of *2048* is appropriate. Consult with the district network team for specific district policy.

4. Click the **Generate CSR** button

Secure Sockets Layer

SSL Encryption:

Certificate Signing Request

When you purchase a commercial SSL certificate, the vendor will ask you for a "Certificate Signing Request". Most certificate vendors will require that you to paste the CSR text directly into their online form during checkout. This form allows you to generate a CSR.

Bold fields are required.

Country: (2-letter code)

State or Province: (full name)

City or Locality:

Organization:

Department or Unit:

Domain Name: (of this SAFARI Montage server)

Email:

Digest Method:

Bit Length Key:

When you click "Generate CSR", your CSR and its Private Key will be saved onto the SAFARI Montage hard drive. It will not overwrite any previously uploaded Private Keys (yet). Paste the CSR into the appropriate box on the SSL vendor's checkout page. When your certificate arrives, return to this page and upload it. **At that point, any previously uploaded Private Key will be overwritten by the CSR's Private Key.**

Generate CSR

5. Click the **View** link next to **CSR**. Copy and provide the text of the CSR to the Certificate Signing Authority of your choice.
6. Click the **View** link next to **CSR Private Key** and copy the text into the text editor of your choice. Save this as a *.KEY file type and keep it in a safe and secure place.

IMPORTANT: BEFORE PROCEEDING, ENSURE YOU HAVE COPIED THE PRIVATE KEY IN STEP 6 AND STORED IT IN A SECURE LOCATION. YOU CANNOT RETRIEVE THE PRIVATE KEY AFTER APPLYING THE CERTIFICATE.

5.9.2 Applying the Certificate

Depending on the type of certificate being purchased and the vendor supplying the certificate, it may take anywhere from 30 minutes to several weeks to get the certificate. Each vendor has slightly different procedures for delivering certificates, but you want to make sure you have both the **certificate** (typically a *.CRT file) and a **certificate chain**. (The certificate chain contains the chain of intermediate and root certificate servers responsible for certifying your site certificate and is often provided with your certificate and publicly available on the vendor's website.) While installing a certificate chain is not explicitly required, it is strongly recommended to ensure maximum compatibility with clients and third parties.

Store a copy of both the certificate and the certificate chain in a safe location; while these may be reacquired from the vendor, it is good practice to have them ready on hand.

1. Navigate to **Admin > Settings > SSL**
2. Upload the Certificate and Chain by clicking the **Choose File** button next to the appropriate field for each. The text to the right changes to reflect the file name once a file has been chosen.
3. Once both the Certificate and Certificate Chain have been uploaded, click **Save**

Secure Sockets Layer

SSL Encryption: Commercial Certificate

If uploaded certificate was purchased from a trusted authority (VeriSign, Thawte, Comodo, etc.), the browser will not display a security warning.

Certificate: Choose File No file chosen

In order to enhance the security of the Root certificate, an intermediate certificate from which SSL certificates are signed and issued is used. An intermediate certificate is a subordinate certificate issued by the trusted root specifically to issue end-entity server certificates. The result is a certificate chain that begins at the trusted root CA, through the intermediate and ending with the SSL certificate issued to you. Such certificates are called chained root certificates.

This is not required, but if used, select the chained certificate bundle.

Certificate Chain: Choose File No file chosen

Save

Certificate Signing Request


Web services will then restart, and users will experience a brief interruption. When the page is reloaded, the option to upload certificates or view the CSR will be replaced by the expiration date of the certificate and a black box containing information about the installed certificate. You may need to clear your cookies and log in again before continuing to use the system. Confirm that the certificate has installed correctly using an SSL installation validator provided by the certificate vendor or a third-party service such as [Qualys SSL Labs](#).

5.9.3 Installing or Updating a Certificate from an Existing Certificate/Key Pair

If you already have a private key and certificate pair and do not need to generate a signing request, follow the instructions below. Note that before uploading a new certificate/key pair or updating an existing certificate, you must first delete the existing certificate/key pair. To use this method, you must have **both** the certificate and the private key available.

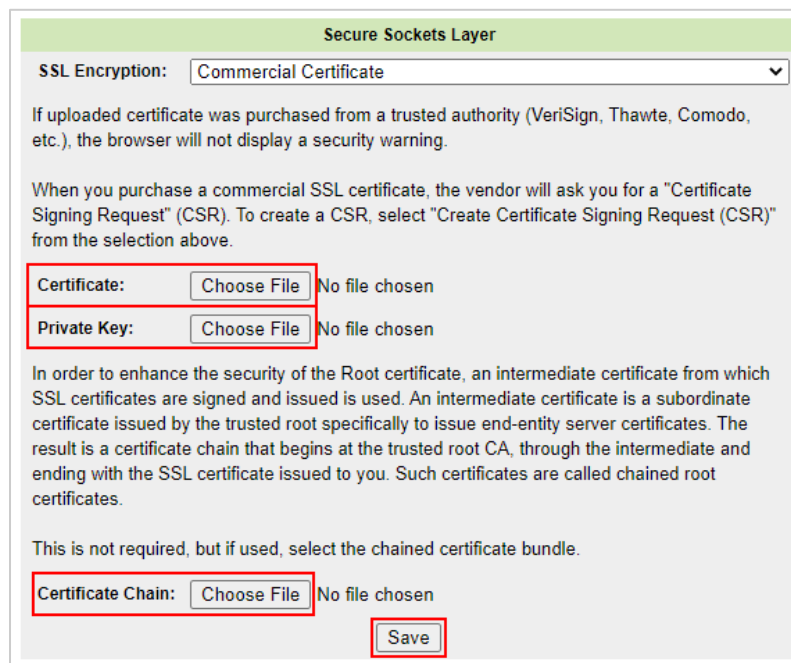
1. Navigate to **Admin > Settings > SSL**

2. Select **Commercial Certificate** from the dropdown menu



The screenshot shows a dropdown menu titled "Secure Sockets Layer". The "SSL Encryption:" label is followed by a dropdown menu. The menu is open, showing several options. "Off - Basic Password Encryption" is highlighted in blue. Below it, "Create Certificate Signing Request (CSR) and Self Signed Certificate" is visible. "Create Certificate Signing Request (CSR) for Commercial Certificate" is also visible. "Commercial Certificate" is highlighted with a red box. "Self-Signed Certificate (Default)" is at the bottom.

3. For each heading, choose the appropriate **Certificate**, **Private Key**, and **Certificate Chain** file to upload



The screenshot shows the "Secure Sockets Layer" configuration page. The "SSL Encryption:" dropdown menu is set to "Commercial Certificate". Below the dropdown, there is a text block explaining that if a certificate is purchased from a trusted authority, no security warning will be displayed. It also explains that when purchasing a commercial SSL certificate, the vendor will ask for a "Certificate Signing Request" (CSR). To create a CSR, the user should select "Create Certificate Signing Request (CSR)" from the selection above. Below this text, there are three file upload sections, each with a "Choose File" button and "No file chosen" text. The "Certificate:" section is highlighted with a red box. The "Private Key:" section is also highlighted with a red box. Below these, there is a text block explaining that an intermediate certificate is used to enhance the security of the Root certificate. It also explains that an intermediate certificate is a subordinate certificate issued by the trusted root specifically to issue end-entity server certificates. The result is a certificate chain that begins at the trusted root CA, through the intermediate and ending with the SSL certificate issued to you. Such certificates are called chained root certificates. Below this text, there is a text block stating "This is not required, but if used, select the chained certificate bundle." Below this, there is a "Certificate Chain:" section with a "Choose File" button and "No file chosen" text. The "Certificate Chain:" section is highlighted with a red box. At the bottom right, there is a "Save" button, which is also highlighted with a red box.

4. Click **Save**

Web services will then restart, and users will experience a brief interruption. When the page is reloaded, the option to upload certificates is replaced by the certificate expiration date and a black box containing information about the installed certificate. You may need to clear your cookies and log in again before continuing to use the system. Confirm that the certificate has installed correctly using an SSL installation validator provided by the certificate vendor or a third-party service such as [Qualys SSL Labs](#).

5.10 System

The system menu contains a number of global settings for your SAFARI Montage system. Settings on this page generally affect all schools configured on your system unless subject to school-specific WAN Manager settings (for multi-school systems).

Setting	Description
Version Number	Displays the current version of SAFARI Montage software installed on this system.
Server Name	A human readable name for the system to differentiate it from other SAFARI Montage systems.
System Notifications Email	The SAFARI Montage system will send system notifications to this email address. This should be set to the email address of the person or group in charge of administering the system.
Administrator Password (On-Prem Systems Only)	<p>Clicking this link allows you to change the password for the Administrator (Default) account with the username <i>admin</i>.</p> <p>This password should be changed IMMEDIATELY during first time setup to a secure password or passphrase.</p>
State	Controls the default state academic standards
LOR Web Links	Enables the ability to add web links as learning objects
Display Web Links in Embedded Form	Enable to attempt embedding web links in playlist views. If links are unable to be displayed in embedded form, links will be opened in a new tab or window. Note that this setting can be overridden for each learning object.
Allow Freeform Editing of YouTube URLs	If LOR Web Links is enabled, this will allow editors to override the automated web link formatting for YouTube content
Whiteboard	Sets the default interactive whiteboard for displaying learning objects
Email Notifications	Enabling will send an email to users when their account settings are changed
Default All Playback to HTML5 Media Player	Used in legacy systems to force the use of the HTML5 media player instead of the SAFARI Montage Media Player plugin in Internet Explorer 11
Default Home Access Media Player	Displays which media player is preferred for Managed Home Access users

Setting	Description
Permanent Links	Enables the creation of permanent links that lead users directly to the specified learning object
Portal Links (Page 1 and Page 2)	Allows the portal links pages to be renamed
Use Original Format on Endpoints	Instructs SAFARI Montage Endpoints to use the original file for playback instead of autoconverted formats, when available.
Rename Playlist “Essential Question” to:	Overrides the name of the “Essential Question” field for playlist information.
Enable Recording for Teacher w/ Upload and above	For systems with N-DVRs, this automatically enables recording permissions for Teacher w/ Upload and higher level user types. Recording permissions are otherwise disabled by default.
Enable View & Chat	Enables or disables the View & Chat feature.
Require teacher for View & Chat	Disables View & Chat’s chat feature if no teacher is present.
Enable Microsoft Immersive Reader	Enables the display of the Microsoft Immersive Reader for use with learning object metadata, playlist descriptions, and LOR Lesson Presenter descriptions

5.11 Time



From here you can select your time zone, manually set the system time, and define up to three time servers to synchronize with. Your network configuration must allow communication outbound on port 123 to use external time servers. We strongly recommend having your SAFARI Montage system synchronize time with an internal time server such as your domain controller so that all SAFARI Montage system components are synchronizing with the same local source.

Tue Nov 30 1:33:05 EST 2021

Time Zone: America ▼ New_York ▼

System Time: November (11) ▼ 30 ▼ 2021 , 1 ▼ : 33 ▼ AM ▼

Time Servers:

0.us.pool.ntp.org

1.us.pool.ntp.org

2.us.pool.ntp.org

Example Time Servers: ntp.nasa.gov, 0.us.pool.ntp.org

Set
Cancel

5.12 Title Permissions

The title permissions tool allows customization of grade range and user type permissions for learning objects in bulk. Search for titles using the abbreviated search function, select titles you wish to modify, select an update action from the dropdown, provide the new grade range or minimum user type, and click Apply Changes to save the selected settings for the selected titles. See section 10.6 Title Permissions for more in-depth information about this feature.

Title Permissions

SEARCH:

GRADE RANGE:

Pre-K

to

Adult

PUBLISHER:

All Publishers

FILTERS

FILTERS:

☐ CLOSED-CAPTIONED
 ☐ HOME ACCESS
 ☐ N-DVR
 ☐ SCHOOL NEWS
 ☐ EXPIRED
 ☐ VIEWPATH ALERTS
 ☐ NEW PACKAGED TITLES
 ☐ EXCLUDE UPLOADED CONTENT

SHOW ONLY LEARNING RESOURCE TYPES:

☐ ASSESSMENT
 ☐ INTERACTIVE
 ☐ LESSON
 ☐ LESSON PLAN
 ☐ PROFESSIONAL DEVELOPMENT
 ☐ SLATE
 ☐ TEACHER'S GUIDE

COPYRIGHT:

In

All Years

PACKAGE:

All Packages

SHARED:

All Share Levels

UPLOADED BY:

All Users

DATE ADDED:

All Dates

CLOSE

Select an Action to Apply to Selected Titles in Bulk

Choose Update Action:

Select an Update Action

Apply Changes

5.13 Users

This provides a list of all users in the system and can be filtered by school, user type, and user group. By default this displays the users in the school you are logged into, but you can switch to a different school or display all users in all schools by selecting the appropriate options from the **School** and **User Type** dropdowns.

Clicking the lettered tabs displays only users who have last names starting with the selected letter. Navigate between pages of results using the arrows at the top and bottom right of the results.

5.13.1 Results

The results table provides information for each user, as well as options for editing, deleting, or transferring individual user accounts

Field	Description
Active	<p>For accounts provisioned via LDAP or OneRoster, this indicates whether an account is active and the user can log into that account (TRUE) or if the account is inactive (FALSE).</p> <p>For locally created accounts (via the Add User link at the top of the page) this displays a selectable checkbox to quickly enable or disable the account.</p> <p>Note: The “Administrator (Default)” account for on-premises systems is a special case in that it is a Local account that is always enabled.</p>
Type	Displays whether an account is a <i>Local</i> , <i>LDAP</i> , or <i>OneRoster</i> account.
Online	Displays a checkmark if the user has an active login session
User	Displays the name of the user in “Last Name, First Name” format. Results are ordered alphabetically by last name.
Last Login	Displays the date and time this user last logged in

In addition to these fields, the results table offers edit, delete, and transfer options for all users except the Administrator (Default) account.

5.14 Video Resolution

The video resolution menu can be used to define which user types have access to which video playback resolutions and bitrates. The default settings determine the initial resolution for each user type when starting playback and the maximum determines the highest resolution available to each user type.

Video resolution settings are set per school. From the school dropdown, select the school you wish to configure. Select the desired default and maximum resolutions for each user type by clicking the dropdown arrow selecting the desired level. The new default and maximum is applied immediately to the selected school. If you wish to copy a school’s settings across all schools configured in your system, click the Apply These Settings to All Schools button.

School: Cardinal School ▼

Video Resolution Settings	Default ?	Maximum ?
User Type	School	School ?
Administrator	High ▼	High ▼
Curriculum Administrator	High ▼	High ▼
School Administrator	High ▼	High ▼
Principal	High ▼	High ▼
Teacher (w Upload)	High ▼	High ▼
Teacher	High ▼	High ▼
Student (w Upload)	Medium ▼	High ▼
Student	Medium ▼	High ▼
Parent	Low ▼	Medium ▼

Apply These Settings to All Schools ?

Resolution may be manually changed from the player window up to the maximum level available to that user for on-premises systems with content drives older than SuperSet 38. For SuperSet 38 and later, as well as uploaded content that has been autoconverted to adaptive bitrate (ABR) format, the media player dynamically adjusts the resolution based on the user's available bandwidth, with the maximum being treated as the upper limit. In ABR environments:

- Low now equates to an average video bitrate of 500 kbps for new content provided by SAFARI Montage on Smart ABR drives. Newly uploaded content through CreationStation will be considered Low if it averages at 500 kbps or below. All streams to the home are limited to Low.
- Low now equates to an average video bitrate of 500 kbps for new content provided by SAFARI Montage on Smart ABR drives. Newly uploaded content through CreationStation will be considered Low if it averages at 500 kbps or below. All streams to the home are limited to Low.
- Low now equates to an average video bitrate of 500 kbps for new content provided by SAFARI Montage on Smart ABR drives. Newly uploaded content through CreationStation will be considered Low if it averages at 500 kbps or below. All streams to the home are limited to Low.

6 Tools

The pages found under this heading provide various tools useful for troubleshooting and maintaining your SAFARI Montage system. Many of the tools described below are available only on on-premises systems as they are designed for troubleshooting network connectivity or physical server hardware. **These tools are meant to be used in conjunction with technical support and should only be accessed when requested by technical support or your SAFARI Montage Systems Engineer.**

Tool	Description
Allow Remote Access	Allows the SAFARI Montage server to establish an outbound connection with our support network and create a secure tunnel for our support technicians to access the server. You may be asked to navigate to this page when troubleshooting to grant technical support remote access.
APC UPS Monitor	APC SmartUPS brand uninterruptable power supplies are compatible with SAFARI Montage for automatic control of shutdown procedures during power interruption. The Battery Threshold indicates at what percent of remaining battery power SAFARI Montage servers will begin to shut down.
Bandwidth	Displays a graph of the server's bandwidth consumption over a time period in Megabits per second (Mbps). In represents data sent to the server, and out represents data sent from the server to clients or other servers.
Bookmark Thumbnail Check	Creates thumbnail images for any bookmarks lacking a thumbnail
Configurable Options	Contains advanced settings used by SAFARI Montage Systems Engineers and is password protected
Content Packages Statistics	Lists active licenses, what publishers are associated with that license, how many records (titles) the license enables, and the space the content takes up on the content drive.
Content Update Queue	Lists any pending content package downloads
CPU Temperature	If your server is equipped with the appropriate sensors, this will fetch the CPU core temperatures.
DB Cache	Allows the administrator to enable or disable database caching and to clear the database cache. Clearing the database cache may be useful when changing system settings.
Dig	Dig requests the IP address associated with the provided host name from the selected DNS server.
Disk Space Info	Provides information on disk space usage of the various file system partitions

Tool	Description
Email	Allows sending of a test email using the server's internal email service
Find User	Looks up users in the system by First Name, Last Name, Email Address, or Username. The search uses OR logic and will return all results that match any of the four fields. Blank fields are ignored.
Find LDAP Groups	Retrieves the LDAP Groups the supplied User DN is associated with
Find LDAP User	This tool will try to retrieve information about the User DN from the selected (active) LDAP Server.
Host	Provides the IP address and mail handler for the provided host name.
Nmap	This tool will try to determine the state of the specified inbound ports for a given host.
NSLookup	Provides the IP address for the provided host name
Ping	Pings the provided IP address or host the specified number of times (max 10) and returns ping statistics
Reboot and Shut Down	Contains web interface controls to shutdown or restart the server.
Server Boot Times	Provides a readout of system startup and shutdown times and indicates if any of these events was an improper shutdown.
Server Load	Provides a list of running server processes and associated statistics
Server Load Averages	Displays the average percentage CPU usage on an hourly basis
Software Update History	Lists the software version history for the server, along with content and standards updates. Server update ISO files can be uploaded by clicking the Upload Installation ISO File link
Space Available	Provides a breakdown of CreationStation file types and how much space they occupy on the CreationStation drive, along with how much storage space is remaining.
Sync Cache Status	Displays the status of database synchronization between expansion servers and the controller.

Tool	Description
System DB Restore	Provides web interface options for restoring the system database to an earlier snapshot. Warning: This should only be used on request by technical support. Incorrect usage may render your system inoperable.
System Volumes	Lists content and CreationStation drives installed in the system and provides tools for managing and troubleshooting these volumes.
Traceroute	Performs a trace route to the provided IP address or host time
Verify Live Stream	Outputs descriptive information about the live stream at the URL provided.

7 Reporting

Usage data found under the **Admin > Reporting** menu is important for tracking the adoption and utilization of your SAFARI Montage system. Numerous reporting options are available within the SAFARI Montage UI, along with several specialized CSV export options for external use.

7.1 District Usage Highlights/Reports

This dashboard reporting option provides at-a-glance information on system usage statistics. The **Highlights** heading displays four key metrics: Plays, Logins, and Uploads across the district as well as the most active school for each category, as well as the most viewed content package. **Schools** lists each school configured on your SAFARI Montage system, the number of plays logged in the selected period, and the percentage of total plays that school accounts for. **Content** provides the same plays data, but for each content package on your system.

The period slices include slices tuned to capture a full school year of data. These school year periods being on July 1st and end on June 30th of each year. **Year to date** will capture data from July 1st to the current date: for example, viewing *Schools* by *Current School Year to Date* on February 20th, 2021 will return data from July 1st, 2020 to February 20th, 2021.

Export produces a downloadable CSV file of the current view. **Print** produces a printer-friendly version of the current view.

7.2 SAFARI Montage UI Reports

SAFARI Montage features numerous reports within the SAFARI Montage UI for quick exploration of usage trends in greater detail than the above dashboard reports. Several of these reports update in real time, indicated by the word **Live** in parentheses, providing up-to-the-minute statistics on current system usage.

Many reports feature various filtering options at the top of the page to help narrow down the reporting results—these vary based on the content and context of the report. The following discusses.....

7.2.1 Activity and Login Reports

The **Activity Log**, **Logins by Failure**, **Logins by IP**, **Logins by Time**, and **Online Users by School** cover user logins and their status. These reports can be helpful when trying to diagnose why a specific user (or group of users) is having difficulty logging into the system.

- **Activity Log** provides a general report of various activity within the SAFARI Montage system. This includes information on login attempts, ISS configurations, and system setting changes, among others.
- **Logins by Failure** displays the IP address the attempt originated from, the reason for the failure, the time of the last attempt to log in, and how many failures occurred.
- **Logins by IP** displays successful logins by their IP address, what user logged in, when the last login occurred, and how many times a given IP address has logged in during the selected time period.
- **Logins by Time** is a live report displaying how many logins occurred during the selected time period, and whether those logins were from the SAFARI Montage login page or from an LTI login method (such as Clever or ClassLink).
- **Online Users by School** is a live report that displays the number of existing login sessions for each school. A login session expires when the browser is closed, or after 4 hours of inactivity.

7.2.2 Playback Reports

Permanent Links by Time, **Playback Details**, as well as **Playbacks by Media**, **Package Detail**, **School Detail**, **Time**, and **User** all cover aspects of content playback.

- **Permanent Links by Time** lists the number of links used in the selected time period.
- **Playback Details** gives detailed information on the title played, when it was last played, which content package a title belongs to, how many times it was played, and what percentage of plays within the selected time period the title represents.
- **Playbacks by Media** is a live report listing the number of plays of a specific media type (Quicktime, WMV, H.264, SVS streams, or Other) over the selected time period.
- **Playbacks by Package Detail** displays titles played during the selected time period, along with which package they belong to (CreationStation for user-uploaded content), what type of media the title is, the media format, how many times the title was played, and what percentage of plays during the time period that title represents.
- **Playbacks by School Detail** produces a list of titles played, when they were last played, how many times the title was played, and what percentage of plays the title represents for the selected time period in a specific school (selected from the dropdown menu at the top of the page).
- **Playbacks by Time** is a live report that displays the number of plays that occurred within the selected time period.
- **Playbacks by User** lists the number of plays per user at the selected school over the selected time period, by username, and the percentage of total plays during the selected time period that user represents.

7.2.3 CreationStation and LOR Reports

The following reports deal with uploaded user created content (**Download Popularity**, **Downloads by User**, **Uploads**, **Uploads by Schools**, and **Uploads by User**) and features specific to the Learning Object Repository license (**Share to LMS** and **SAFARI Montage Basics Certification Test Results**).

- **Uploads** displays a list of all uploaded content by title, with the duration, date of upload, school it was uploaded to, and the user who uploaded the title listed.
- **Uploads by Schools** lists the number of uploads for each type of content performed per school.
- **Uploads by User** lists the number of uploads per user, along with the school that user is associated with.
- **Share to LMS** is a special report for LOR users. Whenever a learning object is shared to an LMS such as Google Classroom via a SAFARI Montage integration, information about that share including who shared it, what the title was, and when it was shared is recorded here.
- **SAFARI Montage Basics Certification Test Results** is another special report for LOR users. When a user completes the quiz at the end of the SAFARI Montage Basics tutorial, their user information, score, and time of completion are recorded. This report allows a CSV containing this information to be downloaded, as a record for who has completed the SAFARI Montage Basics training.

7.3 CSV Export Options

For advanced users looking to analyze SAFARI Montage usage statistics in spreadsheet or data analysis programs, SAFARI Montage offers the option to download specific usage data as CSV files. Several of the reports in the previous section offer this feature and **Admin > Reporting > Usage Data (csv)** and **Admin > Reporting > Usage Data (schedule csv)** offer additional reports for download.

7.3.1 Usage Data (CSV)

This menu allows for the export of one of several reports for total plays and playlist plays over a period of time. Additional filters for time period and school can be applied to the reports to further narrow the results for a snapshot of specific schools or time periods. To run a report:

1. Select the desired **Field Separator**. We recommend using the Vertical Bar (the pipe symbol, “|”) as this delimiter has the lowest chance of being found in a given title’s metadata.
2. Select the report from the dropdown menu
 - a. **Total Plays** reports list the provider, number of plays, and optionally the title that was played and the year and month those plays occurred in
 - b. **Total Playlist Plays** reports list the total number of playlist plays in a given month and year, with options to include the school, playlist name, media type, title (*objectname*), and user information on the user that logged these playbacks
 - c. **Full Export** produces a detailed report with extensive metadata for each playback that occurred at the selected school(s) within the selected time period (up to two years)
3. (Optional) Set any additional filters
 - a. Select a school from the dropdown, or leave as All Schools (District) for a district wide report
 - b. Select a start and end date either through manual entry or using the calendar control to the right of the dropdowns

4. To generate the report click Run
5. A link to the CSV will appear. Right click the link, select Save Link As... and save the CSV to your computer.

From here the CSV can be imported to spreadsheet, database, and other statistical analysis software that accepts delimited text files as inputs. Keep in mind the delimiter you selected in step 1—you will need to specify which delimiter you used when importing this file into an analysis program.

7.3.2 Usage Data (schedule csv)

This menu offers the option to run CSV exports on a repeating schedule. The options are the same except for the addition of the scheduling fields. You may specify the date, time, and repetition for the scheduled report.

The report schedule may be viewed by clicking the Scheduled Reports link at the top of the page. The table displays all reports scheduled within the selected date range, including who scheduled the report.

The report output is placed in the SFTP file location. To retrieve the report, login to the SFTP account using the SFTP client of your choice and the username and password configured under **Admin > Settings > Network Settings** and navigate to the `/smupload/reports/export` folder.

7.3.3 CSV Headings

The CSV reports contain numerous data fields. See below for descriptions of these fields. As a CSV file, all entries are assumed to be text strings and may contain blank entries irrespective of the implied data type.

Field	Description
montageserialnumber	The serial number of the SAFARI Montage unit the play was recorded from. Any leading zeroes have been truncated.
activity	The token describing what type of playback occurred. Common entries include: Play : Standard play Playplaylist : Play of the item from within a playlist Play API App : Play made from external tool Playsupetube : Play from Supetube Fullscreen : Full screen play Lecture Capture : Play of Lecture Capture recording
user	The username of the account that logged the playback.
date	The date of the logged activity in 'm/d/yyyy hh:mm' format
contentpackage	The common name for the package the title belongs to as shown on the Content Packages page.
title	The title of the learning object

Field	Description
segment	If the playback was of a segment of a title, the segment title is recorded in this field.
userip	The IP address of the user that accessed the content.
providercode	Internal identifier of the content publisher
expirationdate	The date the learning object is set to expire. This is blank if no expiration date is set.
homeaccess	This is <i>t</i> if the <i>userip</i> recorded is outside the range defined as internal under Admin > Managed Home Access > Excluded Subnets , and <i>f</i> otherwise
school	Which school the user playing the learning object played it from
schoolsisid	Lists the school's SIS ID if the school is rostered or has a School ID defined under Admin > WAN Manager > Schools > Edit
schoolncesid	Lists the NCES School ID visible under Admin > WAN Manager > Schools > Edit
playlist	If the title was accessed from a playlist, that playlist's name is recorded in this field
mediatype	The learning object classification that shows which tab in search results the object will appear under
objectorderinplaylist	A number indicating what place the learning object occupies in a playlist (if any)
playlisttotal	The number of items in the playlist the playback originated from (if any)
usersisid	If the user is a rostered user, this field records that user's SIS ID
firstname	The first name of the user
lastname	The last name of the user
custompublisher	If the playback is a CreationStation title (including objects from a Thin Common Cartridge), the custom publisher (from the list defined under Admin > Learning Object Repository > Manage Publishers) is displayed in this field
reportdatetime	The date and time the CSV file containing this record was created.
duration	The length of the title for learning objects with playback durations in hh:mm:ss:ms
schoolgroup	The school group that the school belongs to

The Learning Object Repository (LOR)

8 WAN Manager

By default, SAFARI Montage supports provisioning content in a single-school environment. With the Learning Object Repository license, multiple schools can be provisioned and managed via the WAN Manager. WAN Manager is the core of any multiple school environment, and the following section details the tools for managing schools and district-wide settings.



8.1 Schools

[Add School](#)

Group: [New Group](#) • [Edit Groups](#)

All A B C D E F G H I J K L M N O P Q R S T U V W X Y Z Other

Results 1 to 5 of 5

ID	Name	
	Cardinal School	log in • content packages (136) • users • edit • delete
	Chestnut Elementary School	log in • content packages (131) • users • edit • delete

This menu provides a listing of all schools configured in the SAFARI Montage system and the means to manage their settings.

Schools displayed may be filtered by school group, and groups can be managed using the **New Group** and **Edit Groups** links at the top of the table.

8.1.1 Add a School Manually

To add a new school manually, click the **Add School** link, and fill out the fields of the add school form with the appropriate information. Only the school name is required for adding the new school, but additional fields should be completed based on how your district has implemented the Learning Object Repository. When finished, click the **Add** button to create the new school.

Field	Description
School ID	This is the school's SIS ID, and for all schools managed via OneRoster, should match the <i>sourcedId</i> of that school in the SIS (found in the <i>orgs</i> table).
NCES School ID	The Nation Center for Education Statistics School ID, a 12-digit school identification number that uniquely identifies a school in NCES data.
School Name	The name of the school. This is required, and defaults to <i>Add School</i> .

Field	Description
School Logo	Allows for the addition of a 100x100 px JPG or PNG file which will be displayed as the school logo in places such as the select school menu.
School Logo Link To URL	The school logo displayed in the upper righthand corner of the top navigation bar links to the address input here.
ZIP Code	The 5-digit ZIP code of the school. Used for Digital Sign weather display.
Maximum Items per Search Page	Sets the default number of items displayed in search results per page. Users may set their own preference for this under Preferences.
Restrict Grade Range	Checking this will forbid users from setting their search grade range outside the Default Grade Range defined for the school in their preferences or on the search page.
Default Grade Range	Defines the default grade range set for searches conducted by users at this school.
Stills Display Running Time (seconds)	Determines how many seconds a still image remains on screen before proceeding to the next item in a playlist. Users can change this on a per-item basis in their playlists.
Integration Selections	In addition to configuring which schools display certain aspects of integrations under Interoperability Support > Services > Schools , these selections may also be changed here for select integrations. Options will vary based on the integrations configured in your SAFARI Montage system.
Require teacher for View & Chat	Select this to forbid chatting in a View & Chat session without a teacher present.
Minimum User Type Allowed to Upload YouTube Web Links	Restricts the ability to upload YouTube Web Links to the selected user type and above if Web Link Upload has been enabled under Admin > Settings > System

Field	Description
Interactive Whiteboard Settings	<p>Contains settings governing using SAFARI Montage with interactive whiteboard displays. Enabling Whiteboard allows these settings to be changed and provides a Whiteboard tab for search results. Search results for whiteboard items provide file formats specific to the whiteboard type configured here.</p> <p>Changing the Whiteboard dropdown alters the context that the View In New Window button takes to match the selected whiteboard format.</p> <p>Changing the Upload and Share Whiteboard Files setting allows whiteboard-specific files such as *.FLP files to be uploaded and shared by the specified user type and above independent of other upload settings, with respect to the file size limitation set below.</p>
My Files – teacher	The selection allows users of type teacher to upload files to My Files; teachers will not be able to share uploaded files.
Channel Guide	<p>Allows the selection of restrictions applied to programming available through the N-DVR Channel Guide. Programming that contains the selected restrictions or is rated outside the Highest Audience Label will be inaccessible.</p> <p>Override Audience (teachers and Above) can be selected to allow teacher and above user types to access otherwise restricted channel guide content.</p>

8.1.2 Edit An Existing School

Click the **Edit** link for a school to change the settings of an existing school. In addition to the settings available when manually creating a school (see above), additional options may become available after creating the school and assigning content licenses.

Field	Description
School Logo for Uploaded Content	<p>A separate logo can be uploaded for use with uploaded content published by this school. Clicking Update will take you to the Learning Object Repository > Logo Upload page.</p>

Field	Description
Uploaded and Packaged Content Downloadable By	Allows setting permissions for what users can download content from their respective courses. Download permissions can be granted to specific learning objects under Rights Management.
Video Resolution Settings	Links to the Admin > Settings > Video Resolutions page if the <i>Video Resolutions</i> option is enabled under Admin > Settings > System
Allow Users to Select Default Resolutions	Allows individual users to set personalized resolution settings
LDAP Groups	Click the link to edit and assign LDAP groups to this school. Assigned LDAP groups can be viewed along with the user type they are assigned to. See the SAFARI Montage LDAP Configuration Guide for information on configuring LDAP groups.
School Groups	Displays which (if any) school groups this school is associated to. Clicking the link navigates to the School Groups Management page.

8.1.3 School Groups

Schools in SAFARI Montage can be organized by school groups. These groups allow for managing permissions and other settings for groups of schools. Groups may represent any kind of association between schools, and a school may be a member of more than one group.

To **create a new school group** click the **New Group** link at the top of the page, and provide a **name** and **short description** for the group before clicking **Add**.

Once a group has been created, click **edit** for the group to assign schools to the group. You may add or remove multiple schools from the group at a time.

8.1.4 Content Packages

Once a school has been created, content packages can be assigned by clicking the **content packages** link for that school. See section [4.2.2 Assigning Licenses](#) from the WAN Manager for more information.

8.2 Settings

Here you will find global settings related to content sharing in a district setting.

8.2.1 District Sharing

Field	Description
Share Media to District	Enables or disables the ability for users to share uploaded content district-wide.
Approval Required for Media	Uploads shared by users of the selected user type and below will require approval before being distributed to the district.
Share Playlists to District	Enables or disables the ability for users to share playlists district-wide.
Copy District Shared Playlists	Select this to create a district-owned copy when a playlist is shared district-wide, similar to how uploaded content is shared.
Approval Required for Playlists	Playlists shared by users of the selected user type and below will require approval before being distributed to the district.

Field	Description
Daily Email	Users with the approver role receive an email with a list of shared items pending approval each day.

8.2.2 Individual Media Upload Storage

Here you can define the amount of storage allocated to users based on user type. Each user receives the specified amount of storage, which can be increased by request of the user in their **My Files** screen when the user is out of space.

The **Initial Storage Size** defines the default amount of storage allocated to each user of that user type.

The **Additional Storage Increment** defines the amount of additional storage users may request per request, subject to administrator approval. Users may request additional storage as often as needed. Approval for additional storage is managed under **Admin > Learning Object Repository > User Storage Request**.

The **Drive Space Warning** option determines when the system sends an email alert to the administrator email (set under **Admin > Settings > System**) warning that CreationStation storage is approaching capacity. The **Drive Space Limit** defines a limit for when the CreationStation drive will stop accepting new uploads.

8.2.3 Transfer Scheduling (Legacy)

For districts with legacy Remote Servers, the Transfer Schedule may be used to prevent media transfer from occurring during times when the system is in use. This can help low-bandwidth environments conserve network resources for school functions. You may also choose to **Limit Transfer Speed** to cap the amount of bandwidth used for media transfers or **Ignore Transfer Schedule** to allow media files to be distributed to remote servers continuously. These settings have no effect on Expansion Servers.

The transfer schedule times denote the range of time that media file transfers are **disabled**. This should usually be the hours that school is in session. To always allow transfers on a particular day, select 0:00 AM to 0:00 AM.

Media files pending transfer to remote servers can be viewed under **Admin > WAN Manager > Transfer Queue**.

8.3 Approval Queues

If district sharing is enabled for uploaded content or playlists, you may elect to require approval for content shared by certain user types. These queues are managed under **Admin > WAN Manager > Content Pending Approval** and **Playlists Pending Approval** respectively. Each queue displays the playlist or content name, the creator, the date the learning object was created, and the approve/deny buttons.




Playlists additionally show the list of learning objects within the playlist. Click the title of the item in the queue to view that learning object and click the green checkmark to approve or the red strike to deny.

Playlist Approval Queue

Results 1 to 1 of 1

Sort By: Date Uploaded/Edited New to Old

Status: Pending Approval

Title	Creator	Date Uploaded/Edited	Approver	Date Approved	School	Status	Action
 Frog Anatomy Review	smichaels	01/05/2021 10:19 AM			Cardinal School	Pending Approval	 

9 Integrations

SAFARI Montage leverages IMS Global® LTI® standards to integrate with other LTI-compliant digital learning tools, along with several other popular digital platforms such as Google Workspace and Microsoft 365.

9.1 Vocabulary: Tools, Providers, Consumers, and Platforms

SAFARI Montage supports the LTI 1.0 and 1.3 standards. LTI 1.0 describes relationships in terms of Tool Providers and Tool Consumers, while LTI 1.3 describes relationships in terms of Tools and Platforms

A **Tool Provider** is a digital learning resource that provides resources to others. An example might be a textbook company that uses LTI launch to access digital resources.

A **Tool Consumer** consumes a resource from a provider. The consumer of the textbook resource might be a learning management system.

A **Platform** is very similar to a tool consumer. IMS defines it as “any kind of platform that needs to delegate bits of functionality out to a suite of tools.” Once again, the learning management system makes an excellent example of a platform.

A **Tool** is then an external application or service providing functionality to the platform. This could be the textbook publisher described above, or any number of applications or services that are adding their features to the platform.

SAFARI Montage can act as both Tool/Provider (ex. providing access to embedded content in your LMS) and as Platform/Consumer (ex. cataloging and providing access to a textbook publisher’s digital resources), depending on the role the LOR plays in your learning environment. When configuring an integration, keep in mind the role the SAFARI Montage system plays in the integration.

9.2 Interoperability Support

Several integrations with popular services have predefined settings on the **Admin > Interoperability Support > Services** page. New integrations are under constant development. Individual integrations may have their own administrator and teacher guides linked on this page. See these guides for instructions on enabling and configuring these integrations.

9.2.1 Featured Integrations

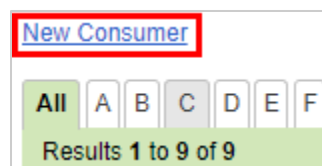
Integration	Configuration Guide
Blackboard	Blackboard® Learn® LTI® Integration
BrainPOP/BrainPOP Jr.	BrainPOP® Integration Instructions
Canvas	Canvas™ by Instructure Integration
CK-12 Foundation	CK-12 Foundation® Integration
ClassLink	<i>Coming Soon</i>
Clever	<i>Coming Soon</i>
Discovery Education Experience	<i>Coming Soon</i>
Google Workspace	Google Workspace® Integration Instructions
itsLearning	itsLearning® LTI Integration
MathNation	<i>Coming Soon</i>
Microsoft 365	Microsoft 365® Integration Instructions
Schoology	Schoology® LTI Integration
TeachingBooks	<i>Coming Soon</i>
Zoom	Zoom® Integration Instructions

9.3 LTI 1.0

9.3.1 Creating a new LTI Tool Consumer

Tool Consumers and how they implement their functions vary greatly from consumer to consumer. Before creating a new Tool Consumer, contact your SAFARI Montage Systems Engineer to discuss how best to integrate with SAFARI Montage

1. Navigate to **Admin > IMS Global LTI 1.0 > Tool Consumers**
2. Click the **New Consumer** link at the top of the page



3. Enter a **Consumer** name and click **Add**
4. Click the **edit** link for the consumer you just created

- Provide the **Key** and **Secret** to the third-party consumer application

IMS Global LTI Consumer

Consumer: Example Consumer

Key: [Redacted] [\(COPY\)](#)

Secret: [Redacted] [\(COPY\)](#)

URL:

- Any Permanent Link
- SAFARI/api/imslitsearch.php (embed search)
- SAFARI/api/imslitgethttp.php (external play)
- SAFARI/api/imslitupload.php (CS upload)
- SAFARI/api/search.php (federated search)
- SAFARI/api/imsliti.php

SAFARI Montage Custom Parameters

These are not required and may not be used by all LTI calls but are shown here for reference.

custom_safarimontage_username
This is the same user name recognized by SAFARI Montage. Usually the LDAP user name.
Sample: Administrator (Default)

custom_safarimontage_schoolname
This is the same School name used within SAFARI Montage.
Sample: Cardinal School

custom_safarimontage_url
This is the URL access after authentication is complete. Usually a permanent link of an asset.

custom_safarimontage_vendor
This is the vendor code used to identify calls from special vendors.

custom_safarimontage_search
This is the search criteria for use with api/search.php.

custom_safarimontage_imslitsearch
This is the search criteria for use with imslitsearch.php.

custom_safarimontage_alignmentid
This is the search criteria for use when searching for standards-aligned titles.

custom_safarimontage_caseuri
This is the search criteria for use when searching for standards-aligned titles by CASE uri.

Special Configuration External Tools

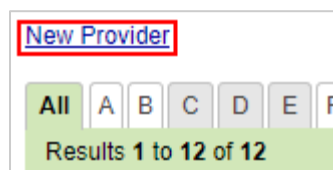
Click a link below then cut+paste the text into the other platform.

Canvas: [Editor Button](#) • [Editor Button + Course Navigation](#)

[Add](#) [Cancel](#)

9.3.2 Creating a new LTI Tool Provider

- Navigate to **Admin > IMS Global LTI 1.0> Tool Providers**
- Click the **New Provider** link at the top of the page



- Enter a **Provider** name, as well as the **Key** and **Secret** provided by the cartridge vendor

- Configure the remaining fields per instructions from the vendor, otherwise these may be left as their default settings

IMS Global LTI Provider

Provider: Example Provider

Key: [Redacted] (copy)

Secret: [Redacted] (copy)

Share User's Name: ☒

Share User's Email: ☒

Base URL: [Empty field]

Optional, if a LTI link doesn't include http and hostname, this will be used. example: /content/object/play?id=24

Value for lis_person_sourcedid: Username [Dropdown]

The username is the default value for the lis_person_sourcedid parameter.

Custom Parameters: [Empty text area]

Default Thumbnail URL: [Empty field]

Share LDAP DN: ☒ Custom parameter to support SSO when both systems are integrated with district LDAP. (custom_ldap_dn)

Typical Age Range As Grade Range: ☒ Custom parameter to interpret typicalagerange value as grades for Common Cartridge import.

Thumbnail Urls Included in Thin Common Cartridges: ☐ Custom parameter to use <biti:secure_icon> or <biti:icon> when thumbnailing resources.

Thumbnail Urls Supplied by Provider: ☐ Custom parameter to use provider thumbnail url when thumbnailing resources.

Update Existing Thin Common Cartridge Resources: ☒ Update the metadata of existing resources that are also included in a new cartridge during import.

Open Links in a New Window: ☐ Set web links to open in a new window during Thin Common Cartridge import (does not affect previous imports).

Always Embed Links via iFrame: ☐ Change standard embed playback of links to use iframe for this provider.

Maintain Learning Object ID As LTI Context ID: ☐ Maintain a static context_id across all LTI launches of the same resource.

Require Class ID: ☐ Require a Class ID when launching LTI links from this provider.

Show VHL Recording Controls: ☐ Show VHL recording controls on playlist student view when launching LTI links from this provider.

Add Cancel

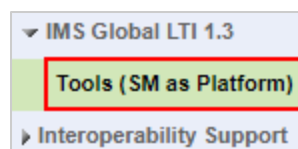
- Click **Add** to create the new Provider

9.4 LTI 1.3

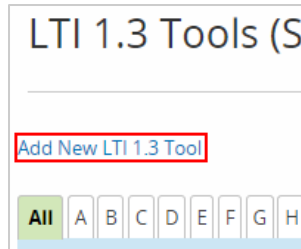
9.4.1 Creating a new LTI 1.3 Tool

This guide uses the IMS Global TrustEd Apps™ dashboard as an example LTI 1.3 tool, however the steps are similar for other LTI 1.3 applications. Exact naming conventions and third-party interfaces may vary from tool to tool, but the basic workflow remains the same.

- Navigate to **Admin > IMS Global LTI 1.3 > Tools**



- Click the **Add New LTI 1.3 Tool** link



3. Leave the SAFARI Montage LTI 1.3 Tool form open in a separate tab or window and navigate to the third-party tool. Refer to the third-party tool's documentation for information on where to configure third-party platforms in the application.
4. Copy the autogenerated platform information from the SAFARI Montage LTI 1.3 Tool form to the appropriate **Connection Details** fields in the tool as outlined below

Note: Screenshots below are from the IMS Global TrustEd Apps tool and may differ in presentation from tool to tool.

Note: 'Connection Details' and the names of the fields may differ from tool to tool. Refer to the third-party tool's documentation for more information.

SAFARI Montage Field	Connection Details Field
Platform Issuer ID (ISS)	Issuer ID (iss)
Platform Client ID	Client ID
Platform Authorization URI	OIDC URL
Platform Originating Messages Public Key Set (JWKS) URI	JWKS URL

Platform Issuer ID (ISS):
Platform Deployment ID:
Platform Client ID:
Platform Authorization URI:
Platform Originating Messages Public Key Set (JWKS) URI:

The Deployment Identifier is used during the OAuth2 secure con...

The Client Identifier is used during the OAuth2 secure con...

The Tool will redirect to this link once the launch request

JSON Web Key Set contains the Public Key below and can...

[\(copy\)](#)
[\(copy\)](#)
[\(copy\)](#)

Connection Details
Trusted Apps OIDC Login Initiation URL
Trusted Apps Launch URL
Trusted Apps Public .JWK URL (optional)

Client ID *
Issuer ID (iss) *
OIDC URL *
JWKS URL *

[Save](#)

5. Provide a **Tool Name** to identify this configuration in SAFARI Montage (ex. IMS Global TrustEd Apps Dashboard)

Tool Name:

- Copy the following information from the tool Connection Details fields into the appropriate fields in the SAFARI Montage LTI 1.3 Tool form as outlined below

Note: Screenshots below are from the IMS Global TrustEd Apps tool and may differ in presentation from tool to tool.

Note: 'Connection Details' and the names of the fields may differ from tool to tool. Refer to the third-party tool's documentation for more information.

Note: The Tool Allowed Redirect URI(s) is typically a list provided by the LTI tool provider. If no list is provided, this field should match the Tool Target Link URI.

Connection Details Field	SAFARI Montage Field
TrustEd Apps OIDC Login initiation URL	Tool Open ID Connect Link URI
TrustEd Apps Launch URL	Tool Target Link URI and Tool Allowed Redirect URI(s)
TrustEd Apps Public JWK URL	Tool Originating Messages Public Key Set (JWKS) URI

The left screenshot shows the 'Connection Details' section of the IMS Global TrustEd Apps tool. It contains the following fields:

- Trusted Apps OIDC Login initiation URL: <https://app.fedtech.org/owb-endpoint/owb/v1/pd/its/initiate>
- Trusted Apps Launch URL: <https://app.fedtech.org/owb-endpoint/owb/v1/pd/trustedapps/its/login>
- Trusted Apps Public JWK URL (optional): <https://authserver.imsglobal.org/jwks>
- Client ID: <https://app.fedtech.org/owb-endpoint/owb/v1/pd/its/initiate>
- Issuer ID (iss): <https://app.fedtech.org/owb-endpoint/owb/v1/pd/its/initiate>
- OIDC URL: <https://app.fedtech.org/owb-endpoint/owb/v1/pd/its/initiate>
- JWKS URL: <https://app.fedtech.org/owb-endpoint/owb/v1/pd/its/initiate>

The right screenshot shows the 'Tool Open ID Connect Link URI' field with a description: 'Location of the secure start of the launch sequence. The launch sequence starts with the user accessing the Tool, which will verify this request and redirect the user (Platform) from the tool which will then redirect the user to the final location.' Below it are fields for 'Tool Target Link URI', 'Tool Allowed Redirect URI(s)', and 'Tool Originating Messages Public Key Set (JWKS) URI', each with a description and a 'Save' button.

- Under Connection Details in the tool, click **Save**
- Determine which (if any) optional settings are required for this integration by referring to the third-party's tool documentation and enable or disable the options as required
- Click **Add** to save the configuration

Optional Settings

Share User's Identity: LTI allows for access of the Tool anonymously and sharing of user's name and email can be disabled. It is recommended to share the user's identity to allow for more accurate usage of the tool.
☐

Custom Parameters: LTI allows for the use of custom parameters that are accepted by the Tool. This is optional and specific to each individual Tool.

Open Links in an iFrame (always): Change standard embed playback of links to use iFrame for this Tool
☐

Maintain Learning Object ID as LTI Context ID: Maintain a static context_id across all LTI launches of the same resource
☐

Thumbnail URLs Supplied by Tool: Custom parameter to use tool thumbnail url when thumbnailing resources
☐

Default Thumbnail URL:

IMS LIS Person Source ID:

Thin Common Cartridge Import Settings

Open Links in a New Window: Set web links to open in a new window during Thin Common Cartridge import (does not affect previous imports)
☐

Typical Age Range As Grade Range: Custom parameter to interpret "typicalagerange" value as grades for Common Cartridge import
☐

Update Existing Thin Common Cartridge Resources: Update the metadata of existing resources that are also included in a new cartridge during import
☐

Thumbnail URLs are Included within the Thin Common Cartridge: Custom parameter to use <bit:secure_icon> or <bit:icon> when thumbnailing resources
☐

Add **Cancel**

9.4.2 Creating a new LTI 1.3 Platform (Coming Soon)

Support for utilizing SAFARI Montage as a tool in third-party platforms (such as learning management systems) is coming soon.

10 Content Management

10.1 IMS Common Cartridge

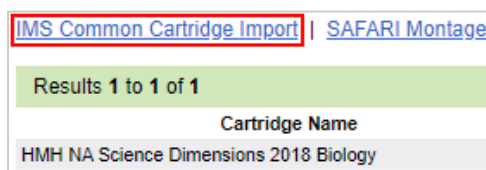
SAFARI Montage allows the ability to load an IMS Global® Common Cartridge provided by publishers into the Learning Object Repository (LOR) to provide easy access to educational publishers' digital resources. In addition to ease of distribution, the Common Cartridge standard also makes it easy to manage and update digital resources. Districts can add resources from their own textbook and digital content publishers via IMS Global® Common Cartridge standards. Importing resources via Thin Common Cartridge allows for individual learning objects to be searchable within the SAFARI Montage LOR and for their use to create dynamic digital lessons, comprised of content licensed from SAFARI Montage, third party providers, as well as resources uploaded by district teachers.

Two types of Common Cartridge exist. The first, referred to as a Common Cartridge can include both learning object metadata as well as media files such as video and audio objects, storing and serving resources from your Learning Object Repository. The second, the Thin Common Cartridge, supports only web and LTI links and associated learning object metadata; resources are hosted by the vendor and accessed through web links (if the resource is accessible without authentication) or LTI links (for content requiring authentication).

To import a Thin Common Cartridge, a custom publisher and (if required) an LTI Tool Provider should be created prior to importing. While cartridges typically include provider information, it can be easier to specify the provider explicitly. See section [10.3.2 Creating a new LTI Tool Provider](#) for instructions on creating new providers and section [11.4.1 Creating a new Custom Publisher](#) for creating new publishers.

10.1.1 Importing a Cartridge

1. Navigate to **Admin > Learning Object Repository > Common Cartridges**
2. Click the **IMS Common Cartridge Import** link at the top of the screen



3. Complete the details under the **Cartridge Information** heading

Note: Typically a cartridge contains metadata defining some of these values, however setting them manually allows finer control over how the cartridge is associated in the SAFARI Montage system

 - a. Select the publisher created above from the **Publisher** dropdown. This selection sets all imported content to the chosen publisher. When choosing “Match LTI Vendor in cartridge to existing custom publishers”, the system will auto-associate resources to custom publishers that match the LTI Vendor listed in the cartridge. If the Vendor does not exist as a custom publisher, the system will associate the learning object(s) with the default district publisher.
 - b. Select the LTI provider created above from the **LTI Provider** dropdown (if required). A selection here overrides any LTI Provider defined in the metadata of each resource. Leave blank if cartridge contains resources from multiple LTI Providers.
 - c. Input the *sourcedId* provided by the vendor in the **Sourced ID** field. This is a unique ID for each cartridge and should only match another cartridge if the upload is to update an existing cartridge. Entering a *sourcedId* here will override the ID included in the cartridge.

Note: When updating a cartridge this field must match the *sourcedId* of the original upload to prevent duplication.

Note: If one has not been provided by the vendor, we recommend creating a unique identifier to facilitate management of the cartridge after import. If not provided by the vendor within the cartridge and this field is left empty, one will be created automatically by the system.
 - d. (Optional) Input the **Vendor ID** and **Vendor Resource ID** provided by the vendor in their respective fields
4. If the cartridge is intended for use district-wide, check the **Share to District** box
5. If user groups have been set up, select a group to limit access to cartridge items. Leave as All Users if using OneRoster permissions or if the cartridge is not intended to be restricted.

Note: Group permissions act in combination with user type permissions set by the cartridge. For example, if a resource is restricted to teacher and above, and the cartridge group has been restricted to “PD Group,” only teachers and above within the “PD Group” will be able to view resources from the cartridge.
6. If updating an existing cartridge, ensure **Update Existing Resources** is selected to update the metadata of existing resources with the updated cartridge metadata

Note: This should be left enabled by default.

7. (Optional) To open imported links in a new window rather than an embedded window, select the **Open Links in a New Window** option. This can be used to address links that do not allow embedded presentation or otherwise fail to render in embedded windows.

[Back to Common Cartridges](#)

IMS Common Cartridge Import

Use this page to import or update an IMS Global Common Cartridge or Thin Common Cartridge.
Refer to the [IMS Global Common Cartridge Standard](#) for more information.
SAFARI Montage specific resources: [Documentation](#) | [SAFARI Montage Exemplar Cartridge](#)

Cartridge Information:

Publisher:

LTI Provider:

Sourced ID: *

Vendor ID:

Vendor Resource ID:

Sharing and Permissions:

Share to District: ☒ Shares all items within the cartridge to the district.

Restrict Viewing to Group: [View Users](#)

Metadata:

Update Existing Resources: ☒ Update the metadata of existing resources that are also included in this cartridge.

Other:

Open Links in a New Window: ☐ Open imported links in a new window, instead of attempting to open in an embedded view.

* Highly recommended, required to manage cartridges after import, and to use OneRoster to manage permissions for resources within a cartridge.

Import

Note: To avoid duplicating items, make sure the Publisher, LTI Provider, Sourced ID and individual resource GUIDs match when importing an updated cartridge.

8. Click **Import**
9. Drag the cartridge file into the designated upload box, or click in the box to open the file browser, select the cartridge file, and click open
10. Cartridge import will begin. When complete, click the link to return to the Common Cartridges management page. You do not need to remain on this page while the cartridge imports.
11. Verify that resources imported are accessible through the LOR by clicking **Preview** for the newly imported cartridge's entry on the Common Cartridges management page and viewing a resource

10.1.2 Common Cartridge Management

Under **Admin > Learning Object Repository > Common Cartridges**, all cartridges uploaded to the system are listed, along with details about each cartridge. From here, you can manage various aspects of the cartridge. Cartridges are uniquely identified by the Sourced ID. If a Sourced ID is not present, many of these management tools will experience reduced functionality.

Results 1 to 1 of 1						
Cartridge Name	Publisher	Sourced ID	Uploaded By	Uploaded On	Total Resources	
HMH NA Science Dimensions 2018 Biology	HMH Science Dimensions 2018	2018B	Administrator (Default)	April 20, 2020 10:08:55 AM	1608	

Heading	Description
Cartridge Name	The name of the cartridge provided by the publisher.
Publisher	The publisher this cartridge is associated with in SAFARI Montage.
Sourced ID	The Sourced ID chosen during cartridge import or contained in the cartridge metadata.
Uploaded By	The name of the user that uploaded the cartridge.
Uploaded On	The date the cartridge was uploaded or updated.
Total Resources	A count of the learning objects associated with this cartridge

[Preview](#) •
 [Download](#) •
 [Permissions](#) •
 [Restrict Schools](#) •
 [Regenerate Thumbnails](#) •
 [Delete](#)

Heading	Description
Preview	Generates search results with items associated with this cartridge, based on the cartridge's Sourced ID. These results can then be refined further to find specific titles in that cartridge.
Download	Downloads a copy of the original *.imsc file uploaded to SAFARI Montage.
Permissions	Opens the user permissions page allowing for fine tuning access to specific user types, groups, and individual users.
Restrict Schools	Allows restricting access to the cartridge items to specific schools or school groups.
Regenerate Thumbnails	Instructs SAFARI Montage to recreate thumbnails for each cartridge item based on the metadata included in the cartridge.

Heading	Description
Delete	Deletes all learning objects associated with this cartridge's Sourced ID.

10.2 Uploads

Media files and web links (if enabled under **Admin > Settings > System**) may be uploaded to your SAFARI Montage system by users. This is typically accomplished through the Easy Upload dashboard icon. Alternatively, users may navigate to **Modules > Learning Object Repository** and click the **Media Upload** or **Web Link Upload** depending on the type of learning object the user wishes to upload. For more information specific to how to upload content, see the [Learning Object Repository User Guide](#).

10.2.1 Bulk Uploads

To manage uploading multiple items, SAFARI Montage supports the bulk upload of media files and web links, accessible under **Modules > Learning Object Repository**. In each instance, a user uploads a CSV file containing information about the media to SAFARI Montage. The system uses this information to populate metadata for each uploaded file or create web links and associated metadata, respectively.

10.2.1.1 Create CSV Metadata for Bulk Media (File) Upload

The bulk media uploader assigns metadata to uploaded files based on information provided in a complementary CSV, containing fields as shown in the table below.

Field	Example	Notes
filename	football.mov	Valid Characters: space, dash, underscore, letters, numbers. Each file in the CSV must be uniquely named.
from grade	Pre-K	Values: Pre-K, Kindergarten, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, Adult
to grade	Adult	Values: Pre-K, Kindergarten, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, Adult
expiration date	01/01/2006	MM/DD/YYYY format. Leave this field blank if the media never expires.
copyright	2005	YYYY format
title	Football Game on 10/10/2005	Max 120 characters
description	The football game played on 10/10/2005 versus Central High School	Max 1,000 characters

A valid CSV row should look like this:

football.mov, PK, 12,,2005,Football Game on 10/10/2005,The football game played on 10/10/2005 versus Central High School

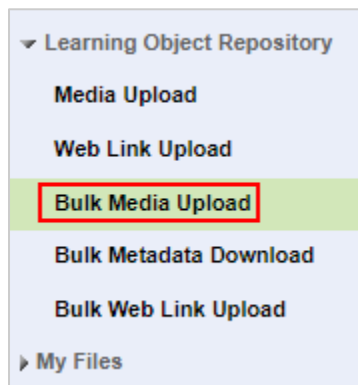
bulkuploadsample.csv
1 filename,from grade,to grade,expiration date,copyright,title,description
2 football.mov,PK,12,,2005,Football Game on 10/10/2005,The football game played on 10/10/2005 versus Central High School

[Sample CSV File](#) (Google Drive – CSV File – 192 Bytes)

Note: SAFARI Montage conforms to RFC 4180 with respect to CSV file formatting, allowing the use of commas and quotation marks in fields as specified in RFC 4180. For more information on this specification and how to format CSV files, see [RFC 4180](#).

10.2.1.2 Bulk Media (File) Upload Workflow

1. Navigate to **Modules > Learning Object Repository > Bulk Media Upload**.



2. Upload CSV Metadata that you created in the previous section for the upload

A screenshot of the 'Bulk Media Upload' form. The title 'Bulk Media Upload' is at the top. Below it, there is a section 'Upload CSV Metadata:' with a 'Choose File' button (highlighted with a red rectangular box) and the text 'No file chosen'. Below that is a 'Publisher:' label followed by a dropdown menu showing 'Metropolitan Public Schools'.

3. Select a **Publisher** for the uploaded files. All media in the upload will have the same publisher.
4. Select any other metadata settings appropriate for your upload, such as whether the files should be downloadable, accessible over a Managed Home Access connection, shared to school or district, or assign Learning Resource Types (LRT). All uploads will share these metadata settings.
5. Click **Next** at the bottom of the page
6. Follow the prompt to upload the files defined in the CSV file. **Filenames must match those defined in the CSV file**. Multiple files may be added at the same time so long as the file names match those included in the CSV file.
7. Click **Done** once the upload has finished

10.2.1.3 Create CSV Metadata for Bulk Web Link Upload

CSV files for bulk web link upload must include the following attributes **without a header row**:

Field	Example	Notes
Media Type	web link	Values: video, image, audio, document, interactive, web link
3 rd Party Service	generic	Values: lti, generic Use "lti" if this link requires an LTI Provider (see next section)
URL	http://www.myschoolwebsite.com/footballgame.html	Max length 2000 characters
Minimum Grade	Pre-K	Values: Pre-K, Kindergarten, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, Adult
Maximum Grade	Adult	Values: Pre-K, Kindergarten, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10, 11, 12, Adult
Duration	01:22:41	Format: HH:MM:SS Video and Audio titles require a duration
Expiration Date	01/01/2005	MM/DD/YYYY or leave this field blank if the media never expires
Copyright Year	2005	4-Digit Year
Media Title	The Video Title	Max 120 characters
Title Description	A description of the media	Max 1,000 characters

A valid CSV row should look like this:

video,generic,http://www.myschoolwebsite.com/footballgame.wmv,1,12,01:30:00,,2005,Football Game on 10/10/2005,The football game played on 10/10/2005 versus Central High School

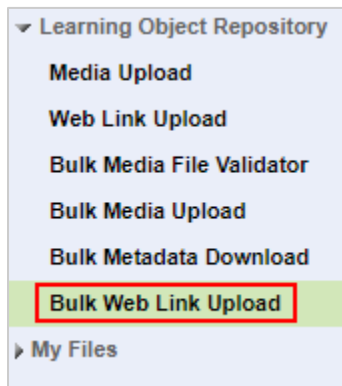
bulkwebuploadsample.csv [3]
1 video,generic,http://www.myschoolwebsite.com/footballgame.wmv,1,12,01:30:00,,2005,Football Game on 10/10/2005,The football game played on 10/10/2005 versus Central High School

[Sample CSV File](#) (Google Drive – CSV File – 175 Bytes)

Note: SAFARI Montage conforms to RFC 4180 with respect to CSV file formatting, allowing the use of commas and quotation marks in fields as specified in RFC 4180. For more information on this specification and how to format CSV files, see [RFC 4180](#).

10.2.1.4 Upload the Bulk Web Link CSV File

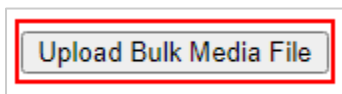
1. Navigate to **Modules > Learning Object Repository > Bulk Web Link Upload**



2. Click the **Choose File** button and select the CSV you created in the previous section
3. Select the **No headers** radio button

A screenshot of a web form for uploading bulk media. The form includes several fields: 'Upload File:' with a 'Choose File' button and 'No file chosen' text; 'Upload Type:' with two radio buttons, 'No headers' (selected) and 'Headers with Metadata'; 'Publisher:' with a dropdown menu showing 'Metropolitan Public Schools'; 'LTI Provider:' with a dropdown menu showing 'Not Applicable'; and 'Home Access:' with a dropdown menu showing 'All Users'. The 'Choose File' button and the 'No headers' radio button are highlighted with red rectangular borders.

4. Select any other metadata settings appropriate for your upload such as Publisher, LTI Provider (if your web links support LTI authentication), Home Access, and sharing. The selected options to apply to **all** media in this upload
5. Click the **Upload Bulk Media File** button



10.3 Copyright Policy

Before uploading content, users must acknowledge and agree to the Copyright Permission Information notice. System Administrators can add a custom message to this notice for district-specific policies and adjust the frequency that this message is shown under **Admin > Learning Object Repository > Settings**.

10.4 Publishers

System Administrators can create custom publishers with their own logos for use with uploaded content. These publishers could be a third-party vendor, school club, a department, or any other type of content

creator. Once the publisher has been created, users uploading content may associate their upload with that publisher.

10.4.1 Creating a new Custom Publisher

1. Navigate to **Admin > Learning Object Repository > Manage Publishers**
2. Click the **Add Publisher** link at the top of the page



3. Enter the name of the publisher in the **Description** field
4. Select which user types may associate content to this publisher. Only users of the selected type and above will be able to associate uploaded content with this publisher.
5. If the publisher's associated content is intended for professional development, select the **Professional Development** box to give content associated with this publisher the Professional Development learning resource type

A screenshot of the 'Add Publisher' form. The form has a green header bar with the title 'Add Publisher'. Below the header, there are four fields: 'Description:' with a text input field containing 'Example Name'; 'Restrict to User Type:' with a dropdown menu showing 'Teacher' and a note '(Restrict the ability to associate content to this publisher to these user types)'; 'Professional Development:' with an unchecked checkbox; and 'Records:' with the value '0'. At the bottom right of the form, there are two buttons: 'Add' and 'Cancel'. The 'Add' button is highlighted with a red rectangular box.

6. Click **Add** to create the new Publisher
7. (Optional) Once created, associate a custom logo with the publisher by clicking the **Change Logo** button, uploading a logo image, and clicking **Save**

10.4.2 Editing or Deleting a Custom Publisher

Clicking the **Edit** link next to a custom publisher opens an editing screen for that publisher similar to the form used to create a new publisher. In addition to the options to edit the description, user type restriction, and professional development tag, you may also change the publisher logo or delete the

publisher using the appropriate buttons.

Save Publisher

Description:

Restrict to User Type:

Professional Development:

Records:

▼ and above

(Restrict the ability to associate content to this publisher to these user types)
☐

3

Logo



Change Logo

10.5 Auto-Converter

When enabled, the SAFARI Montage Multiformat Auto-Converter helps to standardize uploaded media and ensure compatibility. For video conversion, the auto-converter takes videos that use WMV, H.264, or MPEG1 codecs and converts them into H.264 video with AAC audio in low, medium, and high resolution formats, with an additional 1600 bitrate ABR format that dynamically adjusts based on the user's connection quality. If configured, the auto-converter will also create an Adaptive Bitrate format which dynamically selects the appropriate bitrate and resolution based on the user's available bandwidth.

In most cases, uploads and recordings are automatically added to the auto-converter queue. Conversion takes time and a title still being converted may play back at a lower quality than expected. The auto-converter can be set to only accept files manually if automatic conversion of every upload is undesirable.

10.5.1 Settings

Setting	Description
Enable	Turn the auto-converter on or off
Manually Add to Queue	Enable this to stop automatically converting uploaded content. Users will have to manually add their uploads to the conversion queue.

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Setting	Description
Manually Add School News	A less restrictive form of the above. Uploads designated as “School News” during upload will not automatically be added to the conversion queue. This can be helpful if uploaded school news must be available immediately after upload.
Prioritization	<p>Sets the processing priority for objects in the queue.</p> <ul style="list-style-type: none"> • Default (Last In, First Out): The most recently added items will be converted first. • First In First Out: Items will be converted in the order they were added. • School News: Items tagged “School News” during upload will be converted first. Everything else will be converted using the default ordering. • VIEWPath Alerts: Items tagged as VIEWPath alerts through the Pathways SM integration will be converted first. Everything else will be converted using the default ordering.
Adaptive Bitrate Streaming (ABR)	Instructs the auto-converter to create an adaptive bitrate format
Convert to H.264 MP4s	Instructs the auto-converter to retain additional low, medium, and high-quality MP4 files for use in legacy playback scenarios. Only available when Adaptive Bitrate Streaming is enabled.
Low, Medium, and High Resolution	Defines the frame size (resolution) and bitrate for the three quality settings. Low quality has a locked bitrate of 500k.

10.5.2 The Convert Queue

The convert queue displays all uploads and recordings pending conversion. Video priority can be reordered by clicking the up and down arrows under the **Edit Order** heading. Items can be individually removed from the queue by clicking the red X for the item in question, or you can remove all items from the queue by clicking ‘Clear Queue’ at the top of the screen. To convert all unconverted learning objects, click ‘Add Unconverted Videos.’

10.5.3 Manually Adding a Single Video

If manual conversion is turned on, learning objects will not automatically convert when uploaded. Instead, navigate to the learning object and click **Edit**, then **Formats**. From here, you can add the object to

the conversion queue by clicking the **add to auto-convert** link, or clear existing auto-converted formats if the object has already been converted.

10.6 Title Permissions

The title permissions tool allows changing grade range and user type permissions for learning objects in bulk. Search for titles using the abbreviated search function, and select any titles in the results you wish to modify. Then select an update action from the dropdown, provide the new grade range or minimum user type, and click Apply Changes to set those settings for the selected titles.

Titles can be reviewed by clicking the title link. This link takes you to the learning object's title page as if you had searched for the title.

10.6.1 Update Actions

When you select an update action from the drop down, the context chosen will determine what additional options appear before applying changes.

Action	Description
Edit Recommended Grade Range	<p>Displays the custom grade range selection, allowing the selection of a new minimum and maximum grade range for the selected titles. Note that this feature is for pre-packaged content only.</p> <p>Note: District-created content is not eligible for recommended grade range modifications.</p>

Action	Description
Edit User Type Permissions	<p>Allows selecting a minimum user type that can view this video. Prepackaged content defaults to all user types. A title will not appear in the search results for users below the minimum user type, and those users will receive an error if attempting to access the title via a permanent link or other means.</p> <div> <div> Choose Update Action: Edit User Type Permissions ▼ </div> <div> User Type Permissions: Teachers and above ▼ </div> <div> Apply Changes </div> </div>
Restore Recommended Grade Range	<p>Applying this option restores any custom grade ranges set for the selected titles to the SAFARI Montage recommended grade range.</p>

11 View & Chat

The View & Chat student engagement tool allows teachers to initiate real-time, moderated text chatting during in-class video playback

Teachers can ask thought-provoking or guided questions to engage student discussion and inquiry while presenting videos. Students can join the session and participate in the discussion via their computer or mobile device.

System and Curriculum Administrators can access all View & Chat transcripts on the system. Transcripts will include the date and time stamp for each chat entry. If a teacher deleted a comment, the deleted comment still appears on the transcript.

To access a transcript:

1. Navigate to **Admin > Learning Object Repository > View & Chat Manager** or click the **View & Chat Manager** dashboard icon.
2. Apply any school, user, or date filters to find the session in question
3. Click **view/export chat**

The chat history for that session is displayed as a table featuring the name of the user, the message sent, when that message was sent, and when the message was deleted (if applicable). Click the **Chat CSV File** link to get a *.CSV file output for use in other programs.

12 Get it?

Get it? is an interactive formative assessment tool that can either be led by a teacher or completed by students independently, supporting a check for student understanding of a topic or concept during a lesson. Each Get it? can contain a review playlist to be used for immediate remediation, providing a customized experience for each learner. In a teacher-led session, this review playlist can also be assigned to any students who answer a question in the Get it? incorrectly, at the discretion of the teacher. Teacher





as Learner mode (set on the dashboard) will allow teacher user types to interact with a Get it? as if they were a student.

12.1 Enabling Get it?

Get it? must be enabled by a system administrator before students and teachers can utilize the tool. To enable Get it?:

1. Navigate to **Admin > Learning Object Repository > Get it? Settings**
2. **Select the schools** in which Get it? should be active and adjust user types if necessary.
3. Click **Save** at the top of the screen.

When active, the Get it? dashboard icons will display for teachers and students (see below). Additionally, the **Teacher as Learner** dropdown will appear in the upper left of the dashboard.

Dashboard Icon	Function	Displays to Teachers*	Displays to Students*
	Author a Get it?	Yes	-
	View data about session participation (live Get it?s only)	Yes	-
	For a user to join a live Get it? session led by a teacher	Only in Teacher as Learner mode	Yes
	For a user to view their personal Get it? data and access review playlists for questions answered incorrectly. This includes sessions they have participated in and Get it?s they have completed on their own.	Only in Teacher as Learner mode	Yes

Note: Changes to the users settings when enabling Get it? may alter the display behavior.

13 Web Proxy and Managing YouTube Access

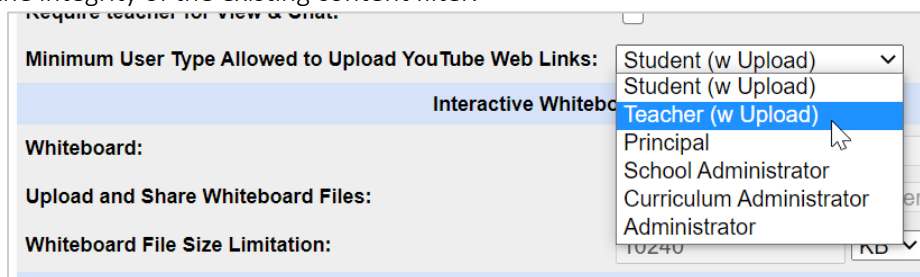
Many schools and districts are faced with the challenge of how to effectively restrict access to YouTube without denying students and faculty access to the wealth of educational resources available from the popular video streaming site. SAFARI Montage provides districts with effective management of YouTube links and limits access only to approved YouTube resources stored in and launched from the LOR via the following three methods.

Note: The SAFARI Montage server will only proxy URLs contained within the LOR.

13.1 A Trusted Referrer

Depending on your content filter, you may have the option of setting up SAFARI Montage host(s) as trusted referrer(s) for YouTube web links. As a trusted referrer, the content filter recognizes that the request for the filtered content is coming from the authorized SAFARI Montage host(s) and allows the content to be viewed. Clicking a link to the same content from anywhere other than SAFARI Montage and your filter will handle the content like normal.

Combined with the **Minimum User Type** setting under **Admin > WAN Manager > Schools > Edit**, authorized users can be allowed to upload educationally relevant YouTube content for student use while maintaining the integrity of the existing content filter.



13.2 Whitelisting Based on URL Parameter

If your content filter does not support setting up a trusted referrer, SAFARI Montage v8.2 and greater features the ability to append a custom parameter to YouTube web links. By adding this custom parameter to the content filter for whitelisting, links containing the custom parameter may be allowed to pass through the web filter, while other content remains blocked. As this parameter is visible in the URL, it is recommended this be changed regularly to prevent students from memorizing and appending the parameter to their own links.

To enable this feature, navigate to **Admin > Web Proxy > Settings**, check **Enable Proxy**, add your custom parameter to the **Custom Parameter** field, and click **Save**. Then create a whitelist rule in your content filter to allow URLs featuring that parameter.

Proxy Server

Enable Proxy: ☒

Port Number: Default port number is 3128


Use SSL certificate configured via Admin > Settings > SSL: ☐
By default, the proxy utilizes a pre-loaded self-signed certificate. Enabling this option will cause the proxy to use the SSL certificate loaded via Admin > Settings > SSL, noting that this certificate must be capable of certificate signing.


Access Denied Message:

Additional referrer servers:
Additional referrer servers can be added here. The hostnames MUST be separated by commas if there are multiple servers.

Custom Parameter:
Additional custom parameter to append to URL.

proxy.pac location:

Default SSL Certificate:  [View](#)

Private Key:  [View](#)

Selecting 'Save' will create/update the proxy.pac file used for client setup.

On-Premises Configuration

Proxy Server

Enable Proxy: ☒

Custom Parameter:
Additional custom parameter to append to URL.

Cloud Configuration

13.3 Using SAFARI Montage as a Proxy Server



On premises installations of SAFARI Montage can serve as a proxy for YouTube video links. Client machines are configured via a *.PAC file, and the SAFARI Montage server provides management of the YouTube URLs that users may access through the proxy.

The SAFARI Montage server must have unrestricted access to proxied web sites to make requests on behalf of the client devices, and the *.PAC file must contain appropriate references to proxied domains. You may create your own *.PAC file if necessary to support existing district proxy servers or more complex proxy configurations.

13.3.1 SAFARI Montage Web Proxy Configuration Instructions:

1. Log into SAFARI Montage as an administrator.
2. Navigate to **Admin > Web Proxy > Settings**.
3. Check the **Enable Proxy** box.
4. Configure the Proxy Server **Port Number**.
5. Determine if using a pre-loaded self-signed SSL certificate or if using the certificate loaded in **Admin > Settings > SSL** and check the **Use SSL certificate...** box as appropriate.
 - a. If using the certificate configured under **Admin > Settings > SSL**, ensure that certificate is capable of certificate signing.
6. Edit the **Access Denied Message** as required. This message will appear to users if attempting to access YouTube resources that are not in the proxy whitelist.
7. (Optional) Enter any **Additional referrer servers** host names, separated by commas.

8. Click the **Save** button.
9. Configure clients and web browsers with the proxy.pac file provided under **proxy.pac location** or your own custom *.PAC file.

13.4 Recommended YouTube URL Format

For the best viewing experience, we recommend YouTube web links be formatted as follows when adding to CreationStation, which will open the video in a new full browser window with minimal extraneous content:

[http://www.youtube.com/embed/\[video id\]?modestbranding=1&autoplay=1&iv_load_policy=3&rel=0&fs=1](http://www.youtube.com/embed/[video id]?modestbranding=1&autoplay=1&iv_load_policy=3&rel=0&fs=1) SAFARI

Note that SAFARI Montage will convert YouTube web links to this format automatically.

IPTV

14 Selective Video Streaming (SVS)

14.1 Configuring Streams

To configure a new stream, navigate to **Admin > Selective Video Streaming > Video Streaming** and click the **New Stream** link at the top of the page. Existing streams can be edited by instead using the **Action...** dropdown.

[New Stream](#)

School:

Type:

AllA B C D E F G H I J K L M N O P Q R S T U V W X Y Z Other

Results 1 to 20 of 20

Active	Stream	Room	
✓	*ID		<div>Action... ▼</div>
✓	*PBS		<div>Action... ▼</div>
✓	*PBS (CC)		<div>Action... ▼</div>
✓	ABC		<div>Action... ▼</div>
✓	AccuWeather HD		<div>Action... ▼</div>
✓	Animal Planet HD		<div>Action... ▼</div>

14.1.1 Copyright Information

Before configuring a new stream for the first time, users are prompted to read and agree to copyright permission information as follows:

When you create an active link to live-streaming content through the Selective Video Streaming module ("SVS") on your SAFARI Montage® system, live TV broadcasts which are sourced from providers of Cable TV or Satellite TV are re-transmitted on your School/School District's internal network. In addition, other content that you may be sourcing that is not licensed for use on the SAFARI Montage system like packaged media (i.e., VHS, DVD), user-generated content, and any Internet content, may be restricted by copyright law or may be governed by an existing license with a content provider. It is your responsibility to adhere to your School/School District's copyright and privacy policies and may require permission from the source of such content for use of such content in the

classroom. SAFARI Montage is not responsible for any unauthorized use of copyrighted material.

You acknowledge and confirm that you have read and understand the above copyright warning and that you are authorized to upload and use this content to the SAFARI Montage system.

14.1.2 Stream Settings

General

Setting	Description
Active Stream	Enables or disables the stream
School	Selects which school this stream is available to, in addition to any schools selected under the Assignments heading.
Video Stream Name	The name of the stream as it appears in the stream list.
Description	A short description of the stream.
Enable URL for Users	<p>Allows users to view the stream directly from the encoder in the web browser if the browser supports the stream format. When disabled, the encoder stream is only used internally as the source for N-DVR recordings, Universal Live Broadcast Server (ULB), and Endpoint playback.</p> <p>This does not prevent viewing ULB streams within the browser.</p>
Launch URL in VLC	Launch the stream URL in a locally installed VLC media player when viewing with a browser that does not support any available stream format.
Use Mobile URLs on Endpoints	Plays the mobile URL stream on SAFARI Montage Endpoints instead of the encoder URL. This setting can be helpful when the encoder is configured for multicast playback and endpoints are unable to play multicast streams due to network or other conditions and perform better with unicast mobile URL playback.
URL	The URL of the encoder stream. Refer to the encoder or camera manual to determine the appropriate format. Some common URL schemes are available by clicking the help icon next to the URL field.

Setting	Description
Mobile URL	Typically populated with the URL generated by the Universal Live Broadcaster, this URL is used by mobile devices and browsers when available in lieu of the encoder's stream URL
Type (for recording)	Specifies what type of stream the encoder produces to support N-DVR recording. Refer to the encoder or camera manual to determine which type is appropriate.
Bitrate	The bitrate of the stream. This should match the bitrate the encoder or camera specifies
Source	DTV Internet Cameras – This stream is from a DVD – This stream is from a DVD player or other type of external playback media. Mobile – This stream is from the SAFARI Montage iOS app
Bypass Auto-Converter	Instructs the system not to convert N-DVR recordings made from this stream.
Show on Live Streams or DTV Page	Adds the stream to the Live Streams dashboard icon based on school assignment.
Show On Dashboard	Adds the stream to the Dashboard for the school(s) the stream is assigned to.
School News	Designates the stream as School News and makes it accessible via the Live School News dashboard icon. If the option to display school news streams without requiring login is enabled under Selective Video Streaming > Settings , streams set to School News are made available without logging in.
Reservations	Requires the stream to be reserved for viewing. Use this if the stream source has limited capacity. Note: Requires Pathways SM
Controlled Devices	Associate this stream with a Pathways SM controllable device for Pathways SM integration Note: Requires Pathways SM

Universal Live Broadcaster

Additional options are available for systems with the Universal Live Broadcaster (ULB) license and a ULB server configured.

Setting	Description
Active	Instructs the system to produce a ULB stream for this stream.
Continuous	Instructs the ULB to always maintain the stream. Otherwise, the stream will end after the specified duration.
Resolutions	Selected ULB stream resolutions. Note that Native will rebroadcast the stream source directly and is only available for H.264 video with AAC audio.
Mobile URL	When the stream is broadcasting, the URL of the ULB stream is displayed here.
CDN Support	Enables broadcasting the stream to a third-party Facebook or Vimeo distribution networks.
CDN Provider	The provider hosting the stream.
CDN Key	The third-party provider's unique access key.

Closed Caption Server

When integrated with the enCaption Live captioning server, SAFARI Montage streams can display closed captions for better accessibility. After configuring the captioning server, select the appropriate server from the selection dropdown. See section [16.4 Closed Captioning with enCaption Live](#) for configuration information.

Channel Guide

Systems with an N-DVR Channel Guide license can configure the stream for display in the channel guide.

Setting	Description
Active Channel	Indicates this stream should be displayed in the channel guide
Position	Determines where in the guide this channel should appear. Auto by Current Channel displays the entry in the location it would appear based on the selected channel. Next Available displays the entry at the end of the channel guide in the next available position.
Current Channel	The channel number this stream is configured for
Custom Schedule	Select if the program schedule for this channel will be manually uploaded
Postal Code	Enter the postal code for your area and click Submit Postal Code to obtain a list of television providers in your area

Setting	Description
Provider	Displays the list of providers based on the submitted postal code. Select a provider to get the list of channels for the next field
Channel Type	Selects which type of configuration to use: Fixed – The stream will appear in the channel guide with only one channel associated with it. This is used for streams that will not switch between different channels on the same encoder. Select a single channel from the dropdown to display in the channel guide. Programmable – Displays multiple channels associated with this stream. In conjunction with Pathways SM, this allows a single stream to serve multiple channels. Select all channels that will be associated with this stream to display in the channel guide.

Assignments

This field allows you to determine which schools have access to this stream. This stream will display on the dashboard, Digital TV, Live Streams, or Channel Guide for schools selected here. Other schools will not have access to the stream.

14.1.3 School News

Streams marked as **School News** appear on the **Live School News** page accessible from the dashboard. Additionally, Administrators may grant users the ability to view School News streams before logging in by selecting **Display School News Before Login** under **Admin > Selective Video Streaming > Settings**. This will add a School News link to the SAFARI Montage login page that, when clicked, displays all school news streams without requiring a login.

14.2 Closed Captioning with enCaption Live

SAFARI Montage can provide real-time closed captioning on SVS streams when used in conjunction with an enCaption Live captioning server. Once an enCaption Live server has been installed at your site, it can be added to SAFARI Montage under the **Admin > Closed Caption > Servers** menu.

14.2.1 Adding an enCaption Server

Once the enCaption hardware and software configuration is complete:

1. Log into SAFARI Montage as an administrator and navigate to **Admin > Closed Caption > Server**

- Click the **Add Server** link to configure the enCaption 4 server

DASHBOARD										SEARCH	SUBJECTS	STANDARDS	PLAYLISTS	COURSES	MODULES	PREFERENCES	ADMIN	HELP	
Content & Modules										<div>Add Server</div>									
Data Recovery										<div><input checked="" type="checkbox"/> Force Communication by IP</div>									
Reporting																			
Settings																			
Tools																			
Add-On Modules																			
Auto-Converter																			
Channel Guide																			
Closed Caption																			
Servers																			

- Enter the following information into the respective fields

Field	Value
Active	Yes
Description	A descriptive title for the server
Server Type	ENCO
IP Address	IP Address of the enCaption server
FQDN	The URL of the enCaption server (optional)
API Port	80
WS Port	12345

Note: Check "Use IP" if no FQDN and/or DNS record has been configured for the enCaption server.

Add Closed Caption Server

Active: ☒

Description:

Server Type:

Host Information

IP Address ☒ **Use IP**

FQDN: ☐ **Use SSL**

API Port:

WS Port:

- Click the Add button.

14.2.2 Associating a Captioning server with an SVS stream

- Navigate to **Admin > Selective Video Streaming > Video Streaming**
- Find the stream that is configured for the encoder connected to the enCaption server's output, and click edit

3. Within the stream's settings find the **Closed Caption Server** section

Closed Caption Server	
This allows the stream to be supported by a closed caption server.	
Server:	<div>None ▾</div> (One Closed Caption Server Per Stream)

4. Select the enCaption server from the drop down and click Save Changes at the bottom of the screen
5. Navigate to and view the SVS stream, and verify that enabling closed captions displays the captions

15 Network DVR (N-DVR)

Requires the SAFARI Montage Network DVR license

The Network Digital Video Recorder (N-DVR) provides a method to record and save the content of video streams to the LOR. The N-DVR interfaces seamlessly with other modules in the SAFARI Montage® suite, including the SAFARI Montage Learning Object Repository, Selective Video Streaming and Pathways SM™, to provide an easy and convenient method of capturing streamed video for future viewing. Most configurations utilize discrete 4, 8, or 18 stream N-DVR server(s), but the SAFARI Montage controller server can also act as a single-stream N-DVR.

15.1 N-DVR Configuration

15.1.1 First-Time Setup

The N-DVR is a special SAFARI Montage server equipped with multiple video capture cards for recording and saving live streams to the LOR. After installing the N-DVR, follow the instructions under **First Time Setup** to configure the N-DVR's network settings.

15.1.2 Settings

The Settings menu is specific to each N-DVR device

Setting	Description
This Server Records	Indicates that this server should be made available for N-DVR recordings
Recorder Count	Defines how many slots are available for recording at any one time
Maximum On Demand Recording	Determines the maximum length of an unscheduled, on-demand recording
Maximum Scheduled Recording	Determines the maximum length of a scheduled recording
SVS Recording Retention	Recordings made from either scheduled or on-demand recording features outside of the Channel Guide will be marked expired (but not deleted) after the specified time has elapsed

Setting	Description
Channel Guide Recording Retention	Recordings made through the Channel Guide will be marked expired (but not deleted) after the specified time has elapsed
Free Space Retention Amount	When Expire When Space Needed is selected for the retention settings, this indicates at what percent of remaining CreationStation space the system should begin expiring recordings. Recordings expired in this way follow a first-in-first-out logic.
SAFARI Montage Hostname	Enter the host name or IP address of the SAFARI Montage controller here. The N-DVR will reach out to this address to provide information to the controller. If this recorder is the controller, the host name should be the local host IP address (127.0.0.1)

15.1.3 Chart: Recordings (Live)

The chart on this page displays a live view of N-DVR activity, providing an at-a-glance overview of usage for the past 30 days.

15.1.4 N-DVRs

The N-DVRs page lists all N-DVR devices associated with the SAFARI Montage controller.

Field	Description
Active	Indicates this N-DVR should be used for recording
Version	What version of SAFARI Montage is running on the N-DVR
Serial Number	The six-digit serial number of the N-DVR. Provide this to technical support if you are having issues with the N-DVR
IP	The IPv4 address of this N-DVR as configured on the N-DVR
Hostname	The FQDN of the N-DVR as configured on the N-DVR
Description	The name of the N-DVR server configured under Admin > Settings > System on that specific N-DVR
Recorders	How many recording slots are devoted to standard recordings
Today's Results	Displays the scheduled, recording, and completed recordings for the day, starting from midnight
Time Diff	Calculates the time difference between the server time set on the controller and the time set on the N-DVR. This should always be as low as possible.

Field	Description
Status	How long it has been since the last communication with the N-DVR.
Delete	Removes the server from the list. Note that if the server is still active it will reappear on the list.

15.1.5 Recorder Availability

The Recorder Availability chart displays the capture cards enabled on N-DVR servers that you have access to and shows their schedule status in 15-minute intervals. Only one recording can take place on a card at a time. This view can show what capture cards are available for recording during a specific time period.

Scheduled cards are slated to record at that time. **Reserved** cards have been claimed using the SVS reservation for the stream. **Recording** are cards that are currently recording a stream.

15.1.5.1 Scheduled Recordings

Field	Description
Status	Displays whether the recording is Scheduled , Completed , or Failed
DVR	The serial number of the N-DVR this recording is scheduled to use
User	The first and last name of the user who scheduled the recording
Title	The title the recording will be saved as in the LOR
Repeat*	How often this recording will be repeated. Note: This field does not have a column header.
Start	The start time for the recording
Requested Duration	How long the recording is scheduled to last
File Size*	When finished, displays the file size of the recording on the CreationStation drive
Bitrate*	The bitrate of the recorded video.
Dimensions*	The resolution of the video, in pixels
Volume*	Which storage volume the recording is stored on.
Edit	Opens the Edit Scheduled Record menu to make changes to the title, description, start time, duration, and repetition
Clear	Removes the recording from the schedule

*: Denotes a field populated after the recording completes

15.1.5.2 Trim Queue

N-DVR recordings can be trimmed to remove content from the beginning or end of the recording. Users access the trim feature when editing a recording by clicking **Trim Recording** in the left navigation. Once the user submits their trim request, the request appears in this list to be processed according to first-in-

first-out logic before being resubmitted for Auto-Conversion (if enabled). Only N-DVR and Lecture Capture recordings support trimming.

Field	Description
Title	The title of the recording in the LOR
Size	The size of the recording being trimmed
Status	The status of the trimming process
Queued	When the recording was submitted for trimming

15.2 Channel Guide

Requires the SAFARI Montage N-DVR Channel Guide license

The N-DVR Channel Guide provides teachers and students with programming information for available video streams and the ability to watch and record programs using available N-DVR(s).

Channel Guide | [Expand](#)

Monday, March 28, 2022

8:05AM	8:00AM (EDT)	8:30AM (EDT)	9:00AM (EDT)	9:30AM (EDT)
12 WHYY	Hero Elementary	Alma's Way	Curious George	Daniel Tiger's Neighborhood
119 AWPPI	← Weather News & Forecasts			
123 ID	The Case That Haunts Me TV14-V Advisory		The Case That Haunts Me TV14-LV Advisory	
139 TLC	Four Weddings		Four Weddings	
506 WPVIDT	← Good Morning America		Live with Kelly and Ryan	
570 ESPNHD	Get Up			
600 CNNHD	New Day With John Berman and Brianna Keilar		CNN Newsroom With Poppy Harlow and Jim Sciutto	
621 NGCHD	Car Repair Secrets!	Humana Medicare Advantage Plans	World's Deadliest Sharks	
628 HSTRYHD	Ancient Aliens		Ancient Aliens	
Conf Room EDUCAM360-B cam	Conf Room EDUCAM360-B camera			

The Channel Guide dashboard icon is configured under **Admin > Settings > Customize Dashboard**, and users can also access the guide by clicking on **Modules** in the top navigation bar, or by selecting the Channel Guide tile on Endpoints with the Classroom Display enabled. For information on recording a program using the Channel Guide, see [Recording with Channel Guide](#)

15.2.1 Data Files

Here channel guide information can be manually downloaded or uploaded.

Function	Description
Download Channel Guide Data	Fetches new channel guide schedule information from the internet
Parse & Store Channel Guide Data	Pulls the schedule for configured Channel Guide streams from the downloaded data and adds it to the Channel Guide menu.
Download, Parse & Store Channel Guide Data	Performs both actions detailed above
Upload/Import Custom Channel Guide Data	Allows uploading a Custom Channel Guide file to import into the schedule.

15.2.1.1 Custom Channel Guide Files

SAFARI Montage can ingest text-based CSV files containing channel schedule information and associate this schedule with a specified SVS stream. Click the **Upload/Import Custom Channel Guide Data** button to open the upload interface. Uploaded schedule must be a **TXT** or **CSV** file with the following fields:

Start Date/Time, End Date/Time, Name, Duration (In Seconds), Rating, Category, Film ID, Version

Date/Time entries should be formatted as m/d/yyyy and H:MM:SS AM/PM

Example:

8/22/2013 6:00:00 AM, 8/22/2013 7:57:11 AM, THE PURSUIT OF HAPPINESS (2006), 7031, PG13, FF, 0022772, ED

If the first line of the CSV file contains headers, select **Headers** in the upload type. Finally, select the SVS stream to associate this file with from the drop down.

16 Desktop and Lecture Capture

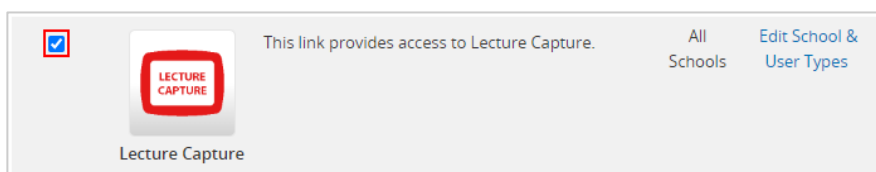
Requires the SAFARI Montage Lecture Capture License

Lecture Capture provides a web-based desktop and lecture recording solution capable of storing recordings directly within the SAFARI Montage LOR. The desktop recording feature is accessed directly within the web browser with no additional software downloads required. Once finished with a recording, users can immediately trim the recording and save the capture within the LOR for later use.

Lecture Capture can also record from a classroom camera simultaneously. This requires the user to be in a room configured through Pathways SM that has been assigned an SVS stream with the **Source** set to *Camera*. When a desktop recording is paired with a camera recording, the LOR provides a picture-in-picture display option for viewing all aspects of the lecture within a single frame.

16.1 Enabling the Dashboard Icon

1. Navigate to **Admin > Settings > Customize Dashboard**
2. Select the **Show on Dashboard** checkbox




3. (Optional) Select which schools and user types see this icon by clicking the **Edit School & User Types** link

- a. Click **Save** to save the settings

Note: The dashboard icon is visible by default in all schools to teacher and above users

< Back to Dashboard Customization

Dashboard Customization - Edit Schools & User Types



Lecture Capture

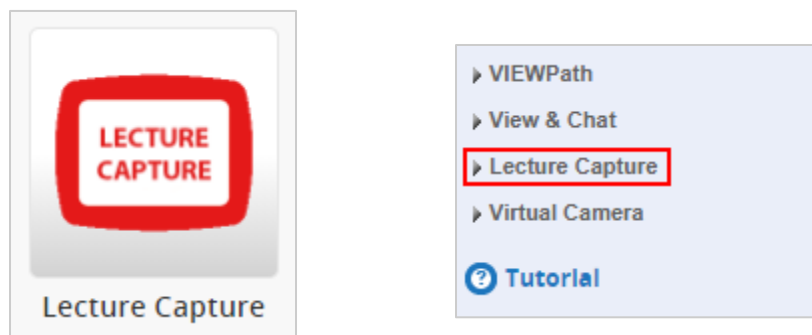
Save Cancel

	Show on Dashboard	Users
All Schools (Selections will change for all Schools)	All None	teachers and above
Cardinal School	<input checked="" type="checkbox"/>	teachers and above
Chestnut Elementary School	<input checked="" type="checkbox"/>	teachers and above

16.2 Using Lecture Capture

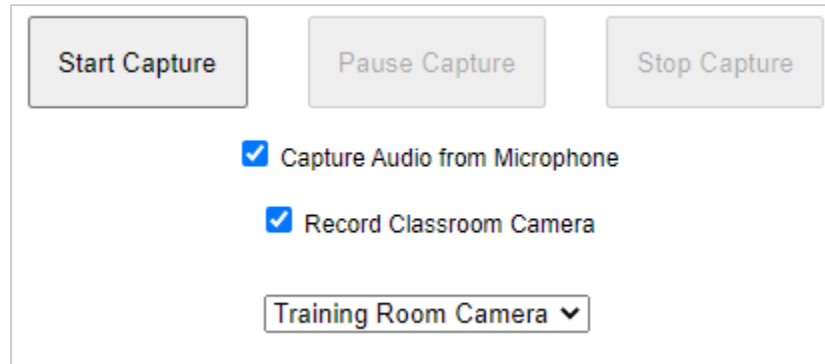
16.2.1 Making a Screen/Lecture Recording

1. Navigate to the Lecture Capture page using the Dashboard icon or by going to **Modules > Lecture Capture**



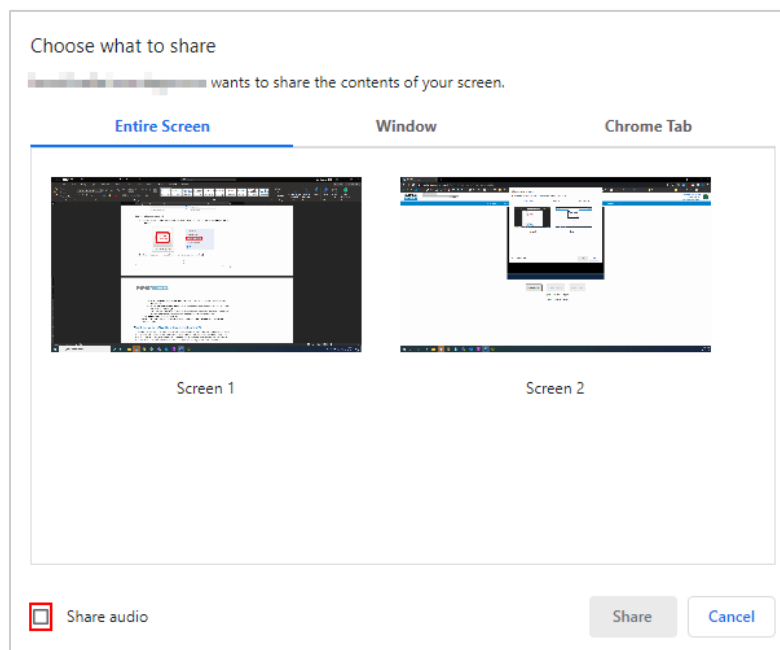
2. Select the options you would like for the lecture capture recording
 - a. Select **Capture Audio from Microphone** to record audio from your computer's default audio input
 - b. (Optional) To include footage from a classroom camera configured in Pathways SM, select **Record Classroom Camera** and select a camera from the dropdown to add a room camera to the recording

Note: For camera options to be available, the user must select a room configured in Pathways SM containing a device with the SVS Source of “Cameras”



The interface contains three buttons at the top: 'Start Capture', 'Pause Capture', and 'Stop Capture'. Below these are two checked checkboxes: 'Capture Audio from Microphone' and 'Record Classroom Camera'. At the bottom is a dropdown menu currently showing 'Training Room Camera' with a downward arrow.

3. Click **Start Capture** to begin recording
4. Select the view you wish to share when prompted
 - a. Select **Entire Screen** to record everything displayed on the selected screen
 - b. Select **Window** and choose an application window to record only activity in that window
 - c. Select **Tab** and choose a browser tab to record only activity in the selected tab
 - d. (Optional) Select **Share audio** to share desktop audio output when capturing the entire screen, or browser tab audio when capturing from a browser tab

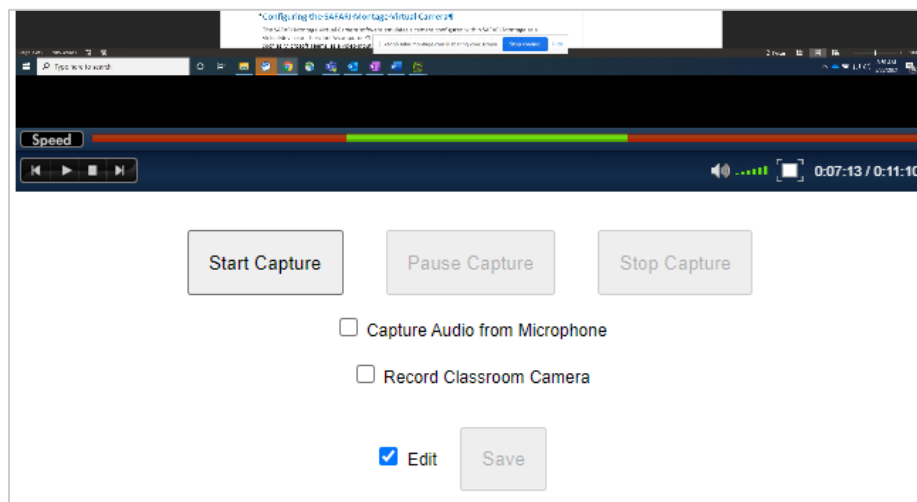


The dialog box is titled 'Choose what to share' and includes the text 'wants to share the contents of your screen.' It has three tabs: 'Entire Screen' (selected), 'Window', and 'Chrome Tab'. Under 'Entire Screen', there are two preview thumbnails labeled 'Screen 1' and 'Screen 2'. At the bottom left is a checkbox labeled 'Share audio' which is currently unchecked. At the bottom right are 'Share' and 'Cancel' buttons.

Note: The exact presentation of this prompt may vary by browser

5. Click **Stop Capture** to end the recording
- Warning: Do not close the browser window or tab containing the Lecture Capture page before stopping the recording and saving. Doing so will end the recording, and any recorded media will be lost.
6. (Optional) Select the **Edit** checkbox to enter trimming mode
 - a. Drag the scrub bar start and end points to select which portion of the recording to keep
 - b. Uncheck **Edit** to exit trimming mode and commit the trim

Note: The trim cannot be undone



7. Click **Save** to upload your capture and be taken to the Easy Upload page to complete metadata entry for your capture.
8. Make any changes and add any additional metadata before clicking **Save** to save your recording to the LOR

Easy Upload

Title: Desktop Recording 2021-05-27 09:12:21

Description: Desktop Capture Recording Recorded: 2021-05-27 09:12:21
Max: 2,000 characters

Grade Range: Pre-K to Adult

Share to School: ☐ All Users ☐ Teachers & Staff

Media: H.264 H.264 2048x1152, 3.48 mbps
Running Time: 00:03:47

[Advanced Meta-Tagging](#)

Save **Save & Add Standards Correlations**

17 Universal Live Broadcaster (ULB)

Requires the SAFARI Montage Universal Live Broadcast Controller license

Universal Live Broadcaster (ULB) servers convert traditional multicast and unicast video streams requiring specialized playback support to a universally viewable HTML5 playable format to support users on any desktop, laptop, or mobile device.

The Universal Live Broadcaster eliminates the need for plugins or third-party software to view live streams, dynamically increasing the reach of live streaming to support mobile devices, such as iPads, iPhones, Android™ tablets and phones, Chromebooks™, Windows® tablets as well as the latest HTML5- only desktop browser versions.

The Universal Live Broadcast server supports up to 10 streams in up to 1080p resolution serving up to 750 unique client viewers. The single-stream Broadcast Encoder provides a cost-effective option for supporting a single stream in 1080p to up to 125 unique client viewers.

17.1 Settings

Each ULB is configured independent of the SAFARI Montage controller. When configuring a ULB server for the first time, follow the instructions in **First Time Setup** to configure the ULB server's network settings.

When logging into a ULB server, the Settings page is the default page. Functions specific to the ULB, including pairing the ULB with a SAFARI Montage controller are configured here.

Setting	Description
Dedicated ULB Server	Marks this server as a dedicated ULB. This setting is set by having the Add-On Module SAFARI Montage Universal Live Broadcast Server license on the server and cannot be changed manually.
This Server Broadcasts	Indicates this server is active and ready to be used for broadcasting. If this is not selected, the controller will not use this ULB for streams.
Broadcast Count	Sets the maximum number of streams this server will support. Multi-stream ULB servers support up to 10 streams. Single-stream ULB servers and controllers support one stream and cannot be changed.
SAFARI Montage Host Name	The hostname of the SAFARI Montage controller
External FQDN	The fully-qualified domain name used by this ULB in external communications
Enable SSL Support for Streams	Indicates that streams should be transmitted using TLS/SSL encryption, and should be enabled if an TLS/SSL certificate is installed on the ULB under Admin > Settings > SSL

Setting	Description
On Demand Broadcast Limit (Controller Only)	Specifies the maximum length of an on-demand ULB broadcast triggered by clicking the Start Broadcasting button on the stream title page. This setting is only present on the SAFARI Montage Controller.

17.2 Broadcast Servers

The broadcast servers page provides a listing of active and inactive ULB servers assigned to this controller, along with basic status information.

Field	Description
Active	Marks this server for use by streams
Version	The version of SAFARI Montage running on this ULB
Serial Number	The six-digit serial number of the server. Provide this to technical support when troubleshooting this ULB
Hostname	The hostname configured on the ULB
IP	The IPv4 address configured on the ULB
Description	The Server Name as configured on the ULB server under Admin > Settings > System
Time Zone	Which time zone the ULB is configured for under Admin > Settings > Time
NTP Servers	The list of NTP servers the ULB is configured to synch with under Admin > Settings > Time
720p/Native	How many streams at 720p or above this ULB is broadcasting
576/Other	How many streams at 576p or below this ULB is broadcasting
Status	The length of time since the last communication with the ULB server
Clear	Deletes the ULB server from the list. If the ULB server is active and configured with this controller's hostname, the ULB server will reappear shortly after.
Assign School	Allows restricting this ULB to use by a single school

17.3 Broadcasts

This page provides a list of streams configured for broadcast through the ULB. The information is divided into two sections. **Feeds** provides information about the configuration of the SVS stream. **ULB Servers** provides information about the ULB hosting the stream.

Field	Description
Name	The name of the SVS stream. Clicking this link will bring you to the SVS stream's configuration page.
Assigned School (Feeds)	Which school the stream is assigned to from the School dropdown on the stream configuration page.
Continuous Support	True if the SVS stream is marked Continuous in the Universal Live Broadcaster section of the stream configuration page.
SN	The six-digit serial number of the ULB server hosting the stream. Provide this to technical support when troubleshooting this ULB stream.
Assigned School (ULB Servers)	Which school this ULB server is assigned to. If the ULB is not assigned to a school, this will be <i>All</i>
Profile	The resolution the ULB server is outputting.
Duration	How long this stream has been broadcasting from the ULB
Event	Opens a presentation view of the ULB stream in a new browser tab
Stop	Ends the stream. If the stream is configured as continuous, the stream should reappear within ten minutes

Pathways SM™

Pathways SM provides administrators and teachers with integrated control of classroom and district-shared devices as well as enterprise and ad-hoc delivery of content throughout the district.

At the district level, Pathways SM enables administrative personnel to manage the schedule for shared district devices, such as a head-end cache of Digital TV Tuners or a conference room PTZ camera used for remote lectures. Districts can also centrally manage and control classroom projectors to manage bulb life through the All-Off feature and monitor bulb and filter status. When used in conjunction with SAFARI Montage® Endpoint and Digital Signage products, Pathways SM expands to offer school-wide video announcements such as live school news or emergency messages (video and audio) through the All-Call feature.

In the classroom, Pathways SM™ provides teachers with full-function control of both remote and local classroom appliances—including audio systems, projectors, and other display devices—all within a unified interface that simplifies technology in the classroom for even the most technology-reluctant teachers. Devices are defined by the user and their assigned rooms so that teachers view only the media resources which they need to see by using the virtual remote control, making it incredibly simple for teachers who move from one classroom to another throughout the school day.

18 Rooms

Rooms are virtual representations of classrooms, conference rooms, and other locations within the school or district. Room management and creation is accessed via **Admin > Pathways SM > Rooms**. Each room can be assigned multiple controllable devices, users, and automation scripts to support classroom device control in support of centralized video announcements.

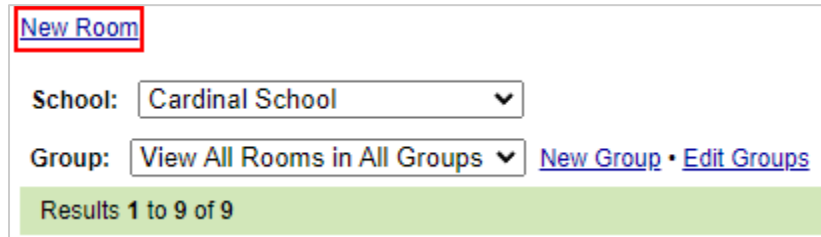
18.1 Room Management

Rooms are organized and displayed by school and room group. In the table, the name of the room is displayed along with options to **add to group**, **edit**, and **delete** that room. New room groups may be added by clicking the **New Group** link, and existing groups viewed and changed by clicking **Edit Groups**.

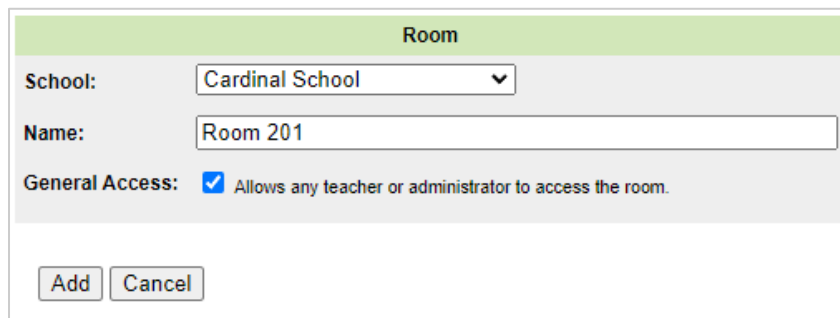
New Room		
School:	<input type="text" value="Cardinal School"/>	
Group:	<input type="text" value="View All Rooms in All Groups"/>	New Group • Edit Groups
Results 1 to 9 of 9		
Name		
FETC Meeting Room	add to group	edit • delete
Meeting Room - Dealer	add to group	edit • delete
Meeting Room - Tim	add to group	edit • delete
Room 409	add to group	edit • delete
Room 7R	add to group	edit • delete
Room 8B	add to group	edit • delete
Room 8E	add to group	edit • delete
Room 9E	add to group	edit • delete
Science Lab	add to group	edit • delete

18.2 Create a New Room

1. Navigate to **Admin > Pathways SM > Rooms** and click the **New Room** link at the top of the page.



2. Select the **School** this room belongs to from the dropdown menu.
3. Give the room a **Name** to identify the room in SAFARI Montage.



4. Select whether this room is for **General Access**. If General Access is selected, any teacher or administrator may access this room. If not, specific users can be assigned to the room after the room has been created.
5. Click **Add** to create the room.

Repeat these steps to create additional rooms. After the rooms have been created, devices, automation scripts, and users may be assigned to each room by clicking **edit** on the room in the room list.

18.3 Edit an Existing Room

1. Navigate to **Admin > Pathways SM > Rooms** and click **edit** for the room you wish to change.

[add to group](#) • [edit](#) • [delete](#)

2. In addition to changing the **School**, **Name**, and **General Access** permission for the room, **Assigned Devices**, **All-Call** scripts, and **Assigned Users** may now be added or changed.
3. Once changes have been made, click **Save** to save changes and return to the room management screen.

18.3.1 Add and Manage Devices

To add a device to the room, the device must first have a **Button Set** configured under **Admin > Pathways SM > Button Set Management**. See section [20.1 Managing Button Sets](#) for more information about configuring button sets. Endpoints are assigned to rooms under **Admin > Pathways SM > Classroom Media Controllers/Endpoints** and are covered in section [21 Endpoints](#).

1. On the **Assigned Devices** tab, click the **Add Device** button. A pop-up window will open.

Assigned Devices					
					Add Device
Type	Room Device	Button Set	IP Address		Delete
1. Projector	HITACHI CP-WX4021N	HITACHI CP-WX4021N		Edit	✕
2. Projector	Hitachi iPJ-AW250N	Hitachi iPJ-AW250N		Edit	✕
3. Device	Blu-ray	Blu-ray		Edit	✕
4. Device	News Camera	PTZ Camera		Edit	✕
SVS URL:				Advanced SVS	

2. Select whether this is a Controllable **Device** or **Projector** from the **Type** dropdown.
3. Select the **Button Set** for this device from the dropdown.
4. Provide the **IP Address** for sending commands to this device. This address may be the device itself or a source controller.
5. (Optional) Provide the **SVS URL** of the camera stream for this device.
 - a. (Optional) Select the **Source** type for the SVS stream.
 - b. (Optional) Check the **Requires Reservation** to require users to reserve the SVS stream before use.
6. Click **Add**

The new device will appear in the list under the **Assigned Devices** tab. To change the settings of an existing device, click **Edit** for that device. To remove a device from the room, click the **Red X button** under the **Delete** column.

18.3.2 Assign Users to the Room

Rooms are only accessible to users assigned to the room under the **Assigned Users** tab unless **General Access** has been selected, in which case any teacher and above user can access the room controls. Previously assigned users may be removed from the room access list by clicking the **remove from room** link next to their name. To add a new user to the room:

1. Click the **Add Users** button.
2. Search for the user by their first or last name.
3. Click **add to room**.

Room • Add Users

Search User:

• Searched for "Moreno". [Reset Search](#)

Results 1 to 2 of 2

Moreno, Altair	add to room
Moreno, Beatriz	add to room

Close Window

18.3.3 All-Call Scripts

An [All-Call](#) script must be configured for any room containing an Endpoint if that Endpoint is to receive an All-Call. There are two types of All-Call script: a **Start Script** which sends commands to room devices when an All-Call begins and is to prepare the room to receive an All-Call video broadcast, and a **Stop Script** which sends commands when an All-Call ends. Both scripts must be present to receive the All-Call. To configure the Start and Stop Scripts:

Note: See section [21.5: All-Call](#) for an in-depth discussion on All-Call functionality.

1. Navigate to **Admin > Pathways SM > Rooms** and click **Edit**
2. Click the **All-Call Scripts** tab
3. Click **Edit All-Call Start Script**

4. Ensure the script contains at least the **CMC** item selected from the **Type** dropdown

Note: The CMC script item tells Endpoints in that room to start (or stop when used in a Stop Script) displaying the triggered All-Call when the All-Call signal is received. Without this item, the Endpoint will ignore the All-Call signal.

5. Add additional controls as necessary for other devices in the room that need to activate or act with the All-Call
 - i. Select either **Controllable Device** or **Projector** from the **Type** dropdown
 - ii. Select the device from the **Device** or **Projector** dropdown as appropriate

- iii. Select a command from the displayed button set

Room: [Room 409](#)

Edit All-Call Start Script

Type	Name	Command
CMC	Room 409	All-Call remove

Add New Line

Type:

Projector:

6. Use the arrows to change the order of the script actions if necessary, with the top most item executing first
7. Once the script is configured, click the link at the top to return to the room page.

Room: [Room 409](#)

Edit All-Call Start Script

Type	Name	Command
Projector	Hitachi iPJ-AW250N	remove
PAUSE	10 Seconds	remove
Projector	Hitachi iPJ-AW250N	remove
CMC	Room 409	All-Call remove

Add New Line

Type:

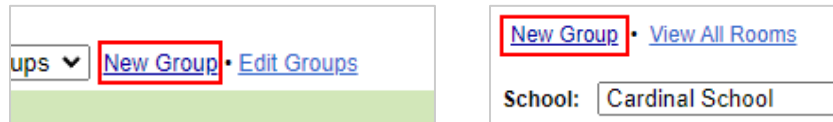
8. Repeat the above steps for **Edit All-Call Stop Script**, keeping in mind that this script activates when the All-Call ends, and typically is used to revert the room back to the previous state required for normal classroom instruction.

18.4 Room Groups

Room groups provide an additional level of organization between the school and individual rooms. Each group can represent any type of logical organization of rooms within the school. Various functions within Pathways SM, for example All-Calls, can be applied to a group or groups of rooms rather than the entire school or district.

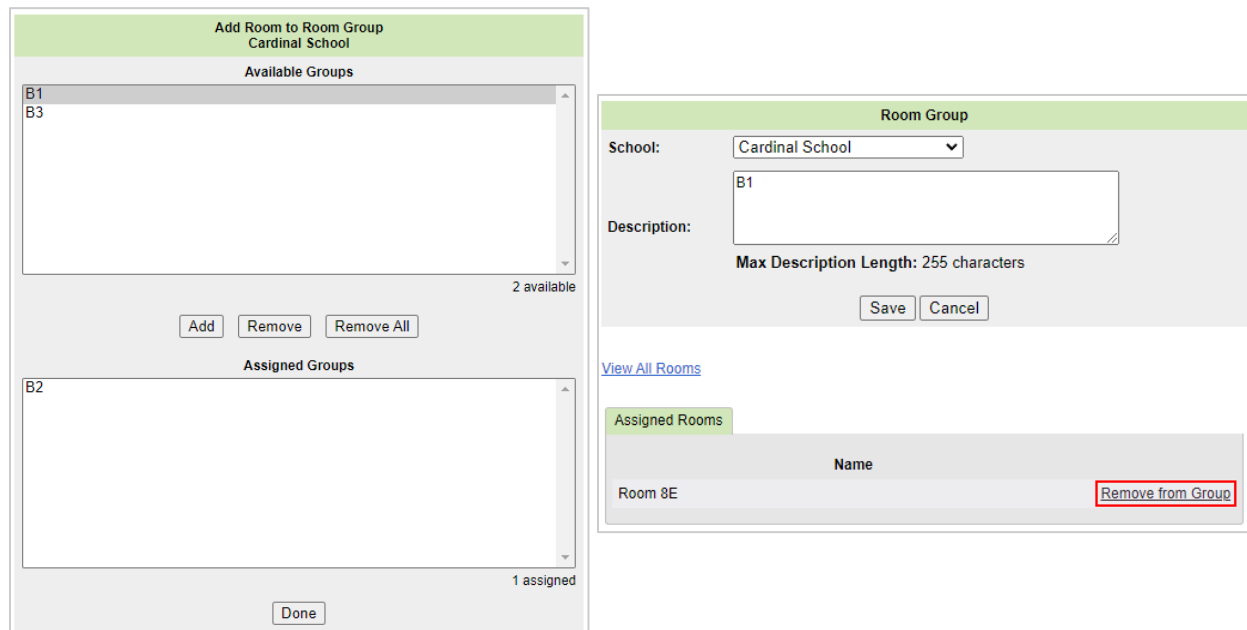
Existing groups may be managed by clicking the **Edit Groups** link on the Room Management screen. To create a new room group:

1. Click the **New Group** link on the Room Management or Group Management screen



2. Select which **School** the rooms in this group belong to
3. Add a **Description** of the group. (Example: "North Hallway," "First Floor," "Science Labs.")
4. Click **Add** to create the group.

Once the Room Group is created, add individual rooms to the group by clicking the **add to group** link on the Room Management screen, selecting one or more available groups, and clicking **Add**. Rooms may be removed from the group in the same way, or by clicking the **Remove from Group** link when editing an existing group.



19 Controllable Devices and Button Sets

Controllable Devices provides a system of managing the complete catalog of district controllable devices from within the SAFARI Montage interface. Depending on specific device capabilities, SAFARI Montage can control devices over the network directly or via a complementary controller such as a GlobalCache iTach infrared or serial-based controller.

19.1 Managing Button Sets

Before configuring any controllable device, a button set must be defined for that device. Button sets are managed under **Admin > Pathways SM > Button Set Management**. Each button set can support up to 30 buttons. Button sets can be filtered by device type and controller type, and exported as a Montage Button Set XML file (*.mbsx).

[New Button Set](#) | [Import/Pre-Defined Button Sets](#)

Device Type:

Source Controller Type:

Results 1 to 25 of 25

	<p>Name: Axis-1054 export • edit • delete</p> <p>Controller Type: URL</p> <p>Device Type: Camera</p>
--	---

19.1.1 Imported and Pre-Defined Button Sets

SAFARI Montage contains pre-configured button sets for select devices and supports creating button sets from an imported button set XML file.

Button Set File Upload

Upload File: No file chosen

Pre-Defined Button Sets

Device Type:

Source Controller Type:

Button Sets

	<p>Name: 812A0N-1 camera import</p> <p>Controller Type: API</p> <p>Device Type: Camera</p> <p>File Name: 812A0N-1_camera.mbsx</p>
--	---

To use a pre-defined button set:

1. Click the **Import/Pre-Defined Button Sets** link at the top of the **Button Set Management** page.
2. Locate your device in the list of **Button Sets** and click **import**.

This button set is now available on the Button Set Management page, under the same name as displayed in the pre-defined button sets list.

To import a button set from a previously exported XML file:

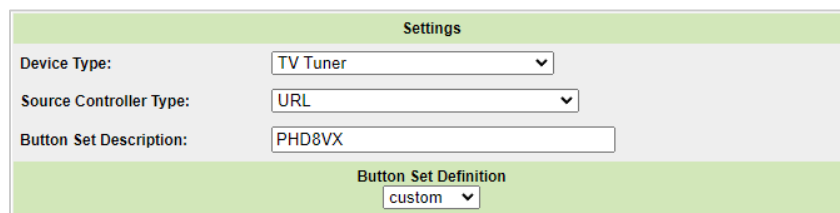
1. Click the **Import/Pre-Defined Button Sets** link at the top of the **Button Set Management** page.
2. Click **Choose File** and select the file from your computer.
3. Click **Upload**

The button set defined in the XML file will now appear on the Button Set Management page under the same name as the originally exported button set.

19.1.2 Creating New Button Sets

Administrators can also create their own button sets for controllable devices.

1. Click the **New Button Set** link at the top of the **Button Set Management** page.
2. Select the **Device Type** from the dropdown list.
3. Select the **Source Controller Type** for the device from the dropdown.
4. Enter a **Button Set Description** to identify the button set.



The screenshot shows a web form titled "Settings" with a light green header. Below the header, there are three rows of form fields: "Device Type:" with a dropdown menu showing "TV Tuner", "Source Controller Type:" with a dropdown menu showing "URL", and "Button Set Description:" with a text input field containing "PHD8VX". Below these fields is a section titled "Button Set Definition" with a light green background, containing a dropdown menu with "custom" selected.

5. Select **custom** under **Button Set Definition** create a new button layout or select a previously created button layout based on the device type chosen previously.
6. Select an action/event button from the right-hand grid and drag it to the desired position in the empty grid on the left.
Note: Once a button is placed on the left-hand grid, it cannot be relocated. To change the location, the button must first be deleted by clicking Delete Button and added again
7. Configure the newly placed button. The active button is highlighted in green on the grid.
Note: Options may differ based on the selected Source Controller Type
 - a. Set a **Button Name** or use the default name provided.
 - b. Select the **Button Type** from the dropdown:
 - i. **Standard** emulates a single press of a controller button.
 - ii. **Repeat** emulates pressing and holding a button as a toggle. Clicking the button once will repeat the signal sent to the device until clicked a second time.
 - c. Enter the corresponding **Data** string to transmit to the device on button press. Refer to your device controller documentation for the expected syntax of this data.
 - d. (Optional) If this button is meant to switch display inputs in the Classroom Portal, select the **Teacher's PC** or **Teacher's Laptop** context from the dropdown. When the corresponding tile is selected in the Classroom Portal, the command is sent to the device.
8. Repeat steps 6 and 7 for each button on the device.

- ## Button Set Definition

The new button set is now available under Button Set Management for configuring Controllable Devices.

19.2 Managing Controllable Devices

Managing controllable devices is done through the **Admin > Pathways SM > Controllable Devices** page. The devices list can be filtered by **School** and **Device Type**. Each device belongs to a single room within a school and is associated with a single button set for controlling the device. A room and button set must exist before a device can be configured.

[New Device](#) | [Import Devices](#) | [Export All Devices](#) | [Export School Devices](#)

School:

Cardinal School

Device Type:

-- Select One --

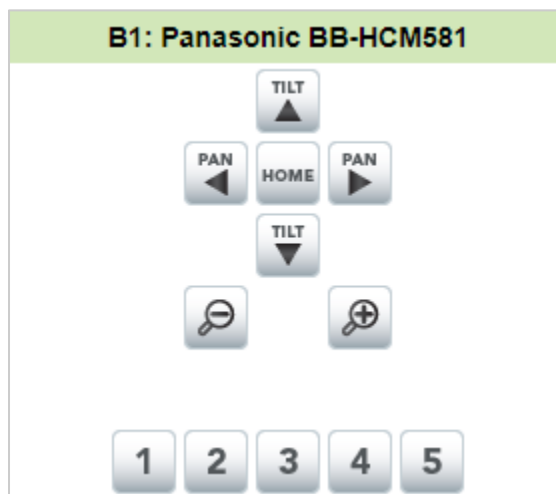
Results 1 to 7 of 7

Device Name	Room	
B1: Panasonic BB-HCM581	Room 8E	test • duplicate • export • move • edit • delete
Blu-ray	Room 409	test • duplicate • export • move • edit • delete
Meeting Room - Tim: Educam 360-A Camera	Meeting Room - Tim	test • duplicate • export • move • edit • delete
Meeting Room - Tim: MS-450	Meeting Room - Tim	test • duplicate • export • move • edit • delete
News Camera	Room 409	test • duplicate • export • move • edit • delete
TV Tuner: PHD8VX - Booth B1	Room 8E	test • duplicate • export • move • edit • delete
TV Tuner: PHD8VX - Meeting Room - Tim	Meeting Room - Tim	test • duplicate • export • move • edit • delete

Each device has six functions associated with managing it: test, duplicate, export, move, edit, and delete.

Test

The **test** link brings up a window showing the button set for that device. Click the buttons to send the configured command to the device and verify the expected response.



Duplicate

The **duplicate** link opens a New Device dialogue with the same settings as the selected device pre-populated in the same room. This is useful for rooms which may have multiple devices of the same

model, such as multiple TV tuners of the same model which differ only in the IP Address of the device or source controller.

Room: Room 8E

Type:	Device
Room Device Name:	<input type="text" value="Copy of B1: Panasonic BB-HCM581"/>
Button Set:	<input type="text" value="Panasonic BB-HCM581"/>
IP Address:	<input type="text" value="10.50.25.50"/>
SVS URL:	<input type="text"/>
SVS Source:	<input type="text" value="-- Select One --"/>
Requires Reservation:	<input type="checkbox"/>

Export

Clicking **export** downloads an XML file with the controllable device's configuration, which can be uploaded later using the **Import Devices** link at the top of the page. Multiple devices can be exported to the same XML file using the **Export All Devices** and **Export School Devices** links at the top of the page. **Export All Devices** creates a file with configurations for all devices configured in the system, while **Export School Devices** only exports devices configured for the selected school.

Move

The **move** link provides options for moving a device to a different room. The current room is displayed in the **Room** field.

1. Select the **School** this device resides in from the dropdown.
2. Select the room this device is moving to from the **Move To Room** dropdown.
3. Click **Move**

B1: Panasonic BB-HCM581

Type:	Device
Room:	Room 8E
School:	<input type="text" value="Cardinal School"/>
Move To Room:	<input type="text" value="Room 409"/>

Edit

The **edit** link provides access to the settings of the controllable device. The device name, associated button set, IP address, SVS URL and source, and reservation requirement can all be modified from this screen. Devices cannot be moved to a different room from this screen.

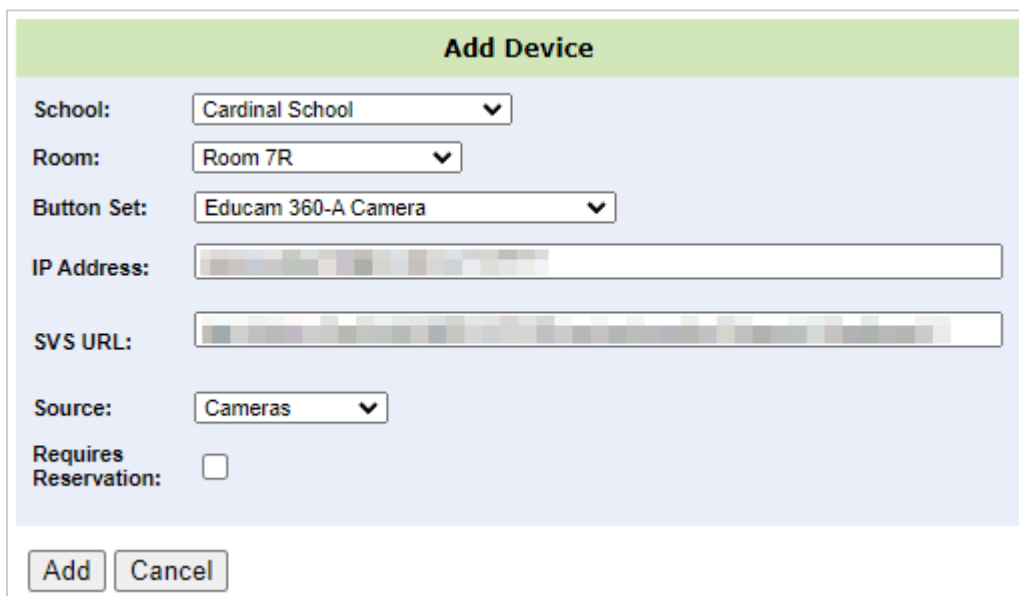
Delete

Clicking **delete** prompts the user to remove the device configuration. Click **Ok** when prompted to delete the device configuration from SAFARI Montage.

19.2.1 Configuring a New Device

Before configuring a new device, make sure that a room and button set exists for the device. Device configuration cannot be completed without a room and button set.

1. Click the **New Device** link at the top of the **Controllable Devices** management page.
2. Select a **School** and **Room** from the dropdown menus.
3. Select the **Button Set** that corresponds to the device being configured.
4. Input the **IP Address** of the device or source controller.
5. If the device produces a video stream output, provide the camera's stream URL in the **SVS URL** field and select the **Source** type from the dropdown.
6. (Optional) Select **Requires Reservation** to require users reserve the device before use.
7. Click the **Add** button to save the configuration.



19.3 Projector Management and Direct IP Control

Many models of projector support communication directly via IP. SAFARI Montage offers additional management options for select projectors that support this control method. To utilize these features, select **Direct IP Controlled Projector** from the dropdown when creating the projector's **Button Set**. Controllable devices using this type of button set are viewable under **Admin > Pathways SM > Projector**

Management. This management screen offers additional information on the power **Status** of the projector and the **Bulb Status**.

In addition to features common to all controllable devices, Projector Management offers a **status** link for each projector. Clicking this link refreshes the **Status** and **Bulb Status** reading for the chosen projector, displaying the projector's power state and bulb life if the projector communicates this information to SAFARI Montage. The **Check Projectors** link at the top of the page performs this action on all configured projectors. The **All On** and **All Off** links allow the administrator to change the power state of all projectors in the selected school or room group. **Projector Status File (csv)** downloads a CSV file containing the status information of all configured projectors.

Note: Direct IP Control utilizes API control to send commands to and receive telemetry from projectors. To accomplish this, the projector must be one of the [models supported by SAFARI Montage](#). If you do not see your model, contact your SAFARI Montage Account Executive about integrating your projector model with SAFARI Montage.

19.3.1 Creating Direct IP Control Button Sets

When creating button sets for Direct IP Controlled Projectors, several menu options in button set creation change.

1. Click the **New Button Set** link at the top of the **Button Set Management** page.
2. Select **Direct IP Controlled Projector** from the **Device Type** dropdown list.
3. Select one of the supported projectors from the **Projector Type** dropdown.
4. Enter a **Button Set Description** to identify the button set.

Settings	
Device Type:	Direct IP Controlled Projector
Projector Type:	Viewsonic PJD6221
Button Set Description:	Viewsonic PJD6221

5. Select **custom** under **Button Set Definition** create a new button layout or select a previously created button layout based on the device type chosen previously.
6. Select an action/event button from the right-hand grid and drag it to the desired position in the empty grid on the left.
Note: Once a button is placed on the left-hand grid, it cannot be relocated. To change the location, the button must first be deleted by clicking Delete Button and added again
7. Configure the newly placed button. The active button is highlighted in green on the grid.
 - a. Set a **Button Name** or use the default name provided.
 - b. Select the **Button Type** from the dropdown:
 - i. **Standard** emulates a single press of a controller button.
 - ii. **Repeat** emulates pressing and holding a button as a toggle.
 - c. Select the **Function** to assign to this button from the dropdown.
 - d. (Optional) If this button is meant to switch display inputs in the Classroom Portal, select the **Teacher's PC** or **Teacher's Laptop** context from the dropdown. When the corresponding tile is selected in the Classroom Portal, the command is sent to the device.
8. Repeat steps 6 and 7 for each button on the device.

- Click **Set** to save the Button Set.

Button Set Definition

custom

ON

OFF

Button Configuration

Button Name:

Button Type:

Function:

Classroom Portal Icon:

Delete Button

Drag and drop a button to the grid to add device functionality to this controller. Once added, clicking on a button will allow you to change button configuration elements such as event codes, button names and types. Once added, clicking on a button and choosing "Delete Button" will remove it from the grid.

Set Cancel

20 Endpoints

The SAFARI Montage Endpoint complements displays and projectors by providing a fully managed platform for the delivery of district-wide digital signage, broadcasts, and classroom-based digital media and live streams.

20.1 Endpoint Management

Endpoint management is handled under **Admin > Pathways SM > Classroom Media Controllers/Endpoints**. Endpoints are displayed by **School** and **Room Group** and status information for each Endpoint is displayed.

The **Description** displays the name of the Endpoint and the room to which it is assigned. It can be expanded or collapsed to display further details about the Endpoint, including its **Serial Number**, **IP**

Address, and it's **Last Communications** with the SAFARI Montage system. If the Endpoint stops communicating with the system, this time will turn red, and the **Status** will change from *ok* to *not*

[New CMC Group](#) | [View CMC Groups](#) | [New Endpoint Group](#) | [View Endpoint Groups](#) | [All On](#) | [All Off](#) | [Update Screen Shots](#) | [New SAFARI Montage Endpoint](#) | [SAFARI Montage Endpoint Settings](#)

School:


Room Group:

Show: per page

☒ Force IP address when communicating

Results 1 to 1 of 1

School	Version	Description	Status
000.000.054	G1615 in room "102"		ok add to endpoint group • IP • assign sign • push sign • edit • delete



Serial Number: JZ83NV2BX17900278
Type: SAFARI Montage Windows Endpoint
Location: 102
IP Address: [10.20.0.68](#)
Hostname: JZ83NV2BX179002
User:
Last Communications: 4 mins 11 secs

communicating.

20.1.1 Endpoint Groups

Endpoint groups provide a method to logically group Endpoints for ease of management. These groups are independent of Endpoint room assignments or room groups. Click the **View Endpoint Groups** link at the top of the Endpoint management screen to view configured groups.

[New CMC Group](#) | [View CMC Groups](#) | [New Endpoint Group](#) | [View Endpoint Groups](#) | [All On](#)

School:

Room Group:

Show: per page

Click on the **Group Name** of the Endpoint group to view only those Endpoints on the Endpoint Management screen. The table additionally displays what school this group belongs to and how many Endpoints are in the group.

[New Endpoint Group](#) | [View All CMCs / Endpoints](#)

Results 1 to 2 of 2

Group Name	School	# of Endpoints	
Cafeteria	Chestnut Elementary School	2	edit • delete
Hallway	Chestnut Elementary School	4	edit • delete

To create a new Endpoint group, click the **New Endpoint Group** link on either the View Endpoint Groups or Endpoint Management screen. Select a **School**, and give the group a **Group Name** before clicking **Add**.

[New CMC Group](#) | [View CMC Groups](#) | [New Endpoint Group](#) | [View Endpoint Groups](#) | [All On](#)

School:

Room Group:

Show: per page

Endpoint Group

School:

Group Name:

Max Description Length: 255 characters

To add an Endpoint to an existing group, return to the **Classroom Media Controllers/Endpoints** page and click the **add to endpoint group** link for the Endpoint you wish to add.

--- [add to endpoint group](#) • [ID](#) • [assign sign](#) • [push sign](#) • [edit](#) • [delete](#)

Click the **edit** link for a group when on the **View Endpoint Groups** page to edit the school, group name, or remove Endpoints from the group. To remove an Endpoint from the group, click the **Remove from Group** link for the Endpoint you'd like to remove.

Assigned Endpoints				
Serial Number	IP	Host	Type	Description
M15WL00250164315	10.20.0.52		SAFARI Montage Endpoint	Cafeteria Menu Display Remove from Group

20.1.2 Endpoint Settings

Clicking **edit** for an Endpoint opens its settings page. Here the **Endpoint Name**, **Assigned School**, **Assigned Room**, **Default User**, **License Type**, **Default Display** type, and **Select Sign** from the Digital Signs created to display on the Endpoint. After making changes, click **Save** to commit the changes.

Setting	Description
Endpoint IP Address	The IP address of the Endpoint on the network. G1615 and G1620 Endpoints set this automatically, and this should not be changed for these Endpoints.
Endpoint Name	The name of the Endpoint displayed on the Endpoint Management description.
Assigned School	The school this Endpoint resides in. This informs what rooms are available for assignment.
Assigned Room	Defines the room this Endpoint resides in. Endpoints must be assigned to a room to receive All-Call commands.
Default User	To access SVS streams the Endpoint uses the selected user for access permissions. The stream must be accessible to this user to display on the Endpoint. By default, this is a <i>student</i> user.
License Type	Allows switching between the Basic and Classroom Display license if Classroom Display licenses are available.
Default Display	Allows changing between the Digital Signage and Channel Guide displays. Note: This is set to Classroom Portal when a Classroom Display license is selected.
Select Sign	Selects which Digital Sign displays by default on this Endpoint. Click Preview to preview the sign in a new window. Click Push Sign to immediately display the selected sign on the Endpoint.

20.2 Endpoint Configuration

Endpoint configuration within SAFARI Montage varies depending on the model of Endpoint. Refer to the guides below based on the model you are configuring.

[SAFARI Montage G1615/G1620 Endpoint](#)

[SAFARI Montage G1575 Endpoint](#)

20.3 Digital Signs

A key feature of SAFARI Montage Endpoints is displaying Digital Signs on their attached display. Digital Signs can be customized to display various types of information, menus, or media from the SAFARI Montage system. Digital Signs can be created and managed by Administrators or users with the Digital Signage Administrator role within SAFARI Montage. Please refer to the [Endpoint Digital Signage Administrator Role Guide](#) for more information on creating, managing, and scheduling Digital Signs.

20.4 Classroom Portal

From **Admin > Pathways SM > Classroom Portal**, administrators can configure the layout and functions of the Classroom Portal displayed on Endpoints configured with the Classroom Portal license. Portal layouts are configured per school, with the **District Default** acting as the template from which all other portal

Classroom Portal Configuration

Metropolitan Public Schools (District Default) ▼

SAFARI MONTAGE

Channel Guide

LIVE STREAM

Principal's Update

School News

School News (Live)

Superintendent's Update

Teacher's Laptop

Teacher's PC

HOME

Icon Configuration

Icon Label :

Icon Action : Live Stream

Live Stream : ▼

Delete Icon

Set Reset to Default Cancel

configurations are built. Clicking the **Reset to Default** button will change a school's configuration back to the district default.

Icons can be added to the grid by clicking and dragging the icon from the right-hand list of icons and can be repositioned on the grid in the same way. Refer to the list below for each icon's functions. Once the icons are placed on the grid and configured, click **Set** to save the arrangement.

Icon	Function
Channel Guide	Opens the N-DVR Channel Guide on the Endpoint.
Live Stream	Opens the live stream selected from the Live Stream dropdown for viewing on the Endpoint.

Icon	Function
Principal's Update	Opens the most recently uploaded learning object tagged as <i>Principal's Update</i>
School News	Opens the most recently uploaded learning object tagged as <i>School News</i>
School News (Live)	Opens the live stream selected from the Live Stream dropdown for viewing on the Endpoint. This is intended for use with School News streams.
Superintendent's Update	Opens the most recently uploaded learning object tagged as <i>Superintendent's Update</i>
Teacher's Laptop	When in a room with a device that has a button set containing a button assigned to the <i>Teacher's Laptop</i> icon, sends that command to the device when selected.
Teacher's Desktop	When in a room with a device that has a button set containing a button assigned to the <i>Teacher's Desktop</i> icon, sends that command to the device when selected.

20.5 All-Call

All-Calls provide an Administrator the ability to distribute emergency, general announcement information, or topical programming to SAFARI Montage Endpoints in individual or groups of classrooms, individual or groups of schools, or district-wide. School Administrators also have permission to manage All-Call functions for their individual school and rooms within their school.

An All-Call can send commands to the Controllable Devices within a Pathways SM Room using the Start and Stop scripts configured for that room. When an All-Call begins, the Start script can be configured to activate a projector, switch an input, turn on sound systems, or other tasks available in a device's button set. At the end of the All-Call, the Stop script can then return the room to the state it was in before the All-Call began. This gives the All-Call the ability to cut in at any time to deliver important information to students and staff.

Learning objects such as videos, audio files, and still images can all be sent out via All-Call to SAFARI Montage Endpoints, and live streams configured through Selective Video Streaming add the ability to bring IPTV broadcasts to all Endpoints for important live updates.

20.5.1 All-Call Management

All-Call management options are found under **Admin > Pathways SM > All-Call**. From the All-Call page, Administrators can manage the various All-Calls configured for the district. Use the Type drop down to filter between district **ALL-CALL**, **School Group**, **School**, and **Room Group** types of calls. The table displays information about each All-Call and options for managing those All-Calls.

[New All-Call](#)

Type:

Results 1 to 10 of 10

Name	ID	Type	# of Rooms	Status	
Ticker: Welcome to RTM 2020- Thanks for your attendance	cdd8cd23-5bf9-11ea-8d78-001e6733e2c1	Room Group Call	3	52 secs	start • edit • remove
Title: lockdown.jpg	06a30ed7-f4ee-11e9-bac8-001e6733e2c1	Room Group Call	3	14 secs	start • edit • remove
Ticker: Welcome to SAFARI Montage	eb0a59ce-bd60-11e1-bd5b-e0699569783d	Room Group Call	3	10 secs	start • edit • remove
Ticker: Welcome to SAFARI Montage	19497edb-b010-11e1-b0c7-e0699569783d	Room Group Call	3		start • edit • remove
Ticker: Welcome to SAFARI Montage	22ee5092-bd61-11e1-bd5b-e0699569783d	Room Group Call	1	6 secs	start • edit • remove
SVS: SM Broadcast Encoder	4d6a0584-5265-11ea-bb61-001e6733e2c1	Room Group Call	3	33 secs	start • edit • remove
SVS: SM Broadcast Encoder	e8f5c30f-7887-11e3-ac05-e0699569783d	ALL-CALL	19	26 mins 11 secs	start • edit • remove
SVS: SM Broadcast Encoder	4a13e2bd-7a3f-11e3-88c7-e0699569783d	Room Group Call	1		start • edit • remove
SVS: SM Broadcast Encoder	d1f4184c-7887-11e3-ac05-e0699569783d	ALL-CALL	19	1 sec	start • edit • remove
	f43b3d32-5111-11e1-947c-386077875eeb	ALL-CALL	19	45 secs	start • edit • remove

Field	Description
Name	The name column displays the Source Type and title of that source (e.g. SVS: Cardinal High News)
ID	A unique identifier of the All-Call used under specific circumstances.
Type	The type of All-Call as selected from the Type dropdown during creation.
# of Rooms	The number of rooms that will receive the All-Call when executed.
Status	Displays how long the All-Call has been running when the All-Call is active, and how long the All-Call was last run for if the All-Call is inactive.

The right most column contains three links for controlling the associated All-Call. While the All-Call is active, the links will be replaced with a single Stop link for ending the All-Call.

Start/Stop: Clicking Start executes the All-Call on Endpoints designated by the All-Call's scope. While the All-Call is active, the All-Call controls will change context to display a Stop link which can be clicked to end the All-Call and return the Endpoint to its default display. The page that appears will allow the Administrator to monitor the progress of the All-Call as the Start script for each room takes effect. Note: A room must be configured with both a Start and Stop script in order for the All-Call to take effect in that room.

Edit: Clicking the Edit link will allow an Administrator to edit the All-Call

Remove: Delete the All-Call

20.5.2 Creating a New All-Call

1. Navigate to **Admin > Pathways SM > All-Call** and click on the **New All-Call** link at the top of the page or choose a title or SVS stream and click the Add to All-Call button on the detail page
2. From the **Type** dropdown, select which type of All-Call to create

The screenshot shows a form titled "All-Call". It has fields for "Type:" and "ID:". The "Type:" dropdown menu is open, showing the following options: "-- Select One --", "ALL-CALL", "School Group Call", "School Call", and "Room Group Call". There is also an "Cancel" button visible.

- a. ALL-CALL: District All-Call that will be pushed to all Endpoints in the district
 - b. School Group Call: All-Call that will be pushed to all Endpoints in Schools within the designated School Group
 - c. School Call: All-Call that will be pushed to all Endpoints in the designated School
 - d. Room Group Call: All-Call that will be pushed to Endpoints assigned to rooms designated by the selected Room Group within the selected School
3. For School Group Calls, School Calls, and Room Group Calls, select the **School Group**, **School**, and **Room Group** as appropriate
 4. Select the **Source Type** if one has not already been selected

The screenshot shows the same "All-Call" form. The "Type:" dropdown is now set to "ALL-CALL". The "Source Type:" dropdown menu is open, showing the following options: "-- Select One --", "Selective Video Stream", "Digital Title", "CMC Text Ticker", and "CMC URL". The "ID:" field is also visible.

- a. Selective Video Stream: Specifies an SVS stream to send to the Endpoints as a full-screen display
 - i. Select the desired stream from the **Selective Video Stream** dropdown

- b. Digital Title: Allows the use of a video, image, or audio learning object for the All-Call

The screenshot shows the 'All-Call' configuration interface. It includes a dropdown for 'Type' (ALL-CALL), a dropdown for 'Source Type' (Digital Title), a text field for 'Digital Title' (Fabulous Frogs) with a red 'change' link, a text field for '# of Rooms' (19), and an 'ID' field. At the bottom are 'Save', 'Cancel', and 'Start' buttons. A note next to the 'Digital Title' field states: '(After selection, the all-call setup will start over)'.

- i. Click the **Change** link to be directed to the Search menu
 - ii. Search for the desired title and use the **All-Call** button on the title page to add it to the All-Call.
 Note: Selecting a title will reset the All-Call type. Ensure the right type of All-Call is configured before saving.
 Note: The add to All-Call button is available on eligible titles during any search, and may be used to start All-Call creation at any time
 - c. CMC Text Ticker and CMC URL (Legacy): Allows the display of a text ticker or web page on legacy Classroom Media Controller (CMC) units
 Note: The CMC Text Ticker and CMC URL options will not function on Endpoints
5. Click **Save** to create the All-Call
- a. To immediately start the All-Call after saving, click the **Start** button

21 Stream Reservations and Device Scheduling

21.1 Stream Reservations

Pathways SM provides stream reservation functions to SVS streams to limit the number of users connected to an SVS stream in situations where stream capacity needs to be managed for bandwidth, licensing, or other reasons.

Reservations are enabled for a stream by selecting the **Reservations** checkbox when creating or editing the stream. Selecting this requires that user's make a reservation for the stream and only allows the specified number of users to reserve the stream during a given period.

The screenshot shows the 'Stream Reservations' configuration section. It includes a 'School News' checkbox, a 'Reservations' checkbox checked with a value of 10, and a 'Controlled Devices' dropdown menu. A yellow warning box states: 'Require title to be scheduled and only allow x users. Maximum is 99. * Streams will not be available to remote schools when reservations are required.'

21.1.1 Managing Reservations

Reservations can be viewed under **Admin > Pathways SM > Reservations**. Only Administrator users can make the reservation. Teachers must request a reservation be made on their behalf and may view these reservations under **Modules > Pathways SM > Reservations**. A reservation must be created before users can be assigned to the reservation. To create a reservation:

1. Navigate to **Admin > Pathways SM > Reservations** and click the **Make a Reservation** link at the top of the page.
2. Select the **School** from the drop down.
3. Enter a **Title/Stream** name and click the **Search** button.
4. The **View Schedule** tab shows a list of streams found in the search. Click the box associated with the reservation to update the **Date** and **Time** for the reservation. Alternatively, click the name of the stream and select the time and interval manually.
5. (Optional) Select **Repeat Daily** if this stream reservation should repeat.
6. Click **Add**.

The screenshot shows the 'Create a Reservation Stream' form with the following fields:

- School:** Cardinal School (dropdown)
- Title/Stream:** Sharks (text input, Max Length: 255 characters)
- Date:** 04/04/2022 (calendar icon)
- Time:** 3:15 PM (dropdown), 15 minutes (dropdown)
- Repeat Daily:** ☐
- Source:** All Sources (dropdown)
- Buttons:** Search, Add, Cancel

Below the form is the 'View Schedule' tab, which shows 'Results 1 to 1 of 1'. The results table has columns for time slots and a row for the reservation:

	3:00 pm (15:00)	3:15 pm (15:15)	3:30 pm (15:30)	3:45 pm (15:45)	4:00 pm (16:00)	4:15 pm (16:15)	4:30 pm (16:30)	4:45 pm (16:45)
Sharks (10 users)								

A red box highlights the 'Sharks (10 users)' cell in the table.

Once added, the **Edit Reservation** menu opens to assign users.

1. Click the **Assigned Users** tab and click the **Add Users** button.
2. Search for a user by first or last name.

- Click **add to reservation** for the user.

Reservation • Add Users

Search User:

- Searched for "Anna". [Reset Search](#)

Results 1 to 3 of 3

Miller, Anna	add to reservation
--------------	------------------------------------

21.1.2 Accessing a Reservation

Users can find their reservations under **Modules > Pathways SM > Reservations**. Reserved streams appear in the **Today's Reservations** tab, along with their time. During the reserved time slot, users that have been added to the reservation can click the **Play** button to start the stream from the reservations page, or they can click the stream link to view that stream from its title page.

Date: [Expand All](#)

Today's Reservations

10:30 am to 10:45 am [Sharks](#)

[Sharks](#) (Internet)

21.1.3 Reservation Settings

The Reservation Settings menu defines the default reservation window (generally set to the school day) and reservation time interval (generally set to one class period). Reservations can still be placed outside of these times if requested.

Reservation Settings

Scheduling Start Time:

Scheduling End Time:

Scheduling Time Interval: (Standard class length)

21.2 Device Scheduling Control

Scheduling Control allows an Administrator to turn Controllable Devices on and off within a district or school on a scheduled basis. Schedules can be configured to run once, daily, or weekly. Scheduling Control is accessed through **Admin > Pathways SM > Scheduling Control**. This page displays information

on currently configured schedules, including the **Action** the schedule takes, what **Class** of device is affected, when the schedule will **Repeat**, what time the schedule is **Starting at**, the **Scope** of the schedule, and the **# of Rooms** affected.

[New Schedule](#)

View Scope: View All

Results 1 to 4 of 4

Action	Class	Repeat	Starting at	Scope	# of Rooms	
Turn Off	CMC	Daily	June 21, 2011 06:00:00 PM	Room Room 409	1	edit • remove
Turn Off	Projector	Daily	June 21, 2011 06:00:00 PM	Room Room 409	1	edit • remove
Turn On	Projector	Daily	June 21, 2011 11:00:00 AM	Room Room 409	1	edit • remove
Turn On	CMC	Daily	June 21, 2011 10:00:00 AM	Room Room 409	1	edit • remove

21.2.1 Create or Edit a Schedule

Creating a new schedule and editing an existing schedule share the same workflow:

1. Click the **New Schedule** link at the top of the page, or the **edit** link for an existing schedule.
2. Choose the **Device Class** for what type of device this schedule applies to.
3. Set the **Scope** of the schedule. The **# of Rooms** field displays how many rooms the chosen scope will affect:
 - a. **All** applies to all devices of this class across the district.
 - b. **School Group** applies to devices of this class in the schools of the selected school group.
 - c. **School** applies to devices of this class in the selected school.
 - d. **Room Group** applies to devices of this class in the selected room group.
 - e. **Room** applies to devices of this class in the selected room only.
4. Select the **Action** to perform, turning the device on or off based on the selection.
5. Select how frequently the schedule will **Repeat**
6. Set the **Time** the schedule takes place.
7. Click **Save** to add the schedule.

Schedule Device Action

Device Class: Projector

Scope: School

School: Cardinal School

Action: Turn Off

of Rooms: 8

Repeat: Daily

Time: 5 : 00 PM

Save Cancel

22 Broadcast Encoder Management

When paired with an active SAFARI Montage Pathways SM license, SAFARI Montage can manage certain aspects of the G3011 Broadcast Encoder from within the web interface. The encoder must first be configured to communicate with the SAFARI Montage controller. See the section “Configure SAFARI Montage Controller” in the [G3011 Broadcast Encoder Installation Manual](#) for instructions on associating the G3011 with a SAFARI Montage controller.

Once the G3011 is communicating with the controller, the encoder will appear on the list under **Admin > Pathways SM > Broadcast Encoders**. Clicking the **view** link opens the encoder stream in the browser window. Clicking **delete** removes the encoder from the list.

Note: If the encoder is still configured to communicate with the SAFARI Montage server, the encoder will reappear in this list the next time it communicates.

Clicking **edit** opens the encoder settings. The General Information and Encoder Settings fields provide information on the encoder’s hardware and configuration and may be requested by Technical Support for troubleshooting. The Stream Settings allow for the adjustment of certain settings configured on the encoder.

Setting	Description
Audio Input	Allows manual selection of audio inputs for the stream in situations where the video input is not also carrying an audio signal.
Volume	Adjusts the stream output volume
Bitrate	Allows manual adjustment of the 576, 720, and 1080 resolution bitrates on a range of 500k to 12000k
CDN End Point	Sets the CDN URL for the encoder to connect to for broadcasting to a CDN.
Multicast Address	Sets the UDP multicast streaming address of the encoder. This should be a valid multicast address including the protocol and port number. Example: udp://239.60.0.113:1234

Once changes have been made, click the **Update** button to save the changes.

23 Appendix

23.1 Network Ports Reference

23.1.1 Client (Workstation) to SAFARI Montage Server(s)

Port	TCP/UDP	Inbound/Outbound	Description
21	TCP	Both	FTP port for CreationStation and OneRoster CSV uploads at sites without TLS/SSL configuration
22	TCP	Both	SFTP port for CreationStation and OneRoster CSV uploads at sites with TLS/SSL configuration
80	TCP	Both	Access to the web interface through HTTP connection
443	TCP	Both	Access to the web interface through HTTPS connection

23.1.2 SAFARI Montage Server(s) to Network (private and public)

Port	TCP/UDP	Inbound/Outbound	Description
21	TCP	Outbound	Used for FTP updates from ftp.libraryvideo.com in environments without TLS/SSL configuration
22	TCP	Outbound	Used for SSH tunnels for remote support connections to <i>tun.safarimontage.com</i>
25	TCP	Outbound	Simple Mail Transfer Protocol (SMTP) port for sending system messages via a SAFARI Montage server's email process
53	TCP/UDP	Both	DNS port for general system operation
80	TCP	Both	HTTP network access for content activation, update availability, and remote support requests via <i>software.safarivideonetworks.com</i> , <i>mti.safarivideonetworks.com</i> , and <i>tun.safarimontage.com</i>

Port	TCP/UDP	Inbound/Outbound	Description
123	UDP	Outbound	Network access for Network Time Protocol time synchronization to external time servers. Note: We recommend synchronizing to the internal domain controller's NTP process to minimize the chance of clocks falling out-of-synch due to connectivity issues
161, 162	UDP	Outbound	Simple Network Management Protocol (SNMP) port for read-only SNMP access
389	TCP	Outbound	Lightweight Directory Access Protocol (LDAP) port for unencrypted communication with LDAP services in environments without TLS/SSL configuration
443	TCP	Both	HTTPS network access for content activation, update availability, and remote support requests via <i>software.safarivideonetworks.com</i> , <i>mti.safarivideonetworks.com</i> , and <i>tun.safarimontage.com</i>
636	TCP	Outbound	Lightweight Directory Access Protocol (LDAP) port for encrypted communication with LDAP services in environments with TLS/SSL configuration

23.1.3 Communication between SAFARI Montage Server(s)

Port	TCP/UDP	Inbound/Outbound	Description
21	TCP	Outbound	Internal access for media transfer between servers when TLS/SSL is not configured
22	TCP		Internal access for media transfer between servers when TLS/SSL is configured
80	TCP	Both	Internal access for status and system synchronization when TLS/SSL is not configured

Port	TCP/UDP	Inbound/Outbound	Description
443	TCP	Both	Internal access for status and system synchronization when TLS/SSL is configured
873	TCP	Outbound	Internal access for CreationStation content synchronization via RSYNC protocol

23.2 Revision History

Date	Changes
5/18/2022	Added Pathways SM guide
4/5/2022	Limited First Release