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## System Specifications

| Hardware | Two 22” flat LCD touchscreen monitors  
Haptics device  
Scope holder  
Dual foot pedal |
|---|---|
| Dimensions | 40.5” W x 35” D x 72” H (Adjustable)  
103cm W x 89cm D x 183cm H (Adjustable) |
| Weight | 245 lb (111 kg) |
| Electrical | 100-120 V, 50-60 Hz, 10A  
200-240 V, 50-60 Hz, 5A |
| 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 for 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 EndoVR Simulator administrator’s guide. This guide provides instructions on how to use and maintain your EndoVR simulator.

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

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 begin to recognize anatomical structures and landmarks, intervention approaches and complication management. Learning within a virtual patient environment offers both students and faculty the opportunity to practice safely.
The standard equipment for the EndoVR simulator includes all the necessary equipment for basic use of the simulator. The items listed in the table below are shipped with the simulator.

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**EndoVR Device**

The EndoVR device comes as a single entity. The haptic device (including external anatomy plates), keyboard, mouse and lifting mechanism are all part of the EndoVR 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.

**Monitor Pole and Monitor Arms**

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

**Monitors**

Two flatscreen monitors are provided with the purchase of an EndoVR simulator. The mounting plates to mount the monitors to the monitor arms are located on the back of the monitors.
Computer

The computer for the EndoVR simulator is shipped inside the EndoVR device. To access the computer, press on the access door located on the side of the simulator.
## Additional Equipment

For modules, which are sold separately, users must purchase additional equipment to fully utilize the curriculum and simulation procedures.

### Bronchoscopy Equipment

- Scope Head
- Scope Tube
- EBUS-TBNA Accessory Tool

### Lower GI Equipment

- Scope Head
- Scope Tube
- Accessory Tool
- Foot Pedals

### Upper GI Equipment

- Scope Head
- Scope Tube
- Accessory Tool

## Before Beginning Setup

Proper operation of the EndoVR 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 Administrator’s 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 EndoVR simulator and configuring the computer. Follow these procedures to prepare for your simulation experience.

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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 EndoVR Simulator](image)

The EndoVR Simulator

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

![The Wheel Brake](image)

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 EndoVR 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 EndoVR 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

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 Monitors

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
e. Repeat steps a through d for the second 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

**Note:** Repeat these processes for the second monitor.
Step 5: Mount the Scope Holder

To mount the scope holder:

- Insert the metal tab near the bottom of the scope holder into the opening on the back of the monitor pole.
- Align the holes near the bottom of the scope holder with the holes on the back of the monitor pole.

**Note:** The black hook at the top of the scope holder should be facing away from the simulator and the holes at the bottom of the holder should rest flat against the monitor pole.

- Place a screw in the hole and use the Phillips screwdriver to tighten the screw until it is secure. Repeat for the second hole.
- Once the screws are secure, place the scopes in the holder.
Step 6: Connect the Scope
Changing a Scope

When the chosen task requires a different scope from the scope that is currently connected, learners can disconnect the current scope and connect the new scope.

**Note:** Do not disconnect scope during a running simulation.

To disconnect a scope:

a. Twist the two fasteners on the scope connector counterclockwise

![The Scope Connector and the Scope Port](image)

b. Pull the connector away from the scope port
To connect a scope:

a. Choose the desired scope from the scope holder located on the back of the simulator

b. Align the prongs in the connector with the scope port located on the back left side of the simulator

c. Press the connector into the scope port and twist the two fasteners clockwise

Note: Only one scope can be connected to the simulator at a time.

Step 7: Connect the External Power Cord

Find an external power source and plug the power cord into the power source.
Step 8: Power On the Simulator

Before starting the software, ensure that the simulator is powered on. In the case that the simulator is not powered on, follow the instructions below.

To power on the simulator:

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

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

The switch illuminates when the simulator is powered on.
Step 9 (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

b. Connect the other end of the Ethernet cable to a network Ethernet port
Step 10 (Optional): Adjust the Height

It is important to ensure the simulator is at the appropriate height for the learner to effectively perform the procedures. The EndoVR simulator has arrows that allow the learner to adjust the height as needed.

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 device begins moving up or down.

c. Release the button when the desired height is achieved
Step 11 (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.
Step 12 (Optional): Connect the Accessory Tool

To connect the accessory tool for specific procedures:

1. Select the desired accessory tool for the procedure
   The EBUS-TBNA accessory tool is used for EBUS-TBNA module tasks.

   ![The EBUS-TBNA Accessory Tool](image1)

   The EBUS-TBNA Accessory Tool

   The Upper GI/Lower GI accessory tool is used for certain Upper GI and Lower GI module tasks.

   ![The Upper GI/Lower Accessory Tool](image2)
2. Locate the accessory tool port on the back of the simulator

2. The Back of the Simulator

3. Press the accessory tool connector into the accessory tool port

3. The Accessory Port
USING THE ADMINISTRATOR TOOLS

Administrators managing the EndoVR simulator are responsible for setting up user accounts, privileges and curriculum. Additionally, the administrator has the ability to change network settings, scope button assignments 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 EndoVR simulator is powered on, the software launches automatically and the Login screen appears.

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.

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 EndoVR 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.

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.
Using the Administrator Tools

Configuration
From the Configuration screen, administrators can adjust network settings, screen layout and available medication options for users in the EBUS-TBNA and UGI modules. Administrators can also calibrate scopes, modify scope button assignments 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 EndoVR 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](image)

   *The Users & Groups Icon*

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

   ![The Users & Groups Screen](image)

   *The Users & Groups Screen*
The Personal Data Screen

3. Enter the information for the specific user in the different fields
4. Click Done
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

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
2. The Personal Data screen appears
3. Click on the Courses & Tasks tab in the Courses & Tasks panel
4. Click on the Tasks 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 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 appears.

   ![The Personal Data Screen]

   The **Users & Groups** icon

   The **Assigned Groups** panel

   The **Groups** panel

   The **Courses & Tasks** tab

   The **Groups** tab

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]

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

3. Select the desired user from the **Users** panel
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

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 deactivated user names appear in the **Users** panel in gray, italic font. Select the desired deactivated user. The user's information appears in the personal data screen.

3. Click **Activate**
Creating Groups

To create a group:

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

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

3. Click the Add Group button
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](image)

2. From the Curriculum screen, click the **Courses** tab

3. Click the **Add Course** button

   ![The Course Information Screen](image)
Using the Administrator Tools

The Course Information screen appears.
4. Enter the new course name in the **Course Name** field
5. Click **Done**
   The course is created.
Using the Administrator Tools

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

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

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
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
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

2. Click the Tasks tab
3. Click the Add Task button

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](image)

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

![The Task Template Screen](image)

3. From the Task Template screen, select a task in the Task Templates panel

4. Click Create

![The Create Task Box](image)

5. 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.

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

The new task

The *Edited Tasks* panel

The *Edited Tasks* tab

The *Task Template Screen*

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

To rename a task:

1. From the Tasks panel, select the desired task

2. Click Rename

3. Enter the desired named 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.

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

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
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.

2. Click **Delete**

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](image)

2. From the Edited Tasks tab, select a task from the Edited Tasks panel

3. Click the Edit Task Parameters button

![The Edit Task Parameters Screen](image)

4. Adjust the parameters to the desired values

5. 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.

6. 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](image1)

   **The Curriculum Icon**

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

   ![The Curriculum Screen](image2)

   **The Curriculum Screen**

3. Click the **Faculty Content** button

   ![The Faculty Content button](image3)

   ![The Edited Tasks tab](image4)

   **The Faculty Content button**

   ![The Faculty Content button](image5)

   **The Faculty Content button**

4. 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.
4. Select the .htm or .html file to be uploaded
5. 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.
6. 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

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

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.
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](image)

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

![The Users & Groups Screen](image)
The Email Options 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](image)

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

   ![The Users & Groups Screen - Groups Tab](image)
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

   ![](Configuration Icon.png)

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

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](image)

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

![The Configuration Screen](image)
3. Click the **Restore Database** button

The **Database Backup/Restore** screen

The **Database Backup/Restore** option

The **Restore Database** button

The **OK** button

The **Cancel** 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 appears.

**The Database Restored Successfully Message**

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

The calibration tool is used to ensure that the physical scope tracks properly with the virtual scope during the simulations. Administrators are required to perform calibrations after a new installation or when the physical scope manipulation does not correspond with the virtual scope display on screen during a simulation.

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

![The Configuration Icon](image)

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

![The Configuration Screen](image)
From the Scope Calibration screen, administrators can run the necessary calibrations for their purchased modules.
Running the Flexible Bronchoscopy Calibration

Administrators should run the Flexible Bronchoscopy Calibration Utility after a new installation or to correct the physical scope’s correspondence with the virtual representation in the software.

Before beginning the Bronchoscopy Calibration Utility, ensure that the bronchoscope and EBUS-TBNA accessory tool are connected to the ports on the back of the simulator.

1. From the Scope Calibration screen, select the **Flexible Bronchoscopy Calibration** button

2. From the Module Selection drop-down menu in the Module Selection window, select the appropriate module
3. Click **Next**

![The Select a Device to Calibrate Window](image1)

4. Click **OK**

![The Calibration Options Window](image2)

5. Click the **Typical** button
6. Flex the thumb wheel downward on the scope as far as it will go and hold the thumb wheel down.

7. On the Scope Thumb wheel window, click the top button.
   The blue bar moves to the right and the calibration is complete when the word Done appears next to the button.

8. Flex the thumb wheel upward on the scope as far as it will go and hold the thumb wheel up.

9. On the Scope Thumb wheel window, click the bottom button.
   The blue bar moves to the left and the calibration is complete when the word Done appears next to the button.

10. Click Next.
11. Insert the EBUS-TBNA accessory tool filament into the working channel of the scope as far as it will go
12. Click the >>> button
   The calibration is complete when the word Done appears next the >>> button
13. Click Next
14. Click Save to save the calibration settings

The Tool Insertion Length Window
The Save a Calibration File Window and Confirmation Message

15. Click Yes
Running the Lower GI Calibration

Administrators should run the Lower GI Calibration Utility after a new installation or to correct the physical scope’s correspondence with the virtual representation in the software.

Before beginning the Lower GI Calibration Utility, ensure that the endoscope is connected to the port on the back of the simulator.

1. From the Scope Calibration screen, select the **Lower GI Calibration** button

2. From the **Module Selection** drop-down menu in the Module Selection window, select the appropriate module

3. Click **Next**
4. Click **OK**

5. Click the **Typical** button
The Scope Up/Down Flexion Window

6. Flex the Up/Down wheel downward on the scope as far as it will go and hold the wheel down
7. On the Scope Up/Down window, click the top >>> button.
   The blue bar moves to the left and the downward calibration is completed when the word Done appears next the >>> button.
8. Flex the Up/Down upward on the scope as far as it will go and hold the wheel up.
9. On the Scope Up/Down window, click the bottom >>> button.
   The blue bar moves to the right and the downward calibration is completed when the word Done appears next the >>> button.
10. Click Next.
The Scope Right/Left Flexion Window

11. Turn the right/left wheel on the scope counterclockwise as far as it will go and hold the wheel in this position

12. On the Scope Right/Left Flexion window, click the top >> button

   The blue bar moves to the right and the calibration is complete when the word Done appears next the >> button.

13. Turn the right/left wheel on the scope clockwise as far as it will go and hold the wheel in this position

14. On the Scope Right/Left Flexion window, click the bottom >> button

   The blue bar moves to the left and the calibration is complete when the word Done appears next the >> button.

15. Click Next

16. Click Save to save the calibration settings
The Confirmation message appears.

17. Click **Yes**
Running the Upper GI Calibration

Administrators should run the Upper GI Calibration Utility after a new installation or to correct the physical scope's correspondence with the virtual representation in the software.

Before beginning the Upper GI Calibration Utility, ensure that the endoscope and the needle accessory tool are connected to the ports on the back of the simulator.

1. From the Scope Calibration screen, select the **Upper GI Calibration** button

![The Scope Calibration Screen](image1)

2. From the **Module Selection** drop-down menu in the Module Selection window, select the appropriate module

![The Module Selection Window](image2)

3. Click **Next**
4. Click **OK**

5. Click the **Typical** button
6. Flex the Up/Down wheel downward on the scope as far as it will go and hold the wheel down.

7. On the Scope Up/Down window, click the top >> button.
   The blue bar moves to the left and the calibration is complete when the word Done appears next the >> button.

8. Flex the Up/Down upward on the scope as far as it will go and hold the wheel up.

9. On the Scope Up/Down window, click the bottom >>> button.
   The blue bar moves to the right and the calibration is complete when the word Done appears next the >>> button.

10. Click **Next**
The Scope Right/Left Flexion Window

11. Turn the right/left wheel counterclockwise on the scope as far as it will go and hold the wheel in this position.

12. On the Scope Right/Left Flexion window, click the top >>> button.
   
   The blue bar moves to the left and the calibration is complete when the word Done appears next the >>> button.

13. Turn the right/left wheel clockwise on the scope as far as it will go and hold the wheel in this position and click the bottom >>> button.
   
   The blue bar moves to the right and the calibration is complete when the word Done appears next the >>> button.

14. Click Next
**Note:** The Tool Level Range window appears only if the ERCP module calibration is selected.

15. Push the elevator lever down on the scope as far as it will go and hold the lever in this position.
16. On the Tool Lever Range window, click the top >>> button.
   The blue bar moves to the left and the calibration is complete when the word Done appears next the >>> button.
17. Push the elevator lever up on the scope as far as it will go and hold the lever in this position.
18. On the Tool Lever Range window, click the bottom >>> button.
   The blue bar moves to the right and the calibration is complete when the word Done appears next the >>> button.
19. Click **Next**
20. Insert the accessory tool filament into the working channel on the scope head until the blue insertion bar on the Working Channel Force window is completely full.

21. Click the **Tool Inserted** button.

22. Withdraw the accessory tool filament slowly and focus on keeping the red needle in the Tool Withdrawal Speed area in the green range.

23. When the tool is withdrawn, click the **Tool Withdrawn** button.
24. Repeat steps 14 and 15 for calibration three times. When the calibration is successful, a message will appear in the blue square message box: *Working Channel Calibration Done!*

25. Click **Next**

26. Click **Save** to save the calibration settings

27. Click **Yes**
Modifying Language Preferences

Administrators can change the language settings for their personal account using the language preferences menu in the top right corner of the Home screen or from the Configuration screen.

To modify the language preferences from the Home screen:

1. Click the **Language Preferences** menu

2. Select the preferred language from the drop-down menu
   - A checkmark appears next to the selected language and the language is applied to the software.

To modify the language preferences from the Configuration screen:

1. From the icon dashboard, click the **Configuration** icon
2. Click the **Language** option in the **Configuration** panel

**The Language Preferences Screen**

*Note:* Since English is currently the only available language, no other options are available to set as default.
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

2. From the Configuration screen, select the Sound Volume Control option in the Configuration panel
3. Click the **Sound Volume Hotkeys Configuration** button

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
Modifying the Scope Button Assignments

Administrators have the ability to change the scope button assignments for the EBUS-TBNA module procedures, if desired. The top and left side buttons are assigned to Freeze and Save Image functions respectively on the bronchoscopic scope heads by default. The two small buttons located on the right side of the scope are unassigned by default.

To modify the scope button assignments:

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

   ![The Configuration Icon](image)

2. From the Configuration screen, select **Scope Button Assignment** in the **Configuration** panel

   ![The Configuration Screen](image)
The EBUS-TBNA module is automatically selected and the button assignments options appear in the main screen.

3. Click the **Scope Button Assignments** drop-down button

4. Select an option from the **Scope Button Assignments** drop-down menu
The available options include:

- Freeze
- Balloon (to inflate or deflate the EBUS-TBNA needle balloon)
- Ultrasound
- Video Recording
- Save Image
- Depth

5. Click **Save Changes** to save the information and update the settings
Modifying the Screen Layout

Administrators have the privilege to change the screen layout assignments for the EBUS-TBNA module procedures, if desired. The following screen layout assignments are set by default when the learner opens starts the EBUS-TBNA simulation:

- Panel 1: Ultrasound
- Panel 2: Endoscopic View
- Panel 3: CT Viewer
- Panel 4: External View
- Panel 5: Tips
- Panel 6: Vital Signs

To modify the screen layout assignments:

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

2. From the Configuration screen, select **Screen Layout** in the **Configuration** panel
The EBUS-TBNA module is automatically selected and the Screen Layout Assignment screen appears.

3. Click the **Assignments** drop-down button

4. Select an option from the **Screen Layout Assignments** drop-down menu

5. Click **Save Changes** to save the information and update the settings
Modifying the Medication Settings

Administrators have the ability to control the medications that are available for learners to utilize during EBUS-TBNA and UGI Bleeding modules.

To modify the medication settings for the EBUS-TBNA module:

1. From the icon dashboard, click the Configuration icon

   ![The Configuration Icon]

2. From the Configuration screen, select Medications in the Configuration panel and select the EBUS-TBNA module

   ![The Configuration Screen]
3. Select the checkbox next to the medications that should be made available to learners during the EBUS-TBNA simulations
4. Click **Save Changes** to save the information and update the settings
To modify the medication settings for the UGI Bleeding module:

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

![The Configuration Icon]

2. From the Configuration screen, select **Medications** in the **Configuration** panel and select the **UGI Bleeding** module

![The Configuration Screen]

The **UGI Bleeding Medications Options Screen**
3. Select the checkbox next to the medications that should be made available to learners during the UGI Bleeding simulations

4. Click **Save Changes** to save the information and update the settings

**Printing Data**

From the Print screen, administrators can print customized data including user profiles, usage summaries and reports.

To create a print preview:

1. From the icon dashboard, click the **Print** icon
2. From the **Data** options, select the desired data to include in the printout.

![The Data options]

3. From the **Groups** options, select the desired groups to include in the print preview or select **All Groups**.

![The Groups options]
4. From the **Users** options, select the desired users to include in the print preview or select **All Users**

**Note:** If the User Reports data was selected, the **User Reports** options appear. From the **User Reports** options, select the desired user reports to include in the print preview or select **All User Reports**.
The Print Screen

Note: A network connection is required for printing documents from the simulator to a printer. To add a printer to the network, exit the software and consult your Windows Help menu.
Printing Data to a PDF File

If network connection is not available or no printers are available on the network, administrators can print data to a PDF file and save the file to an external device to print on a computer with a network printer connection.

To print data to a PDF file:

1. From the Print screen, click **Print**

2. Select the **PDF Complete** program
3. Click **Print**. The PDF window appears

![](image)

**The PDF Complete Document Creation Options Window**

4. Select the desired folder where the file will be saved
   
   **Note:** If the location is on an external device, use the USB port located on the back of the simulator to connect the external device to the simulator.

5. Enter the desired file name in the **File name** field and click **Save**

![](image)

**The PDF Complete Window**

6. Select the acceptance option

7. Click the **Continue** button
Using the Administrator Tools

8. Click **Done**
Printing Data to a Network Printer

To print data to a network printer:

1. From the Print screen, click the **Print** button

2. Select the desired network printer

3. Click **Print**
Importing Users

Using the import function, administrators can add data for multiple users in one process.

To import users:

1. From the icon dashboard, click the **Import/Export** icon

![The Import/Export Icon](image)

2. From the Import/Export screen, click **Users & Groups**

![The Import/Export Users Screen](image)
3. Click Import

4. Click Browse

5. Select the comma delineated (CSV) file to import

   **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.

6. Click Open
Using the Administrator Tools

1. Select Create a new group from this list to create a new group from the file, if desired.
2. Click Import.

The Import Success Message

3. Click OK.
Exporting Users and Groups

Administrators can export data to an external device for evaluation and record purposes. Data for individual users or groups can be customized and exported into a comma delineated (CSV) spreadsheet file from the EndoVR simulator.

To export users and groups:

1. From the icon dashboard, click the **Import/Export** icon
2. From the Import/Export screen, click **Users & Groups**

![The Import/Export Users Screen](image1)

3. Click **Export**

![The User Export Screen](image2)

4. Select the group or **All Groups** from the **Groups** options
Using the Administrator Tools

The Export Users Screen

5. Select the user or **All Users** from the users options

The File Selection Tools

6. Click **Browse**

7. Select the location where the file will be saved when the exporting is complete

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

8. Click **Open**
The file name appears in the **Export users to** field.

9. Click **Export**

   ![The Selected Export File](image)

10. Click **OK**

   ![The Export Success Message](image)
Exporting Results

Administrators can export results to an external device for evaluation and record purposes. The data is exported into a comma delineated (CSV) spreadsheet file from the EndoVR simulator.

To export results:

1. From the icon dashboard, click the **Import/Export** icon

![The Import/Export Icon]

2. From the Import/Export screen, click **Results (Export)**

![The Import/Export Screen]
The Export Results Screen

3. Select the export type from the drop-down menu. Choose from **Clear** (default), **Anonymous** or **Double Blind**

4. Select the group or **All Groups** from the **Groups** options

5. Select a user or **All Users** from the **Users** options
6. Select a course or All Courses from the Courses options

7. Select a task or All Tasks from the Tasks options

8. Click Browse

9. Select the location where the file will be saved when the exporting is complete

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

10. Click Open
11. Click **Export**

The Result Export Success Message

12. Click **OK**
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
3. 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

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

The administrator is logged out of the software.
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.
Care & Maintenance

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.
How to Contact Customer Service

For customer service, please contact CAE.

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:customerservice@caehealthcare.com
- Website: 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:can.service@caehealthcare.com

CAE Customer Service - Europe, Middle East and Africa

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

CAE Customer Service - United Kingdom and Ireland

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

Note: Principal hours of operation exclude holidays and non-business days.

IMPORTANT: Technical and clinical phone support are available ONLY for products with active support and maintenance plans.
Breakdown

The EndoVR simulator should be properly stored in a secure place. To ensure that the simulator remains in good working condition, follow the prescribed CAE 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

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

3. Click **Shutdown**. The simulator powers down
4. Press the bottom of the orange illuminated power switch. This ensures the simulator is powered off.

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
The EndoVR simulator contains several modules for learners to practice performing endoscopic and bronchoscopic procedures using different techniques and tools. Modules are bundled in three packages: Bronchoscopy, Lower GI and Upper GI.

The following table outlines the various modules offered for the EndoVR simulator.

<table>
<thead>
<tr>
<th>Package</th>
<th>Module</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>Bronchoscopy</td>
<td>EBUS-TBNA</td>
<td>Complete an Endobronchial Ultrasound with Transbronchial Needle Aspiration.</td>
</tr>
<tr>
<td></td>
<td>Intro to BAL</td>
<td>Complete common tasks performed during a bronchoalveolar lavage.</td>
</tr>
<tr>
<td></td>
<td>Intro to Bronch</td>
<td>Complete common tasks performed during a bronchoscopic procedure.</td>
</tr>
<tr>
<td></td>
<td>Ped Diff Airways</td>
<td>Perform bronchoscopic procedure tasks involving a pediatric difficult airways.</td>
</tr>
<tr>
<td></td>
<td>Bronch Sampling</td>
<td>Complete common tasks performed during a bronchial sampling.</td>
</tr>
<tr>
<td></td>
<td>Bronch TBNA</td>
<td>Complete common tasks performed during a transbronchial needle aspiration.</td>
</tr>
<tr>
<td>Lower GI</td>
<td>Biopsy</td>
<td>Complete common tasks involved in a lower gastrointestinal biopsy.</td>
</tr>
<tr>
<td></td>
<td>Intro to Colonoscopy</td>
<td>Complete common tasks involved in a colonoscopy.</td>
</tr>
<tr>
<td></td>
<td>Intro to Flex Sig</td>
<td>Complete common tasks involved in viewing the pathologies using a flexible sigmoidoscopy.</td>
</tr>
<tr>
<td></td>
<td>Polypectomy</td>
<td>Complete common tasks involved in a lower gastrointestinal polypectomy.</td>
</tr>
<tr>
<td>Upper GI</td>
<td>Bleeding</td>
<td>Complete common tasks involved in treating upper gastrointestinal bleeding.</td>
</tr>
<tr>
<td></td>
<td>Intro to EGD</td>
<td>Complete common tasks involved in an esophagogastroduodenoscopy.</td>
</tr>
<tr>
<td></td>
<td>Intro to ERCP</td>
<td>Complete common tasks involved in an endoscopic retrograde cholangiopancreatography.</td>
</tr>
</tbody>
</table>
## Module Instruments and Required Equipment

In each of the modules, different instruments, medication and equipment are used to complete the selected task.

### Bronchoscopy

The Bronchoscopy modules present the learners with different scenarios and cases to complete using the bronchoscope and related tools.

<table>
<thead>
<tr>
<th>Module</th>
<th>Available Instruments</th>
<th>Medications</th>
<th>Required Equipment</th>
</tr>
</thead>
<tbody>
<tr>
<td>EBUS-TBNA</td>
<td>• Needle&lt;br&gt;• Stylet&lt;br&gt;• Syringe</td>
<td><strong>Topicals:</strong>&lt;br&gt;• Saline&lt;br&gt;• Lidocaine&lt;br&gt;<strong>IV Medications:</strong>&lt;br&gt;• Fentanyl&lt;br&gt;• Meperidine&lt;br&gt;• Midazolam&lt;br&gt;• Naloxone</td>
<td>• EBUS-TBNA accessory tool&lt;br&gt;• Bronchoscope</td>
</tr>
<tr>
<td>Intro to BAL</td>
<td>• Needle</td>
<td>• Saline&lt;br&gt;• Lidocaine&lt;br&gt;• BAL</td>
<td>• Bronchoscope&lt;br&gt;• Foot pedal</td>
</tr>
<tr>
<td>Intro to Bronch</td>
<td>• Needle&lt;br&gt;• Suction</td>
<td>• Saline&lt;br&gt;• Lidocaine</td>
<td>• Bronchoscope&lt;br&gt;• Foot pedal</td>
</tr>
<tr>
<td>Ped Diff Airways</td>
<td>• Jaw Thrust&lt;br&gt;• Suction</td>
<td>• Saline&lt;br&gt;• Lidocaine&lt;br&gt;• Ketamine&lt;br&gt;• Halothane</td>
<td>• Bronchoscope&lt;br&gt;• ET tube&lt;br&gt;• Foot pedal</td>
</tr>
<tr>
<td>Bronch Sampling</td>
<td>• Brush&lt;br&gt;• Needle&lt;br&gt;• Forceps&lt;br&gt;• Suction</td>
<td>• Saline&lt;br&gt;• Lidocaine&lt;br&gt;• EPI</td>
<td>• Bronchoscope&lt;br&gt;• Foot pedal</td>
</tr>
</tbody>
</table>
### Lower GI

The Lower GI modules present the learners with different scenarios and cases related to the lower GI tract. Learners use an endoscope and related tools to complete the procedures.

<table>
<thead>
<tr>
<th>Module</th>
<th>Available Instruments</th>
<th>Medications</th>
<th>Required Equipment</th>
</tr>
</thead>
</table>
| Bronch TBNA                | • Needle
• Suction
• CT scan | • Saline
• Lidocaine
• EPI | • Bronchoscope
• Foot pedal |
| Biopsy                     | • Needle
• Forceps
• Syringe
• Suction
• Air/Water | **Topicals:**
• Saline
• Lidocaine
**IV Medications:**
• Fentanyl
• Meperidine
• Midazolam
• Naloxone | • Upper/Lower GI accessory tool
• Endoscope |
| Intro to Colonoscopy       | • Suction
• Air/Water | **IV Medications:**
• Sedation | • Endoscope |
| Intro to Flexible Sigmoidoscopy | • Suction
• Air/Water | None | • Endoscope |
| Polypectomy                | • Needle
• Forceps
• Syringe
• Suction
• Air/Water | **IV Medications:**
• Sedation
• Counter Sedative | • Upper/Lower GI accessory tool
• Endoscope |
Appendix A - Module Descriptions

Upper GI

The Upper GI modules present the learners with different scenarios and cases related to the upper GI tract. Learners use an endoscope and related tools to complete the procedures.

<table>
<thead>
<tr>
<th>Module</th>
<th>Available Instruments</th>
<th>Medications</th>
<th>Required Equipment</th>
</tr>
</thead>
<tbody>
<tr>
<td>UGI Bleeding</td>
<td>• Wire Grasper</td>
<td>IV Medications:</td>
<td>• Upper/Lower GI accessory tool</td>
</tr>
<tr>
<td></td>
<td>• Clip Applier</td>
<td>• Fentanyl</td>
<td>• Endoscope</td>
</tr>
<tr>
<td></td>
<td>• BICAP Probe</td>
<td>• Flumazenil</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Injection Needles</td>
<td>• Meperidine</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Irrigation</td>
<td>• Midazolam</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Suction</td>
<td>• Naloxone</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Air/Water</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Intro to EGD</td>
<td>• Cytology brush</td>
<td>IV Medications:</td>
<td>• Upper/Lower GI accessory tool</td>
</tr>
<tr>
<td></td>
<td>• Forceps</td>
<td>• Sedation</td>
<td>• Endoscope</td>
</tr>
<tr>
<td></td>
<td>• Suction</td>
<td>• Counter Sedative</td>
<td></td>
</tr>
<tr>
<td></td>
<td>• Air/Water</td>
<td>• Atropine Sulfate</td>
<td></td>
</tr>
<tr>
<td>Intro to ERCP</td>
<td>• Suction</td>
<td>IV Medications:</td>
<td>• Upper/Lower GI accessory tool</td>
</tr>
<tr>
<td></td>
<td>• Air/Water</td>
<td>• Sedation</td>
<td>• Endoscope</td>
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<td>• Single lumen cannula</td>
<td>• Counter Sedative</td>
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<td>• Thin tapered cannula</td>
<td>• Glucagon</td>
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<td>• Sphincterotome</td>
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