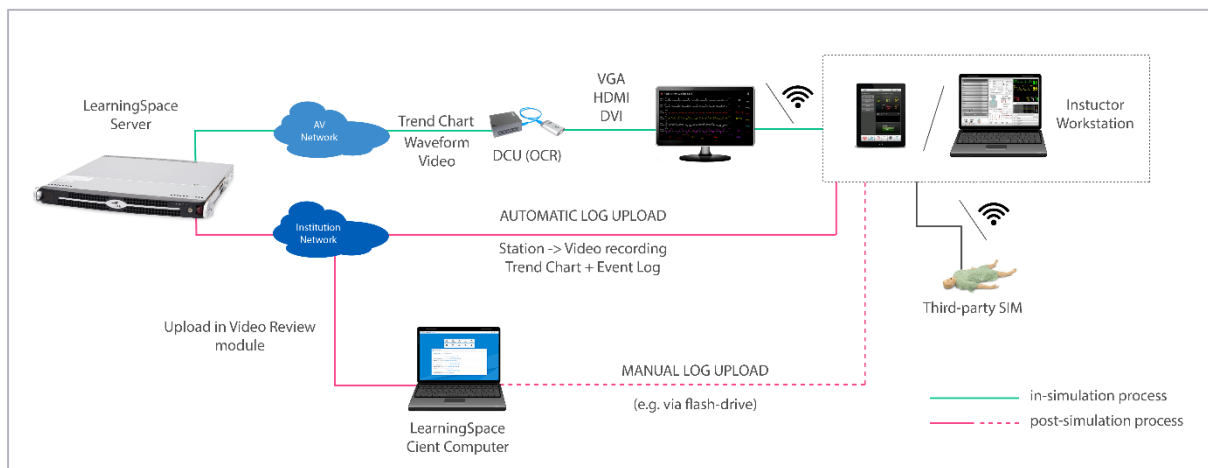


## Third-Party Simulator Management for Server-Based LearningSpace System

**IMPORTANT:** CAE LearningSpace supports the simulators of the following two manufacturers: *Laerdal* and *Gaumard*. These third-party simulators can be connected to the system and data logs saved from such simulators can be uploaded to and synchronized with LearningSpace recordings.



With server-based LearningSpace systems, integration of third-party simulator data can be achieved both live, that is, simultaneously with the simulation (in-simulation) and after the simulation is concluded (post-simulation).

With the help of OCR (optical character recognition), trend charts can also be displayed in-simulation along with the physiological data of the simulation.

## Hardware Setup

Hardware setup is necessary for ensuring in-simulation waveform (and trend chart) display and/ or automatic upload.

1. Connect one of the video outputs of the computer displaying the waveforms of the *non-CAE simulator* to the DVI port of the Framegrabber of the Display Capture Unit (DCU).



**Display Capture Unit: Brix and Framegrabber**

*TIP:* With an appropriate DVI-HDMI or DVI-VGA adapter, the computer displaying the waveforms can be connected to the Framegrabber with an HDMI or VGA cable respectively.

*NOTE:* To display trend chart in LIVE view along with the waveforms, the DCU has to run OCR (optical character recognition) which transcribes the data of the waveforms into a trend chart. The OCR needs be configured by the LearningSpace Support.

*IMPORTANT:* It is recommended that the display settings of the PC be set to 1080p resolution. Depending on the software/ hardware setup of the third-party simulator, the multi-screen display settings should be set to either 'mirroring' or 'extended' mode on the instructor workstation so as to ensure that the physiological data sent to the DCU is displayed in full screen.

2. Connect the Brix to the AV network with a UTP cable (like any other AV device) and power it ON.

**NOTE:** The Brix is not a PoE (Power over Ethernet) capable device, therefore it has to be connected to a power socket.

## Automatic Simulator Log Upload

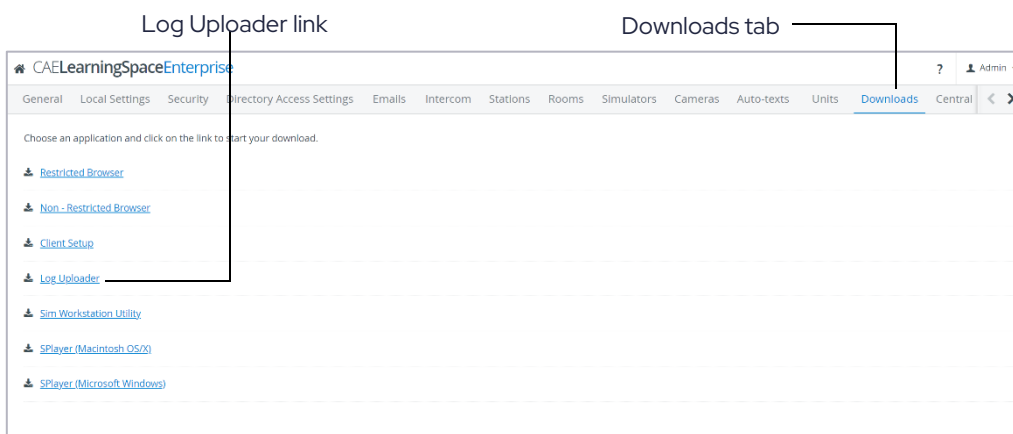
Automatic upload is the automatized transfer of third-party simulation data triggered by the stopping of the simulation scenario.

### Preparation

**IMPORTANT:** The basic criterion of automated upload of simulator logs is a **Windows-based** PC or device (referred to as 'workstation') with **network access to LearningSpace** over HTTP(S).

1. On the workstation, in the **System** module of your LearningSpace, go to the **Downloads** tab and click the **Log Uploader** link to download the necessary Log Upload utility to your device.

**IMPORTANT:** The utility has to be started with Administrator privilege.



**Downloads tab**

2. Unzip the LSLogUploader file and start the Log Upload utility on your workstation by double-clicking the windows batch file (.bat format) in the folder.

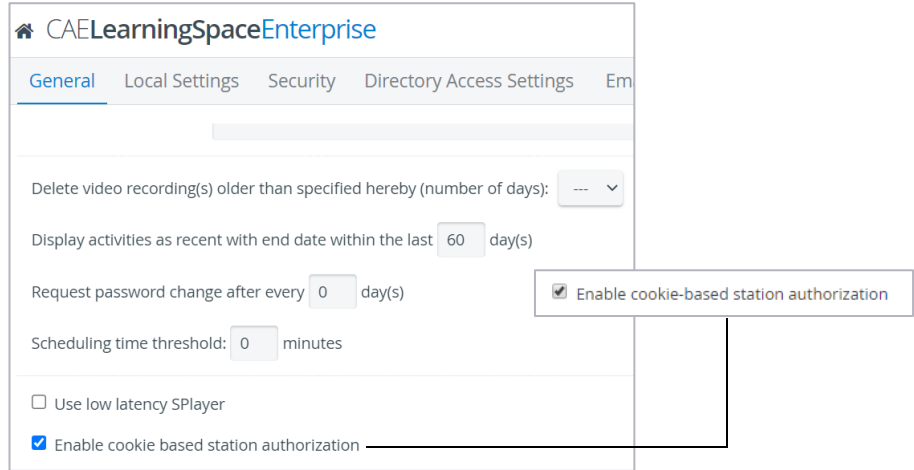
Name	Date modified	Type	Size
LSLogUploader	11/29/2012 2:35 PM	Windows Batch File	1 KB
LSLogUploader	3/2/2016 3:44 PM	Application	16 KB
LSLogUploader.exe.config	11/22/2017 4:05 PM	CONFIG File	1 KB

**Unzipped LSLogUploader file**

### Setup in LearningSpace

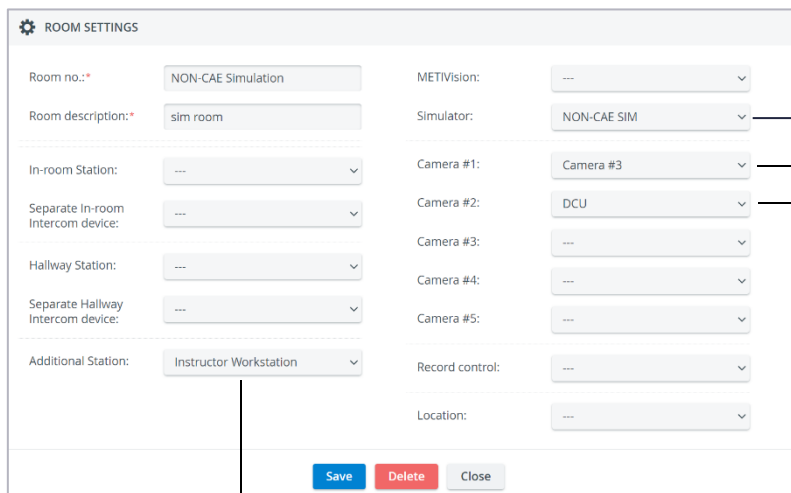
1. On the **Stations** tab of the **System** module, add your workstation as **Additional Station** by clicking the **Add This Computer** button and checking only the Additional Station as station type.

**IMPORTANT:** If the IP address of your computer may change, make sure to **enable cookie-based station authorization** by ticking the corresponding checkbox on the **General** tab of the **System** module.



**General tab of the System module**

- On the **Simulators** tab, the third-party simulator has to be added to the system via the **Add Non-CAE Simulator** button at the bottom of the Simulators list. **NOTE:** Adding the simulator via the **Simulators** tab is a virtual step ensuring that the simulator can be distinguished within the system.
- On the **Rooms** tab, click the cogwheel icon of the room in which you intend to use the simulator to prompt the **Room Settings** pop-up to open. Once opened, assign each of the following to the room:
  - the additional **station** (i.e. your workstation) ◦
  - the non-CAE **simulator**



Workstation as Additional Station

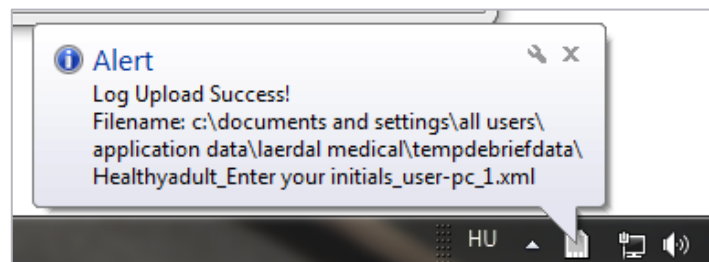
Camera(s)/DCU

**Rooms Settings pop-up**

## Automatic Upload Process

1. Start the recording in the selected room.
2. Start the simulation scenario on the instructor workstation.
3. Stop the simulation.

**NOTE:** Stopping the simulation triggers the log upload and once the upload process is completed, a system message is displayed confirming the successful completion.



*System message about successful log upload*

4. Stop the recording.

The system selects video recordings - including running ones - based on the following:

- recording date matching that of the first log entry in the uploaded simulator log **AND**
- recording in the room to which the instructor workstation is assigned as additional station.

The simulator log is automatically synced to the video recording based on the start date and time.

**NOTE:** Due to potential differences arising from calendar (absolute) versus simulation-offset (relative) dates, it is recommended that the synchronization be checked and, if necessary, updated via manual synchronization (see instructions in the following chapter).

**IMPORTANT:** In case OCR runs on the DCU, that is, trend chart is saved together with the waveform, the data saved through OCR will overwrite any trend chart data that is uploaded along with the log upload.

## Manual Uploading of Data Log to a Selected Recording

Manual upload is a means of transferring third-party simulation data any time subsequent to the conclusion of the simulation scenario.

1. Save/ export the event log of the simulation from your workstation to a flash-drive.  
**NOTE:** Depending on the third-party simulator, the following formats are available:

**Laerdal:** SSX, SSS, XML,  
SBR **Gaumard:** TXT, XML

2. On the **Video Review** page, check the box of the encounter you intend to upload a data log to.

**TIP:** Use the *Quick search* bar for a targeted search. The gray **Upload data log** button becomes activated.

One recording selected

<input checked="" type="checkbox"/>	09/24/2021 15:04	D1	Timothy Alexander,...	61%
<input type="checkbox"/>	09/24/2021 14:38	D1	Katherine Arul	100%

Upload data log active

Number of selected video recording(s): 1

Showing entries: 1 - 11 / 11

**Option buttons with one recording selected**

**NOTE:** Since data log can be uploaded to one specific encounter at a time, selecting more than one videos results in the button becoming deactivated (gray) again. (The number of selected recordings is indicated above the option buttons.)

More than one recordings selected

<input checked="" type="checkbox"/>	09/24/2021 14:38	D1	Katherine Arul	100%
<input type="checkbox"/>	04/19/2016 10:25	Exam 1	Matthew Wittman, ...	
<input checked="" type="checkbox"/>	09/24/2021 15:04	D1	Timothy Alexander,...	61%

Upload data log button inactive

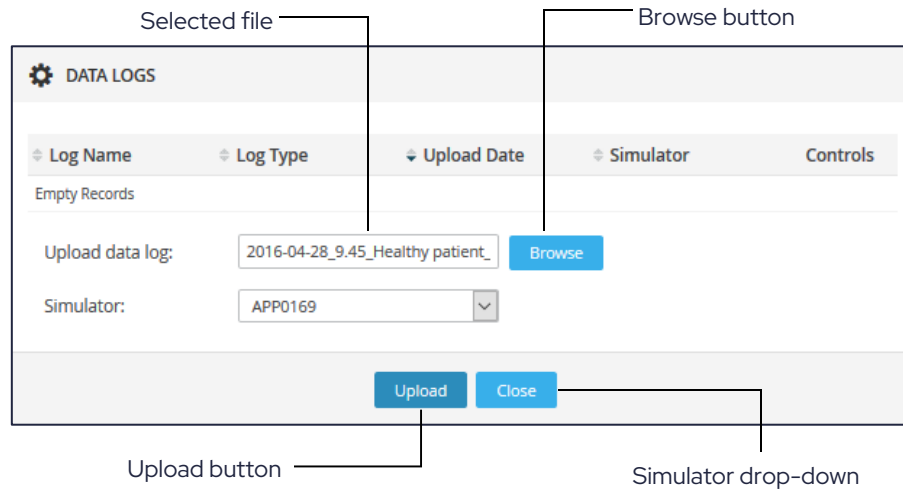
Number of selected video recording(s): 2

Showing entries: 1 - 11 / 11

**Option buttons with multiple recordings selected**

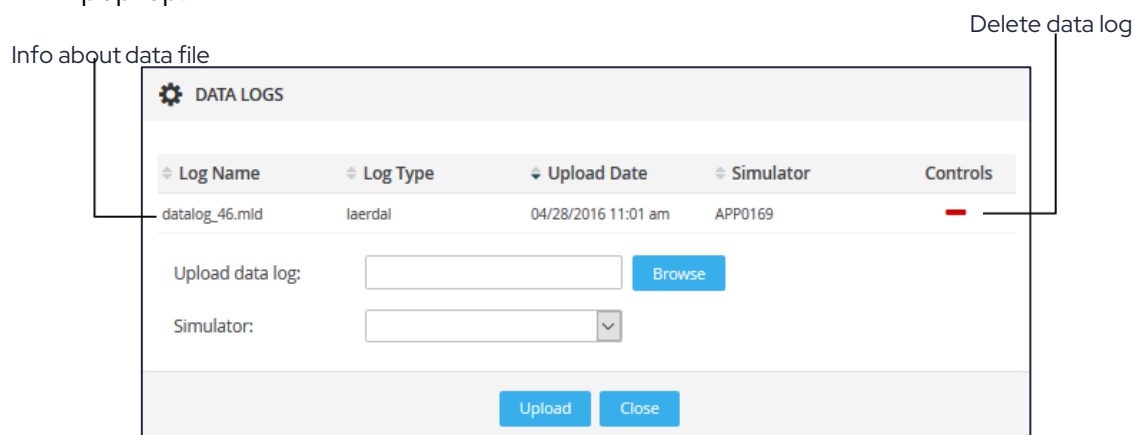
3. Click the **Upload data log** button.

The **Data Logs** pop-up window appears.



**Data Logs pop-up window**

4. Click the **Browse** button and select the file saved to your flash-drive/computer that you want to upload to the recording.
5. Select the simulator from the **Simulator** drop-down.
6. Click **Upload**.  
**NOTE:** Depending on the size of the file, the upload may take a minute.
7. When the upload is complete, information about the data file is listed in the **Data Logs** pop-up.



**Data Log pop-up after upload**

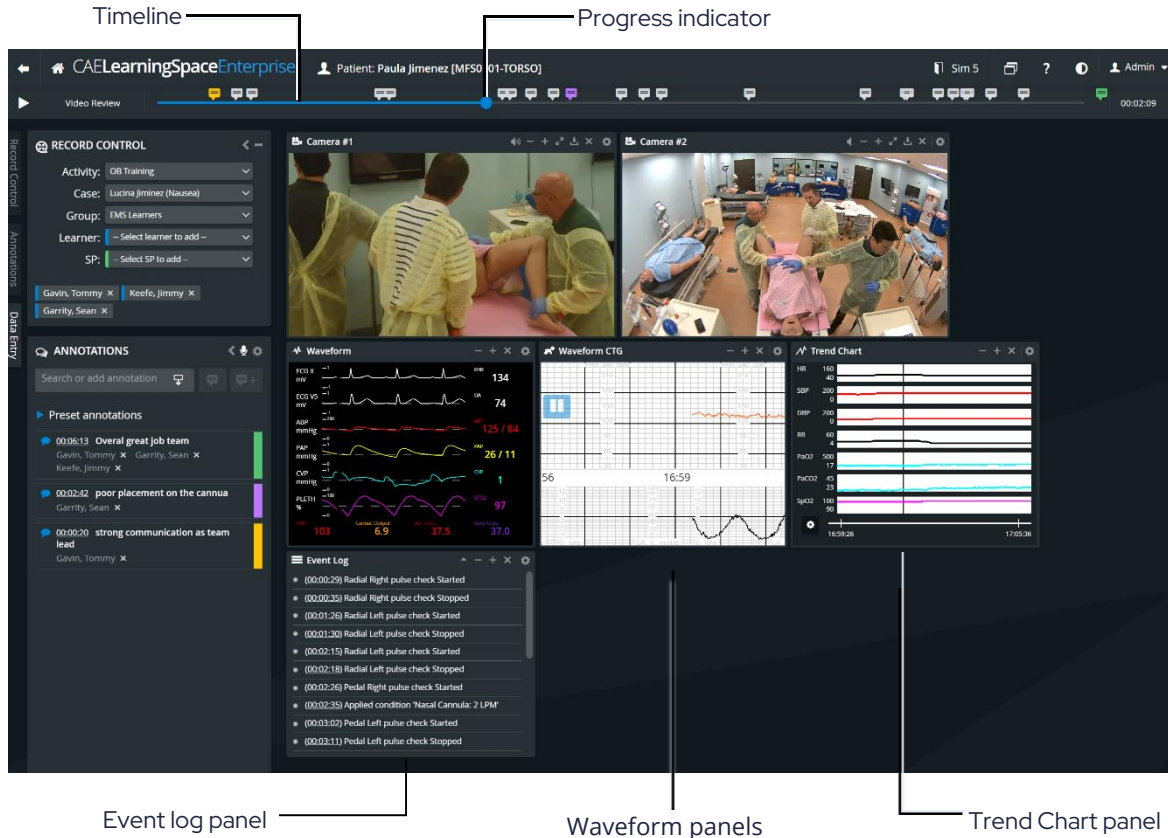
**TIP:** Click the red **minus** icon to delete the uploaded data log.

**NOTE:** Multiple event logs can be uploaded to a specific recording, providing that they do not overlap.

8. Click **Close** to return to the list of recordings.

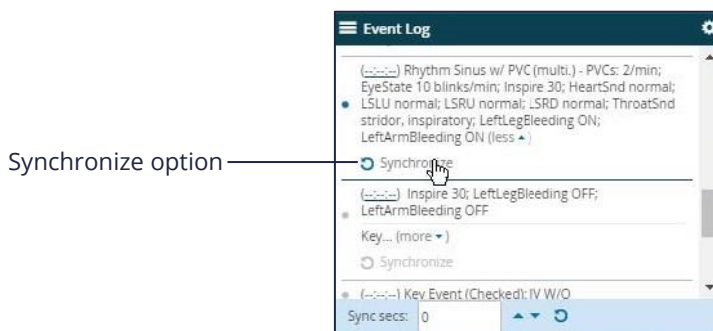
To synchronize the uploaded data log with the recording:

- Open the recording to which the data log has been uploaded. The **Trend Chart** and **Event Log** panels will be displayed along with the video recordings.



**Video Review screen of a recording with uploaded data log**

- In the **Event Log** panel, select a specific event that can be unambiguously linked to the recording.
- Use the progress indicator to display the selected event on the recording.
- When the selected event is screened, click **Synchronize** at the corresponding event in the **Event Log**.

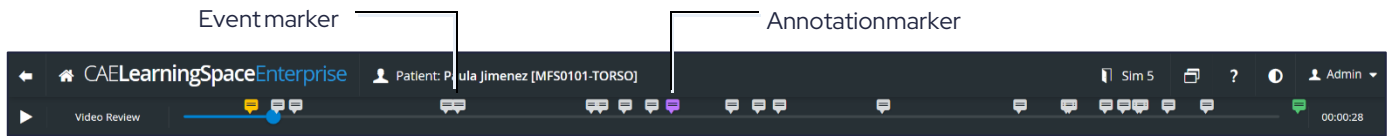


**Event Log panel when hovering over a specific event**



**NOTE:** The **Synchronize** option is darkened when hovering over it within the selected event of the **Event Log** panel.

The synchronized events will be displayed by light gray flags on the timeline (as opposed to the color-coded annotation markers).



*Timeline after synchronizing*