



CAELapVR

Administrator's Guide



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End of End User License Agreement

SYSTEM SPECIFICATIONS

Hardware	
Equipment	<p>24" flat LCD monitor</p> <p>Haptic device</p> <p>Two instruments with 6 degrees of freedom</p> <p>Camera with 5 degrees of freedom, changeable virtual lenses and image capture feature</p> <p>Dual foot pedal for electro-surgery and advanced energy devices</p>
Dimensions	<p>18" W x 38" D x 68" H (Adjustable)</p> <p>46cm W x 96cm D x 173cm H (Adjustable)</p>
Weight	195 lb (90 kg)
Electrical	<p>100-120 V, 50-60 Hz, 10A</p> <p>200-240 V, 50-60 Hz, 5A</p>
Storage Temperature	-40° C to +65° C (-40° F to +149° F)
Storage Humidity	20% to 80% without condensation
Operating Temperature	10° C to 32° C (50° F to 90° F)
Operating Humidity	20% to 80% without condensation

CAUTIONS AND WARNINGS

Please read and understand these cautions and warnings before you begin using the simulator.

Operations

- Do not operate your equipment with any covers removed
- Do not use your equipment in a wet environment. Protect equipment from liquid intrusion.
- Do not put any object on top of the bottom platform. Movement of the lift mechanism can cause crush hazard, resulting in possible bodily injuries and damaged equipment.
- Do not jam the motor lift mechanism onto an object. This is a misuse and subjects the motor to burn out. It can also result in possible bodily injuries and damaged equipment.

Ergonomics

- Tip-over hazard: Do not move your equipment without fully lowering the lift mechanism. Failure to do so can result in possible bodily injury and damaged equipment.
- Improper or prolonged keyboard use may result in injury
- Viewing a monitor screen for extended period of time may result in eye strain

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INTRODUCTION

Welcome to the CAE Healthcare LapVR Simulator administrator's guide. This guide provides instructions on how to use and maintain your LapVR simulator.

The LapVR simulator provides a safe, virtual environment for learners to practice laparoscopic techniques and skills. Learners can range from medical students to licensed medical professionals.



The LapVR Simulator

Preprogrammed tasks and courses with didactic content, real-time simulation haptics and post-simulation evaluation metrics help create the comprehensive training experience for learners. Through the combination of these tools, learners are able to recognize the realistic anatomical and spatial limitations of performing laparoscopic surgery on a human patient and master the techniques required for safe, successful surgeries.

EQUIPMENT OVERVIEW

The standard equipment for the LapVR simulator includes all the necessary equipment for using the simulator. The items listed in the table below are shipped with the simulator.

Standard Equipment
LapVR Device
LapVR Handle Attachments
LapVR Pedals
Monitor Pole
Monitor
Computer

LapVR Device

The LapVR device comes as a single entity. The haptic device, camera, keyboard, mouse and lifting mechanism are all part of the LapVR device. The device is secured to a four-wheel platform for convenient mobility when storing the simulator. Additional parts, which are packaged and shipped separately, will require minor assembly.



The LapVR Simulator

LapVR Handle Attachments

The LapVR comes with two pairs of quick change handle attachments: the pistol grip attachments and the suturing attachments.

The pistol grip attachments are most commonly used for several instruments throughout the various modules.



The Pistol Grip Attachments

The suturing grip attachments are used for more specific modules that require the use of instruments with a constant grip.



The Suturing Attachments

LapVR Pedals

The LapVR comes with foot pedals to provide power controls for simulations that use electro-surgery and advanced energy devices.



The Foot Pedals

Monitor Pole

The monitor pole is shipped separately from the LapVR device and requires some assembly before the simulator can be used. Two plates (one front and one back) connect to the LapVR device to create the monitor pole. The monitor arm is attached to the monitor pole front plate.

Monitor

One flatscreen monitor is provided with the purchase of a LapVR simulator.

Computer

The computer for the LapVR simulator is shipped inside the LapVR device. To access the computer, press on the access door located on the side of the simulator.



The Computer Access Door

Before Beginning Setup

Proper operation of the LapVR simulation requires correct configuration. Before setting up the system, keep in mind these basic guidelines:

- Read and understand the Cautions and Warnings in the beginning of this User Guide
- Follow and complete the sequence of Setup steps carefully
- Do not power on any components until instructed in the text
- Do not install any Windows updates or anti-virus software when connecting to the network
- When unpacking the simulator for the first time, use box cutters carefully to protect both the packaging and the product

Note: Keep all original shipping materials, including boxes. Warranty and repair items must be returned and shipped in their original packaging.

SETUP

This section provides instructions and guidelines for assembling the LapVR simulator and configuring the computer. Follow these procedures to prepare for your simulation experience.

Setting Up the LapVR Simulator	
1	Place the simulator in the work area
2	Mount the monitor pole
3	Mount the monitor
4	Connect and secure the monitor cables
5	Connect the handles
6	Connect the external power cord
7	Power on the simulator
8	Optional: Connect the Ethernet cable
9	Optional: Adjust the height
10	Optional: Prepare pedals for use

Step 1: Place the Simulator in the Work Area

To place the simulator in the work area:

- a. Remove the simulator device and standard equipment from its packaging
Note: Keep all shipping materials intact in case any equipment must be returned.
- b. Place the simulator and hardware components in the desired work area
The work area should provide enough space for the simulator, the learner and one or two observers.



The LapVR Simulator

- c. Lock the wheels on the bottom of the simulator by pressing down on the wheel brake



The Wheel Brake

Step 2: Mount the Monitor Pole

To mount the monitor pole front plate on the pole base:

- a. Twist the wingnuts located on the back of the LapVR device to reveal part of the screw. Repeat for each of the six screws.
- b. Located the monitor pole front plate
- c. Hold the front plate vertically with the front of the plate facing the front of the simulator
- d. Slide the grooves at the bottom of the front plate onto the screws in the LapVR device
- e. Twist the wingnuts onto each screw until tight to secure the front plate

To route the monitor cables:

- a. Gently pull the loose monitor cables from the pole base until the cables are fully extended
- b. Thread the cables through the opening near the top of the monitor pole front plate
- c. Place the black plastic cap over the top of the cable opening near the top of the front plate
- d. Lift the cables and place the black plastic cap over the bottom of the cable opening

To mount the monitor pole back plate onto the pole base:

- a. Locate the monitor pole back plate and align the holes near the top of the back plate with the holes near the top of the front plate
- b. Place the screw into the top left hole and twist until secure
- c. Place the screw in the bottom right hold and twist until secure. Use a Phillips head screwdriver to tighten the screws in place.
- d. Place the screw in the top right hole and a screw in the bottom right hole. Use a Phillips head screwdriver to tighten the screws in place.

Step 3: Mount the Monitor

WARNING: The flatscreen monitor must be held firmly in place while the steps below are completed. To ensure this process is completed safely and properly, CAE strongly recommends that two individuals work cooperatively to complete this task.

To mount the monitor onto the monitor arm:

- a. Remove the screws from the back of the monitor
- b. Align the holes on the mounting plate at the end of the monitor arm with the holes on the back on the monitor

Note: One person must hold the monitor at all times.

- c. Twist the screws by hand into each hole
- d. Ensure the monitor is secure before letting go of the monitor



The Monitor Mounting Plate and Screws

Step 4: Connect and Secure the Monitor Cables

To connect the monitor cables:

- a. Locate the monitor VGA cable at the top of the monitor pole
- b. Run the cable along the monitor arm to the back of the monitor
- c. Plug the cable into the VGA port on the bottom of the monitor and twist the pins on each side of the connector to secure the cable in the port
- d. Locate the monitor power cable at the top of the monitor pole
- e. Run the cable along the monitor arm to the back of the monitor
- f. Plug the cable into the power port

To secure the monitor cables:

- a. Grasp both cables and press the cables against the monitor arm
Note: Leave approximately 3 to 4 inches of cable length from the monitor arm base to the plastic monitor arm cover before completing step b.
- b. Press the bottom of the grouped cables onto the plastic cover
- c. Align the bottom of the cover below the arm and the end of the cover below the monitor arm hinge
- d. Squeeze the end of the cover and push the monitor cover in towards the base until it clicks
- e. Wrap a zip tie around the exposed and create a loose circle
- f. Attached the zip tie circle onto the hook located under the monitor arm near the monitor arm hinge
- g. Pull the zip tie tightly around the hook
- h. Repeat steps f and g on the hook located near the monitor

Step 5: Connect the Handles

Changing the Handles

When the chosen task requires an instrument with a suture grip, learners can detach the pistol grip handle attachments and attach the suturing handle attachments during a running simulation.

To connect the handles:

- a. Grip the handle base and fully retract the handle from the device
- b. Hold the handle attachment and press the thumb on the metal locking tab at the base of the attachment
- c. Approach the handle base with the handle attachment at an angle and hook the attachment onto the base



The Disconnected Handle Attachment

- d. Lift the handle attachment to a vertical position until it clicks



The Connected Handle Attachment

- e. Repeat steps a through c for the second handle

To change a handle attachment:

- a. Grip the handle attachment and fully retract the handle from the simulator
- b. Press the thumb on the metal locking tab at the base of the attachment



The Connected Handle Attachment

- c. Tilt the attachment away from the simulator. The attachment disconnects from the handle base.



The Disconnected Handle Attachment

- d. Approach the handle base with the new handle attachment at an angle and hook the attachment onto the base
- e. Lift the handle attachment to a vertical position until it clicks
- f. Repeat steps a through e for the second handle

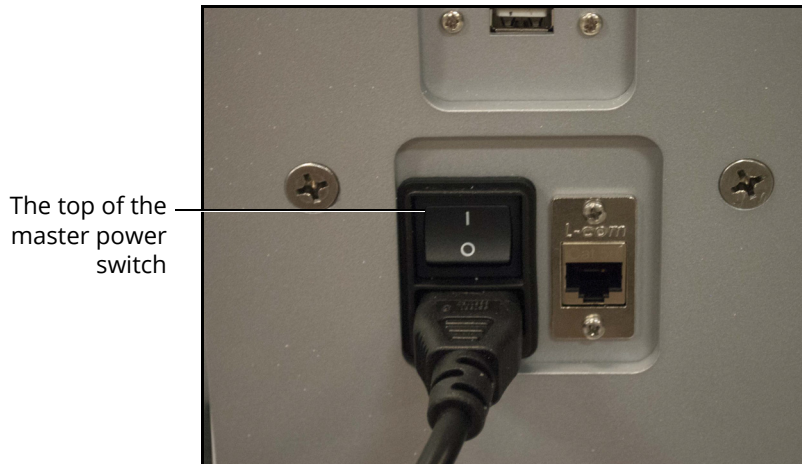
Step 6: Connect the External Power Cord

Find an external power source and plug the power cord into the power source.

Step 7: Power On the Simulator

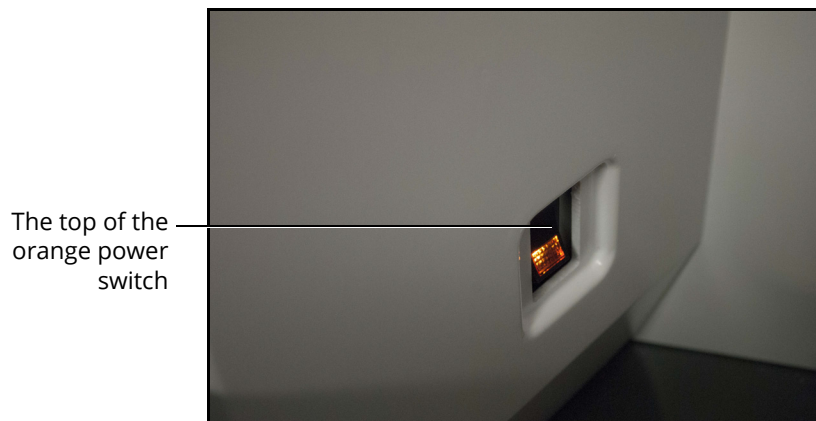
To power on the simulator:

- a. Ensure the top of the master power button, located on the back of the simulator, is pressed in



The Master Power Switch

- b. Press the top part of the orange power switch located on the back right side of the simulator

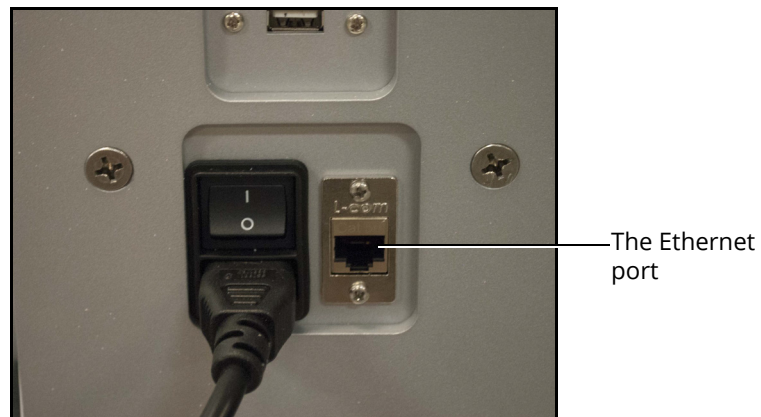


The Power Switch Illuminated

Step 8 (Optional): Connect the Ethernet Cable

To access the network for sending emails or printing:

- a. Connect an Ethernet cable to the Ethernet port located on the back of the simulator



The Ethernet Port

- b. Connect the other end of the Ethernet cable to a network Ethernet port

Step 9 (Optional): Adjust the Height

To adjust the height of the simulator:

- a. Press the up or down illuminated green arrow buttons located on the front of the lifting mechanism
- b. Hold the up or down arrow button for a few seconds to activate the lift mechanism



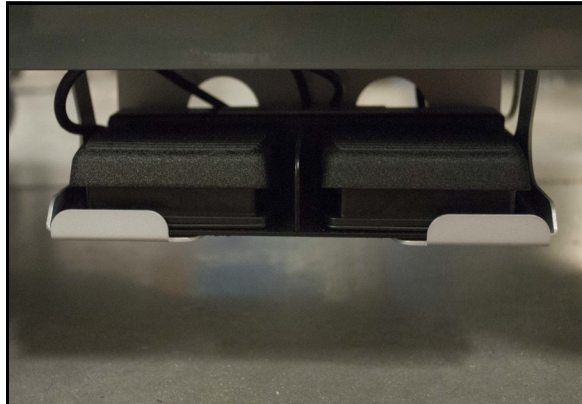
The Lifting Mechanism

- c. Once the lift is activated, the device begins moving up or down
- d. Release the button when the desired height is achieved

Step 10 (Optional): Prepare Pedals for Use

To prepare the pedals for use:

- a. Remove the pedals from the storage tray located underneath the left side of the simulator to use the pedals during procedures



The Pedal Storage Tray

- b. Place the pedals directly in front of simulator for procedures that require the pedals to complete specific actions during the simulation



The Simulation Pedals

Note: Return the pedals to the storage tray when they are not in use to eliminate potential misuse or safety hazard.

USING THE ADMINISTRATOR TOOLS

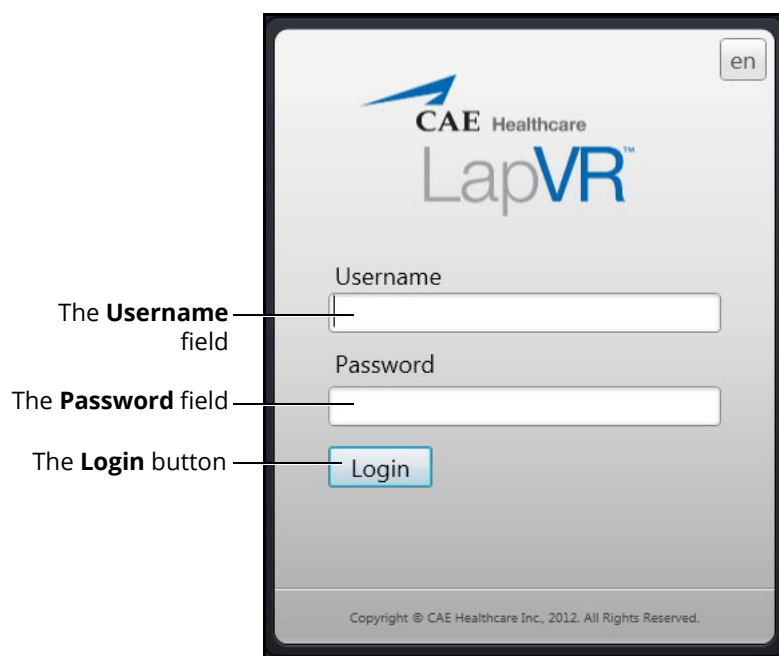
Administrators managing the LapVR simulator are responsible for setting up user accounts, privileges and curriculum. Additionally, the administrator has the ability to change network settings, haptics setting and simulation parameters, set up emails, generate and print reports and import and export system data.

Note: For optimal use, no other software programs should be open while the simulator software is running.

Note: To use the printing functions in the software, a network connection must be established.

Starting the Software

Once the LapVR simulator is powered on, the software launches automatically and the Login screen appears.

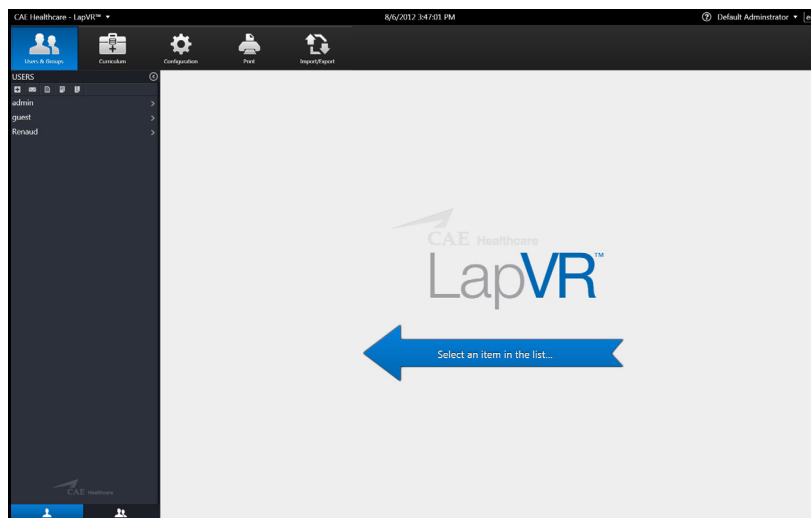


The Login Screen

To log in to the software:

1. Enter the assigned username in the **Username** field. The default username for a new administrator is *admin*.
2. Enter the assigned password in the **Password** field. The default password for a new administrator is *admin*.
3. Click **Login**

The administrator Home screen appears, indicating the administrator is logged in.

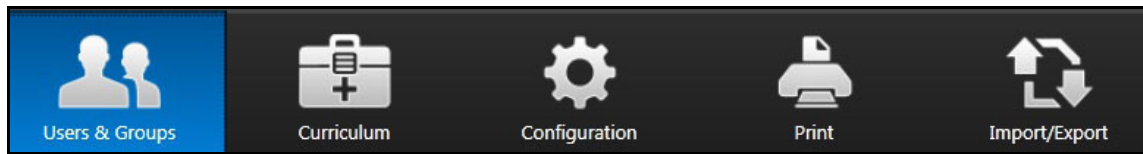


The Administrator Home Screen

From the administrator Home screen, administrators can navigate to the screens required for editing user and group accounts, assigning curriculum, adjusting configurations and printing, importing and exporting user data.

Interface Overview

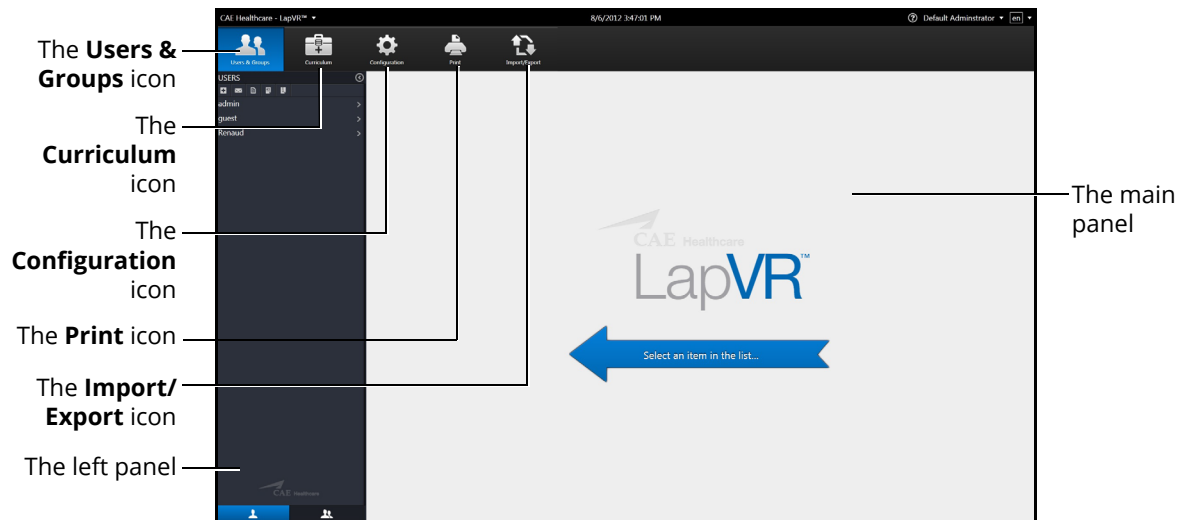
The LapVR administrator interface contains a dashboard of icons located near the top of the screen that represents the screens available for administrators to perform various tasks and functions.



The Icon Dashboard

When an icon is selected, the associated content will appear in the main panel of the interface and the left panel contains a list of options for administrators.

The **Users & Groups** icon is selected by default and referred to as the Home screen when users first login to the software.



The Administrator Home Screen

Users & Groups

From the Users & Groups screen, administrators can create user accounts, assign privileges, courses and tasks to individual users and assign users, courses and tasks to groups. Administrators can also deactivate user accounts and set up and send out automated emails containing user account information.

Curriculum

From the Curriculum screen, administrators can assign courses and tasks to individual users and assign courses, tasks and users to groups. Administrators can also upload faculty content to appear in the didactic content of a simulation, create new tasks and courses and modify user parameters.

Configuration

From the Configuration screen, administrators can adjust network settings, haptic settings and language preferences.

Print

From the Print screen, administrators can print user account information, usage summaries and reports for individual users and groups.

Import/Export

From the Import/Export screen, administrators can import users and export user lists and results.

Creating Users and Groups

Administrators are responsible for creating and managing users and groups in the LapVR system. Only users with administrative privileges can create new users and groups.

Creating Users

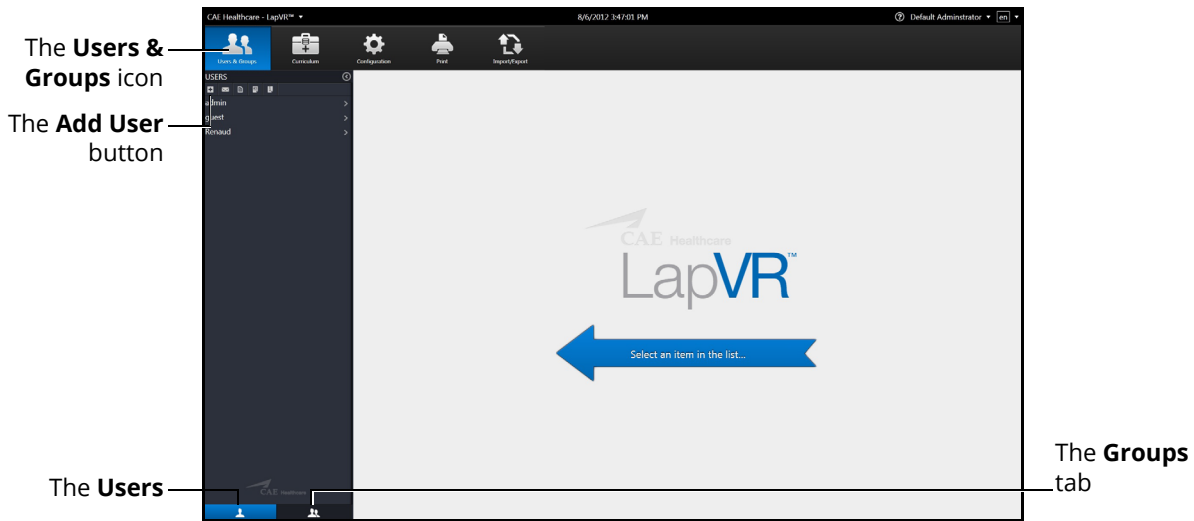
To create a user:

1. From the icon dashboard, click the **Users & Groups** icon

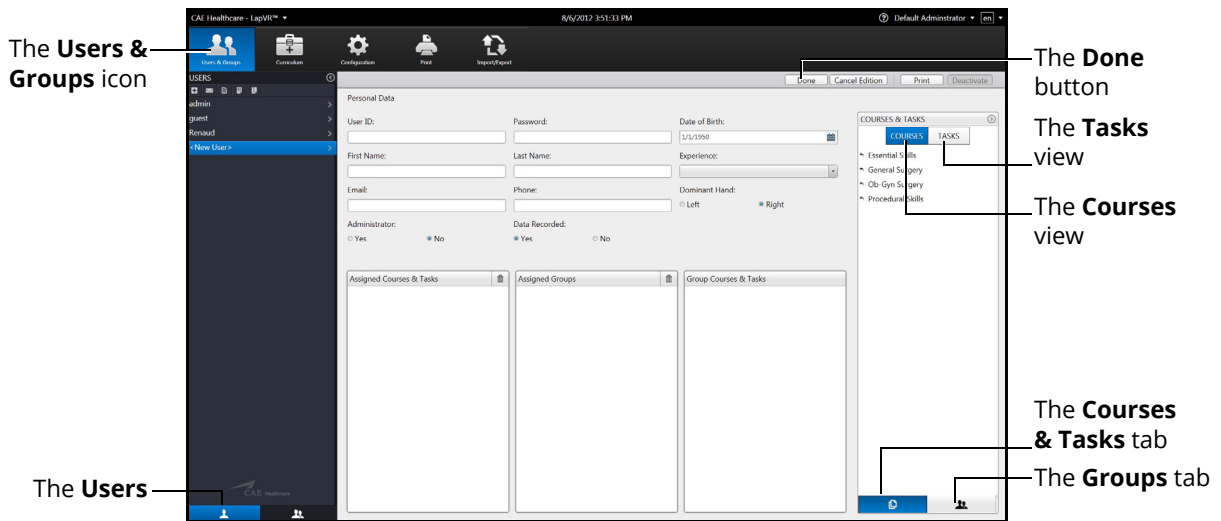


The Users & Groups Icon

2. From the Users and Groups screen on the **Users** tab, click the **Add User** button



The Users & Groups Screen



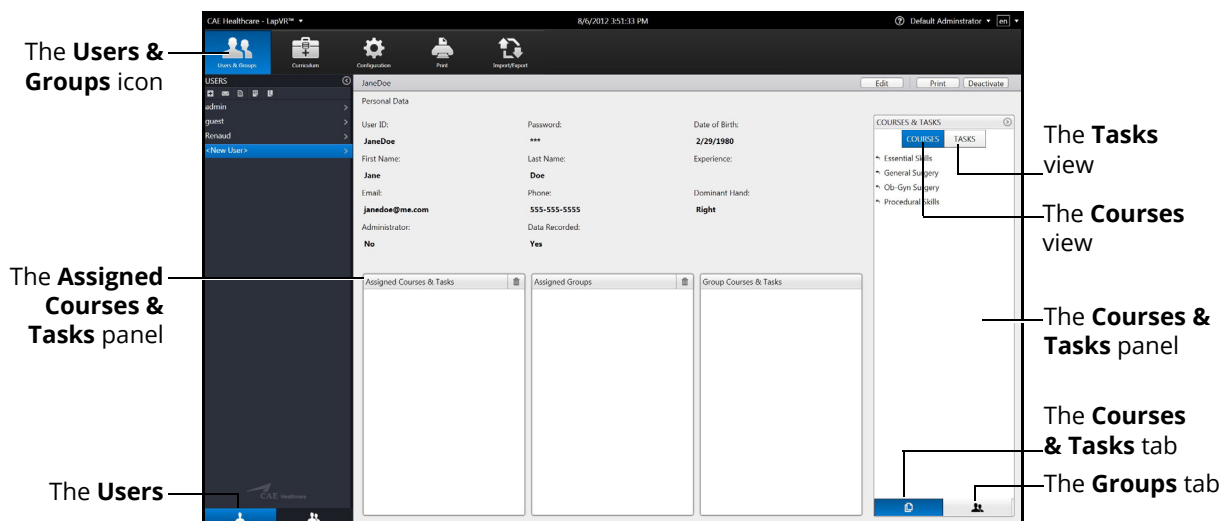
The Personal Data Screen

3. Enter the information for the specific user in the different fields

Assigning Courses to a User Account

To assign a course to a user from the Personal Data screen:

1. Select the user from the **Users** panel on the Users and Groups screen



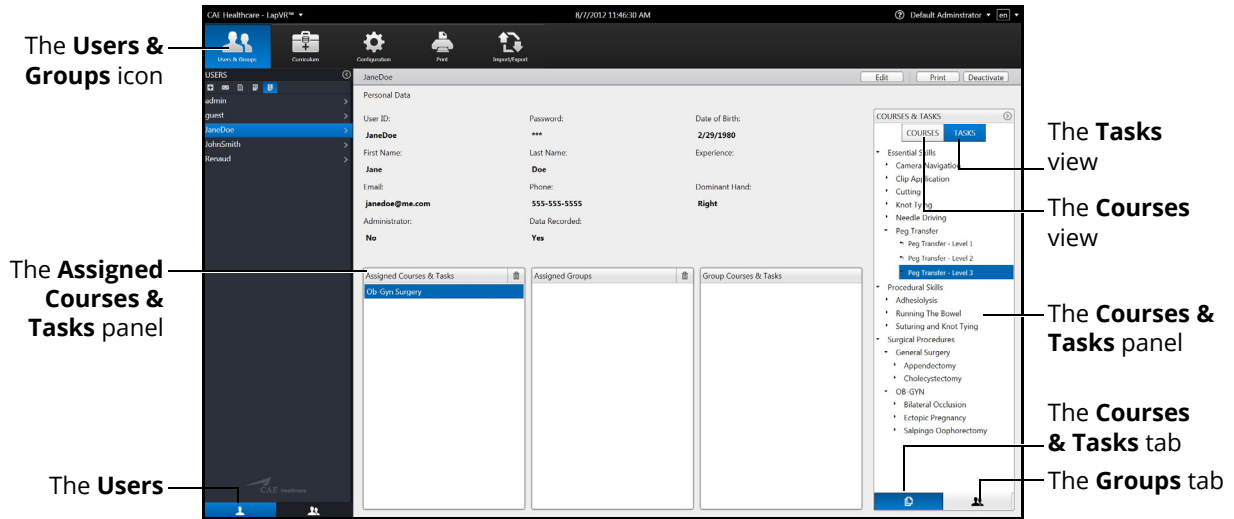
The Personal Data Screen

2. Click on the **Courses & Tasks** tab in the **Courses & Tasks** panel
 3. Click on the **Courses** view and select the desired course in the **Courses & Tasks** panel
 4. Hold down the left mouse button and drag the course from the **Courses & Tasks** panel to the **Assigned Courses & Tasks** panel
- Once the button is released, the course appears in the assigned curriculum for the user.

Assigning Tasks to a User Account

To assign a task to a user from the Personal Data screen:

1. Select the user from the **Users** panel on the Users and Groups screen



The Personal Data Screen

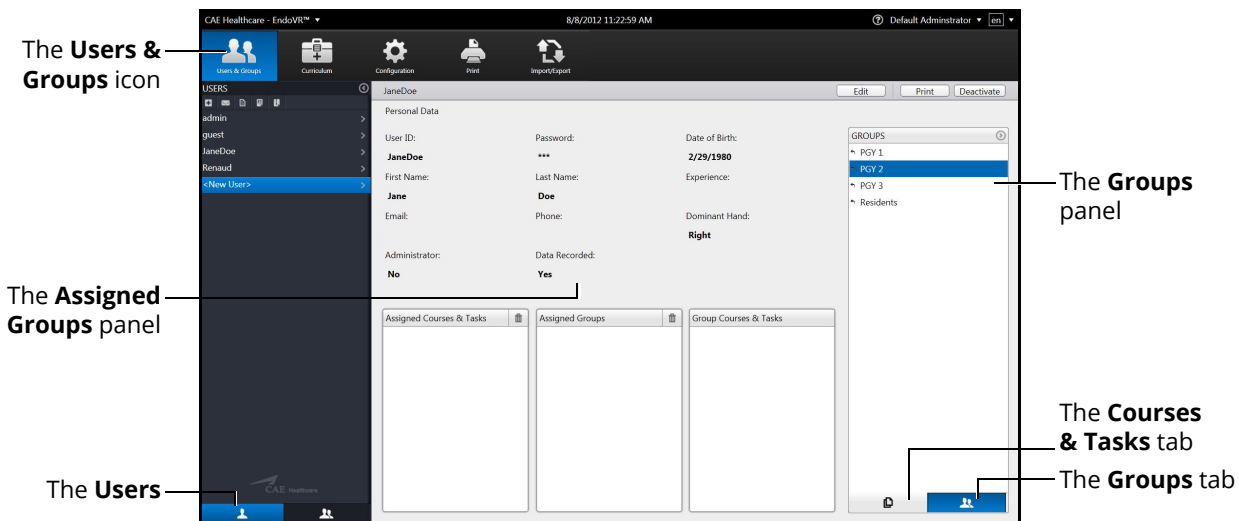
2. Click on the **Courses & Tasks** tab in the **Courses & Tasks** panel
3. Click on the **Tasks** view and select the desired course in the **Courses & Tasks** panel
4. Hold down the left mouse button and drag the course from the **Courses & Tasks** panel to the **Assigned Courses & Tasks** panel

Once the button is released, the task appears in the assigned curriculum for the user.

Assigning a User to a Group

To assign a user to a group from the Personal Data screen:

1. Select the user from the **Users** panel on the Users and Groups screen



The Personal Data Screen

2. Click on the **Groups** tab in the **Groups** panel
 3. Select the desired group in the **Groups** panel
 4. Hold down the left mouse button and drag the group from the **Groups** panel to the **Assigned Groups** panel
- Once the button is released, the group appears in the assigned groups for the user.

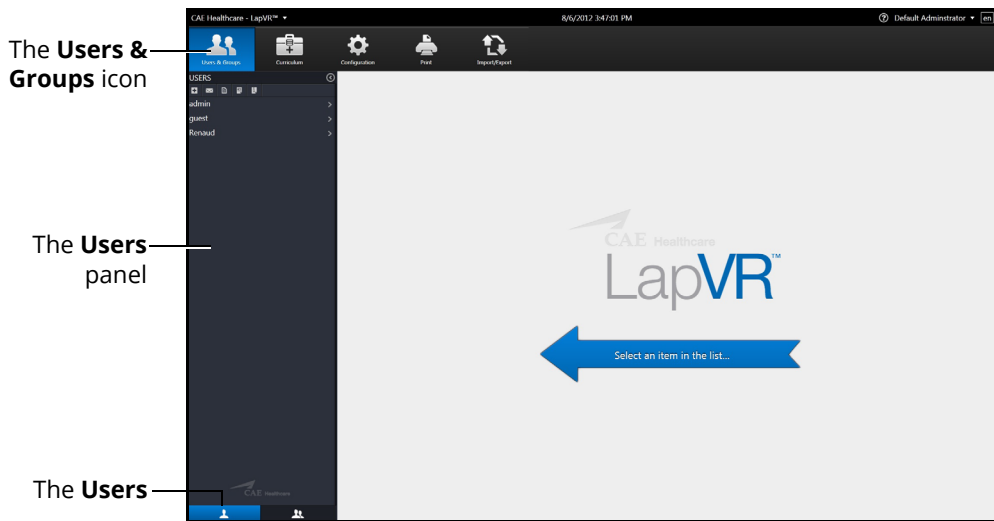
Editing User Information

To edit a current user's information:

1. From the icon dashboard, click the **Users & Groups** icon

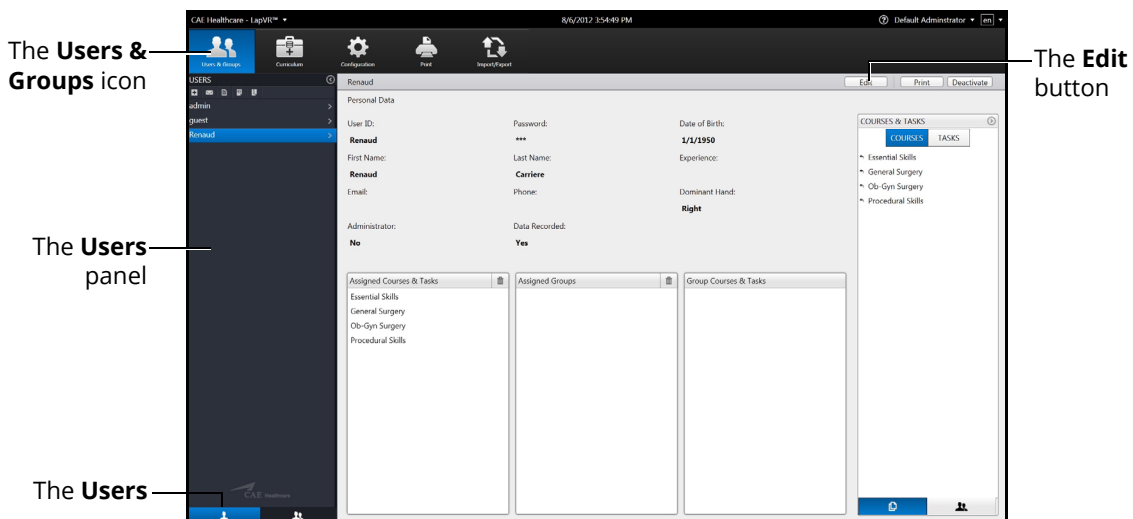


The Users & Groups Icon



The Users & Groups Screen

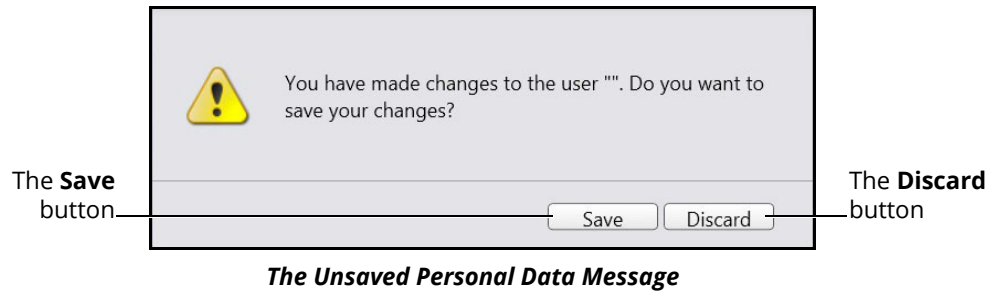
2. From the Users and Groups screen, click the **Users** tab
3. Select the desired user from the **Users** panel



The Personal Data Screen

4. Click **Edit**
5. Change the desired information for the specific user in the different fields
6. Click **Done**

Note: If the user navigates away from the Personal Data screen before clicking **Done** to save the information, the **Unsaved Personal Data** message will appear.



To save the changes, click **Save**.

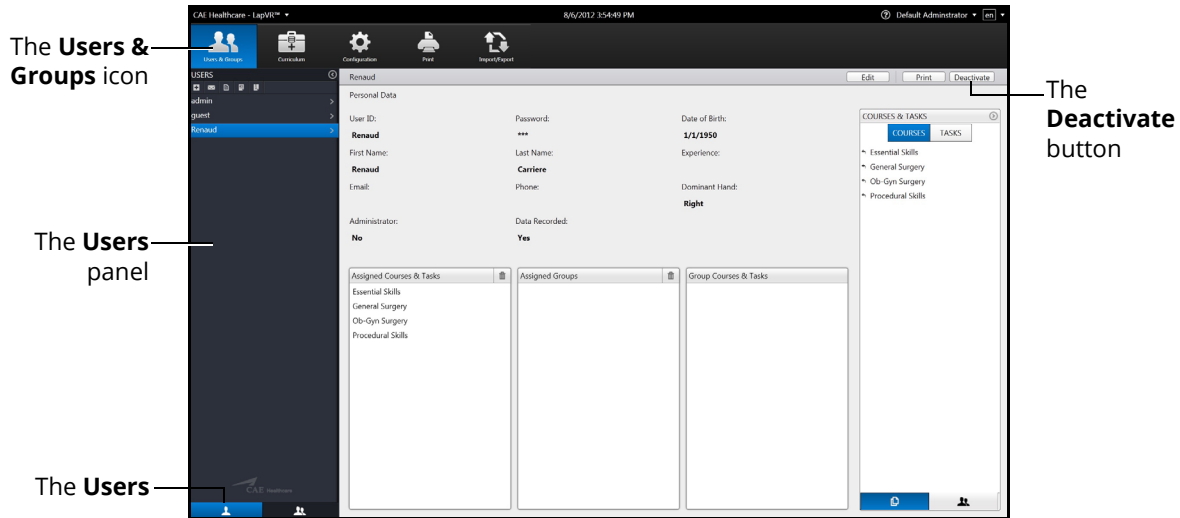
To discard the changes, click **Discard**.

Deactivating Users

If a learner is no longer attending training or their account is no longer active, the administrator can deactivate the user.

To deactivate a user:

1. From the Users and Groups screen, click the **Users** tab
2. Select the desired user



The Inactive Users Personal Data Screen

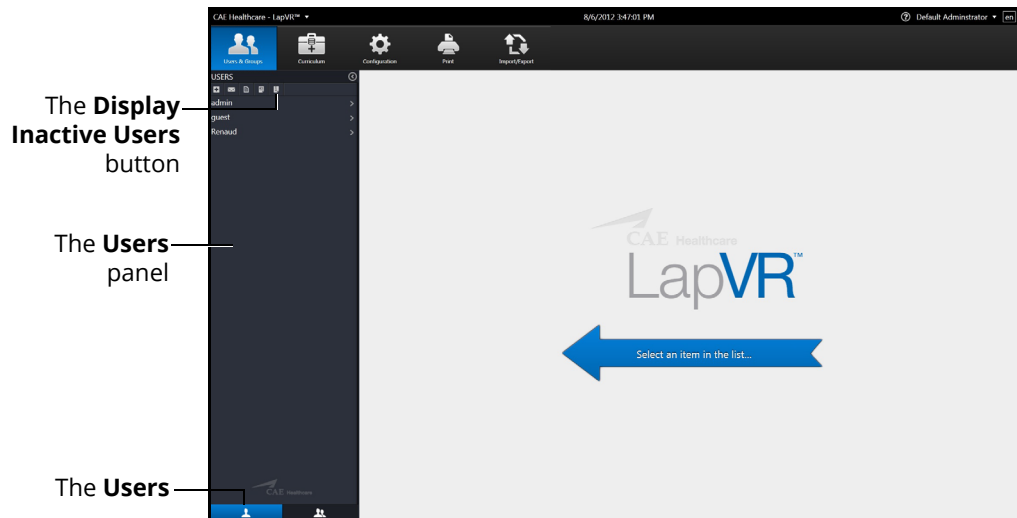
3. Click **Deactivate**

Activating Users

Upon creating and saving a user, the administrator activates the user. If a user has been deactivated by an administrator, the user can also be reactivated by the administrator.

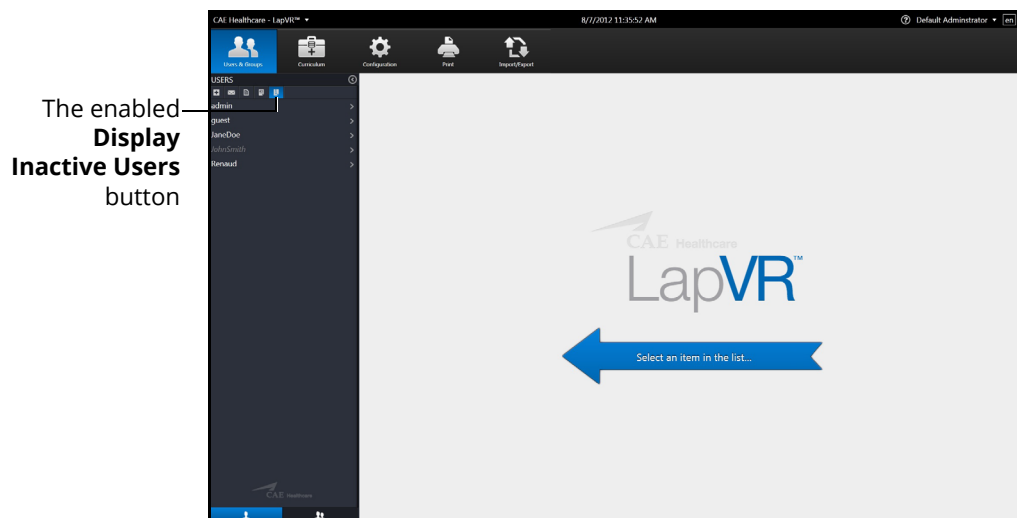
To activate a currently inactive user:

1. From the Users and Groups screen, click the **Users** tab
2. Click the **Display Inactive Users** button



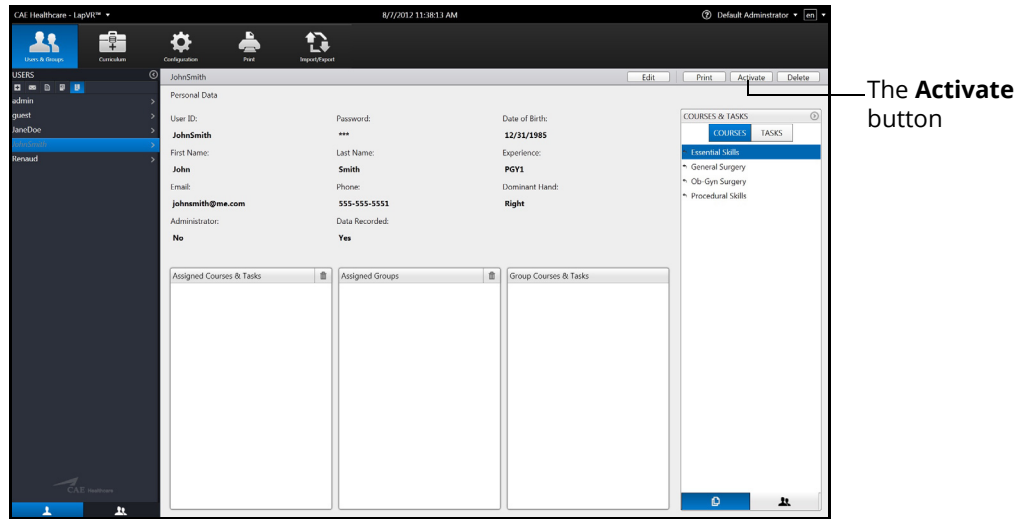
The Users and Groups Screen

The deactivated user names appear in the **Users** panel in gray, italic font.



The Enabled Display Inactive Users Screen

3. Select the desired deactivated user



The Inactive Users Personal Data Screen

4. Click **Activate**

Creating Groups

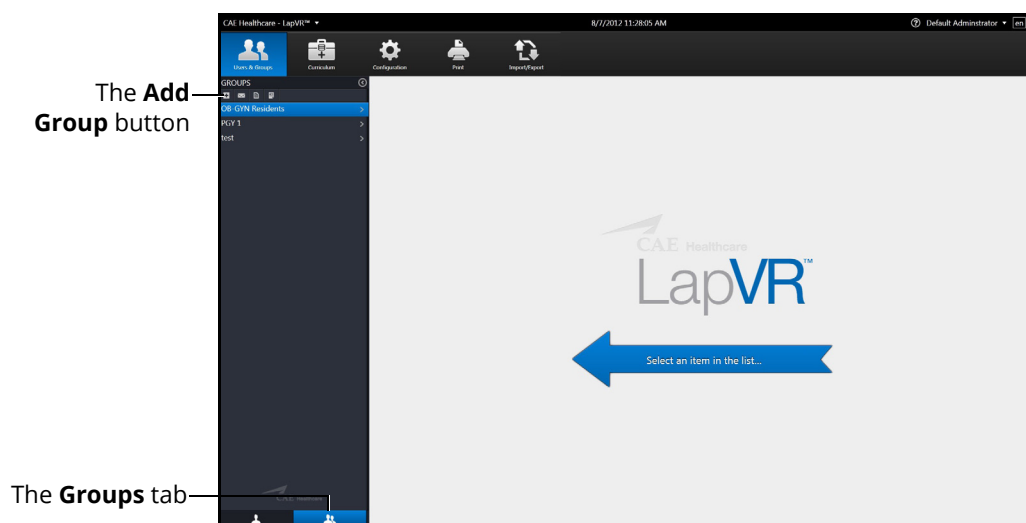
To create a group:

1. From the icon dashboard, click the **Users & Groups** icon



The Users & Groups Icon

2. From the Users and Groups screen, click the **Groups** tab

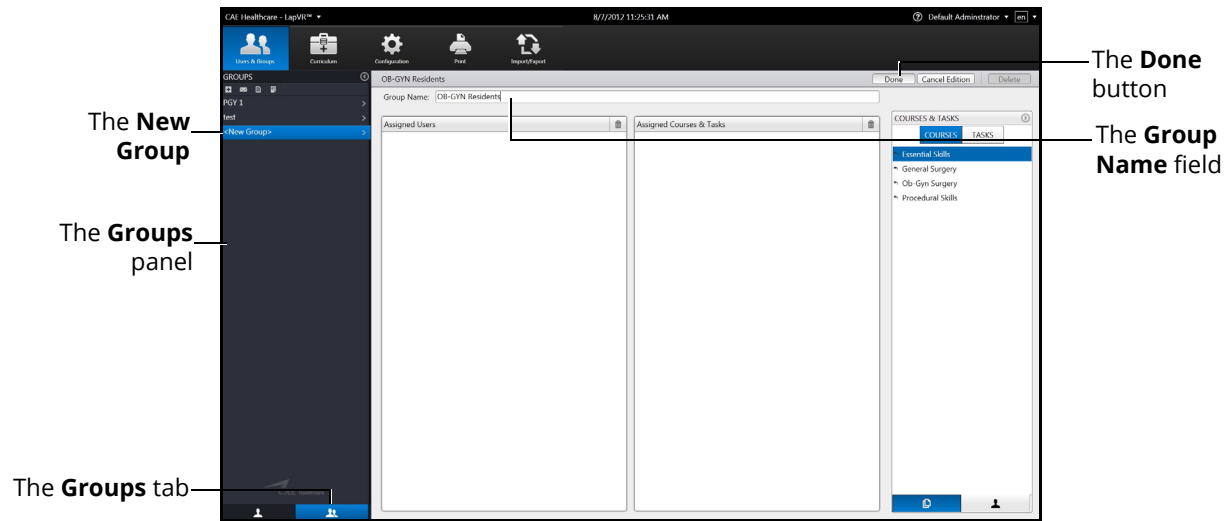


The **Add Group** button

The **Groups** tab

The Users & Groups Screen - Groups Tab

3. Click the **Add Group** button



The Edit Group Screen

4. Enter the desired group name in the **Group Name** field
5. Click **Done** to save the group

Modifying Groups

Administrators can modify the group name, assigned curriculum and assigned users.

To modify a group name:

1. From the Users and Groups screen, click the **Groups** tab
2. Select a group from the **Groups** panel. The group information screen appears
3. Click **Rename**
4. Enter the new group name in the **Group Name** field
5. Click **Done**

Deleting a Group

To delete a group, click the **Delete** button on the group information screen.

Adding a Course to the Group Curriculum

To add a course to the group curriculum:

1. From the Users & Groups screen, click the **Groups** tab
2. Select a group from the **Groups** panel
3. From the Group Information screen, click the **Courses & Tasks** tab in the **Courses & Tasks** panel
4. Click on the **Courses** view and select the desired course in the **Courses & Tasks** panel.
5. Hold down the left mouse button and drag the course from the **Courses & Tasks** panel to the **Assigned Courses & Tasks** panel

Once the button is released, the course appears in the assigned curriculum for the group.

Deleting a Course from the Group Curriculum

To delete a course from the group curriculum:

1. From the Users & Groups screen, click the **Groups** tab
2. Select a group from the **Groups** panel
3. From the **Assigned Courses & Tasks** panel, select the desired course
4. Click the trash can icon button in the upper right corner of the **Assigned Courses & Tasks** panel

Adding a Task to the Group Curriculum

To add a task to the group curriculum:

1. From the Users & Groups screen, click the **Groups** tab
2. Select a group from the **Groups** panel
3. From the group information screen, click on the **Courses & Tasks** tab in the **Courses & Tasks** panel
4. Click on the **Tasks** view and select the desired task in the **Courses & Tasks** panel
5. Hold down the left mouse button and drag the task from the **Courses & Tasks** panel to the **Assigned Courses & Tasks** panel

Once the button is released, the task appears in the assigned curriculum for the group.

Deleting a Task from the Group Curriculum

To delete a task from the group curriculum:

1. From the Users & Groups screen, click the **Groups** tab
2. Select a group from the **Groups** panel
3. From the **Assigned Courses & Tasks** panel, select the desired task
4. Click the trash can icon button in the upper right corner of the **Assigned Courses & Tasks** panel

Adding a User to a Group

To add an individual user to the group:

1. From the Users & Groups screen, click the **Groups** tab
2. Select a group from the **Groups** panel
3. From the group information screen, click on the **Users** tab in the **Users** panel
4. From the **Users** panel, select the desired user
5. Hold down the left mouse button and drag the user from the **Users** panel to the **Assigned Users** panel

Once the button is released, the user appears as an assigned user to the group.

Deleting a User from the Group Curriculum

To delete a user from the group curriculum:

1. From the Users & Groups screen, click the **Groups** tab
2. Select a group from the **Groups** panel
3. From the **Assigned Users** panel, select the desired user
4. Click the trash can icon button in the upper right corner of the **Assigned Users** panel

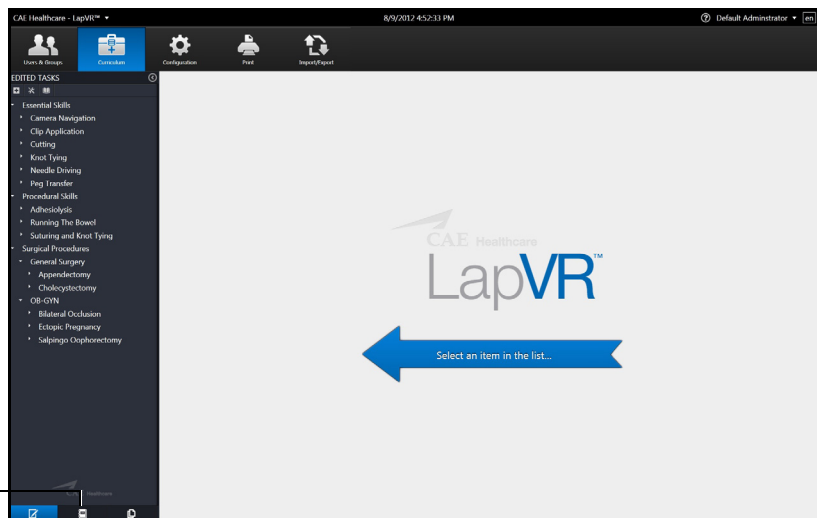
Creating a Course

To create a course:

1. From the icon dashboard, click the **Curriculum** icon



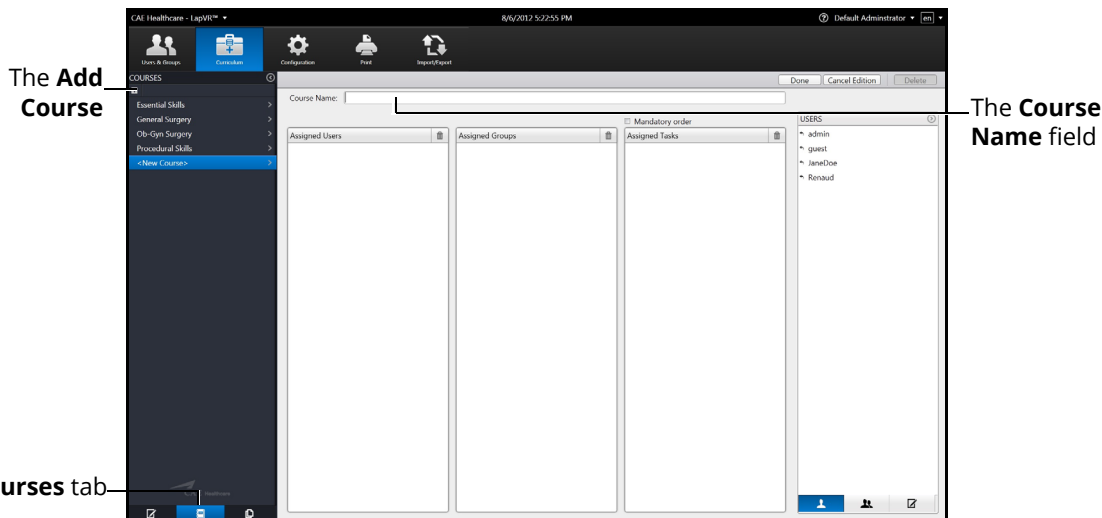
The Curriculum Icon



The **Courses** tab

The Curriculum Screen

2. From the Curriculum screen, click the **Courses** tab
3. Click the **Add Course** button



The **Add Course**

The **Course Name** field

The **Courses** tab

The Course Information Screen

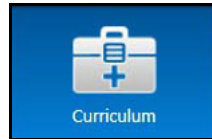
4. Enter the new course name in the **Course Name** field
5. Click **Done**

Editing a Course

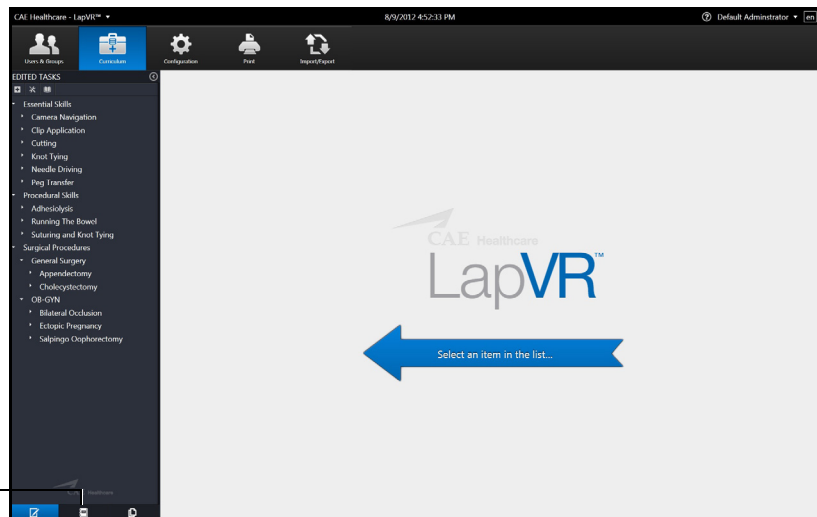
Administrators can modify the course name, assign groups, assign tasks and assign users.

To modify a course name:

1. From the icon dashboard, click the **Curriculum** icon

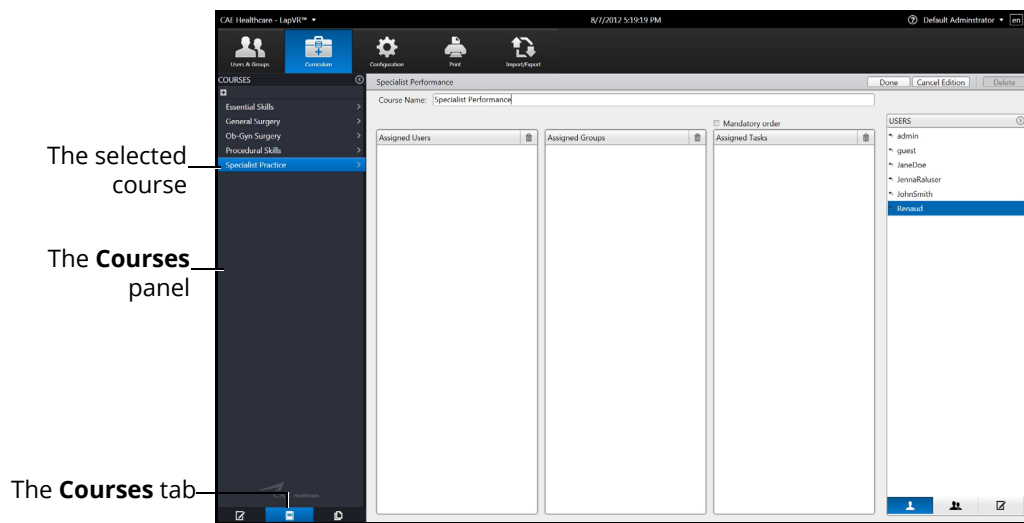


The Curriculum Icon



The Curriculum Screen

2. From the Curriculum screen, click the **Courses** tab
3. Select a course from the **Courses** panel



The Course Information Screen

4. Enter the new course name in the **Course Name** field
5. Select the **Mandatory Order** checkbox to require assigned users to complete the tasks in the order specified for the course
6. Click **Done**

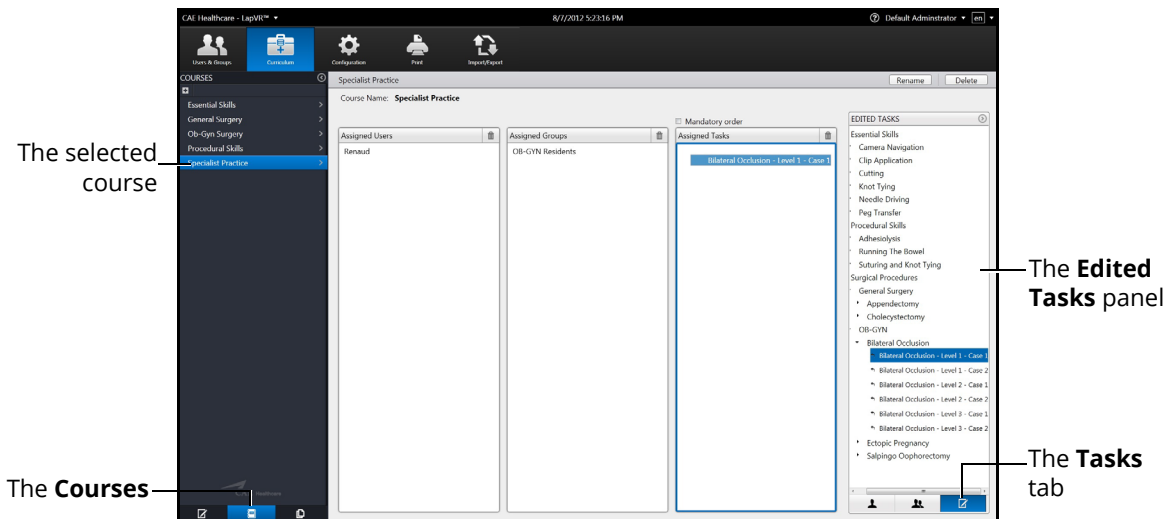
Deleting a Course

To delete a group, click the **Delete** button on the Course Information screen.

Assigning a Task to a Course

To assign a task to a course:

1. From the Curriculum screen, click the **Courses** tab
2. Select a course from the **Courses** panel
3. From the Course Information screen, click on the **Tasks** tab in the **Tasks** panel



The Course Information Screen

4. Select the desired course in the **Tasks** panel
 5. Hold down the left mouse button and drag the course from the **Tasks** panel to the **Assigned Tasks** panel
- Once the button is released, the task appears in the assigned curriculum for the course.

Deleting a Task from a Course

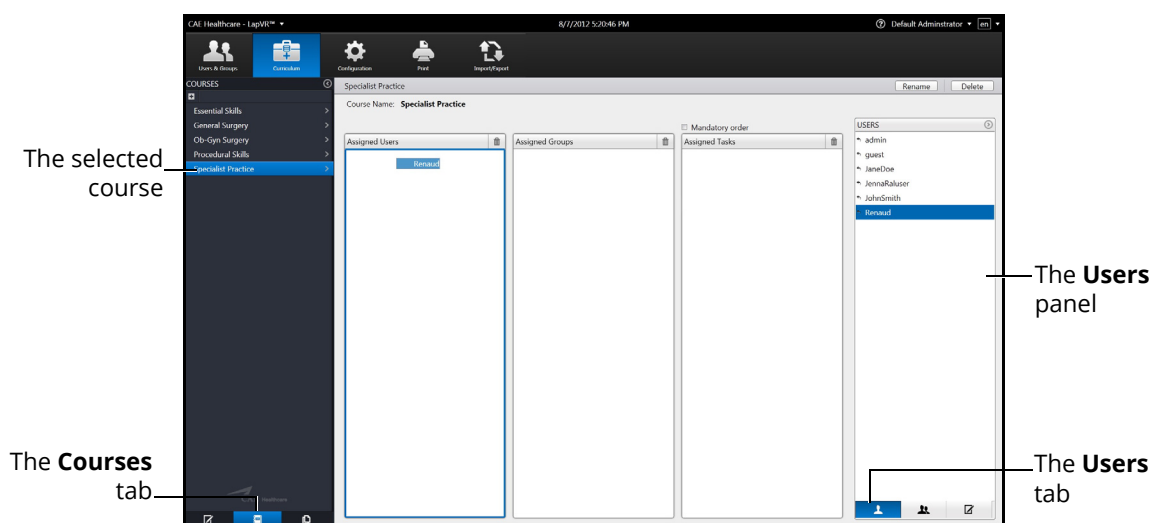
To delete a task from a course:

1. From the **Assigned Tasks** panel, select the desired task
2. Click the trash can icon button in the upper right corner of the **Assigned Tasks** panel

Assigning a Group to a Course

To assign a user to a course:

1. From the Curriculum screen, click the **Courses** tab
2. Select a course from the **Courses** panel
3. From the Course Information screen, click on the **Users** tab in the Users panel



The Course Information Screen

4. Select the desired user in the **Users** panel
5. Hold down the left mouse button and drag the task from the Users panel to the **Assigned Users** panel
Once the button is released, the task appears in the assigned curriculum for the course.

Deleting a User from a Course

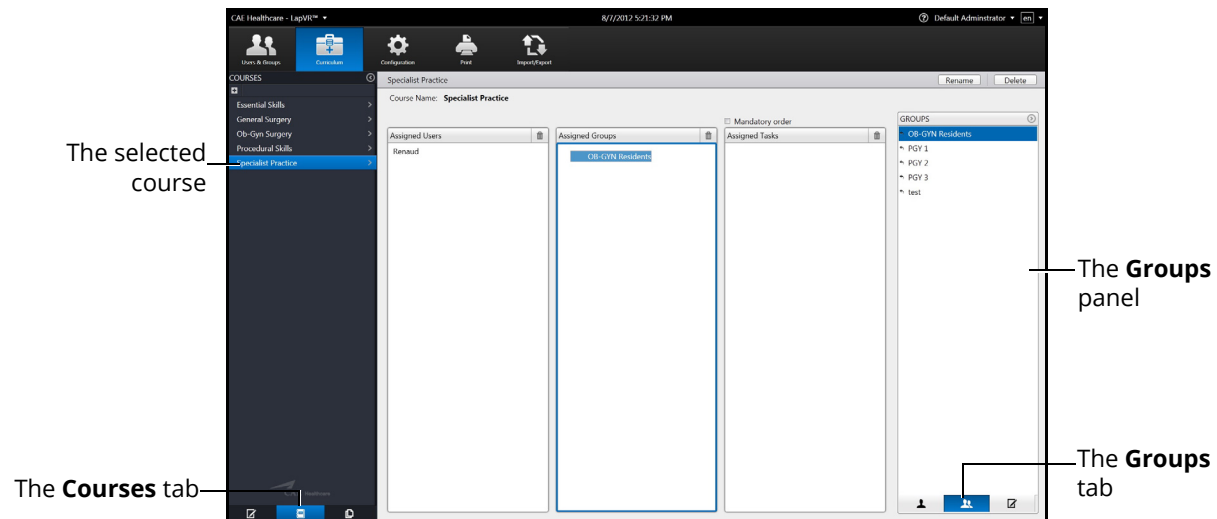
To delete a user from a course curriculum:

1. From the **Assigned Users** panel, select the desired user
2. Click the trash can icon button in the upper right corner of the **Assigned Users** panel

Assigning a Group to a Course

To assign a group to a course:

1. From the Curriculum screen, click the **Courses** tab
2. Select a course from the **Courses** panel
3. From the Course Information screen, click on the **Groups** tab in the **Groups** panel



The Course Information Screen

4. From the **Groups** panel, select the desired group
5. Hold down the left mouse button and drag the group from the **Groups** panel to the **Assigned Groups** panel

Once the button is released, the group appears as an assigned group to the course.

Deleting a Group from a Course

To delete a group from the course curriculum:

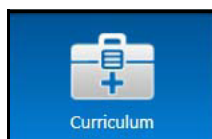
1. From the **Assigned Groups** panel, select the desired group
2. Click the trash can icon button in the upper right corner of the **Assigned Groups** panel

Creating Tasks

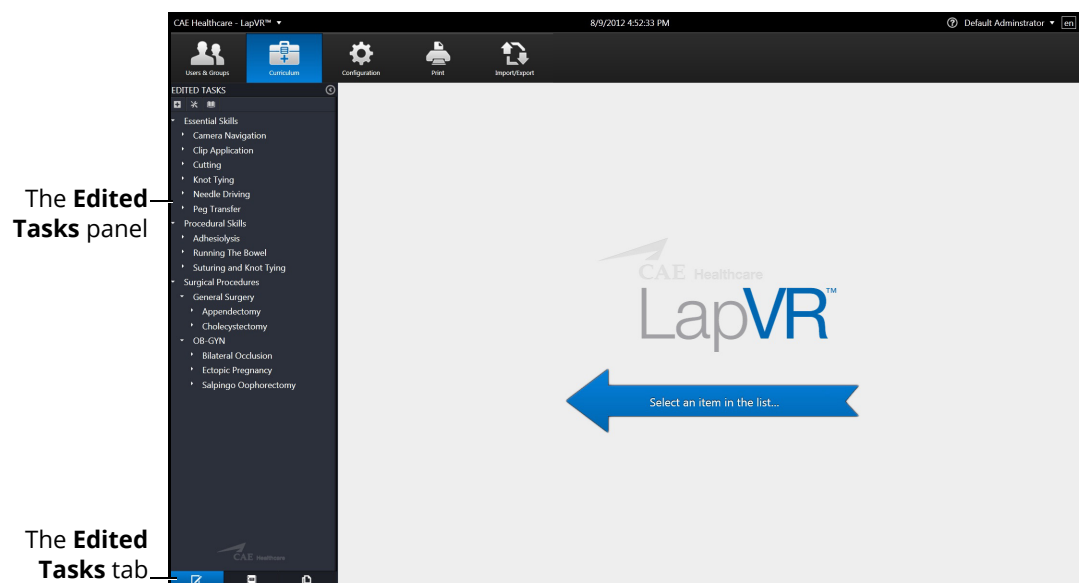
The simulator's module packages come with pre-programmed tasks for each type of procedure. Additionally, administrators can create custom tasks from the **Edited Tasks** tab or the **Task Templates** tab on the Curriculum screen. These tasks are known as administrator-created tasks.

To create a task from the **Edited Tasks** tab:

1. From the icon dashboard, click the **Curriculum** icon



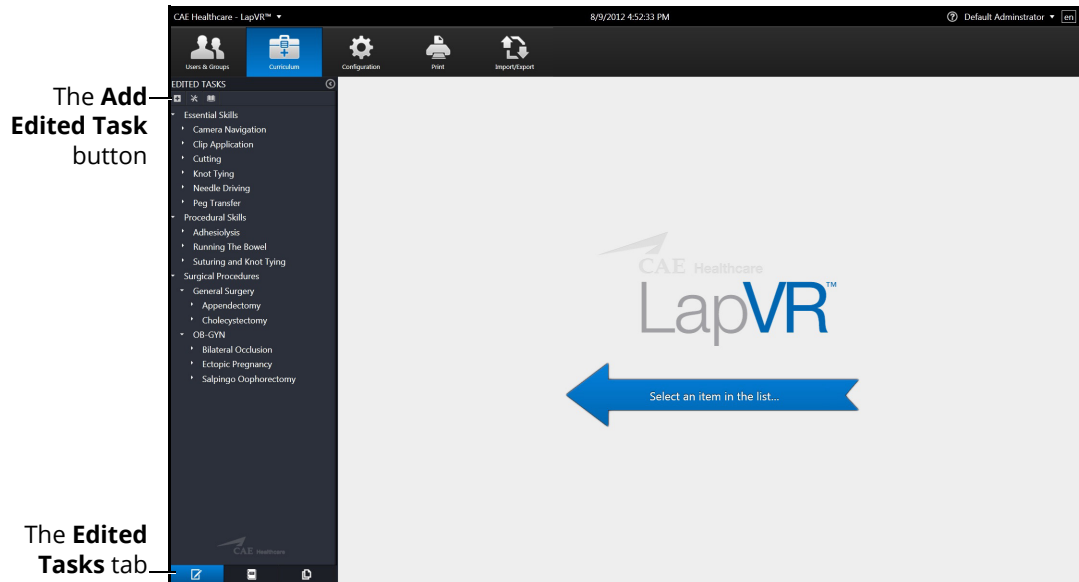
The Curriculum Icon



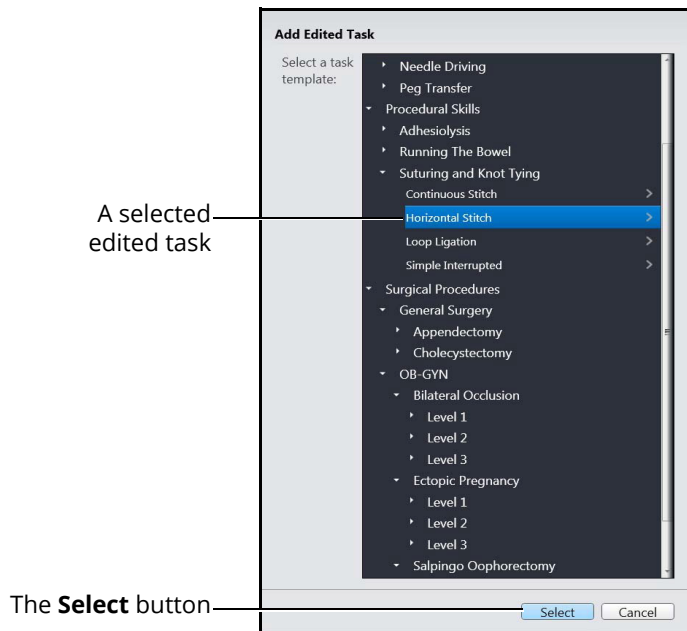
The Curriculum Screen

2. Click the **Tasks** tab

3. Click the **Add Task** button



The Curriculum Screen



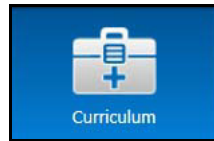
The Curriculum Screen

4. Select a task to add
5. Click **Select**

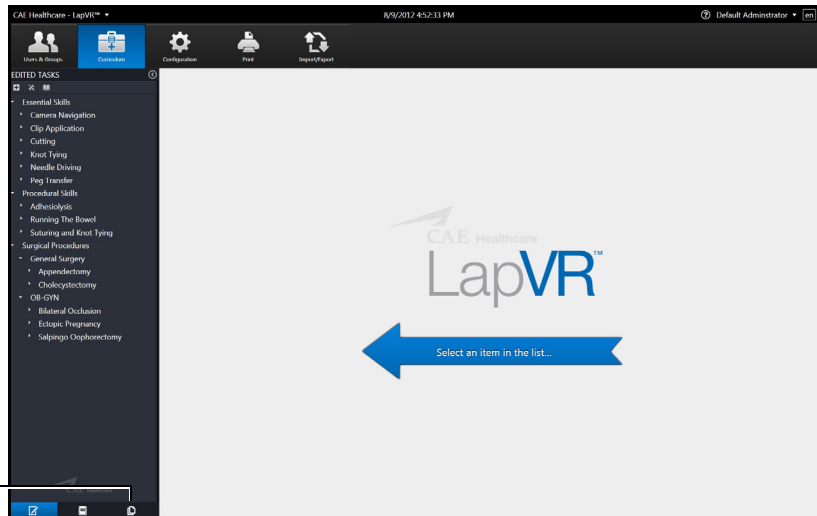
The new task appears in the **Tasks** panel and the new task information appears in the main panel on the Curriculum screen.

To create a task from the **Task Templates** tab:

1. From the icon dashboard, click the **Curriculum** icon

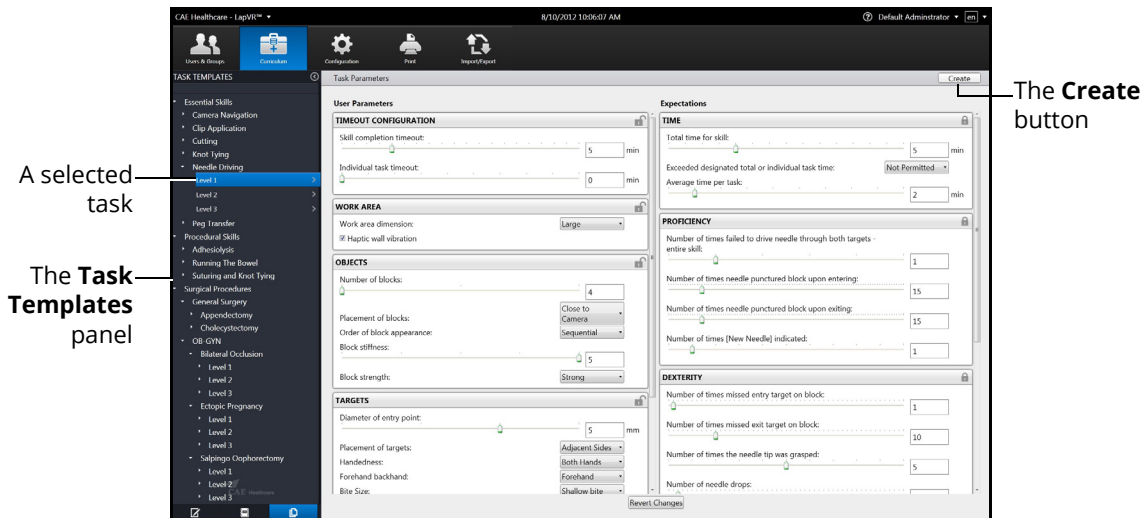


The Curriculum Icon



The Curriculum Screen

2. From the Curriculum screen, click the **Task Templates** tab



The Task Template Screen

3. From the Task Template screen, select a task in the **Task Templates** panel
The task parameters for the selected task appear on the Task Template screen.
4. Click **Create**

Create Task

Edited Task Name

Case Name

The **Create Task** button

The Create Task Box

- Enter the desired task and case name information for the new task

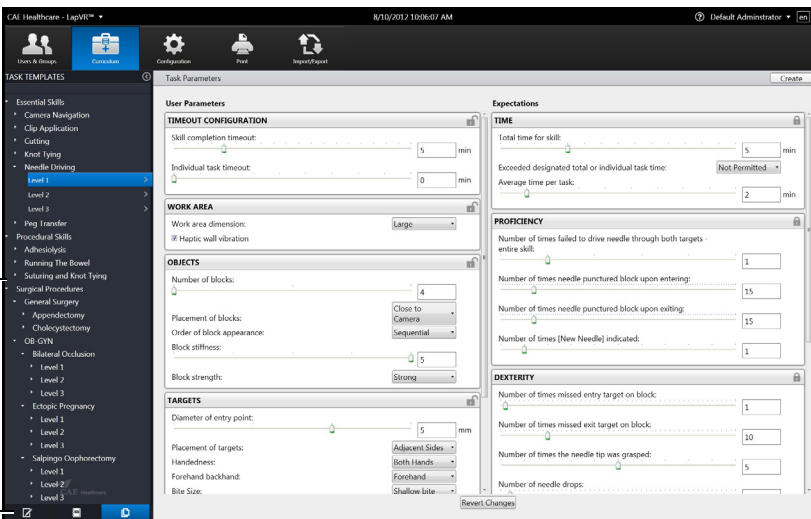
Note: New tasks that are not renamed upon creating a new task will appear with the original task template name and "Copy ####" in the **Task Templates** panel. The new task name can be edited at a later time in the **Tasks** tab after it is created.

- Click **Create Task**

Note: The new task does not appear in the **Task Templates** panel.

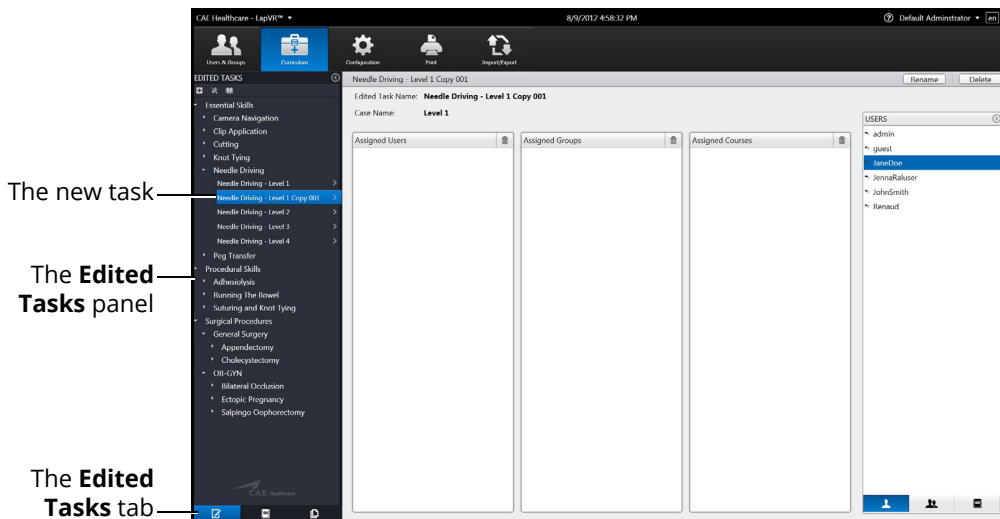
The **Task Templates** panel

The **Edited Tasks** tab



The Task Template Screen

7. From the Task Template screen, click the **Tasks** tab

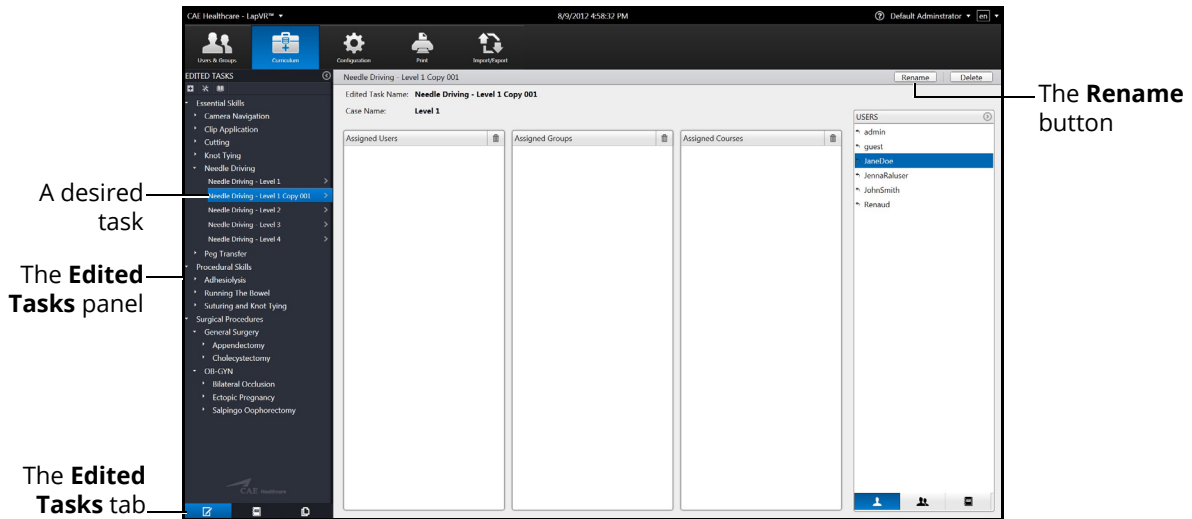


The Edited Tasks Screen

Renaming a Task

To rename a task:

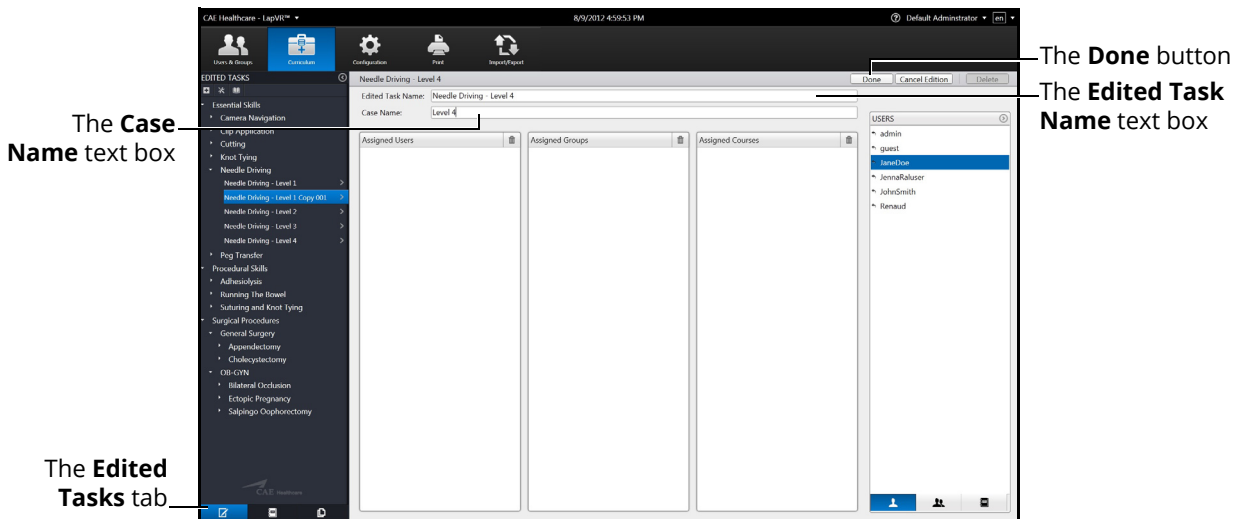
1. From the **Tasks** panel, select the desired task



The Edited Tasks Screen

The task information appears in the main panel of the Edited Tasks screen.

2. Click **Rename**



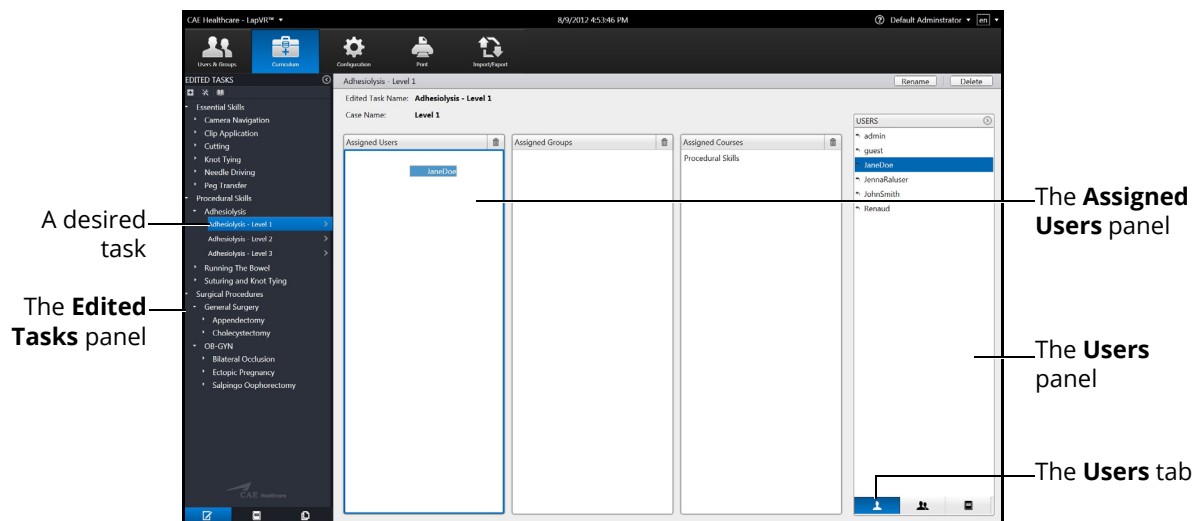
The Edited Tasks Screen

3. Enter the desired name for the new task in the **Task Name** text box
4. Enter the desired case name in the **Case Name** text box
5. Click **Done**

Assigning a User to a Task

To assign a user to a task:

1. From the **Tasks** panel, select the desired task



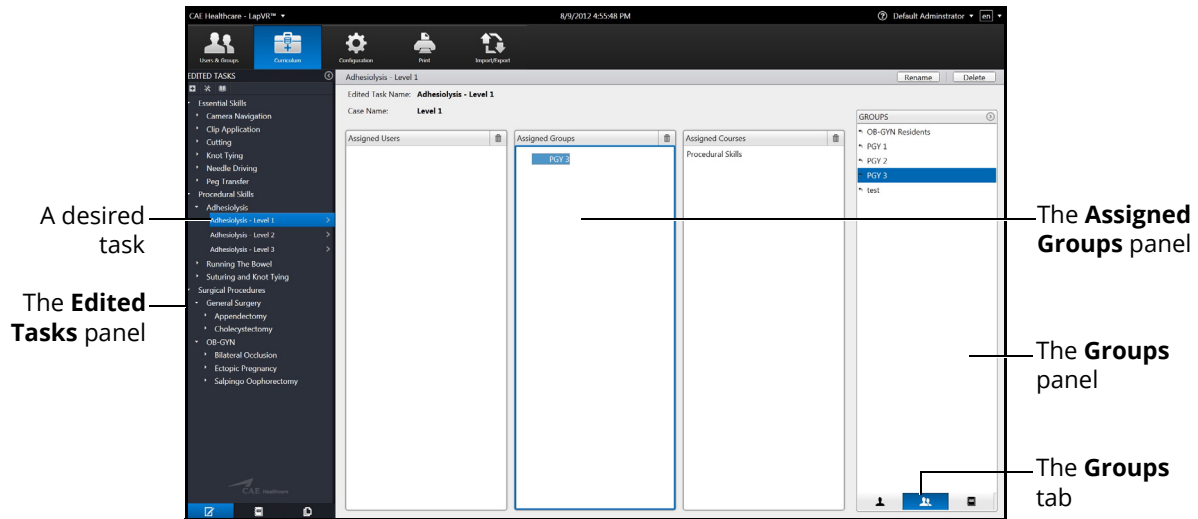
The Edited Tasks Screen

2. From the Tasks screen, click the **Users** tab
3. Select the assigned user in the **Users** panel
4. Drag the user by holding down the left mouse button and navigating the cursor to the **Assigned Users** panel

Assigning a Group to a Task

To assign a group to a task:

1. From the **Tasks** panel, select the desired task



The Edited Tasks Screen

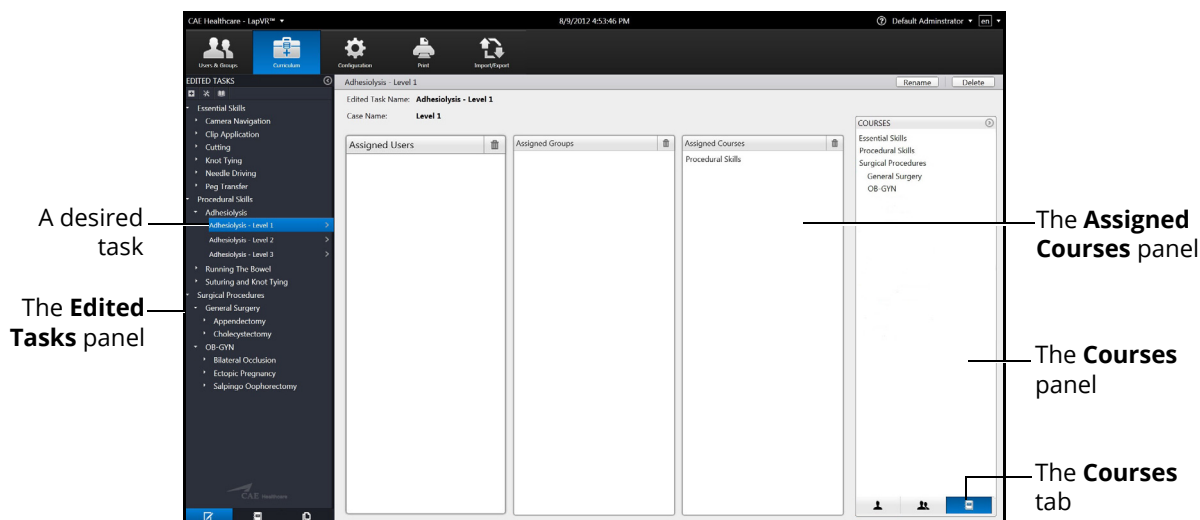
2. From the Tasks screen, click the **Groups** tab
3. Select the desired group in the **Groups** panel
4. Drag the group by holding down the left mouse button and navigating the cursor to the **Assigned Groups** panel

Assigning a Course to a Task

Note: Tasks are assigned to courses automatically based on the task template used to create them. Administrators can modify these course assignments for administrator-created tasks.

To assign a course to a task:

1. From the **Tasks** panel, select the desired task



The Edited Tasks Screen

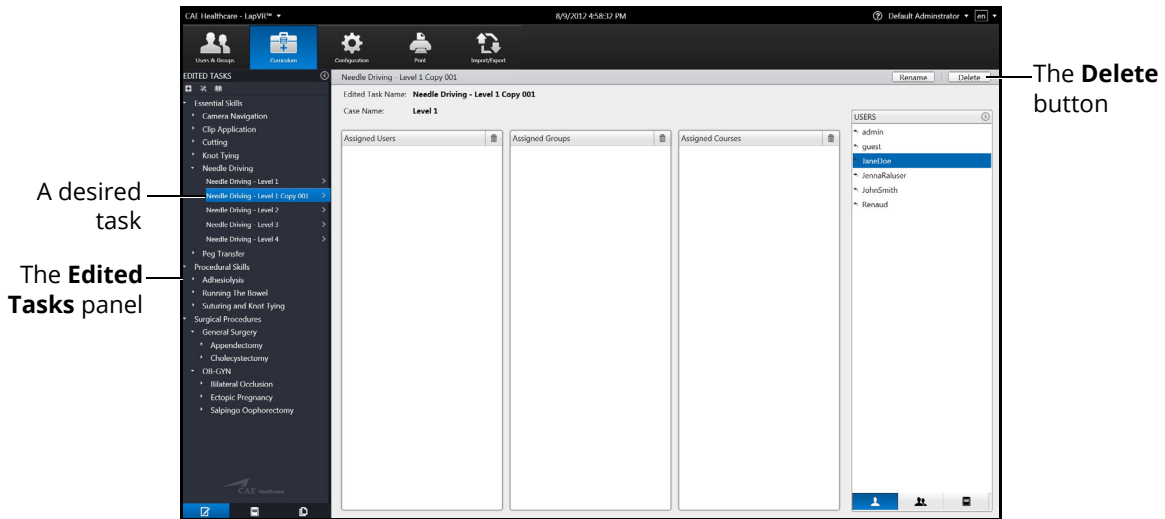
2. Click the **Courses** tab
3. Select the desired course in the **Courses** panel
4. Drag the course by holding down the left mouse button and navigating the cursor to the **Assigned Courses** panel

Deleting a Task

Administrators can delete tasks that are not pre-programmed in the modules (i.e., administrator-created tasks).

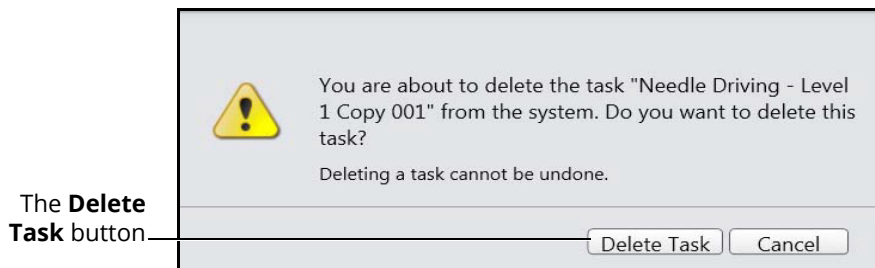
To delete a task:

1. From the **Tasks** panel, select the desired task



The Edited Tasks Screen

2. Click **Delete**



The Delete Task Message

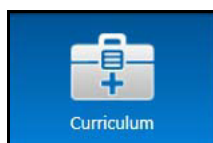
3. Click **Delete Task** to delete the task

Adjusting Task Parameters

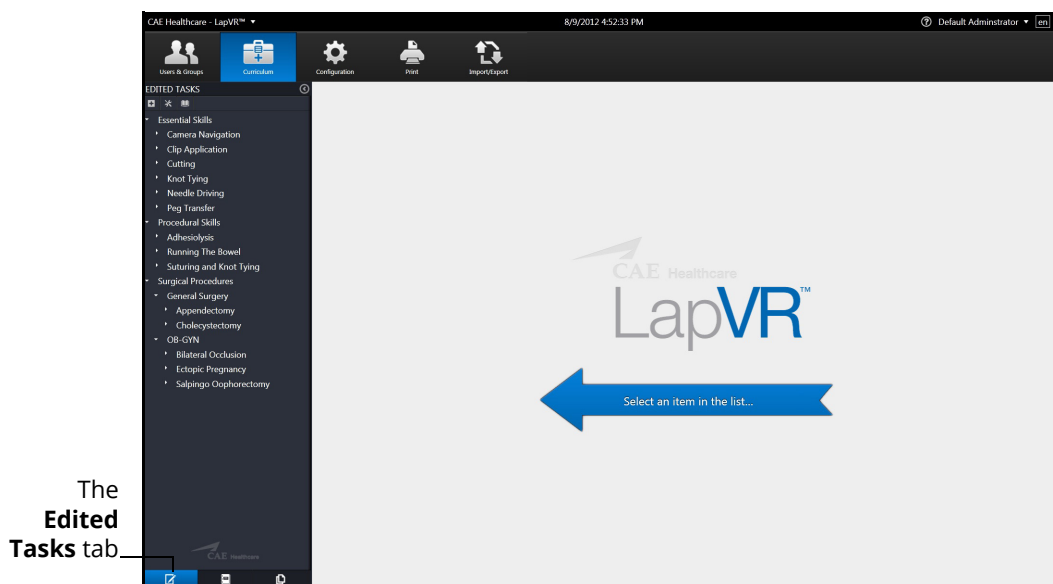
Administrators have the ability to adjust the user parameters for certain tasks to increase or decrease the procedural difficulty level for learners.

To adjust the task parameters from the **Edited Tasks** tab:

1. From the icon dashboard, click the **Curriculum** icon

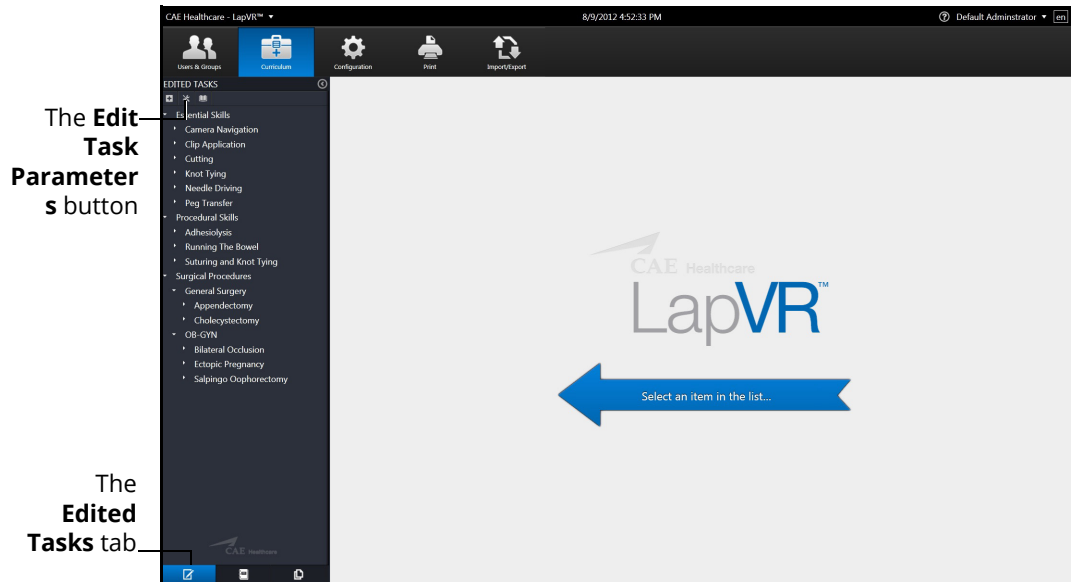


The Curriculum Icon



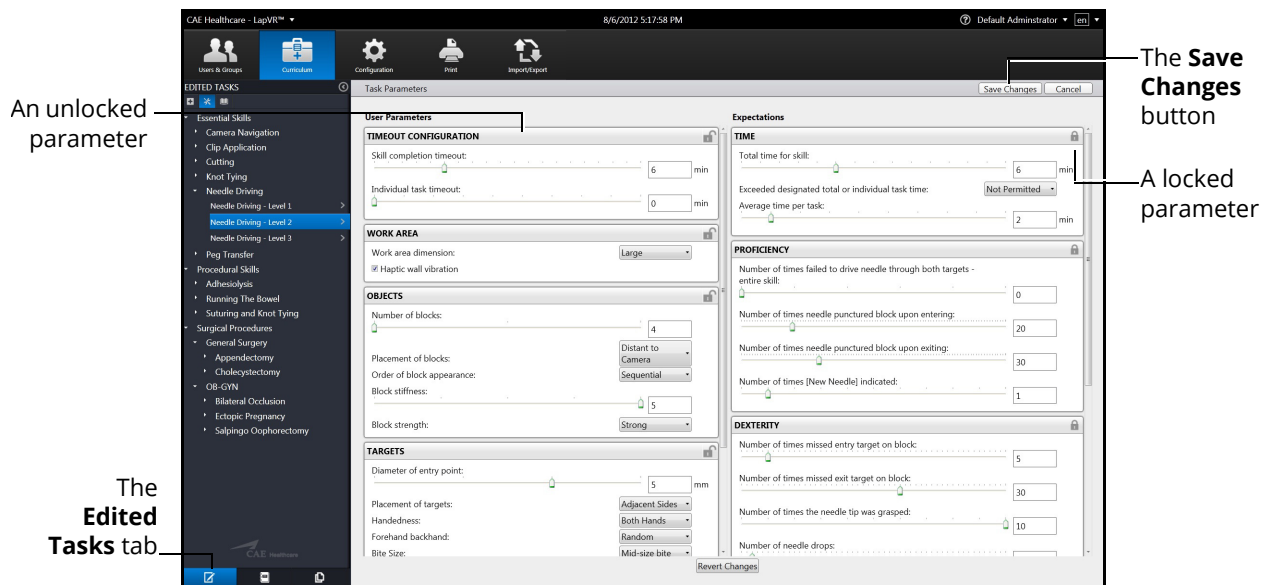
The Curriculum Screen

- From the **Edited Tasks** tab, select a task from the **Edited Tasks** panel



The Curriculum Screen

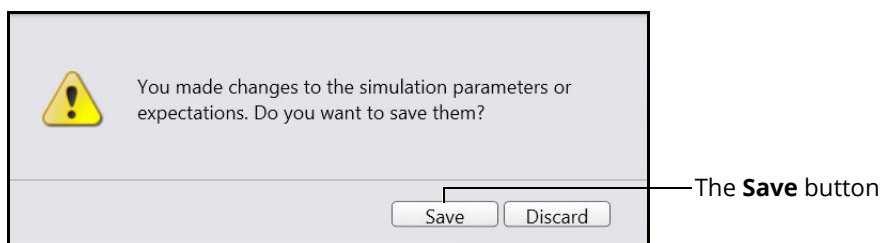
- Click the **Edit Task Parameters** button



The Edit Task Parameters Screen

- Adjust the parameters to the desired values
- Click on the **Lock** icon to unlock parameters. When the **Lock** icon appears closed, the parameter is locked. When the **Lock** icon appears detached, the parameter is unlocked.
- Click **Save Changes** to save the changes to the task parameters

Note: If a user navigates away from the screen, the **Unsaved Simulation Parameters** message appears.



The Unsaved Simulation Parameters Message

To save the changes, click **Save**.

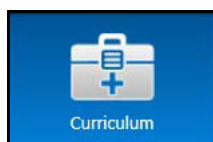
To discard the changes, click **Discard**.

Adding Faculty Content

Administrators can upload content that will appear on a separate tab labeled **Faculty Content** within the didactic content options.

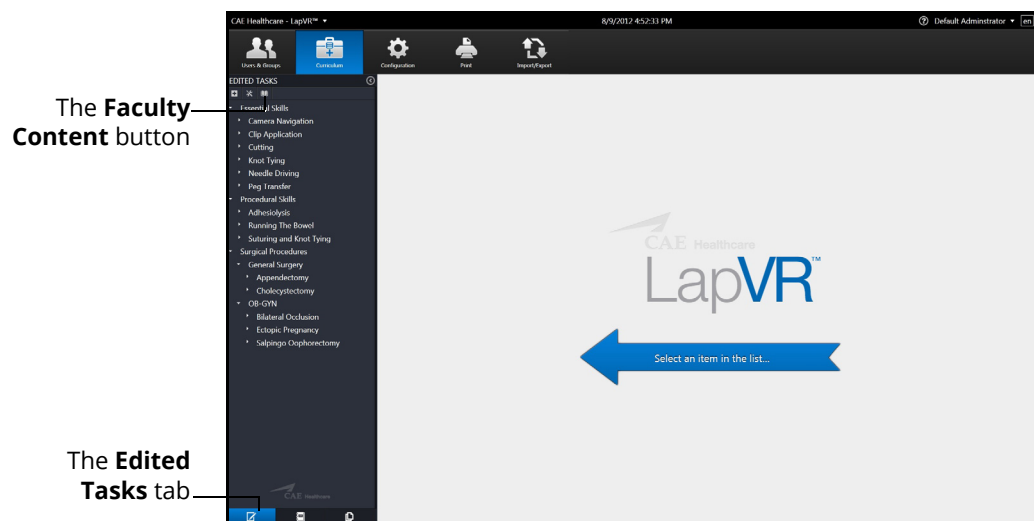
To upload documents for the **Faculty Content** tab:

1. From the icon dashboard, click the **Curriculum** icon



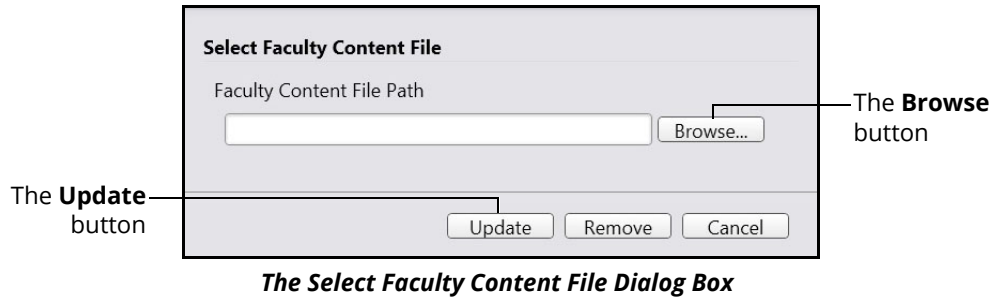
The Curriculum Icon

1. From the Curriculum screen, on the **Tasks** tab, select the desired task associate the content



The Curriculum Screen

- Click the **Faculty Content** button



- Click **Browse**

Note: If the file is located on an external device, use the USB port located on the back of the simulator to connect the external device to the simulator.

- Select the .htm or .html file to be uploaded
- From the **Select File** dialog box, click **Open**

The file name appears in the **Select Faculty Content File Path** field of the **Select Faculty Content File** dialog box.

- From the **Select Faculty Content File** dialog box, click **Update**

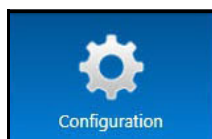
When users access the task, the **Faculty Content** tab appears and the content from the chosen file populates the screen.

Adjusting the Network Settings

The Network Configuration screen is used to set the email server address. The server name must be for an outgoing (SMTP) mail server. This server should provide access to all users and administrators who are to receive reports through the emails function on the Users and Groups screen.

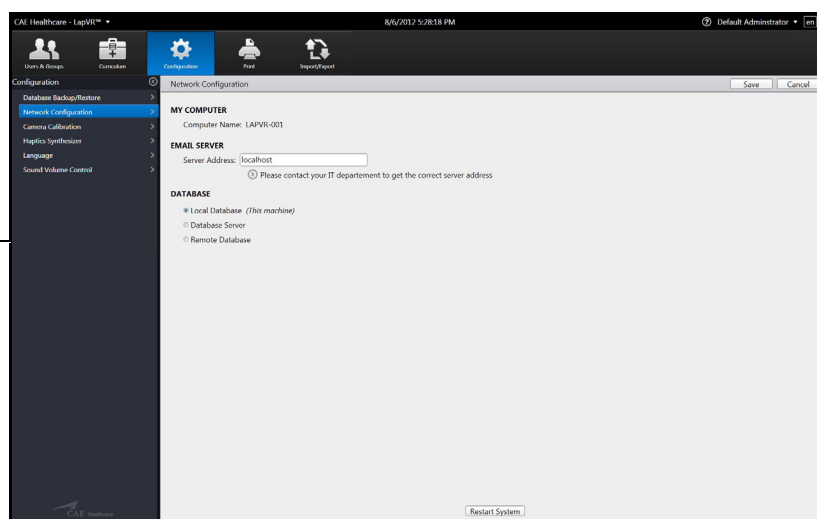
To adjust the network settings:

1. From the icon dashboard, click the **Configuration** icon



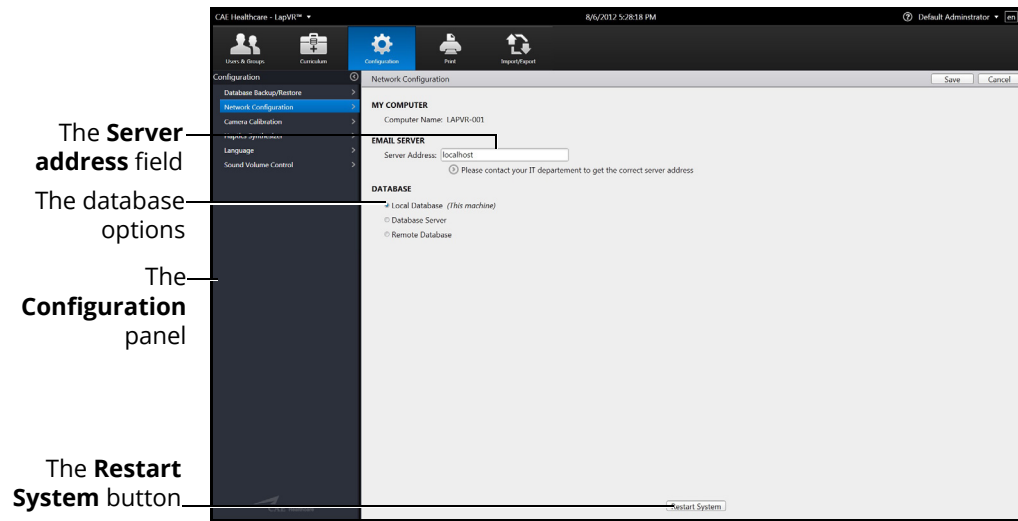
The Configuration Icon

The
Configuration
panel



The Configuration Screen

2. From the Configuration screen, select **Network Configuration** in the **Configuration** panel



The Network Configuration Screen

3. Enter the SMTP server address in the **Server address** field
4. Select a database option
5. Click **Restart System** to save the information and update the settings

Emailing Users and Groups

Administrators have the ability to coordinate automated email correspondence with individual users and groups. Administrators can customize email settings to include content such as user profiles, reports and usage summaries, provide a return email address and set up a recurring auto update.

Once the emails settings are customized, the administrator can send the email immediately or save the email to send at a later time.

Note: To send emails from the simulator, a network connection is required and the administrator must configure the SMTP network information in the simulator.

For more information about SMTP configuration, see *Adding Faculty Content*.

Emailing Users

Administrators can send emails containing user profiles, usage summaries and reports to individual users.

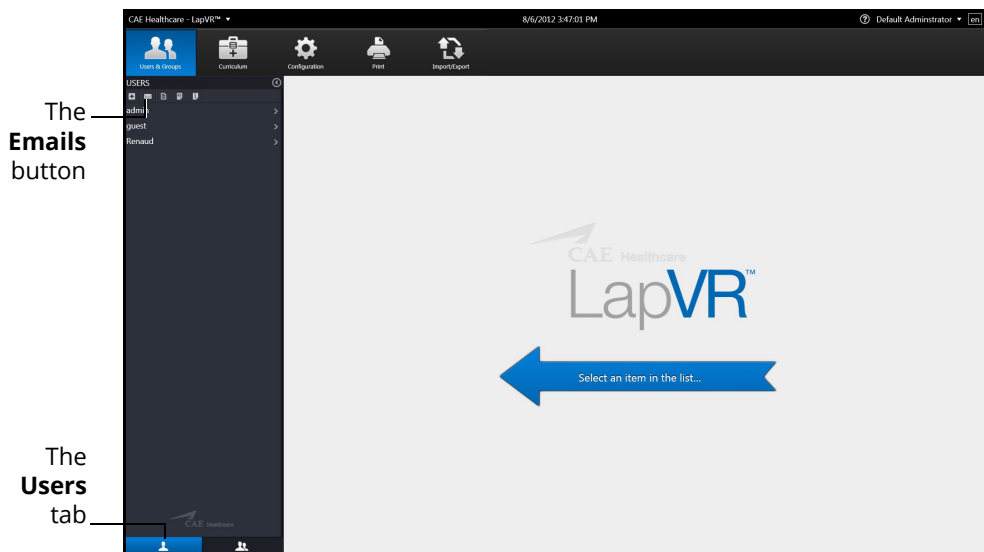
To send an email to an individual user:

1. From the icon dashboard, click the **Users & Groups** icon

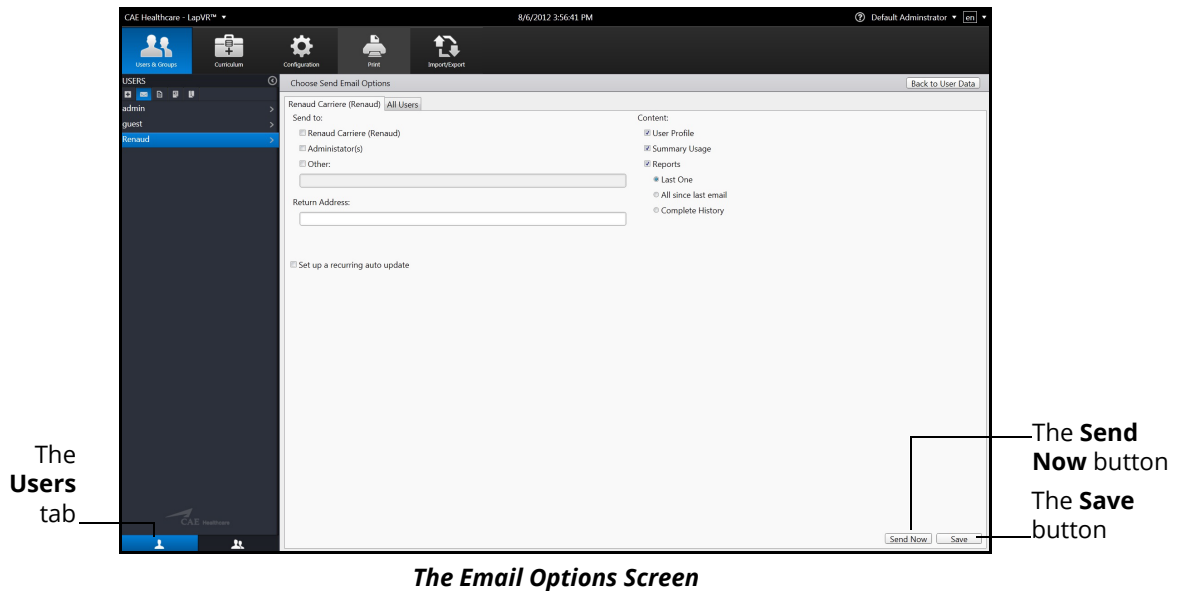


The Users & Groups Icon

2. From the Users and Groups screen, on the **Users** tab, click the **Emails** button



The Users & Groups Screen



Note: If a user is selected from the **Users** panel, the Email Options screen displays a tab specifically for the user. Otherwise, the **All Users** tab displays.

3. Select the recipients for the email
4. Select the content for the email. Content options include **User Profile**, **Summary Usage** and **Reports**
5. Enter a return email address in the **Return Address** text box, if desired
6. Select the **Set a recurring auto update** checkbox, if desired
7. Click **Send Now** to send the email immediately

Note: Email settings can be customized and saved to send at a later time. To save an email to send later, click **Save**.

Emailing Groups

Administrators can send emails containing user profiles, usage summaries and reports to groups.

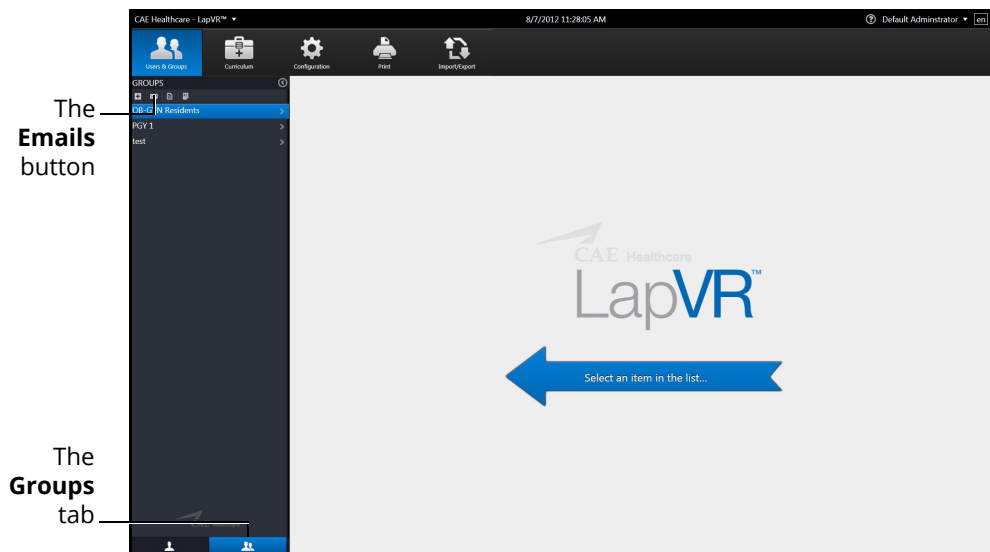
To send an email to a group:

1. From the icon dashboard, click the **Users & Groups** icon

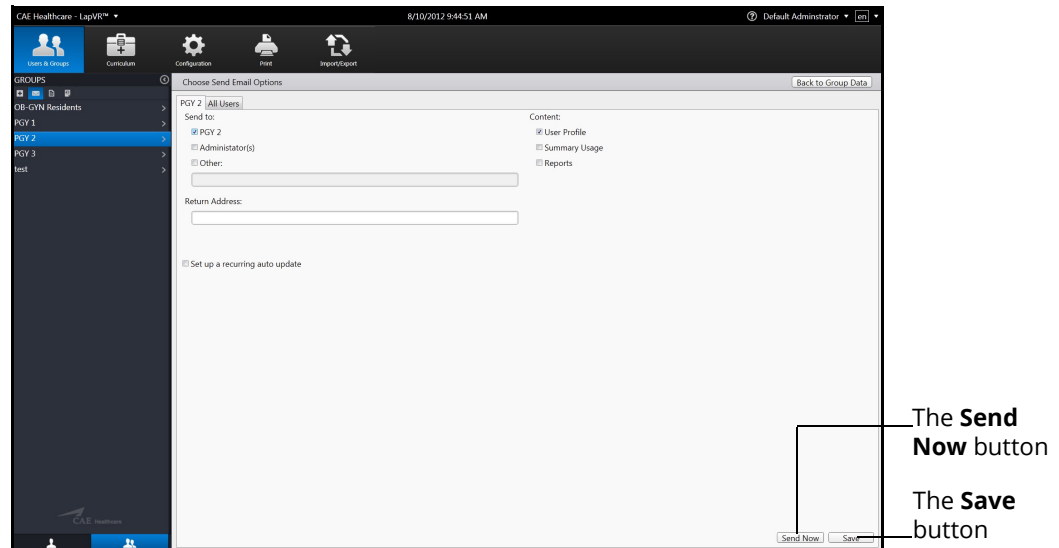


The Users & Groups Icon

2. From the Users and Groups screen, on the **Groups** tab, click the **Emails** button



The Users & Groups Screen



The Email Options Screen

3. Select the group name tab or **All Users** tab
4. Select the recipients for the email
5. Select the content for the email. Content options include **User Profile, Summary Usage** and **Reports**
6. Enter a return email address in the **Return Address** text box, if desired
7. Select the **Set a recurring auto update** checkbox, if desired
8. Click **Send Now** to send the email immediately

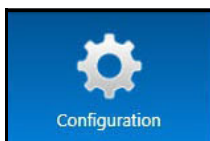
Note: Email settings can be customized and saved to send at a later time. To save an email to send later, click **Save**.

Backing Up the Database

Administrators can back up the simulator database using the Database Backup feature located on the Configuration screen.

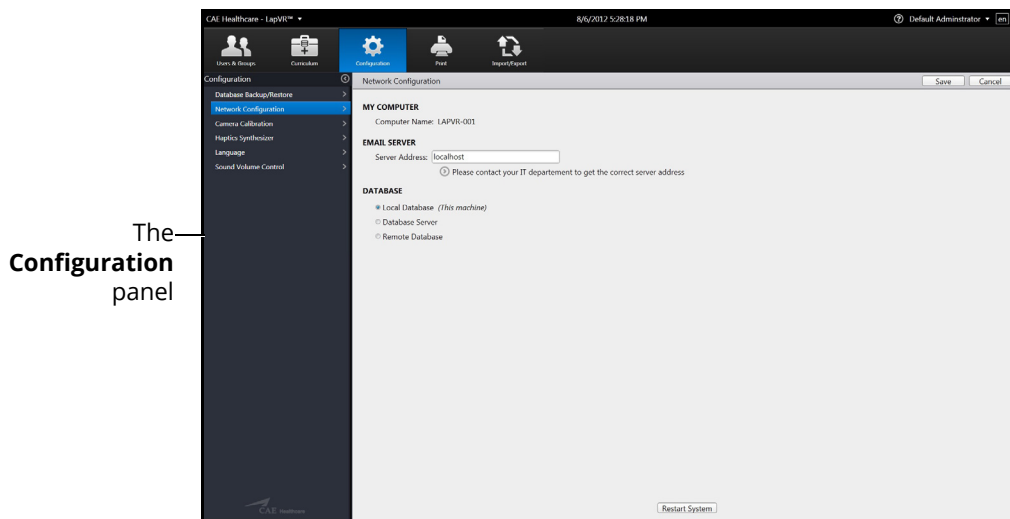
To back up the simulator database:

1. From the icon dashboard, click the **Configuration** icon



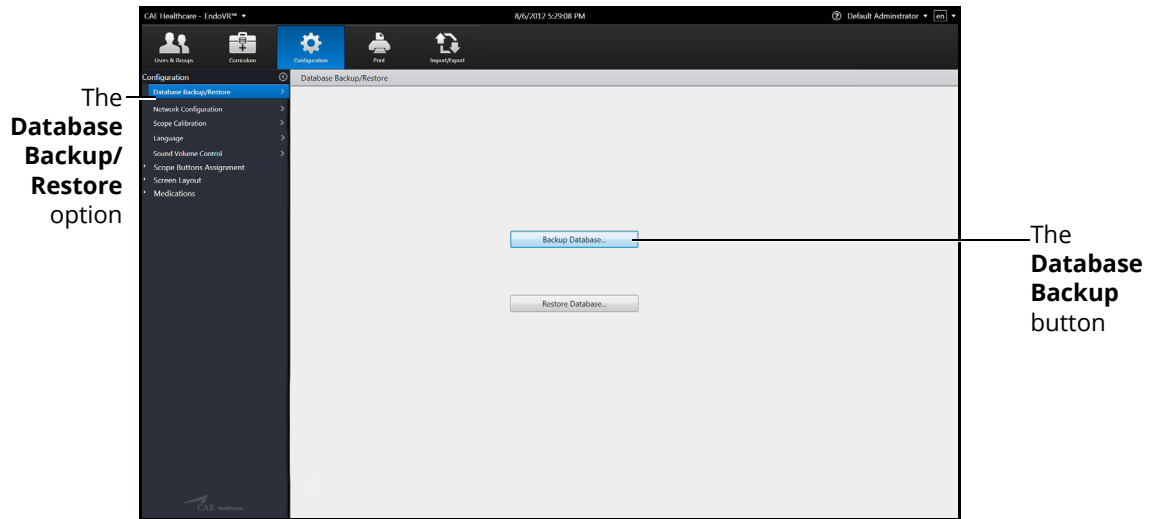
The Configuration Icon

The Configuration screen appears.



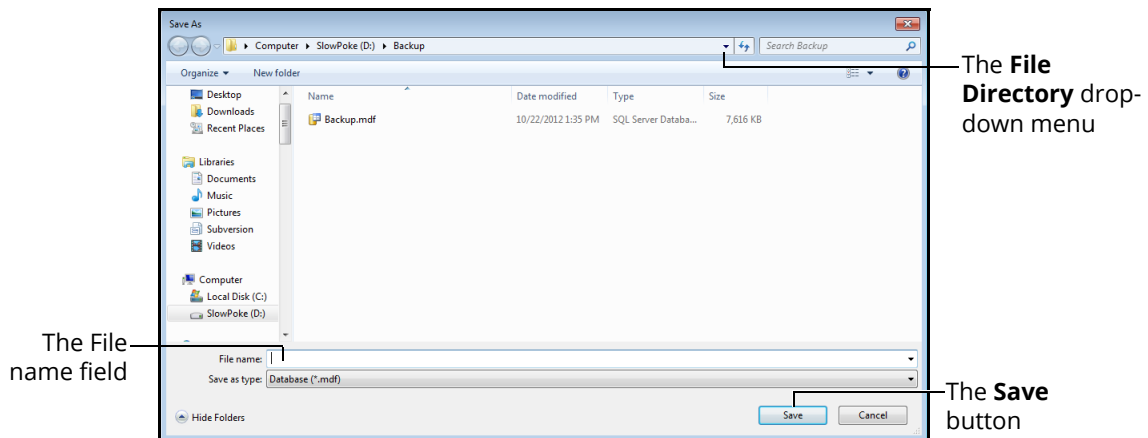
The Configuration Screen

2. From the Configuration screen, select the **Database Backup/Restore** option from the **Configuration** panel



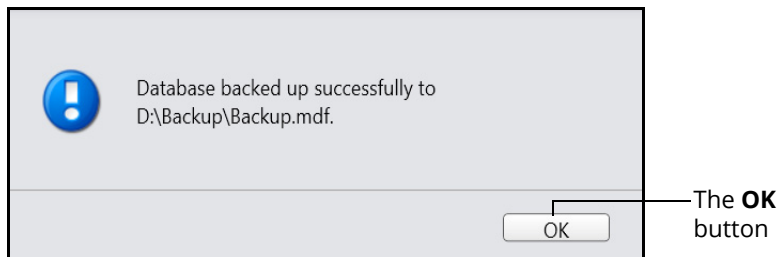
The Database Backup/Restore Screen

3. Click the **Database Backup** button



The Save As Window

4. Click the **File Directory** drop-down menu to navigate to the desired location where the backup file will be stored
5. Enter the desired file name for the database backup file in the **File name** field
6. Click **Save**



The Database Backed Up Successfully Message

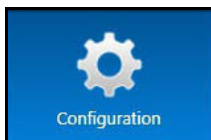
7. Click **OK** to return to the Database Backup/Restore screen

Restoring the Database

Administrators can restore the simulator database using the Database Restore feature located on the Configuration screen.

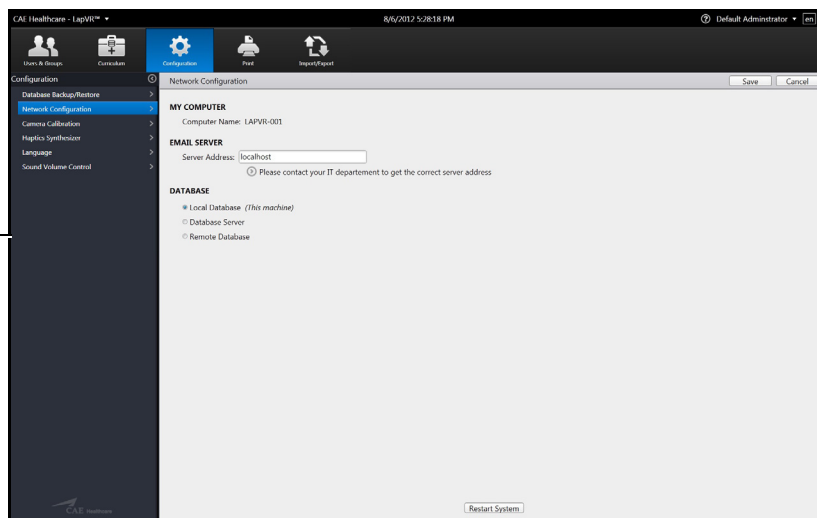
To back up the simulator database:

1. From the icon dashboard, click the **Configuration** icon



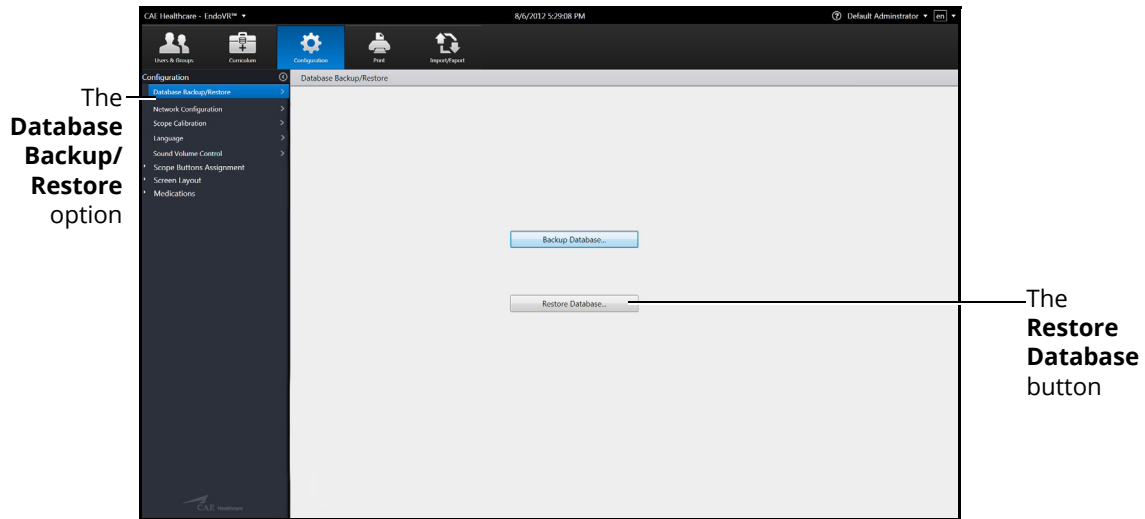
The Configuration Icon

The Configuration panel



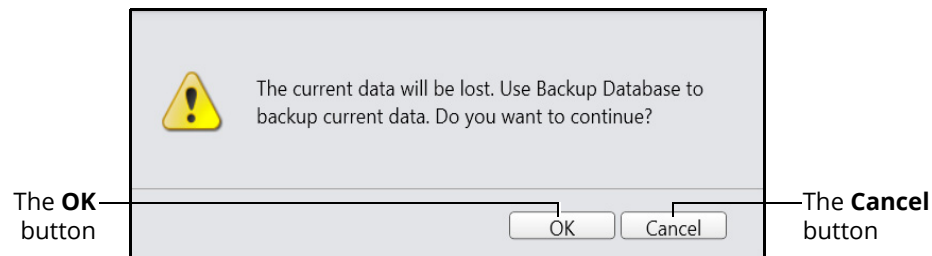
The Configuration Screen

2. From the Configuration screen, select the **Database Backup/Restore** option from the **Configuration** panel



The Database Backup/Restore Screen

3. Click the **Restore Database** button

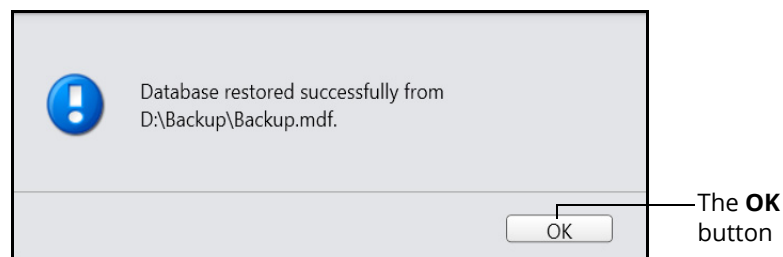


The Back Up Current Data Warning Message

Note: The message states any data that has been added, deleted or modified since the last backup will be lost when a restore is performed.

Click **Cancel** to cancel the restore and return to the Database Backup/Restore screen to perform a backup.

4. Click **OK** to continue with the restore



The Database Restored Successfully Message

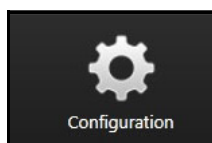
5. Click **OK** to return to the Database Backup/Restore screen

Adjusting the Camera Settings

Administrators can use the camera calibration feature located on the Configuration screen to check for issues with camera settings.

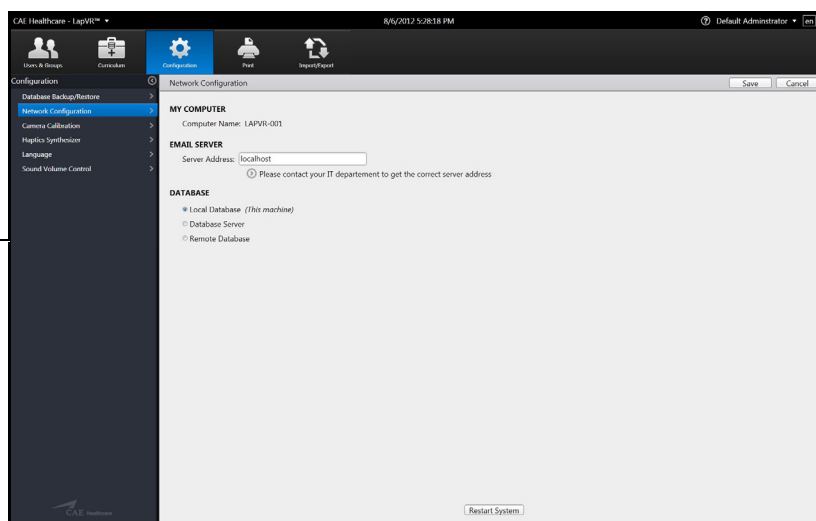
To check the camera calibration settings:

1. From the icon dashboard, click the **Configuration** icon



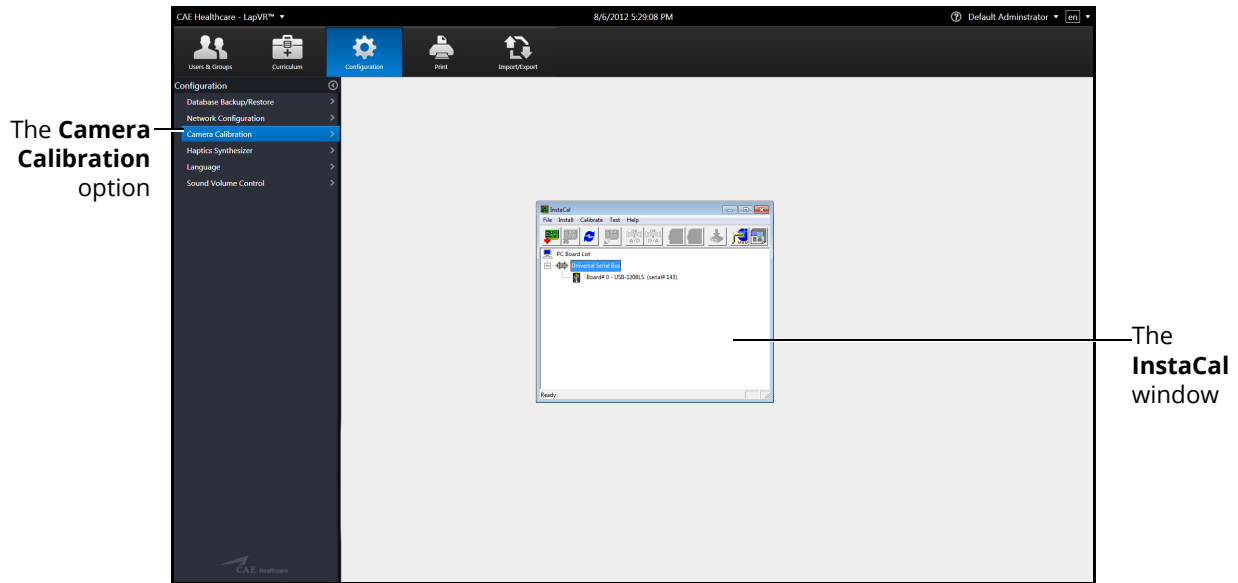
The Configuration Icon

The
Configuration
panel



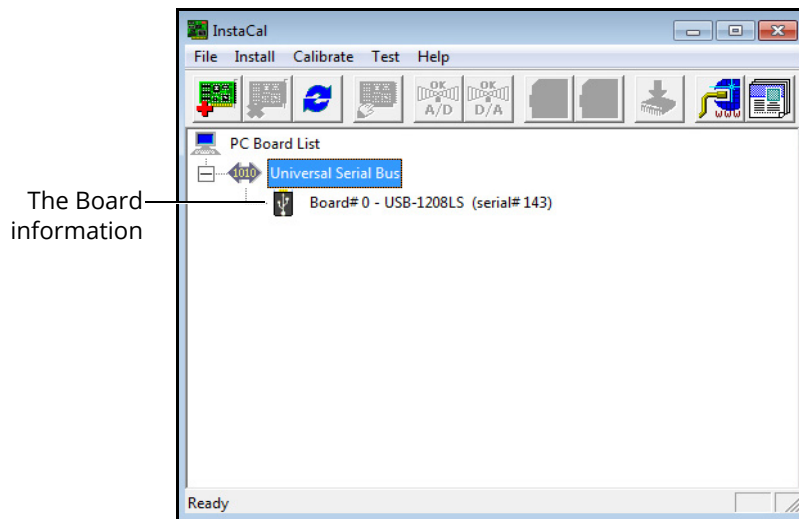
The Configuration Screen

2. From the Configuration screen, select the **Camera Calibration** option in the **Configuration** panel

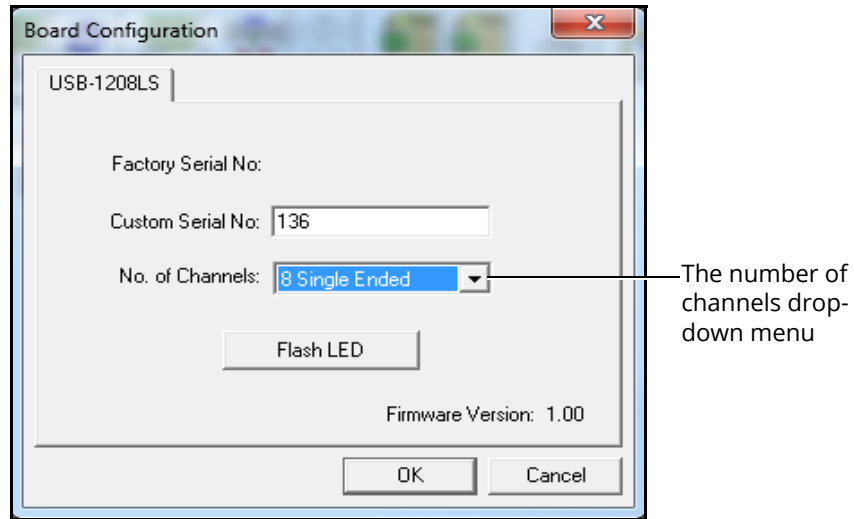


The Camera Calibration Screen

3. On the InstaCal window, double-click the Board information



The InstaCal Window



The Board Configuration Window

4. Ensure the number of channels drop-down menu displays 8 Single Ended
5. Select the 8 Single Ended from the drop-down menu options, if a different option is selected
6. Click **OK** to save the settings and return to the Camera Calibration screen

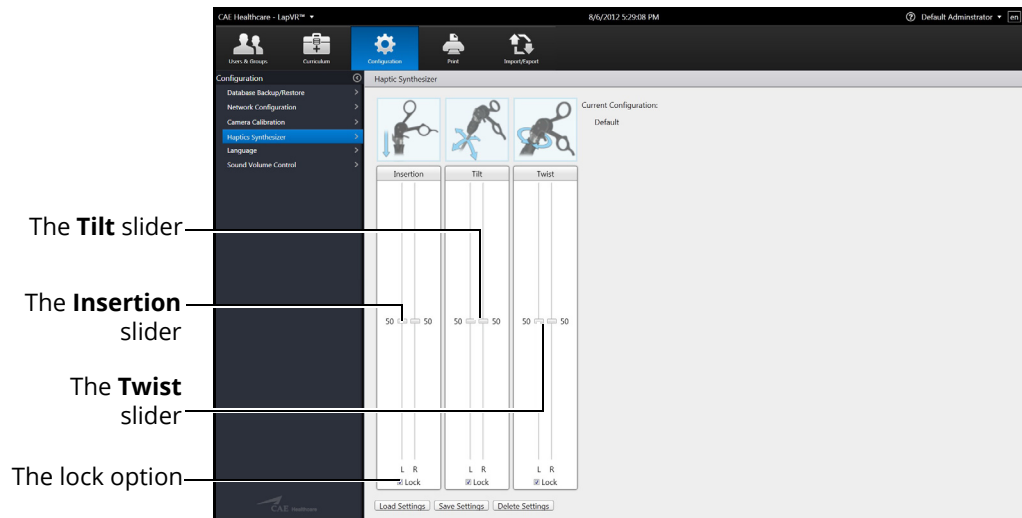
Adjusting the Haptic Settings

The Haptic Synthesizer allows administrators to adjust the forces felt through the handles during the simulation. There are three haptic settings that can be adjusted: insertion , tilt and twist.

Adjusting the **Insertion** settings modifies the force felt when a tool is pushed further into the simulator. Adjusting the **Tilt** settings changes the sensations present when the handle is moved backward, forward and side to side. Adjusting the **Twist** settings affects the ease of rotating the handle around the tool axis.

The sliders can be moved up or down to increase or decrease the amount of force for that given axis. CAE Healthcare has provided a set of installed defaults that are the baseline for all forces.

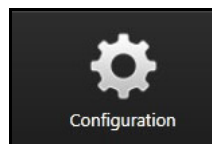
The lock option is checked by default and ensures that both haptic sliders move in unison when an adjustment is made.



The Haptic Synthesizer Screen

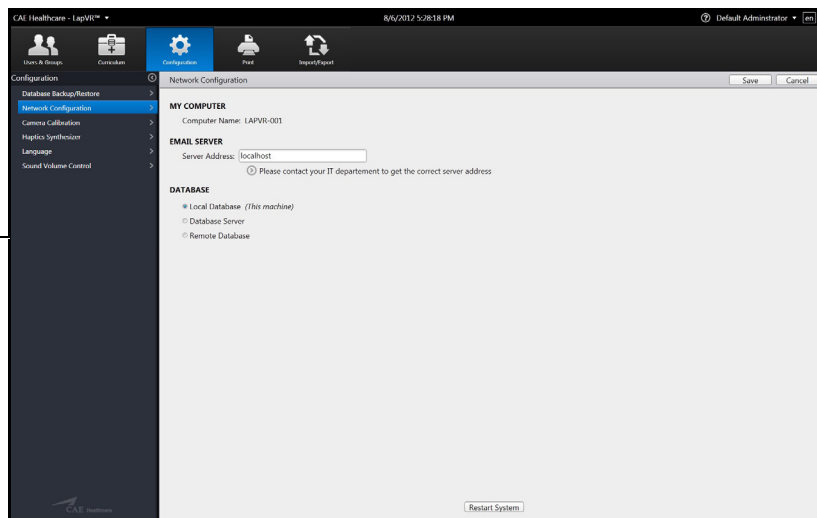
To adjust the haptic settings:

1. From the icon dashboard, click the **Configuration** icon



The Configuration Icon

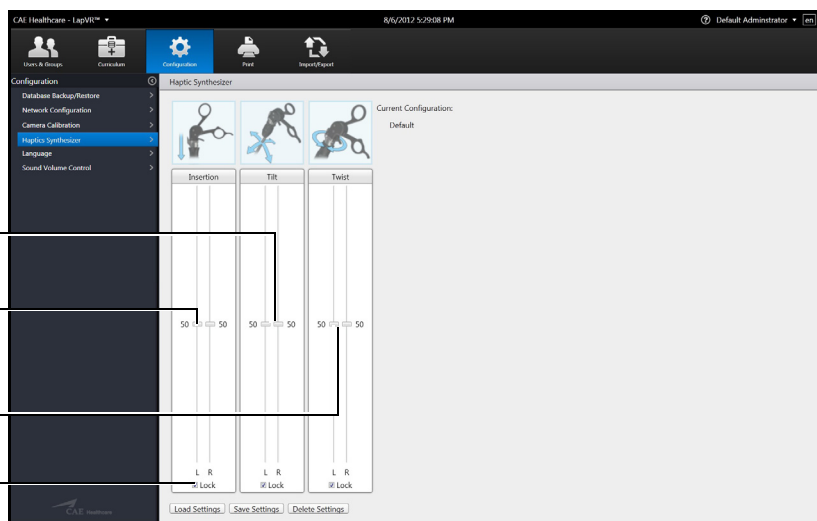
The Configuration panel



The Configuration Screen

- From the Configuration screen, select **Haptic Synthesizer** from the **Configuration** panel

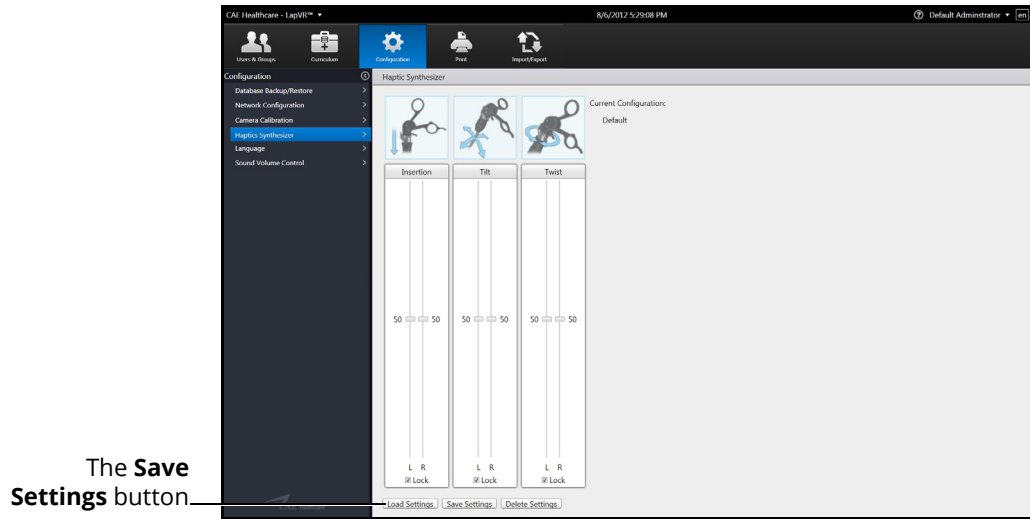
The Tilt slider
 The Insertion slider
 The Twist
 The lock option



The Haptic Synthesizer Screen

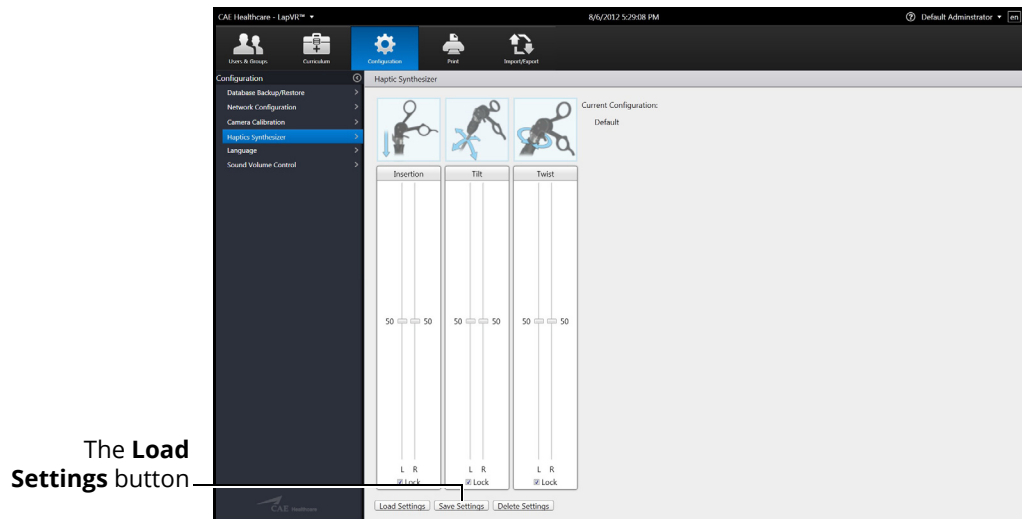
- Deselect the lock option to move the sliders independently, if desired
- Click on a slider and hold the mouse button
- Move the slider up or down to increase or decrease the haptic settings

- Click the **Save Settings** button to save the adjustments



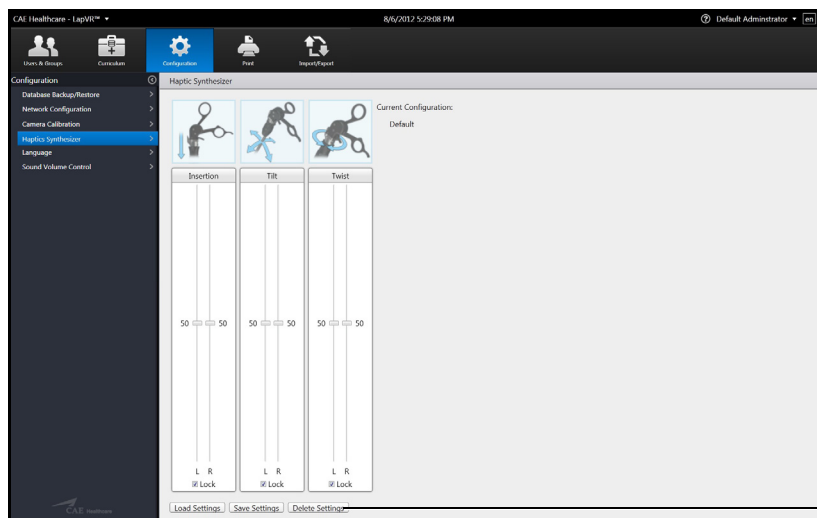
The Haptic Synthesizer Screen

- Click the **Load Settings** button to apply the adjustments to the simulator



The Haptic Synthesizer Screen

- 8. Click the **Delete Settings** button to return the haptic settings to the system default settings, if desired



The Haptic Synthesizer Screen

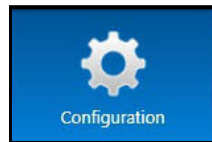
The **Delete Settings** button

Adjusting the Volume Controls

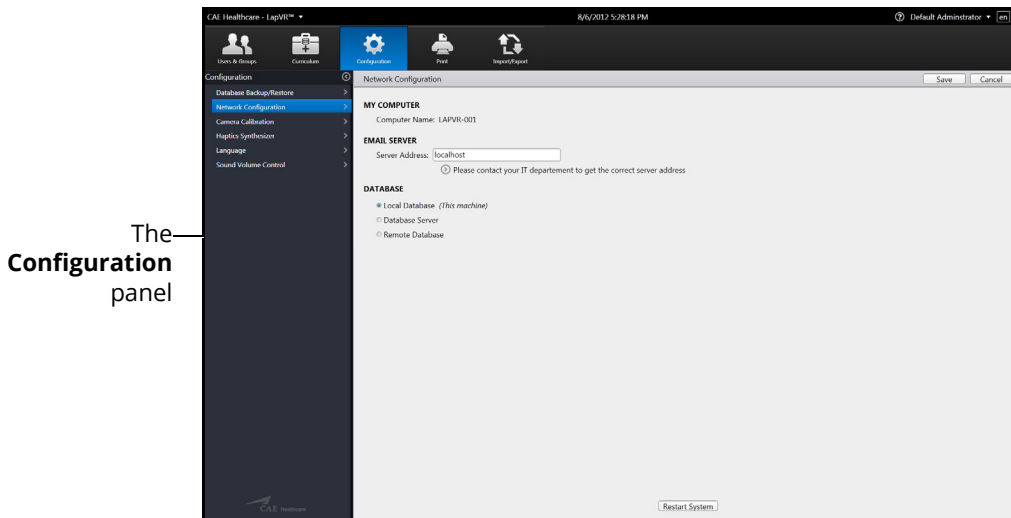
Administrators can configure the sound and volume hotkeys from the Configuration screen.

To adjust the volume controls:

1. From the icon dashboard, click the **Configuration** icon

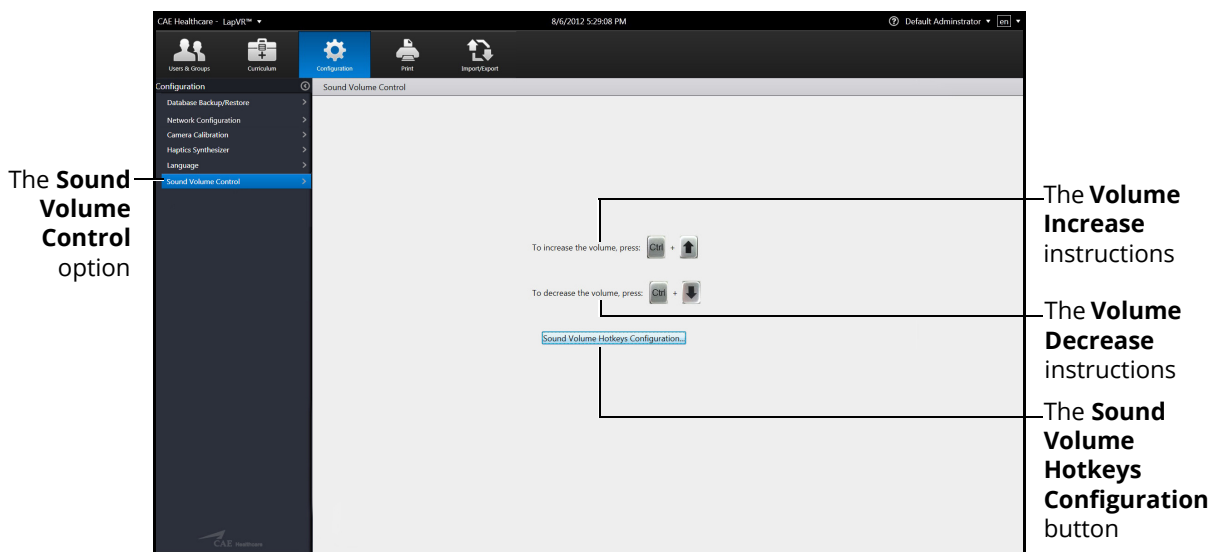


The Configuration Icon



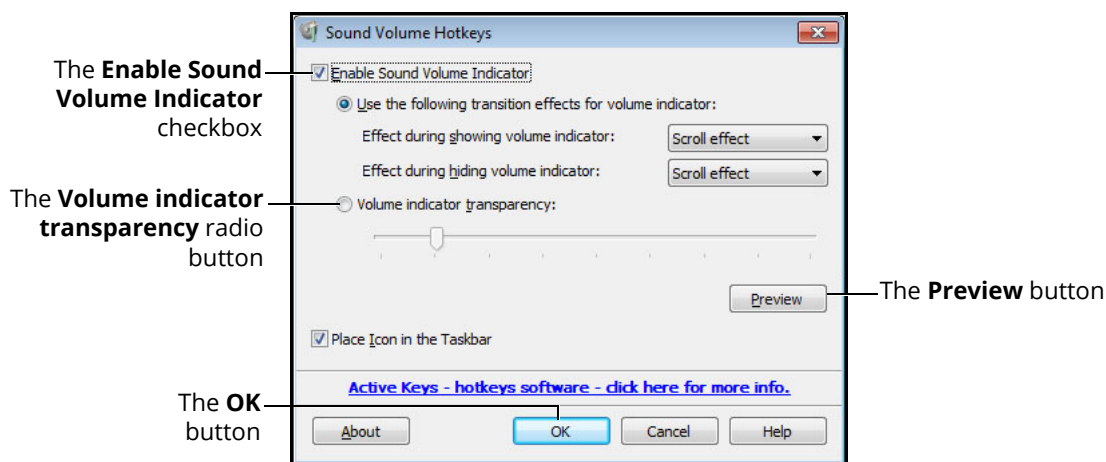
The Configuration Screen

2. From the Configuration screen, select the **Sound Volume Control** option in the **Configuration** panel



The Sound Volume Control Screen

3. Click the **Sound Volume Hotkeys Configuration** button



The Sound Volume Hotkeys Window

4. Select the **Enable Sound Volume Indicator** (selected by default) to display the volume increase/decrease slider when the hotkeys are used
5. Select the **Volume indicator transparency** radio button
6. Use the slider to adjust the transparency of the volume indicator when it appears on the screen
7. Click the **Preview** button to see how the volume indicator will display with the adjusted settings
8. Click **OK** to return to the Sound Volume Control screen

Hiding the Side Panel

Administrators can hide the side panel to view content in full screen mode.



To hide the side panel:

1. From the side panel, select the desired item
2. Click the **Hide Side Panel** arrow
The content expands to the width of the full main screen.

Exiting the Software

Administrators should always log out of the software once they are finished using the software.

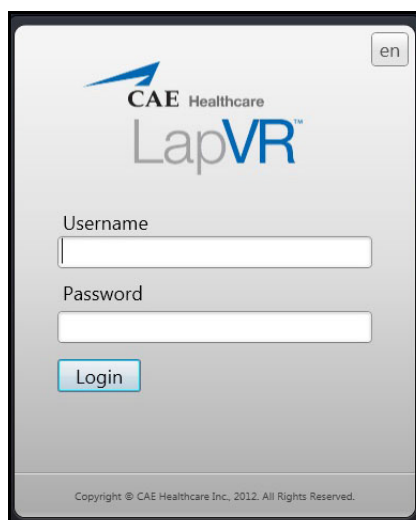
To exit the software:

1. From any screen, click on the username in the top right corner of the screen



The Home Screen with Logout Drop-Down Menu

2. Select **Logout** from the **Logout** drop-down menu



The Login Screen

CARE AND MAINTENANCE

Maintaining the simulator requires careful treatment of the electronic and mechanical components. Each time the simulator is assembled or disassembled, make sure all components are properly handled and correctly removed or placed into storage.

Note: No hardware components within the simulator are user serviceable. Consult CAE Healthcare Customer Service to address any hardware maintenance concerns.

CAE Assurance Programs

General Information

CAE patient simulator products come with a one-year Assurance support and maintenance plan. All plans begin at the date of shipment or CAE installation. You may upgrade your first-year plan to an enhanced plan and receive remedial and planned maintenance. To prevent equipment downtime and delays after the plan expires, CAE encourages customers to purchase extended Assurance plans for all subsequent years.

Units Out of Plan

For units no longer under an Assurance plan that require repairs, the Time and Materials service plan applies. For more information, see *Time and Materials* section of this Care and Maintenance section.

To place an out-of-plan unit under a support and maintenance plan, CAE reserves the right to have the patient simulator inspected by a CAE-approved technician at the customer's expense. If necessary, the unit would have to be repaired at the customer's expense prior to issuance of a plan.

The repairs required as the result of the examination will be quoted on a time and material basis.

Plan Period

Assurance plans are not ordinarily offered for periods of less than one year. However, multiple-year plans may be arranged for up to an additional three years. Discounts are available for purchase of multiple-year plans.

Limitations of Plan

Your exclusive remedy for any defective patient simulators is limited to the repair or replacement of the defective patient simulator.

CAE may elect which remedy or combination of remedies to provide at its sole discretion. CAE shall have a reasonable time after determining that a defective material exists to repair or replace the identified defective material. CAE's replacement material will be manufactured from new and/or serviceable parts. CAE's Assurance plan applies to repaired or replaced materials for the balance of the applicable period of the original support and maintenance plan or ninety days from the date of shipment of a repaired or replaced material, whichever is longer. CAE warrants its labor for 30 days or the balance at the applicable period of the original support and maintenance plan, whichever is greater.

CAE shall not be liable under this Assurance plan for incidental or consequential damages, or in the event of any unauthorized repairs or modifications have been made or attempted, or when the product, or any part thereof, has been damaged by accident, misuse or abuse. This plan does not cover normal wear or tear, staining, discoloration or other cosmetic irregularities that do not impede or degrade product performance. Any damage or malfunction as a result of the installation of software or hardware, not authorized by CAE, will be repaired under the Time and Materials service plan (see *Time and Materials* section).

CAE's Assurance plans do not cover products that have been received improperly packaged, altered or physically damaged. Products will be inspected upon receipt.

Some states in the USA do not allow the exclusion or limitations of incidental or consequential damages, so the limitations above may not apply to you. The Assurance plan gives you specific legal rights and you may also have other rights, which vary from state to state.

Return Materials Authorization (RMA)

No product may be returned directly to CAE without first contacting CAE for an RMA number. If it is determined that the product may be defective, the customer will be given an RMA number and instructions for returning the product. An unauthorized return (e.g., one for which an RMA number has not been issued) will be returned at the customer's expense. Authorized shipments are to be shipped prepaid to the address on the RMA. The original box and packaging materials should be kept for storing or shipping your product. To request an RMA, please contact Customer Service.

Training for Life™

With CAE's Training for Life, you now have access to free and unlimited beginner to advanced simulator training courses for everyone on your staff with the purchase of a CAE Assurance plan. This benefit extends to everyone in your institution for the life of your simulator. Training for Life offers you the opportunity to refresh your skills, learn current best practices, and ensure you are getting maximum training value from your simulator. Training for Life includes access to all courses taught by our clinical experts and certified technicians.

System Software Upgrade Support

Customers with current support and maintenance plans are entitled to receive updates and upgrades to applications software previously purchased. Installation of the system software is the user's responsibility.

The System Software Upgrade Support includes software upgrades for base software and purchased optional learning modules.

Note: This does not apply for major upgrades or technological enhancements.

Time and Materials

For those systems not under a support and maintenance plan, service will be provided as required on a Time and Materials basis:

The principal period of on-site support (customer's local time) is:

- Monday through Friday, 8:00 AM to 5:00 PM (customer's time zone)
- Holiday and non-business days excluded
- Support outside principal period is billed at the premium rate (hourly rate x 1.5)

A minimum of 48 hours notice is required for scheduling an on-site support call. Urgent on-site support with less than 48 hours notice will be charged at the premium hourly rate.

On-site time is described as the time period commencing from arrival at customer site through departure from customer site.

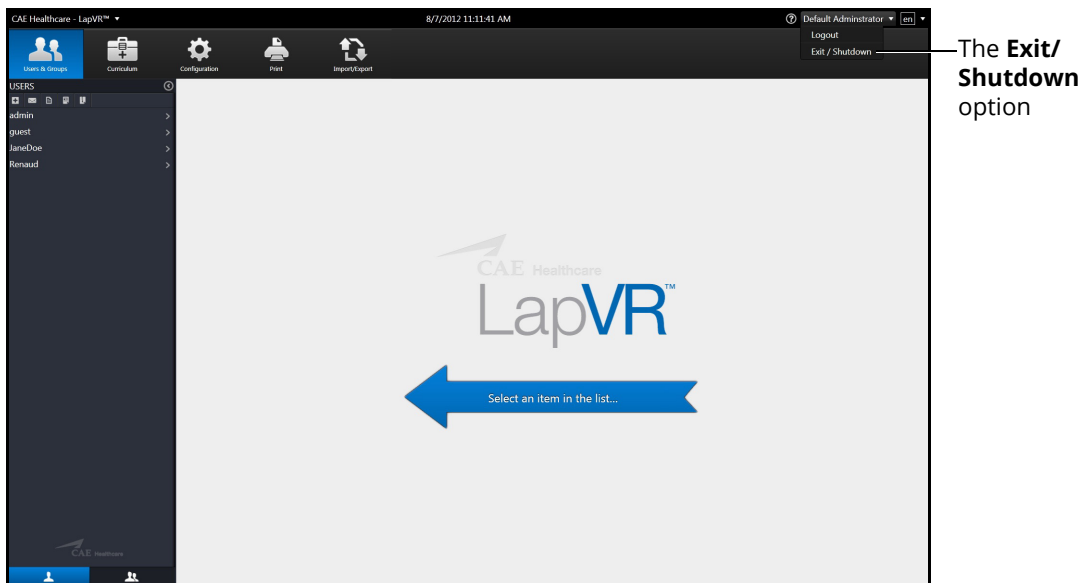
Breakdown

The LapVR simulator should be properly stored in a secure place. To ensure that the simulator remains in good working condition, follow the prescribed CAE Healthcare breakdown procedures below. The procedures are estimated to take less than five minutes.

NOTE: Users must be in logged in as an administrator to complete the shutdown process.

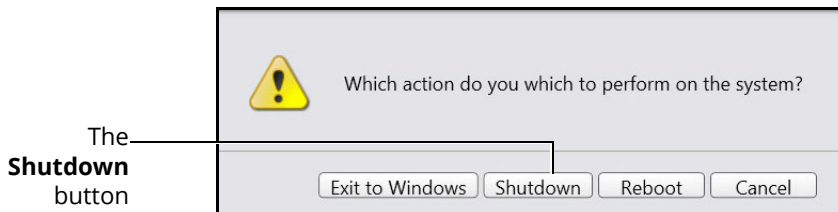
To break down the simulator:

1. Click on the username in the top right corner of the screen.
The logout drop-down menu appears.



The Home Screen with Logout Drop-Down Menu

2. Select **Exit/Shutdown** from the drop-down menu.
The Shutdown Message appears.

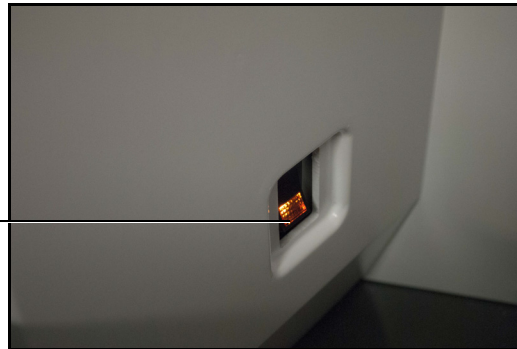


The Shutdown Message

3. Click **Shutdown**. The simulator powers down.

4. Press the bottom of the orange illuminated power switch. This ensures the simulator is powered off.

The bottom of
the orange
power switch



The Power Switch Illuminated

To store the simulator:

1. Unplug the power cord from the power source.
2. Unlock the wheel brakes.
3. Push the simulator to a secure location.

How to Contact Customer Service

CAE Customer Service Headquarters - United States and Latin America

Monday - Friday from 7:00 a.m. to 6:00 p.m. ET
Toll Free +1 (866) 462-7920
24-hour Hotline +1 (941) 342-5605
Fax +1 (941) 342-5600
Email Address: customerservice@caehealthcare.com
Web URL: www.caehealthcare.com

CAE Customer Service - Canada

Monday - Friday from 8:00 a.m. to 5:00 p.m. ET
Toll Free +1 (877) 223-6273
Email Address: can.service@caehealthcare.com

CAE Customer Service - Europe, Middle East and Africa (EMEA)

Monday - Friday from 8:00 a.m. to 5:00 p.m. CET
Phone +49 (0) 6131 4950354
Fax +49 (0) 6131 4950351
Email Address: international.service@caehealthcare.com

CAE Customer Service - UK and Ireland

Monday - Friday from 9:00 a.m. to 5:00 p.m. GMT
Phone +44 (0)800-917-1851
Email Address: uk.service@caehealthcare.com

Principal hours of operation exclude holiday and non-business days.

APPENDIX A - MODULE DESCRIPTIONS

The LapVR simulator contains several modules for learners to practice performing laparoscopic procedures using different techniques and tools. Modules are bundled in four separate categories: Essential Skills, Procedural Skills, General Surgery and Ob-Gyn Surgery.

The following table outlines the categories and modules offered for the LapVR simulator.

Category	Module	Description
Essential Skills	Camera Navigation	Use the camera to adjust the plane of view, yaw, pitch and angle and align the red guide circle with the target yellow circle.
	Clip Application	Use the instruments to clip a blood vessel in a timely and effective manner.
	Cutting	Use the instruments to grasp and cut a circle on a piece of simulated cloth.
	Peg Transfer	Use the instruments to grasp and place the pegs in the holes.
	Knot Tying	Use the instruments to grasp a thread and tie multiple knots in a timely and effective manner.
	Needle Driving	Use the instruments to drive the needle through the targets located on flexible tissue.
Procedural Skills	Adhesiolysis	Use the instruments to complete a successful lysis of an adhesion in the bowel.
	Running the Bowel	Use the instruments to gently manipulate, measure and inspect the small intestine without causing damage.
	Suturing and Knot Tying	Select one of the tasks to to close an enterotomy on as section of the bowel: Continuous Stitch, Horizontal Stitch, Loop Litigation and Simple Interrupted.

Category	Module	Description
General Surgery	Appendectomy	Apply the skills practiced in the essential skills and procedural skills modules to perform a successful laparoscopic appendectomy. These skills include navigating the camera, grasping, clipping, cutting, lysing adhesions and electro-surgery.
	Cholecystectomy	<p>Apply the skills practiced in the essential skills and procedural skills modules to perform a successful cholecystectomy. These skills include navigating the camera, grasping, clipping, cutting, lysing adhesions and electro-surgery. Additional specific objectives include:</p> <ul style="list-style-type: none"> • Dissect the peritoneal sheath and fatty tissue of Calot’s Triangle. • Complete proximal and distal clipping of the cystic duct and artery. • Cut the cystic duct and artery. • Separate and remove the gallbladder from the liver bed.

Category	Module	Description
Ob-Gyn Surgery	Bilateral Occlusion	<p>Apply the skills practiced in the essential skills and procedural skills modules to perform a successful bilateral occlusion on the fallopian tubes. These skills include navigating the camera, grasping, clipping and electro-surgery. Additional specific objectives include:</p> <ul style="list-style-type: none"> • Isolate the tubes. • Complete occlusion of the tubes using Filshie clips or electro-surgery.
	Tubal Ectopic Pregnancy	<p>Apply the skills practiced in the essential skills and procedural skills modules to perform a successful removal of ectopic tissue from the fallopian tube. These skills include navigating the camera, grasping, clipping and electro-surgery. Additional specific objectives include:</p> <ul style="list-style-type: none"> • Isolate the tubes. • Remove the ectopic tissue from fallopian tube. • Use retrieval bag to capture ectopic tissue from the tube via Salpingostomy or to capture both ectopic and fallopian tissue via Salpingectomy.
	Salpingo Oophorectomy	<p>Apply the skills practiced in the essential skills and procedural skills modules to perform a successful removal of ectopic tissue from the fallopian tube. These skills include navigating the camera, grasping, clipping and electro-surgery. Additional specific objectives include:</p> <ul style="list-style-type: none"> • Isolate the tube. • Remove the fallopian tube and ovary. • Use retrieval bag to capture the fallopian tube and ovary.

Module Instruments and Required Equipment

In each of the modules, different instruments are available to the user for completing a task. Users should also note the limitations that an administrator can place on their usage of the instruments and the equipment required to complete a selected task.

Essential Skills

The Essential Skills modules give learners an opportunity to practice and master essential techniques before attempting a procedural task.

Module	Available Instruments	Instrument Restrictions	Required Equipment
Camera Navigation	<ul style="list-style-type: none"> • Camera 	None	<ul style="list-style-type: none"> • Camera
Peg Transfer	<ul style="list-style-type: none"> • Straight Grasper • Probe 	The administrator has the ability to restrict the use of the grasper for either hand.	<ul style="list-style-type: none"> • Pistol grip handles • Camera
Cutting Skill	<ul style="list-style-type: none"> • Straight Grasper • Metzenbaum 	The administrator has the ability to restrict the use of the metzenbaum for either hand.	<ul style="list-style-type: none"> • Pistol grip handles • Camera
Clipping Skill	<ul style="list-style-type: none"> • Straight Grasper • Metzenbaum • Clip Applicator • Suction 	The administrator has the ability to restrict the use of the clip applicator for either hand.	<ul style="list-style-type: none"> • Pistol grip handles • Camera
Needle Driving Skill	<p>Needle Drivers:</p> <ul style="list-style-type: none"> • Straight • Curved Left • Curved Right 	None	<ul style="list-style-type: none"> • Pistol grip handles • Suturing handles • Camera
Knot Tying Skill	<p>Needle Drivers:</p> <ul style="list-style-type: none"> • Straight • Curved Left • Curved Right 	None	<ul style="list-style-type: none"> • Pistol grip handles • Suturing handles • Camera

Procedural Skills

The Procedural Skills modules give learners an opportunity to practice and master procedural techniques before attempting a procedural task.

Module	Available Instruments	Instrument Restrictions	Required Equipment
Adhesiolysis Procedural Skill	Graspers: <ul style="list-style-type: none"> • Straight • Babcock • Fenestrated Scissors: <ul style="list-style-type: none"> • Metzenbaum Other: <ul style="list-style-type: none"> • Suction 	The administrator has the ability to restrict the use of multiple instruments on either hand.	<ul style="list-style-type: none"> • Pistol grip handles • Camera
	Electrosurgery: <ul style="list-style-type: none"> • Spatula • L-Hook • Bipolar Grasper 		<ul style="list-style-type: none"> • Pistol grip handles • Camera • Foot pedals
Running the Bowel Proceural Skill	Graspers: <ul style="list-style-type: none"> • Straight • Babcock • Fenestrated • Atraumatic Single Scissors: <ul style="list-style-type: none"> • Metzenbaum Stapler	The administrator has the ability to restrict the use of multiple instruments on either hand.	<ul style="list-style-type: none"> • Pistol grip handles • Camera
	Electrosurgery: <ul style="list-style-type: none"> • L-Hook 		The administrator has the ability to restrict the use of the clip applicator for either hand.

Module	Available Instruments	Instrument Restrictions	Required Equipment
Suturing and Knot Tying	Needle Drivers: <ul style="list-style-type: none"> • Straight • Curved Left • Curved Right Drivers with Neele: <ul style="list-style-type: none"> • Straight Scissors: <ul style="list-style-type: none"> • Suture Scissors 	None	<ul style="list-style-type: none"> • Pistol grip handles • Suturing handles • Camera
Loop Litigation	Graspers: <ul style="list-style-type: none"> • Straight Scissors: <ul style="list-style-type: none"> • Suture Scissors Loop Tool	None	<ul style="list-style-type: none"> • Pistol grip handles • Suturing handles • Camera

General Surgery

The General Surgery modules allow learners to use the practiced skills from the Essential Skills and Procedural Skills modules to perform multi-step laparoscopic procedures from start to finish.

Module	Available Instruments	Instrument Restrictions	Required Equipment
Appendectomy	Graspers: <ul style="list-style-type: none"> • Straight • Maryland Scissors: <ul style="list-style-type: none"> • Straight Cutter Stapler: <ul style="list-style-type: none"> • 45mm vascular load • 45mm bowel load Other: <ul style="list-style-type: none"> • Loop tool • Clip applicator • Suction/irrigation 	None	<ul style="list-style-type: none"> • Pistol grip handles • Camera
	Electrosurgery: <ul style="list-style-type: none"> • L-Hook • Advanced device 		<ul style="list-style-type: none"> • Pistol grip handles • Camera • Foot pedals

Module	Available Instruments	Instrument Restrictions	Required Equipment
Cholecystectomy	Graspers: <ul style="list-style-type: none"> • Straight Dissectors: <ul style="list-style-type: none"> • Straight • Maryland dissector Scissors: <ul style="list-style-type: none"> • Metzenbaum Other: <ul style="list-style-type: none"> • Clip applicator • Suction/irrigation 	None	<ul style="list-style-type: none"> • Pistol grip handles • Suturing handles • Camera
	Electrosurgery: <ul style="list-style-type: none"> • L-Hook 		<ul style="list-style-type: none"> • Pistol grip handles • Camera • Foot pedals

Ob-Gyn Procedures

The Ob-Gyn Surgery modules allow learners to use the practiced skills from the Essential Skills and Procedural Skills modules to perform acute laparoscopic procedures on simulated female reproductive organs.

Module	Available Instruments	Instrument Restrictions	Required Equipment
Bilateral Tubal Occlusion	Graspers: <ul style="list-style-type: none"> • Straight • Allis • Babcock • Atraumatic Dissectors: <ul style="list-style-type: none"> • Maryland dissector Scissors: <ul style="list-style-type: none"> • Metzenbaum Other: <ul style="list-style-type: none"> • Probe • Filshie clip • Suction/irrigation Uterine Manipulator	None	<ul style="list-style-type: none"> • Pistol grip handles • Suturing handles • Camera
	Electrosurgery: <ul style="list-style-type: none"> • Bipolar grasper • Kleppinger 		<ul style="list-style-type: none"> • Pistol grip handles • Suturing handles • Camera • Foot pedals

Module	Available Instruments	Instrument Restrictions	Required Equipment
Tubal Ectopic Pregnancy	Graspers: <ul style="list-style-type: none"> • Straight • Allis • Babcock • Atraumatic Dissectors: <ul style="list-style-type: none"> • Maryland dissector Scissors: <ul style="list-style-type: none"> • Metzenbaum Other: <ul style="list-style-type: none"> • Probe • Filshie clip • Suction/irrigation • Retrieval bag Uterine Manipulator	None	<ul style="list-style-type: none"> • Pistol grip handles • Suturing handles • Camera
	Electrosurgery: <ul style="list-style-type: none"> • Monopolar needle • Bipolar grasper • Kleppinger 		<ul style="list-style-type: none"> • Pistol grip handles • Suturing handles • Camera • Foot pedals

Module	Available Instruments	Instrument Restrictions	Required Equipment
Salpingo-Oophorectomy	Graspers: <ul style="list-style-type: none"> • Straight • Allis • Babcock • Atraumatic Dissectors: <ul style="list-style-type: none"> • Maryland dissector Scissors: <ul style="list-style-type: none"> • Metzenbaum Other: <ul style="list-style-type: none"> • Probe • Filshie clip • Suction/irrigation • Retrieval bag Uterine Manipulator	None	<ul style="list-style-type: none"> • Pistol grip handles • Suturing handles • Camera
	Electrosurgery: <ul style="list-style-type: none"> • Monopolar needle • Bipolar grasper • Kleppinger 		<ul style="list-style-type: none"> • Pistol grip handles • Suturing handles • Camera • Foot pedals



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