



LifeSize[®] UVC Video Center[™] Deployment Guide

LifeSize UVC Video Center

LifeSize UVC Video Center records and streams video sent by LifeSize video communications systems enabled for recording. It can also record SIP calls to and from video systems that do not have built-in recording capability. Viewers access these videos and live streams through a browser on their computers.

Deploying	Plan for and perform initial configuration.	Deploying LifeSize UVC Video Center
Recording and Streaming	Configure recording and streaming and learn how to manage videos.	Recording and Streaming
Maintaining	Monitor server health, current calls, and transcodes; and back up and restore videos and associated data.	Maintaining LifeSize UVC Video Center

Related documentation is available from lifesize.com/support.

Section 1: Deploying LifeSize UVC Video Center

Deploying LifeSize UVC Video Center includes the following tasks:

Prepare firewalls to accommodate recording and streaming.	Planning for Firewalls
Complete installation and initial configuration.	Initial Configuration
<i>Optional:</i> Configure LifeSize UVC Video Center to use network attached storage (NAS).	Using NAS
<i>Optional:</i> Configure LifeSize UVC Video Center to subscribe to content published by another LifeSize UVC Video Center.	Federation
<i>Optional:</i> Customize the logo and favicon displayed in the user interface.	Customizing the LifeSize UVC Video Center Interface
<i>Optional:</i> Use the LifeSize UVC Video Center API to integrate LifeSize UVC Video Center into corporate intranets, payment gateways, or content management systems.	Access API documentation at: <a href="http://<videoCenter/IP or hostname>/api/v1">http://<videoCenter/IP or hostname>/api/v1

Planning for Firewalls

You can place LifeSize UVC Video Center in the LAN, in the DMZ, or in a third party data center. Depending on LifeSize UVC Video Center's placement in your environment relative to those viewing streams from it or recording streams to it, you may need to open certain ports on your firewalls. If all recording devices and viewers are within the same LAN as LifeSize UVC Video Center, no action is necessary.

NOTE If viewers or recorders use VPN from the Internet or use a site-to-site VPN tunnel, ensure that your VPN bandwidth can accommodate the maximum number of viewers or recorders at one time.

If your environment includes LifeSize UVC Access, LifeSize UVC Transit Client, and LifeSize UVC Transit Server, ensure that you review the deployment scenarios in the *LifeSize UVC Transit Deployment Guide* for guidance on placing them in the network.

Following are common network deployments that require you to open ports in your firewall:

LifeSize UVC Video Center Location	Viewer and Recorder Location	Firewall Implications
In the LAN	Viewers in the Internet	The internal and external firewalls must allow incoming access to the following ports: <ul style="list-style-type: none"> • 80 (HTTP) • 443 (HTTPS/SSL/TLS) And incoming and outgoing access to the following port: <ul style="list-style-type: none"> • 1935 (RTMP, Apple HTTP live streaming)
	Recording video devices in the Internet	The internal and external firewalls must allow incoming access to the following ports: <ul style="list-style-type: none"> • 443 (HTTPS/SSL/TLS) • 554 (RTSP) • UDP: 50000 to 52000
Hosted in a third party data center	Viewers in the LAN	The internal and external firewalls must allow outgoing access to the following ports: <ul style="list-style-type: none"> • 80 (HTTP) • 443 (HTTPS/SSL/TLS) • 1935 (RTMP, Apple HTTP live streaming)
	Recording video devices in the LAN	The internal and external firewalls must allow outgoing access to the following ports: <ul style="list-style-type: none"> • 443 (HTTPS/SSL/TLS) • 554 (RTSP) • UDP: 50000 to 52000
	Recording video devices in the DMZ	The external firewall must allow the DMZ recorders outgoing access to the following ports: <ul style="list-style-type: none"> • 443 (HTTPS/SSL/TLS) • 554 (RTSP) • UDP: 50000 to 52000

LifeSize UVC Video Center Location	Viewer and Recorder Location	Firewall Implications
In the DMZ	Viewers in the LAN	The internal firewall must allow outgoing access to the following ports: <ul style="list-style-type: none"> • 80 (HTTP) • 443 (HTTPS/SSL/TLS) • 1935 (RTMP, Apple HTTP live streaming)
	Recording video devices in the LAN	The internal firewall must allow outgoing access to the following ports: <ul style="list-style-type: none"> • 443 (HTTPS/SSL/TLS) • 554 (RTSP) • UDP: 50000 to 52000
	Viewers in the Internet	The external firewall must allow incoming access to the following ports: <ul style="list-style-type: none"> • 80 (HTTP) • 443 (HTTPS/SSL/TLS) • 1935 (RTMP, Apple HTTP live streaming)
	Recording video devices in the Internet	The external firewall must allow incoming access to the following ports: <ul style="list-style-type: none"> • 443 (HTTPS/SSL/TLS) • 554 (RTSP) • UDP: 50000 to 52000
In any given network	Non-recording video devices in a different network (using dial out recording)	The firewalls must allow incoming and outgoing access to the following ports: <ul style="list-style-type: none"> • UDP: 5060 to 5100
	Non-recording video devices in a different network (using dial in recording)	The firewalls must allow incoming and outgoing access to the following ports: <ul style="list-style-type: none"> • 5060 UDP • 5060 TCP

Initial Configuration

1. Install the LifeSize UVC Platform hardware or virtual machine according to the instructions in the *LifeSize UVC Platform Installation Guide*.

NOTE Ensure that the disk space is set to 1 TB if you use local storage for recordings.

2. Log in to LifeSize UVC Platform and activate a license for LifeSize UVC Video Center. Refer to the *LifeSize UVC Platform Deployment Guide*.
3. Complete the initial configuration for LifeSize UVC Video Center described in [Enabling LifeSize UVC Video Center](#).

Enabling LifeSize UVC Video Center

1. Log in to LifeSize UVC Platform. The default administrator credentials for LifeSize UVC Platform and all enabled applications are:

Username: *administrator*

Password: *admin123*

NOTE You can also create an administrator account with separate credentials for logging in to LifeSize UVC Video Center. Refer to step 4 in this procedure.

2. Ensure that an IP address is available for configuring LifeSize UVC Video Center:
 - a. Navigate to **System Settings : IP Addresses – Edit**.
 - b. Click **Add address**.
 - c. Enter the new IP address.

NOTE Press **Tab** to automatically complete the remaining values, or enter each remaining value manually. Ensure that you review the values entered automatically.

- d. Click **Apply Changes**.

3. Enable LifeSize UVC Video Center. Ensure port 8180 is open to your LifeSize UVC Platform.

NOTE You must activate a license for LifeSize UVC Video Center before performing these steps. Refer to the *LifeSize UVC Platform Deployment Guide*.

- a. Navigate to **Operations and Maintenance : Applications enabled – Edit**.
 - b. In **Enable new application**, select **Video Center**.
 - c. Select the IP address.
 - d. Click **Enable Application**.
4. *Optional:* Create an administrator account for LifeSize UVC Video Center.
 - a. Navigate to **User Management : Users – Add**.
 - b. Enter a username and password.
 - c. Click **Save**.
 - d. In **Video Center Permissions**, select **Content Administrator**.
 - e. Click **Save**.

Network Considerations

Recording bit rate	Ensure that the recording bit rate for individual recordings is set properly for your network to avoid packet loss. From LifeSize UVC Video Center, access the bit rate settings in Administer : Content Management : Default recording properties – Edit .	Default Recording Properties
Aggregate bit rate	If necessary for your network, set aggregate bit rate limits in LifeSize UVC Video Center in Administer : System Settings : Bandwidth limits – Edit . These settings determine the total allowed simultaneous recordings and live streams.	Bandwidth Limits
Firewalls	If any content viewers or recording-enabled LifeSize video communications systems are outside the LAN or DMZ in which LifeSize UVC Platform resides, you must adjust firewall and VPN settings to ensure proper operation.	Planning for Firewalls
Multicast	If you plan to stream video to a multicast address, you must configure LifeSize UVC Video Center for multicasting.	Multicast

Using NAS

By default, LifeSize UVC Video Center stores the videos recorded to it on local hard drives. You can configure the LifeSize UVC Video Center to use NAS instead.

1. From LifeSize UVC Video Center, select **Administer : System Settings**.
2. In **Network Storage Server Settings**, click **Edit**.
3. Select the server access protocol: **NFS** or **CIFS**.
4. Enter the NAS server's hostname or IP address.
5. Enter the directory from which to mount the server. For example, if the mount point is `\\<NAS server hostname or IP address>\sharedfolder`, enter `sharedfolder`.
6. If you are using CIFS, enter the username and password to access the NAS.
7. Click **Update Configuration**.

The LifeSize UVC Video Center enters maintenance mode and attempts to mount the NAS location you specified. If the process was successful, the LifeSize UVC Video Center copies the entire local storage image to the NAS server. After the copy is complete, the LifeSize UVC Video Center exits maintenance mode and continues normal operation.

Creating a Shared Directory for NFS v4

The NFS v4 access protocol requires that the client and server use the same user ID. LifeSize UVC Video Center uses the `www-data` (`uid=33` and `gid=33`) user as the owner of the shared folder that is mounted on the network storage location. Complete the following steps to create the NFS v4 shared directory on the server:

1. If the user `www-data` does not exist, create it on the NFS server.
2. Assign `uid=33` and `gid=33` to the `www-data` user.
3. Create the local share directory and use `chown` to change owner and group owner to `www-data`.

Changing NAS Locations

1. Enter maintenance mode and manually copy the contents of the current network storage location to the new network storage location.
2. Edit the NAS properties in LifeSize UVC Video Center to point to the new server location: select **Administer : System Settings**. In **Network Storage Server Settings**, click **Edit** and enter the NAS server's hostname or IP address.
3. Click **Update Configuration**.

LifeSize UVC Video Center attempts to mount the NAS location you specified, and reports *Success* or *Failure*. After LifeSize UVC Video Center synchronizes its content database with the NAS contents, it exits maintenance mode and continues normal operation.

Reverting to Local Storage

Revert to local storage if local disks have the capacity to store the data on the NAS:

1. Select **Administer : System Settings**.
2. In **Network Storage Server Settings**, click **Edit**.
3. Click **Switch to local storage**.

LifeSize UVC Video Center enters maintenance mode, and copies the NAS image to the local disks, unless the local disks do not have the capacity necessary, and you receive an error message. When the copy is complete, LifeSize UVC Video Center exits maintenance mode and continues normal operation.

Customizing the LifeSize UVC Video Center Interface

Administrators can customize the appearance of the LifeSize UVC Video Center interface in **Administer : System Settings : Logos and messages – Configure**.

Element	Description
Logo	By default, LifeSize UVC Video Center appears on every page of the LifeSize UVC Video Center interface. Clear Use default logo and browse to locate a custom logo. Requirements for the custom logo are as follows: <ul style="list-style-type: none"> • JPG, GIF, or PNG format • 300x40 pixels maximum size; larger images are scaled to fit
Favicon	By default, the LifeSize favicon appears in the browser URL line. Clear Use default favicon and browse to locate a custom favicon. Requirements for the custom favicon are as follows: <ul style="list-style-type: none"> • ICO format • 16x16 or 32x32 pixels <p>NOTE: If the new favicon does not appear, clear the browser cache.</p>
Login page message	Specify text to include on the login page. HTML markup is allowed.
Page footer text	Specify text to include at the footer of all pages. HTML markup is allowed.

Section 2: Recording and Streaming

Configure LifeSize UVC Video Center for recording and streaming by completing the following tasks:

Create and manage recording keys.	Configuring Recording Keys
Manage global permissions.	Users and Global Permissions
Configure recording: <ul style="list-style-type: none"> • Create channels. • Configure default recording properties. • Set bandwidth limits. • Configure multicasting. • Create federated nodes. • Enable chat. 	Configuring Recording
Learn how to record on LifeSize UVC Video Center with video systems that cannot initiate recordings.	Dial Out and Dial In Recording
Edit videos and their properties and attributes. Upload, download, and embed videos. Create supplemental versions of existing videos for low bandwidth and mobile users.	Managing Videos
Enable recording on supported LifeSize video communications systems through the Administrator Preferences of the video system. Alternatively, you can use the auto provisioning tool in LifeSize UVC Platform to push a configuration to enabled video systems. Refer to the <i>LifeSize UVC Platform Deployment Guide</i> for more information.	Refer to the user and administrator guide for the video system.

Configuring Recording Keys

LifeSize UVC Video Center uses recording keys to manage video recording. A recording key is a number of up to 10 digits that is required to start recording or streaming from a LifeSize video system. Depending on your login credentials, create and edit recording keys as follows:

Task	User	Location in User Interface
Creating a recording key	Administrator	Administer : Content Management : Recording keys – Add
	User with permission	Manage : My Recording Keys : Create a new recording key
Editing a recording key	Administrator	Administer : Content Management : Recording keys – Edit
	User with permission	Manage : My Recording Keys and click Edit for the appropriate key

When you create a recording key, its properties are associated with the recorded video (or series of videos).

Property	Description
Recording key	<p>A number of up to 10 digits required to start recording or streaming. Administrators can define the recording key. Leaving the field empty instructs the system to generate a key.</p> <p>Administrators can specify the length of a key that the system generates. Read more at Configuring the Length of the Default Recording Key.</p> <p>Administrators can also enable a blank recording key, which allows users to record without entering a key value. Read more at Enabling a Blank Recording Key.</p> <p>You can configure the LifeSize video system to use a specific, default recording key. In this case, users are not prompted to enter a key when recording. Refer to the video system's user and administrator guide for more information.</p>
Owner	By default, the user who created the recording key. Administrators can change the owner.
Name	Descriptive name of the recording.
Channel	<p>By default, Main. Administrators and recording key owners can assign the recording to a different channel.</p> <p>When you select a channel other than Main, the channel's default values are used for Share with all, Viewers, and Viewer groups. You can edit these values. If you edit an existing recording key and change the channel, the channel's default values are not used.</p>
Description	Descriptive details.
Tags	Descriptive terms that help users find videos recorded with the key.
Share with all	Clear the checkbox to specify users and groups who can view videos recorded with the key.
Stream live	Select to create live streams with the key. Live streams are available to view during the call.
Record stream	Records the stream. Recorded calls are available to view after the recording is complete. With both Record stream and Stream live selected, the stream is available to view during the call.
Default recording layout	<p>Determines whether video from the near end, far end, or both are recorded. Defaults to Use the video system setting.</p> <p>NOTE: Selecting Far video only in a multiway call records only the first far end caller.</p> <p>The setting in the recording key overrides the setting on the LifeSize video system initiating the recording. Set the preference on the LifeSize video system in Administrator Preferences : Video : Record and Stream : Default Recording Layout.</p>
Recording bit rate	Specifies the bit rate (in kb/s) to use when recording.
Low bit rate version	Generates a second dual stream video version at the bit rate specified for PC viewers whose bandwidth cannot support the bit rate of the primary version. LifeSize UVC Video Center automatically determines which version to send to PC viewers based on the quality of their Internet connection.

Property	Description
Mobile stream 1	Generates combined main and presentation video for mobile devices at the bit rate specified. Set this to the highest bit rate the device can sustain with a good Internet connection.
Mobile stream 2	Generates a second combined main and presentation video for mobile devices at the bit rate specified. Set this to the lowest rate to ensure mobile devices with slower Internet connections can experience uninterrupted streaming. The client automatically determines the version to use based on the network connection.
Mobile stream layout	Appears only when a mobile stream is enabled. Specify the layout of the combined main and presentation video in the stream. The viewer cannot change the layout.
Presentation quality	Defaults to Low . Use a higher setting to improve the readability of small text or detail in a presentation. The frame rate for presentations remains 5 f/s.
Enable multicasting	Appears only when multicast is configured on LifeSize UVC Video Center. Read more at Multicast . Select this option to multicast the live video. You must also select Live stream and at least one mobile stream layout.
Allow commenting	Appears only when chat is enabled globally. Clear this option to disable commenting in videos created with this key. Refer to Users and Global Permissions .
Allow download	Appears only when downloading is configured globally on LifeSize UVC Video Center. Clear this option to prevent users from downloading videos created with this key. Refer to Users and Global Permissions .
Enable chat	Appears only when chat is enabled globally on LifeSize UVC Video Center and Stream live is enabled. Clear this option to disable chat in live streams using this key. Refer to Chat .

NOTE Creating low bit rate or mobile streams uses additional storage and reduces the capacity for simultaneous recordings. Refer to [Transcoding](#) for more information about transcode scheduling.

Mobile streams use the industry standard Apple HTTP Live Streaming protocol, which supports live and recorded streams, and streams at different bit rates.

Recording Key Strategies

Administrators control who can create and edit recording keys and can reassign recording key and video ownership to any user. Because the system provides full flexibility, consider the workflow of your organization before assigning user permissions. As you plan your strategy for managing recording keys, use the following scenarios as a guide.

Example: Highly Controlled Environment

In a controlled environment, administrators can restrict recording key creation to themselves. Administrators then communicate to users the keys to use for each conference, and fulfill requests when new keys are needed.

Administrators can also create keys and then assign key ownership to a trusted user, who can then edit the assigned keys, but not create new keys. These trusted users own the videos created with these keys and are responsible for their maintenance.

Administrators can configure a LifeSize video communications system to enable recording with a default recording key. All recordings made from that video system use that default recording key. Users are not prompted for a key when they record. This method simplifies recording. However, every video recorded from that system uses the same key and, therefore, has the same title (appended with a timestamp). To make differentiating the videos easier, the video owner must then edit details for the videos.

Example: Distributed Environment

Large organizations may give trusted users permission to create recording keys. For example, in an educational setting, 30 instructors may teach three classes each and need three recording keys for their classes. Instead of one administrator configuring recording keys for 30 instructors, instructors are allowed to create their own.

Example: Flexible Environment

Rather than creating many recording keys, small organizations may decide to allow users to record using a blank recording key. Alternatively, they may create recording keys for regularly scheduled meetings and use the blank key for events that do not fit those keys. If the blank key is enabled, the user can create a recording from a system enabled to record by pressing **OK** on the remote control when prompted for a recording key.

NOTE The blank key cannot be used on a video system configured to use a default recording key. If a default key is defined, the system does not prompt for a recording key.

The advantage of this approach is that users can record without knowing the key. The disadvantage is that all videos recorded with the blank key, regardless of their subject matter, are associated with just one recording key and therefore share the same title, description, and user permissions. To make these videos easier to consume, someone must provide distinguishing information by editing each video's details after recording.

Enabling a Blank Recording Key

Instead of requiring a recording key to start recording, administrators can enable an empty key that allows a user to simply press **OK** on the remote control when prompted for a recording key. This setting provides the least restrictive use of recording, because users are not required to know the recording key.

With the blank recording key enabled, you can continue to define and use recording keys with numeric values. Administrators enable the blank recording key as follows:

1. Select **Administer : Content Management : Recording keys – Edit**. The page displays the status: **The blank recording key is disabled**.
2. Click **Edit**.
3. Select **Enable** and specify additional settings for the key.
4. Click **Save Blank Key Settings**.

All videos created with the blank recording key are tagged with the information you provide. The titles for each video differ only by their timestamps. For a distinctive name, description, set of tags, and user permissions, the video owner must edit the properties of each video.

Configuring Recording Key Permissions

Administrators set permissions for creating recording keys at the following levels:

- **Global.** Administrators manage site wide permission to create recording keys by editing global authorization properties. By default, content creators can create recording keys. Refer to [Users and Global Permissions](#).
- **Group.** If the global permission to create recording keys is enabled (the default), administrators can grant individual groups permission to create recording keys. Users who belong to the group inherit the group permissions.

NOTE If user and group permissions differ, the more permissive permission applies. For example, if a user who does not have permission to create content belongs to a group that does, the user inherits the permission to create content.

- **User.** If the global permission to create recording keys is enabled (the default), administrators can grant individual users permission to create recording keys.

For more information about group and user permissions, refer to the *LifeSize UVC Platform Deployment Guide*.

Changing Recording Key Ownership

By default, the user who creates a recording key is the owner of the key. If only administrators create recording keys, only administrators own recording keys and the videos created with them. However, an administrator can specify a content creator or another administrator as the owner of a key.

Administrators change recording key ownership in **Administer : Content Management : Recording keys – Edit**. Click the desired key name and select a different owner.

When logged in, the recording key owner can access the **Manage** tab. The key appears in **My Recording Keys**, and any video created with the key appears in **My Videos**. The owner can edit or delete the recording key. If videos were recorded with the recording key, the owner can edit video details, view video statistics, or delete the video.

Configuring the Length of the Default Recording Key

Administrators can change the length of recording keys that the system generates. Select **Administer : Content Management : Recording keys – Edit** and click **Set key length** to enter a value from 3 through 10. Keys generated after changing this setting reflect the new length. Previously generated keys are unaffected.

URLs to Live Streams and Recordings

Recording key owners can reserve a URL that points to the live stream, if available, or the latest video recorded with the key. Navigate to **Manage : My Recording Keys** and in the recording key's profile, click **Display URLs** to generate two URLs: one URL that requires login authentication and another URL that does not require authentication. Use the URL that does not require login authentication to make private videos accessible without logging in to LifeSize UVC Video Center.

When you use the recording key for a new live stream or recording, click **Reset** to generate new URLs. The previous URLs remain associated with the previous recording created with the key.

Users and Global Permissions

LifeSize UVC Video Center includes four user roles:

Anonymous Users	Anonymous users either have not logged in or do not have a user account. They can view public videos (videos that have not been restricted to specific users or groups), but cannot post comments.
Registered Users	Once logged in, registered users can watch all videos to which they have been granted permission and can post comments. Registered users cannot create recording keys or own content.
Content Creators	Once logged in, content creators can own videos and recording keys, create recordings with existing keys, and upload videos. Administrators grant users access to the Manage tab by selecting Recording when setting up or editing the user account (from LifeSize UVC Platform). Administrators grant permission to publish live and recorded content to another federated LifeSize UVC Video Center by selecting Content subscription when managing the user account. If the Allow users to create recording keys global permission is selected, content creators can also create recording keys. NOTE: Read more about user management in the <i>LifeSize UVC Platform Deployment Guide</i> .
Administrators	Once logged in, administrators have the same access as the LifeSize UVC Video Center administrator account, and must be trusted users. In large organizations, multiple administrators may be the most efficient distribution of labor.

By default, registered users can comment on videos, all users can download videos to their desktop, and content creators can create recording keys and own videos. Administrators can globally restrict these options for non-administrator users in **Administer : Content Management : Global authorization properties – Edit**.

Global Setting	Description
Allow commenting on videos	Allows users to comment on videos. Clear this checkbox to disable commenting on all videos. Existing comments remain visible.
Allow video downloads	Allows registered users to download video content. Clear this checkbox to prevent users from downloading content they do not own. Content owners (and administrators) can always download their own content.
Allow users to create recording keys	Allows content creators to create recording keys. If you clear this checkbox, only administrators can create recording keys.
Allow content creators to generate reports with private user data	Allows a content creator to generate reports with private user data for videos that the content creator owns. Administrators are always allowed to generate reports with private user data for any video.
Allow format selection	Allows content creators to specify video formats, including low bit rate and mobile device versions, in recording keys. If you clear this checkbox, only administrators can specify video formats and create multiple streams.
Allow subscriptions from federated nodes	Allows another LifeSize UVC Video Center to subscribe to and watch live and recorded videos published by the current LifeSize UVC Video Center.

Configuring Recording

Configure recording by completing the following tasks:

- Create **Channels**.
- Configure **Federation**.
- Enable **Chat**.
- Configure **Multicast**.
- Configure **Default Recording Properties**.
- Set **Bandwidth Limits**.

Channels

LifeSize UVC Video Center includes a predefined channel, **Main**, to which all videos are assigned by default. Creating additional channels categorizes videos to make them easier to manage and locate.

For example, in an academic setting, you might create two channels: *Lectures* and *Staff Meetings*. Videos for student users are available on the *Lectures* channel, and videos for school staff are available on the *Staff Meetings* channel.

Administrators can create a channel in **Administer : Content Management : Channels – Add**. When you create a channel, **Share with all** is selected by default. Clearing this option allows you to grant specific users and groups permission to view videos on this channel.

When you select a channel for a recording key, the channel's default sharing is used. You can override the channel permissions by setting a different sharing mode for the recording key.

Setting a different sharing mode at the recording key (restricting access through the key permissions) allows you to maintain fewer channels. Consider the academic example: By default, all students can have access to the *Lectures* channel. However, a recording key for an individual class might restrict video access to the students in that class.

Federation

Under federation, a LifeSize UVC Video Center (node 1) subscribes to another LifeSize UVC Video Center (node 2). Node 1 viewers can access live streams originating on node 2 from their node 1 LifeSize UVC Video Center. Because viewers on node 1 access only one live stream from node 2, bandwidth use on node 2 is limited.

Federation also allows viewers on the subscriber node to access recorded (on demand) videos available from the publisher. The video on the subscriber node is a copy. Therefore, editing the video on one node does not modify the video on the other node.

NOTE The recording log for a video uploaded from a federated node does not include recording data. To view the recording data for a video, access the recording log from the publisher node.

The viewing permission of the subscriber determines which live streams and on demand videos are accessible from the publisher. The video's viewing permission on the publisher transfer to the subscriber. If **Share with all** is not set, LifeSize UVC Video Center grants viewing permissions to users and groups with matching names on the subscriber.

To configure federation, administrators must set properties on both the subscriber and publisher nodes.

Configure the Publisher Node

1. Configure LifeSize UVC Video Center to allow subscriptions: Select **Video Center : Administer : Content Management : Global authorization properties – Edit** and select **Allow subscriptions from federated nodes**.
2. Configure an authorized user on the publisher: Select **Platform Administration : User Management : Users - Add** (or **Edit**) and grant the user **Content subscription** permission.

Configure the Subscriber Node

1. Configure federation on the subscriber LifeSize UVC Video Center: Select **Video Center : Administer : Content Management : Federation configuration – Add**.
2. Enter the IP address or domain name of the publisher.
3. Optionally, select **Use HTTP proxy**. Use this option if the subscriber is in a LAN with restricted Internet access. The proxy must be configured on the UVC Platform in **System Settings : Network Settings : Proxy Settings**. Only on demand videos are available through a HTTP proxy. Live streams cannot be viewed through a proxy.

4. Enter the credentials for the remote user with **Content subscription** permission.
5. Click **Save**.
6. Configure the subscription:

Subscribed content	Select from <i>Live Only</i> , <i>On Demand Only</i> , and <i>Both</i> .
Channels	Subscribe to all or select channels on the publisher node.

7. Click **Save**.

One of the following status messages appears:

OK	The federated connection is successfully configured.
Unreachable	The subscriber node cannot ping the publisher node.
Authentication failure	The credentials you entered for the remote user are invalid.

Chat

Administrators enable chat in **Administer: Content Management: Chat configuration – Edit**. With chat enabled, viewers of live streams can exchange rich text messages in a chat window that accompanies the live video. When the live stream is terminated, users can see the chat history during video playback. Up to 1000 chat participants are allowed, whether in one or across multiple simultaneous live streams.

Multicast

Multicast allows LifeSize UVC Video Center to stream video to a single multicast address to which multiple networks can subscribe. Administrators configure multicast in **Administer : Content Management : Multicast configuration – Edit**.

Multicast IP address	One or more multicast addresses that LifeSize UVC Video Center can use for multicasting. LifeSize UVC Video Center selects one multicast IP address and streams video to that address. Clients subscribe to the multicast IP address to receive the stream.
Port range	Range of ports that are available to the specified multicast IP addresses.
TTL	Time to live (TTL) for the multicast packets.
Client addresses	List of network IP addresses that are capable of receiving a multicast stream. A client address must be a unicast address. Clients in other networks receive the unicast version of the stream.

NOTE You must install the QuickTime player to view a multicast stream. The QuickTime player plug-in does not support full screen viewing.

Default Recording Properties

Default recording properties define default limits for individual recordings when the corresponding limits are not set at the user or group level (in LifeSize UVC Platform). If the disk quota has been set to a higher or lower value for a user or one of the user's groups, that value applies for the user. If the disk quota for the user and all that user's groups specifies **Use Defaults** (at the user and group level in LifeSize UVC Platform), the default property applies.

Administrators define default recording properties in **Administer : Content Management : Default recording properties – Edit**.

Global Setting	Description
Disk quota (in MB)	Sets the maximum amount of disk space a user can use for recordings and file attachments. The default is the capacity of the LifeSize UVC Video Center. You can set a lower limit in the text box. Refer to Monitoring the Server for information about monitoring disk usage.
Recording length (in hours)	Sets the maximum recording length for a single video. The default is 8 hours. You can raise or lower this limit in hours and fractional hours. For example, enter 3.75 to represent three hours and 45 minutes.
Maximum recording bit rate (in kb/s)	Sets the maximum recording bit rate. The default is 1152 kb/s.
Default recording bit rate (in kb/s)	Sets the default recording bit rate. The default is 400 kb/s. Lower bit rates consume less disk space and bandwidth, but also reduce video quality. Settings of 256 or 384 are appropriate for videos viewed remotely on the Internet. Videos viewed on the LAN can safely use higher bit rates.

Bandwidth Limits

Administrators can set aggregate bit rate limits in **Administer : System Settings : Bandwidth Limits – Edit**. These limits determine the number of simultaneous recordings and live streams that are allowed. For example, setting **Recording bit rate** to 1536 allows the following:

- Two simultaneous recordings at 768 kb/s
- Three simultaneous recordings at 512 kb/s
- Six simultaneous recordings at 256 kb/s

NOTE The number of simultaneous recordings that are allowed is dependent also on the number of recording licenses activated on your system. A site with three recording licenses is unable to host six simultaneous recordings.

Lowering bandwidth limits does not affect streaming and recording that is in progress. New limits apply to all activity after the change is made. Setting bandwidth limits is optional. Change these settings only if your network cannot support the number of simultaneous recordings and live streams that LifeSize UVC Video Center supports.

Bandwidth Limit (in kb/s)	Description
Recording bit rate	<p>Sets the total bit rate limit for recordings (incoming and dial out). Valid values are 0 to 16000. A value of 16000 is equivalent to 40 standard definition (SD) or 20 high definition (HD) recordings. Setting the limit to 0 disables recording.</p> <p>NOTE: The number of recording licenses activated on the system determines the upper limit of allowed recordings.</p> <p>The Recording bit rate includes both incoming streams and dial out recordings, so that the number of dial out recordings in progress affects the recording capacity for incoming streams. For example, with 3 HD dial out recordings in progress, the capacity for recordings initiated by the video system is 17 HD recordings.</p>
Encoding bit rate	<p>This setting applies to SIP dial out recordings, SIP dial in recordings, and video transcoding used to create dual streams and mobile formats.</p> <p>Sets the total bit rate limit. Valid values are 0 to 3840. A value of 3840 is equivalent to 5 HD recordings or transcodings. Setting the limit to 0 disables dial out recording, dial in recording, and transcoding.</p> <p>Dial out recordings, dial in recordings, and transcoding use the UVC Platform CPU. The bit rate is limited to conserve CPU resources. If your LifeSize UVC Video Center is deployed on a virtual machine (VM), set this value according to the VM's CPU capacity.</p>
Viewing bit rate	<p>Sets the total bit rate limit for videos (live and recorded) with viewing in progress. Valid values are 0 to 1600000 (1600 Mb/s). Setting the limit to 0 disables viewing. The default is 800000 and recommended for single NIC configurations. Dual NIC configurations can use higher rates.</p> <p>The Viewing bit rate includes both live and on demand viewing, so that on demand viewing reduces the bandwidth available for viewing live streams.</p>
On demand viewing bit rate	<p>Sets the total bit rate limit for recorded videos with viewing in progress. Valid values are 0 to 268800. A value of 268800 is equivalent to 350 HD streams. Setting the limit to 0 disables on demand viewing.</p> <p>The total on demand viewing bit rate depends on the read capacity of the hard drives. If your LifeSize UVC Video Center is deployed on a VM, limit this value according to the disks used.</p>

Dial Out and Dial In Recording

Dial out and dial in recording allows you to initiate recordings with LifeSize UVC Video Center from or to video devices that do not support streaming and recording. Using this method sets up a SIP call and starts the recording. LifeSize UVC Video Center inserts key frames, allowing viewers to locate a specific section of the video more quickly.

For multiway calls with three or more participants (including LifeSize UVC Video Center), the SIP call between LifeSize UVC Video Center and the video system that initiates the recording appears in the video system layout as a call participant and is embedded in the video recording. In two-way calls (including LifeSize UVC Video Center), the recorded stream does not display LifeSize UVC Video Center as a call participant.

Because dial out and dial in recording requires LifeSize UVC Video Center to perform additional processing, LifeSize recommends that you use dial out and dial in recording only if the video system does not support recording and streaming to LifeSize UVC Video Center.

For a list of systems that support streaming and recording and a list of systems that support dial out and dial in recording, refer to the release notes for LifeSize UVC Video Center at lifesize.com/support.

Dial In Recording

Use one of the following dial strings (where <UVC Video Center> is the IP address or hostname) to initiate a dial in recording:

- sip@<UVC Video Center>
At the prompt, select **Record**, and enter a recording key.
- sip:record@<UVC Video Center>
At the prompt enter a recording key.
- sip:record:<recording key>@<UVC Video Center>
The recording begins using the specified recording key.

Dial Out Recording

Users (with permission to record) and administrators can record directly from LifeSize UVC Video Center.

1. Select **Manage : Dashboard (or My Videos) : Record Video**.
2. Specify the IP address or SIP URL of a video system that can stream H.264 video and G.711 audio.
3. Enter a name for the recording. Additional optional properties include recording key options (refer to [Configuring Recording Key Permissions](#)). You can enter a recording key you own to specify these properties for the dial out recording.
4. Click **Call**.

Managing Videos

Manage a video from the video's view page. Access the video's view page by clicking the thumbnail displayed at **Watch** or, if you are a video owner, at **Manage**.

Administrators can also view a video in **Administer : Content Management : Videos – Edit**. Filter the displayed video names by recording date, channel, or both. Some filters also include more detailed options. Clicking **This year** displays additional filters for any month in the current year in which a minimum of one recording was created. Click **View** to display the video's view page.

A video's view page includes the following options. Available options depend on your user role.

Option	Description
Adding captions	<p>Allows administrators and video owners to add closed captions to videos in a variety of supported languages in the following ways:</p> <ul style="list-style-type: none"> • Upload a caption file to a video • Add captions to a video manually • Add captions to a live stream manually
Adding chapters	<p>Allows administrators and video owners to add chapters to videos to simplify internal navigation.</p>
Commenting	<p>If enabled, allows registered (logged in) users to post a comment.</p>
Attaching files	<p>Allows you to upload files from your computer and associate them with the video. You can only attach as many files as you have room for under your storage quota.</p>
Embedding and sharing a video	<p>Allows users to copy the code for embedding the video into a web site.</p> <p>You can also copy the link to the video to allow recipients to view the video from LifeSize UVC Video Center. To share a private video without requiring logging in to LifeSize UVC Video Center, select the video link that does not require login authentication.</p> <p>Administrators and video owners can access this feature from the following locations:</p> <ul style="list-style-type: none"> • The video's properties page • Watch : Recent Videos • Watch : Featured Videos • Manage : My Videos
Deleting a video	<p>Allows administrators and video owners to delete the video.</p> <p>Administrators and video owners can also delete a video from the video's properties page.</p>
Editing a video's properties	<p>Allows administrators and video owners to complete the following tasks:</p> <ul style="list-style-type: none"> • Edit the video's name, tags, and description. Edits you make to these sections can help users find the video easily. • <i>Administrators only:</i> Assign a new owner. • Assign the video to a different channel. • Specify who can view the video. • Embed and share the video. • Allowing commenting. This only appears if commenting is configured globally. If you clear this option, existing comments are displayed. • Allow download. This only appears if downloading is configured globally. • Manage video formats, such as adding a mobile device version of the video. Read more at Managing Video Formats. • Delete the video.
Featuring a video	<p>Allows administrators to add a video to the main channel's Featured Videos. Featured videos for the main channel appear in Watch : Home. If the video is assigned to another channel, you can also feature the video on that channel's page.</p>

Option	Description
Downloading a video from LifeSize UVC Video Center	<p>If enabled, allows users to download a video to their computers. Enable video downloads for all users in Administer : Content Management : Global authorization properties – Edit. Read more at Users and Global Permissions.</p> <p>Download the archive to include all associated files, including transcoded low bit rate and mobile versions. Long recordings are stored as a series of videos, each no longer than an hour in length. A presentation is stored as a separate file. Recordings can have multiple files if the resolution changes during recording, with each file maintaining a constant resolution. You can upload this archive to any LifeSize UVC Video Center that supports uploading an archive.</p>
Uploading a video to another LifeSize UVC Video Center	Allows content creators to upload a video to another LifeSize UVC Video Center.
Viewing a video's statistics	<p>Allows administrators and video owners to view the following information about a video:</p> <ul style="list-style-type: none"> • Total number of times the video was viewed. • Number of views by date. • Number of views by segment of the video. • Number of views by segment of the video for the most recent 10 viewers. • Viewer summary data, including the username, name, date, and percentage of the video viewed. This information is available to download in CSV format. Administrators manage permission for content creators to generate viewer summary data in Administer : Content Management : Global authorization properties. <p>NOTE: Downloaded viewer summary data does not include data for anonymous users. Because the total view count includes anonymous users, the total can be higher than the number of rows in the viewer summary.</p> <ul style="list-style-type: none"> • If the video was streamed live, you can view the live telecast statistics and generate a report showing who watched the telecast, when they joined, and when they left. <p>Administrators and video owners can also download statistics in Watch : Recent Videos, Watch : Featured Videos, and Manage : My Videos.</p>
Changing the thumbnail	Allows administrators and video owners to specify the video segment to capture for the thumbnail that appears on LifeSize UVC Video Center.
Trimming a video	<p>Allows administrators and video owners to set a new start time and end time for the video. You cannot undo this action.</p> <p>NOTE: The video is trimmed to the nearest key frame, which occurs at 10 second intervals in videos recorded from LifeSize systems. Specify the trim times in multiples of 10 seconds.</p>
Viewing a video's recording log	<p>Allows administrators to view a video's recording log.</p> <p>NOTE: Uploaded videos do not have an associated recording log.</p>

Managing Video Playback

Administrators can manage video playback as follows:

- By default, videos start playing when a user navigates to the video page. Clear **Enable autoplay** to turn this feature off.
- Select **Enable secure streaming** to stream all video on secure connections using RTMPS (RTMP over SSL). Enabling this option reduces streaming capacity.

NOTE Secure streaming requires that you configure UVC Platform with a valid SSL certificate on the **System Settings : SSL Configuration** page.

Uploading Videos

Users (with recording permission) and administrators can upload external videos from **Manage : My Videos**. Administrators can upload external videos from **Administer : Content Management : Videos – Edit**. Video uploads must be QuickTime (.mov) or MP4 files with H.264 video and AAC-LC audio. Additionally, you can upload a video archive that was downloaded from LifeSize UVC Video Center.

You can manage an uploaded video in the same way that you manage a video recorded with a LifeSize video system.

Managing Video Formats

Administrators and content owners can create multiple versions of a recording or live stream by using recording key settings. Refer to [Configuring Recording Keys](#). They can also add versions of the recording by clicking **Manage video formats** on the video's **Edit properties** page. New versions are created from the original video as resources become available.

Video Format	Description
Low bit rate version	Generates a second dual stream video version at the bit rate specified for Internet PC viewers whose bandwidth cannot support the primary video's bit rate. LifeSize UVC Video Center automatically determines which version to send to PC viewers based on the quality of their Internet connection.
Mobile stream 1	Generates combined main and presentation video for mobile devices at the bit rate specified. Set this to the highest bit rate the device can sustain with a good Internet connection.
Mobile stream 2	Generates a second combined main and presentation video for mobile devices at the bit rate specified. Set this to the lowest rate to ensure mobile devices with slower Internet connections can experience uninterrupted streaming. The client automatically determines which version to use based on the network connection.
Mobile stream layout	Appears only when a mobile stream is enabled. Specify the layout of the combined main and presentation video in the stream. The viewer cannot change the layout.

Click **Add selected formats** to schedule the transcoding of the new versions. The page refreshes to show the versions of the video, their resolution, bit rate, type, disk usage, and whether they are available or pending creation. You can delete rarely used or otherwise unwanted versions at any time from this page. Read more at [Transcoding](#).

NOTE Creating low bit rate or mobile streams uses additional storage and reduces capacity for simultaneous recordings. Mobile streams use the industry standard Apple HTTP Live Streaming protocol, which supports live and recorded streams, and streams at different bit rates.

Creating Reports

Administrators can create reports of LifeSize UVC Video Center activity and optionally schedule them to be regularly sent to particular email addresses.

Video Views

Select **User Video Views** to see a particular user's viewing activity or select **Total Video Views** to see viewing activity for all users.

Click **Date Range** to list standard date ranges and date options you can set yourself using an interactive calendar.

In **Group By**, select *Day*, *Month*, or *Year*, as appropriate for the range of your report.

Exporting

You can save the graphical report to a PDF or CSV file.

Scheduling

You can regularly generate a report and have it emailed to a list of users. Enter the frequency and time of day at which to generate the report and enter the email accounts to which to send the report.

NOTE You must establish an email account on UVC Platform from which these emails originate. From UVC Platform, navigate to **Platform Administration : User Management : Accounts : Email - Add**.

Section 3: Maintaining LifeSize UVC Video Center

Monitoring the Server

Administrators can monitor the server in **Administer : System Status**.

Property	Description
Storage	Disk Usage shows the percentage used and hours remaining at the default recording bit rate specified in Administer : Content Management : Default recording properties . If NAS is configured, network storage usage appears.
Connections	Displays current streaming, recording, transcoding, and uploading activity.
Port Usage	Displays the ports used for each process. For information about ports and firewall settings, refer to Planning for Firewalls and Network Considerations .

NOTE The **Storage** section appears in **Administer : Content Management** also.

Connections and Bandwidth

Administrators can monitor and control video activity in **Administer : System Status : Connections**.

Videos being watched	Displays the status of video activity, including the number of connections and the bandwidth used. Click Disconnect to terminate playback. Use this feature to ensure that a preferred video has access to the maximum bandwidth. NOTE: Details do not include video activity on embedded players.
Recordings and transcodings in progress	Displays the status of recordings and format conversions.
Video uploads in progress	Displays the status of uploads to other LifeSize UVC Video Centers.

Transcoding

Creating low bandwidth and mobile versions of videos and performing dial out and dial in recording are processor intensive tasks that require LifeSize UVC Video Center to transcode video. The server creates low bandwidth and mobile video versions by transcoding the primary video sent to it from the recording capable LifeSize system. For dial out and dial in recordings, the server performs all of the processing.

If requests for transcoding exceed processor capacity, the requests are queued and processed in sequence. Dial out and dial in recordings take precedence. Navigate to **Administer : System Status : Connections : Recordings and transcodings in progress - View Details** to view in process and pending format conversions.

Performing Server Maintenance

LifeSize recommends that you put LifeSize UVC Video Center in maintenance mode before backing up, restoring, or implementing NAS. Maintenance mode terminates streaming and recording activity and prevents non-administrators from logging in.

CAUTION LifeSize UVC Video Center does not warn streaming and recording users before their activity is terminated, but a message alerts users that their activity has been terminated by an administrator. Use another method, such as email, to forewarn users.

Enter maintenance mode as follows:

1. Select **Administer : Operations and Maintenance : Maintenance mode**.
2. Click **Shut Down Services**. Current streaming activity is terminated and users receive a message that an administrator has terminated services.

Ensure that you exit maintenance mode and restore services after your tasks are complete.

Backing Up Videos and Settings

You can use the local Redundant Array of Independent Disks (RAID) configuration on LifeSize UVC Video Center or NAS to store videos and associated data. Whatever option you use, consider regularly backing up the content to external servers to prevent losses in case of disk failures or accidental deletion of content.

Use the backup option to create a copy of the videos, comments, and all settings in the **Content Management** page.

NOTE System settings and application software are not backed up.

Backing Up Local Storage

1. Select **Administer : Operations and Maintenance : Back Up**.
2. Enter the IP address for the FTP host.
3. Enter your FTP username and password.
4. *Optional:* Enter an FTP backup directory.
5. Click **Create Backup**.

If you previously backed up the server to this path, subsequent backups are incremental, replacing only data that has changed since the previous backup.

Restoring from Local Storage Backup

1. Select **Administer : Operations and Maintenance : Restore**.
2. Enter the IP address for the FTP host.
3. Enter your FTP username and password.
4. Enter the FTP backup directory, if you used one during the backup.
5. Click **Restore From Backup**. LifeSize UVC Video Center validates the backup image and lists the recordings located in the backup image.
6. To restore selected videos, select one or multiple video names and click **Restore Videos**.

-or-

To restore all videos, users and groups, channels, and recording keys, click **Restore All Content**.

NOTE Because users and groups may have permissions associated with LifeSize UVC services other than LifeSize UVC Video Center, restoring all content restores only users and groups that are missing from the LifeSize UVC Video Center database. Restoring all content does not affect existing users and groups.

Backing Up NAS

1. Select **Administer : Operations and Maintenance : Back Up**.

LifeSize UVC Video Center enters maintenance mode and copies the content databases to the network storage location, including recently recorded media still in local storage. When the content flush is complete, LifeSize UVC Video Center exits maintenance mode.

2. Manually back up the NAS location with tools of your choice.

Restoring from a NAS Backup

1. Enter maintenance mode.
2. Manually copy the backed up contents to the current configured storage location.
3. Click **Restore From Backup**.

LifeSize UVC Video Center enters maintenance mode and synchronizes its content database with the NAS contents. When the synchronization completes, LifeSize UVC Video Center exits maintenance mode and continues normal operation.

NOTE You cannot select specific videos to restore from an NAS backup.

Copyright Notice

©2012 Logitech, and its licensors. All rights reserved.

LifeSize, a division of Logitech, has made every effort to ensure that the information contained in this document is accurate and reliable, but assumes no responsibility for errors or omissions. Information in this document is subject to change without notice. Companies, names, and data used in examples herein are fictitious unless noted. This document contains copyrighted and proprietary information which is protected by United States copyright laws and international treaty provisions. No part of the document may be reproduced or transmitted, in any form or by any means, electronic or mechanical, for any purpose, without the express written permission from LifeSize Communications.

Trademark Acknowledgments

LifeSize, the LifeSize logo and other LifeSize marks, are registered trademarks or trademarks of Logitech . All other trademarks are the property of their respective owners.

Patent Notice

For patents covering LifeSize® products, refer to lifesize.com/support/legal.

Contacting Technical Services

LifeSize Communications welcomes your comments regarding our products and services. If you have feedback about this or any LifeSize product, please send it to feedback@lifesize.com. Refer to lifesize.com/support for additional ways to contact LifeSize Technical Services.