Chapter 12  Application Sharing

Moderators automatically have the permission to host an Application Sharing session. A Participant must be given the permission to host an Application Sharing session by a Moderator. The Application Sharing icon is displayed in the Participants list next to those session attendees who have the permission.

For details on setting permissions, please refer to Setting Permissions on page 47 of Chapter 4 The Participants Window.

When using the Application Sharing feature, you can do the following:

- Share application(s) running on your desktop
- Share a region or your entire desktop
- Have another participant control your desktop or application
- View and control another participant’s desktop or application
- Send a snapshot of the shared application to the whiteboard.
- Set hosting options
- Send simulated keystrokes
- Filter keystrokes

As the host, when you begin sharing an application and/or region, it (and all its content) will appear in the Application Sharing window of other session attendees.

In order for the participants to be able to see the Application Sharing window, they cannot be in any of the minimal window layouts (i.e., the Whiteboard cannot be hidden).

Hosting an Application Sharing Session

Hosting an Application Sharing session can be performed in single, quick, step or, for more control, using a multi-step approach.

For a description of the options you may set prior to actually hosting an Application Sharing session, refer to Advanced Application Sharing Options described later in this chapter.

When sharing an application, any new windows that open relating to the application also will be shared.
If you minimize the application you are sharing or cover it with a different application (one that is not being shared), the participants will no longer be able to view the application.

**Quick Step for Sharing a Single Application**

With this method, you can share one application only. If you use this approach to Application Sharing, you automatically will use the settings configured in the Hosting Options Preferences panel (see *Hosting Options* on page 235).

The application you wish to share must be open on your desktop.

1. Select Tools > Application Sharing > Share Application and then select the appropriate application from the list.

   If you have two monitors, be sure the shared application is displayed in your primary monitor – otherwise, it will not be present in the list.

2. The Application Sharing window will appear to other session attendees.

**Sharing Your Desktop**

To share your entire desktop, select Tools > Application Sharing > Share Entire Desktop.  

The Application Sharing window will appear to other session attendees.

For information on sharing a region on your desktop, refer to *Sharing a Region of Your Desktop* on page 233.

**Sharing One or More Applications**

Using the Host Applications dialog, you can share a single application or multiple applications at the same time.

The applications available for sharing are listed in a tree structure under the Applications tab of the Host Applications dialog. You can see which windows are open in each application by expanding the tree using the disclosure buttons or toggling the Expand All/Collapse All button.

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37 If you have more than one monitor, only your primary display (main monitor) can be displayed.
38 If you have more than one monitor, only those applications in your primary display (main monitor) will be displayed.
1. Launch the Application Sharing feature by doing one of the following:
   - Click on the Share Application button located in the main toolbar.
   - Select Tools > Application Sharing > Host Applications…

   The Host Applications dialog appears.
2. Click on the Applications tab (if it isn’t already open).

3. From the list, select one or more applications you wish to share. To select more than one item, hold down Shift or Control (⇧ or ⌘ on Macintosh) while clicking with the mouse. The selected applications will be highlighted.

Expand and collapse items in the tree hierarchy, as required, to view the windows open in each application.

4. Select your options:
   - Select Show in Presentation mode to automatically open up your shared application in Presentation Mode view. (See Showing Application Sharing in Presentation Mode below.)
   - (Macintosh only) Select Exclude menu bar to display the shared application without its menu bar.
   - Click on the Options… button to open the Hosting Options preferences panel to set viewing options. For details, see Hosting Options on page 235.

5. Click OK to save and dismiss the dialog box.
   The Application Sharing window will appear on the participant’s monitor.

If you are sharing more than one application, you (as the host) can move between them using the Windows Alt+Tab function (⌘Tab on Mac).

**Showing Application Sharing in Presentation Mode**

Application Sharing sessions can be displayed in Presentation Mode by selecting the option Show in Presentation Mode. This forces the session attendees to view the shared application or region in full screen mode.

For full details about Presentation Mode, see Presentation Mode on page 255.

You are able to see you are sharing your application in Presentation Mode in two ways:

- The Present Content button in the main toolbar will incorporate the Application Sharing icon.

- Two messages will scroll in the status bar (at the bottom of the Elluminate Live! window): one stating “Presenting Application Sharing” and another describing what is being shared (i.e., the application name, a region or the desktop).
A yellow border is displayed to all viewers of an Application Sharing session while it is being displayed in Presentation Mode. The border will disappear if the user opts out of Presentation Mode.  

**Application Sharing Window**

*The Host’s Window*

When you share an application or your desktop on a Mac, Linux or Solaris, by default your main view will be changed to the Narrow Minimal Layout and the Elluminate Live! window will be moved as far left as possible. When you share an application or your desktop on Windows, by default your main view will be changed to the Left Docked Minimal Layout.

To better view the Application Sharing window, Mac users are advised to move the Elluminate Live! window to the right side of their monitors.

On all platforms, by default your shared application or region will have a yellow border around it, making it easy to identify on your screen. (For this feature to work, some requirements must be met. For details, see the *Highlight Shared Region* option under the *Hosting Options* section on page 235.) Attached to the border will be a controller (normally at the top) with buttons for stopping and pausing/resuming the application share and a button for sending a snapshot of the application sharing window to the Whiteboard. There is one exception: there will be no controller, and perhaps not even the border, if there is no room for them on your screen, such as when you are sharing the entire desktop.

To change the default options, see *Hosting Options* on page 235.

**Switching to the Mini-Controller**

If you want more space for your Application Sharing window, switch to the mini-controller.

To switch from the main window view to the mini-controller view, click on the *Show Mini-Controller* button in the main tool bar.

To switch back to the main window view from the mini-controller view, click on the *Restore Main Window* button in the mini-controller.

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39 As the host of the Application Sharing session, you may see a yellow border. It won’t be shown because the application is being shared in Presentation Mode but because the border is an Application Sharing Hosting preferences (see *Hosting Options* on page 235). The default color is yellow.

40 The controller may move to the bottom, left side or right side if there is no room for it on the top.
The Viewer's Window

When someone else is hosting an Application Sharing session, an Application Sharing window will appear in the content area of your Elluminate Live! window. When you move your mouse below the Application Sharing title bar, a translucent Application Sharing tool bar appears.

The bar has two buttons. The first button toggles between enabling and disabling the Scale to Fit feature:

- If the button looks like 📣, scale to fit is disabled; click on it to enable.
- If the button looks like 📣, scale to fit is enabled; click on it to disable.

The second button is used to request remote control of the shared applications.

- If the button looks like 🔧, you may request remote control of the shared applications.
If the button looks like ☑, you are not permitted to request control of the shared applications.

The Application Sharing tool bar is not available when you are remotely controlling another user’s application.

**Scale to Fit**

The Application Sharing window can be resized and repositioned (and also moved to a second monitor) to better view the content. However, if scroll bars are still required to view the contents of the Application Sharing window, because the application that is being shared is still larger than the Application Sharing window, use Scale to Fit. Either

- click on the **Scale to Fit** button in the Application Sharing tool bar, or
- select Tools > Application Sharing > Scale to fit.

The application being shared will fit in the window. The percentage that the application is scaled from the original image will be indicated at the top of the Application Sharing window.

If the text is too difficult to read because the application has been scaled down too much, de-select this option.

**Emphasized Cursor**

If the application host has turned on the option *Emphasize Cursor*, you will see their cursor surrounded with a circle (the default color is yellow), making it easier for you to follow.

**Pause and Resume Application Sharing**

To pause Application Sharing, do one of the following:

- Application Sharing controller
  - Click on the button.
- Main window tool bar
  - Click on the button.
- Mini-controller
  - Click on the button.
Tools menu
Select Tools > Application Sharing > Pause Application Sharing

The participants will see a still-shot of what you are sharing in the Application Sharing window.

To resume Application Sharing, do one of the following:

- Application Sharing controller
  Click on the button.

- Main window tool bar
  Click on the button.

- Mini-controller
  Click on the button.

- Tools menu
  Deselect Tools > Application Sharing > Pause Application Sharing

Any changes that were made in the application or region when the Application Sharing session was paused will immediately be sent to the participants.

Show Preview Window

The Show Preview Window feature allows you to view what the participants are seeing in the Application Sharing window when you are hosting the Application Sharing session. A thumbnail view of the hosted Application Sharing session is displayed in the Application Sharing Preview window in the Main room and an extended panel when accessed from the Mini-Controller.

To open the Application Sharing Preview window, do one of the following

- Main window tool bar
  Click on the button.

- Mini-Controller
  Click on the button

- Tools menu
  Select Tools > Application Sharing > Show Preview Window.

To dismiss the Application Sharing Preview window, do one of the following

- Click on the Close button in the Application Sharing Preview window.

- Main window tool bar
  Click on the button.

- Mini-Controller
  Click on the button.
Send Snapshot to Whiteboard

The Send Snapshot to Whiteboard feature allows you to take a snapshot of the contents of the Application Sharing window and place the snapshot on the Whiteboard.

To use this feature, you must be a Moderator and must be hosting the Application Sharing session.

The snapshot will be placed as the background image of a new whiteboard slide, immediately after the current Whiteboard screen and the Application Sharing session will be paused. If you are not in a window layout that contains the Whiteboard window (e.g., you are using the mini-controller), the full window will open so you can view the snapshot. The title of the Whiteboard screen will be Application Sharing Image x, where x is an incremental number.

To send a snapshot to the Whiteboard, do one of the following:

- Application Sharing tool bar
  Click on the button.

- Main window tool bar
  Click on the button.

- Mini-Controller
  Click on the button.

- Tools menu
  Select Tools > Application Sharing > Send Snapshot to Whiteboard.

- Hot Keys
  Ctrl+Print Screen (^F13 on Mac). (Substitute your own hot key here if you modified the default hot key definition.)

The Application Sharing session will be paused and you will be returned to the previous Main window view layout.

Send Snapshot with Delay to Whiteboard

Send Snapshot with Delay to Whiteboard is the same as snapshot to Whiteboard, except there is a 10 second delay before the snapshot is taken and placed on the Whiteboard.

To send a snapshot to the Whiteboard, Select Tools > Application Sharing and then select the option Send Snapshot with Delay to Whiteboard.

The Application Sharing session will be paused; the snapshot to the Whiteboard will take 10 seconds before it will be placed on the Whiteboard screen.
Stop the Application Sharing Session

To stop Application Sharing, do one of the following

- Application Sharing controller
  Click on the button.

- Main window tool bar
  Click on the button.

- Mini-Controller
  Click on the button.

- Tools menu
  Select Tools > Application Sharing > Host Applications (de-select this option).

- Hot Keys
  Enter Ctrl+Pause (^End). (Substitute your own hot key here if you modified the default hot key definition.)

The Application Sharing session will terminate and you will be returned to your default Main window view.

Control of Your Shared Applications

When hosting an Application Sharing session, you have the ability to

- give control of your desktop or shared application to another Participant or Moderator; and
- take away control of the shared applications.

The participant must have host Application Sharing permissions.

Give Control

By giving control of your Application Sharing session to a participant, they will then be able to manipulate what you are sharing in the Application Sharing window.

1. Start hosting an Application Sharing session on your desktop.
2. Select the participant in the Participants list you wish to give control to.
3. Right-click (^Click on Macintosh) on the participant’s name and select Give Control of Shared Applications from the context menu. Alternatively, select Tools > Application Sharing > Give Control of Shared Applications.

4. The Give Control notification window appears.

5. Click OK to confirm the operation and close the window.

6. The Participants list is updated to indicate who is controlling the application(s). A red arrow will appear in the Application Sharing column indicating the participant who is now in control of your application.

**Take Away Control**

You can regain control of your shared applications performing one of the following methods:

- **Tools menu**
  Select Tools > Application Sharing > Take Away Control of Shared Applications.

- **Participants list**
  Right-click (^Click on Macintosh) on the participant who has control of your Application Sharing session. From the context menu select Take Away Control of Shared Applications.
Hot Key
Ctrl+Space (׳Space on Macintosh). (Substitute your own hot key here if you modified the default hot key definition.)

Request Control of Someone Else's Desktop

You can request control of a participant’s desktop at any time during a session. Both the person requesting control and the person receiving the request must have Application Sharing permissions.

If a different user already has control of the desktop you want to control, or the desktop owner is already sharing their own desktop, you will not be able to request control (Request Desktop Control will be disabled). However, you may still request control of shared applications.

To request control of a participant’s desktop, do the following:

1. Select the participant in the Participants list you wish to request desktop control from.
2. Right-click (׳Click on Macintosh) on the participant’s name and select Request Desktop Control from the context menu. Alternatively, select Tools > Application Sharing > Request Desktop Control.
3. Depending on how the participant is configured and how they wish to allow others to control their desktop, one of the following will occur:
   - If the participant set Permit Remote Control to Always, you will automatically gain control of the participant’s desktop.
   - If the participant set Permit Remote Control to With Password, the Password Required dialog box will appear and you will have to enter the correct password before you will have control of the participant’s desktop.
   - If the participant set Permit Remote Control to Prompt Me, then they will have to acknowledge your request before you will be granted control of their desktop.
You will know you are remotely controlling an Application Sharing session by the presence of a magenta border in the Application Sharing window. This border is displayed to you (the remote controller) only.

Return Control Back to the Desktop Owner

There are three ways to release control of a participant's desktop and return control back to them:

- Main window toolbar
  - Click the \(\square\) button.
- Tools menu
  - Select Tools > Application Sharing > Release Control of Shared Applications.
- Participants list
  - Right-click (\(^\text{Click on Macintosh}\) on the participant whose desktop you are controlling. From the context menu select Release Control of Shared Applications.

Control of the Application Sharing session will be returned to the participant hosting the session.

Request Control of Shared Applications

To request control of a participant’s Application Sharing session, do the following:

1. Select the participant in the Participants list you wish to request desktop control from.
2. Right-click (\^Click on Macintosh) on the participant’s name and select Request Control of Shared Applications from the context menu. Alternatively, select Tools > Application Sharing > Request Control of Shared Applications.

3. You will now have control of the participant's Application Sharing session.

If you are remotely controlling the application sharing session, a magenta border will appear around the application. (The border is visible only to you – the person remotely controlling the session.)

**Send Simulated Keystrokes**

When you are remotely controlling another person’s Application Sharing session, the \(\) button appears in the Main window toolbar.

To send a simulated keystroke, do the following:

1. Click on the \(\) button. Or alternatively Select Tools > Application Sharing > Send Keys. A sub-menu appears with the list of defined simulated keystrokes.

2. Select the appropriate simulated keystroke in the list, or select Other which calls up the Define Keystroke dialog box where you can define an on-the-fly simulated keystroke.
3. The simulated keystrokes will be sent to the host machine and interpreted appropriately. For example, sending Ctrl+Escape to a Windows platform will result in the Start menu popping up. The host machine will accept these keystrokes as long as they are not in the Filtered Keystrokes list.

The list of simulated keystrokes available can be changed by defining simulated keys under Preferences. To add or modify a simulated key, refer to Simulated Keystrokes on page 243.

**Terminate Remote Desktop Sharing**

Both the owner of the desktop being shared (host) and the user remotely controlling the desktop can terminate the remote control of a desktop.

A Moderator can terminate any Application Sharing in the session.

**Desktop Controller**

If you are controlling another’s desktop, you can terminate remote desktop sharing by doing one of the following:

✓ De-select Tools > Application Sharing >Host Remote Applications.

✓ In the Participants list, select the participant whose desktop you are controlling, right-click (\Click on Macintosh) and select Terminate Remote Desktop Sharing from the context menu.

**Desktop Owner (Host)**

If your desktop is being controlled by another, you can terminate their control by doing one of the following:

✓ De-select Tools > Application Sharing >Host Applications…

✓ Click on the \revoke Application Sharing Control button in the toolbar.
Sharing a Region of Your Desktop

The Host Applications dialog is used to define a region of your desktop when you host an Application Sharing session. If you will be sharing a region of your desktop, you must redefine the region every time you host an Application Sharing session.

To share a region, follow the steps below:

1. Open the Host Applications dialog by doing one of the following:
   - Click on the Share Application button in the toolbar of the Main window.
   - Select Tools > Application Sharing > Host Applications.
   
   The Host Applications dialog appears.

2. Select the Region tab, if it is not already selected.

   ![Host Applications Dialog]

   The Host Applications dialog shows a graphical representation of your desktop’s window layout.

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41 If you have more than one monitor, a region only on your primary display (main monitor) can be displayed.
3. Use one of the following methods to define the region on your desktop you wish to share:

- **To share a specific window** — Click on the window displayed in the display area under the Region tab and then click **OK** to begin Application Sharing. The dialog box will close and the region will be shared.

- **To define a specific region** — Click the area where you want to start Application Sharing and drag the cursor to create a rectangular outline of the selected area. The selected region will be highlighted in white. Click **OK** to begin Application Sharing. If you have difficulty seeing the region that you are selecting, use the Magnifier option (small or large magnifier) to zoom in on the area you wish to share. You also can define the area you wish to share by entering the position and size in the text boxes provided.

- **To share your entire desktop** — Check **Share entire desktop**. Click **OK** to begin Application Sharing.

4. Click on **OK** to save the settings or **Cancel** to close the dialog without saving.

By default, the region you are sharing will be surrounded by a yellow border (with controller) so you can easily keep track of what you are sharing. To change the default, see **Hosting Options** on page 235.

### Advanced Application Sharing Options

Prior to hosting an Application Sharing session, you can define the following options through the Preferences dialog box:

- Filtered Keys
- Hosting Options (to set the appearance of the Elluminate Live! application window when you start hosting)
- Remote Control
- Simulated Keys

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42 For this feature to work, some requirements must be met. For details, see the **Highlight Shared Region** option under the **Hosting Options** section on page 235.
Macintosh users also can set the option to use Open GL. See Use OpenGL Option (Macintosh only) on page 246.

Hosting Options

The Hosting Options dialog box allows you to define how to display the Elluminate Live! Application Sharing window while you are hosting an Application Sharing session.

The default settings are based on the client you are using. For Windows, the settings are as follows:

- Remain in main window set to “on”
- Change layout to set to
  - “Left Docked Minimal Layout” (Windows)
  - “Narrow Minimal Layout” (Mac, Linux and Solaris)
- Raise shared applications to front set to “on”
- Highlight shared region set to “on”
- Emphasize cursor set to “off”
- Show a notification set to “on”
- Image Quality set to “Normal”

Change the Hosting Options in the Preferences dialog.

1. Open the Preferences dialog in one of the following ways:
   - From the Tools menu, select Preferences… (Windows, Linux & Solaris)
   - From the Elluminate Live! menu, select Preferences (Macintosh)
   - Enter Ctrl+Comma (Windows, Linux & Solaris)
   - Enter ⌘, (Macintosh)
   - From the Host Applications dialog (Tools > Application Sharing > Host Applications), click on the Options button (all platforms)

2. In the left pane of the Preferences dialog, select Application Sharing > Hosting Options. The Hosting Options preferences panel appears.
3. Set your preferences for how the Application Sharing window will be displayed when hosting begins:

- **Switch to mini-controller** – Select this option if, when you start hosting an Application Sharing session, you want the Elluminate Live! application window (main window) to be minimized and the Mini-Controller to appear. (See **Mini-Controller** on page 38.)

- **Remain in main window** – Select this option if, when you start hosting an Application Sharing session, you want the Elluminate Live! application window (main window) to remain visible.

- **Change layout to** – If you chose to remain in the main window (see above) and want the main window to be in a layout other than the default (Left Docked Minimal Layout), select this option (and the desired layout from the option list) to specify the layout of the Elluminate Live! application window during Application Sharing.

⚠️ Switching to a Docked layout (Windows only) may change the location or size of other windows on your screen. This may be a concern if you are sharing a “region” of your desktop. If you want to use the Docked layout and shared region features at the same time, manually place Elluminate Live! into Docked mode before you select a region to share.
- **Move main window** – If you have the option *Remain in main window* selected (and the window layout is not a docked layout), select this option if you want to define the position where the Elluminate Live! application window (main window) will appear on your monitor. You can select
  - an option from the *To* option menu,
  - *To previous location* (last known position when previously application shared), or
  - *To alternate display* (if you have another monitor, when you start Application Sharing, this will move the Elluminate Live! window to that monitor).

4. Set other options as required:
   - **Raise shared application to front** – Select this option if you want the application that is being shared to be brought to the front of all other windows. If the option is not selected, the application may be hidden behind other windows on your monitor and the Application Sharing window will be black.

   ![solaris](solaris.png) This option does not work on Linux using KDE or Gnome and on Solaris using Gnome.

   - **Highlight shared region** – Select this option if you would like your shared application or region to be surrounded by a border. The border identifies what is being shared so you will always know what the viewers of your application share are seeing. Included with the border will be a controller containing buttons to stop or pause/resume application sharing and a button to send a snapshot to the Whiteboard.

   The default color is yellow. To change the default, click on the yellow square to open a color selector dialog and select another color.
For Windows, Linux and Solaris, the border/controller feature is present based on certain settings on your operating system. Windows users must be running Java 1.6.0_12 or higher. Linux and Solaris users must have 1) a configuration compatible with Sun’s requirements, 2) their X11 display server must be configured to support shaped windows and per-pixel translucency and 3) they must be running Java 1.6.0_12 or higher. Java can be installed from http://www.java.com. The additional settings for Linux and Solaris entail configuration of the operating system and, therefore, are beyond the scope of Elluminate’s technical support.

- **Emphasize cursor** – Select this option if you would like the cursor in your shared application to stand out so it is easier for viewers of the shared application to follow its movements. If set, the cursor will be surrounded by a colored circle. The default color is yellow. To change the default, click on the yellow square to open a color selector dialog and select another color.

- **Show a notification** – Select this option if you want a Hosting Notification window to appear on your monitor every time you start hosting an Application Sharing session. If you wish not to have this window appear, de-select this option.

- **Image Quality** – Set the image optimization speed you wish to use when transmitting data to the server. In most cases, the default setting of Normal is adequate. The Image Quality should be set to **Best Quality** or **Better Quality** only if artifacts are seen and set to **Higher Speed** or **Highest Speed** when the bandwidth is at a premium and the Application Sharing session will be image-heavy.

5. Click on **OK** to save your preferences and close the Preferences dialog, **Apply** to save your preferences and leave the Preferences dialog open or **Cancel** to close the Preference dialog without saving any of your changes.

When you configure the Hosting Options settings, Elluminate Live! will remember these settings each time you host an Application Sharing session.

You can restore the Hosting Options settings to the default. For details on restoring default preferences, see **Restoring Default Settings** on page 11.

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43 This feature is available with all supported versions of Java on the Mac. Apple distributes all Mac Java versions; you can download new versions using Software Update or directly from Apple’s web site (http://www.apple.com/support).
Permit Remote Control of Your Desktop

You can grant permission to anyone with Application Sharing permissions to take control of your desktop at anytime during the session. There are three choices for granting permission to others to control your desktop:

- **Ask me for permission**
- **Require password**
- **Allow without asking**

1. Open the Preferences dialog in one of the following ways:
   - From the Tools menu, select Preferences… (Windows, Linux & Solaris)
   - From the Elluminate Live! menu, select Preferences (Macintosh)
   - Enter Ctrl+Comma (Windows, Linux & Solaris)
   - Enter ⌘, (Macintosh)

2. In the left pane of the Preferences dialog, select Application Sharing > Remote Control. The Remote Control preferences panel appears.

3. Select the desired Remote Control option: *Ask me for permission*, *Require password* or *Allow without asking*. See the sub-sections below for a discussion of these options.

4. Click on **OK** to save your preferences and close the Preferences dialog, **Apply** to save your preferences and leave the Preferences dialog open or **Cancel** to close the Preference dialog without saving any of your changes.

When you configure the Remote Control setting, Elluminate Live! will remember this setting each time you host an Application Sharing session.

You can restore the Application Sharing Remote Control setting to the default. For details on restoring default preferences, see *Restoring Default Settings* on page 11.
Ask me for permission

If you want other users to request permission from you to remotely control your desktop, set the Remote Control option to *Ask me for permission*. Any time a user with Application Sharing permissions requests control of your desktop, the Remote Control Requested dialog box will appear on your monitor.

Select the option *Allow all other requests until I quit*, and leave the password field blank, if you want to allow other users to be able to control your desktop without asking permission. (This is equivalent to the *Allow without asking* option.)

1. Select the option *Allow all other requests until I quit*, and enter a password, if you want to allow other users to be able to control your desktop only if they enter a password. (This is equivalent to the *Require password* option.)

2. Click on Yes to grant the user permission to remotely control your desktop.

3. If you click on No (or the window expires before you acknowledge the message), permission to remotely control your desktop will be denied. A message, indicating that the request was denied, will appear to the user requesting access.

Require password

If you want to require other users to enter a password prior to being able to remotely control your desktop, set the Remote Control option to *Require password*. Only those who enter the correct password will have access to your desktop.

1. Any time a user with Application Sharing permissions requests control of your desktop, the Password Required dialog box appears on their monitor.

2. They must enter the correct password and click on **OK** before your desktop will appear in their Application Sharing window. You do not have to acknowledge the request.
**Allow without asking**

If you want anyone with Application Sharing permissions to be able to control of your desktop without asking, set the Remote Control option to *Allow without asking*.

This option lets anyone in the session take control of your computer remotely.

At anytime during the session, when anyone with Application Sharing permissions requests control of your desktop, your desktop will automatically appear in their Application Sharing window. You do not have to acknowledge the request.

**Filtered Keys**

When hosting an Application Sharing session, the keystrokes defined in the Filtered Keys list will be ignored if sent by someone remotely controlling your application.

The default set of filtered keystrokes is defined on a per-platform basis.

Within the Filtered Keys panel of the Preferences dialog, you can add new keystrokes, modify the existing keystrokes or remove the keystrokes from the list.

Change the Filtered Keys in the Preferences dialog.

1. Open the Preferences dialog in one of the following ways:
   - From the Tools menu, select Preferences… (Windows, Linux & Solaris)
   - From the Elluminate Live! menu, select Preferences (Macintosh)
   - Enter Ctrl+Comma (Windows, Linux & Solaris)
   - Enter ⌘, (Macintosh)
2. In the left pane of the Preferences dialog, select Application Sharing > Filtered Keys. The Filtered Keys preferences panel appears.

3. Add, modify or remove keystrokes. (See subsections below.)

4. Click on **OK** to save your preferences and close the Preferences dialog. **Apply** to save your preferences and leave the Preferences dialog open or **Cancel** to close the Preference dialog without saving any of your changes.

When you configure Filtered Keys settings, Elluminate Live! will remember these settings each time you join another session.

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You can restore the Application Sharing Filtered Keys settings to the default. For details on restoring default preferences, see *Restoring Default Settings* on page 11.
Adding Filtered Keys

1. In the In the Filtered Keys dialog, click on the Add button. The Configure Filtered Keystroke dialog box opens.

2. Enter new keystrokes in one of two ways:

   ✓ Click on the down arrow to select a key from the key option list, and then select the desired modifier keys by clicking on their check boxes. For example, the keystroke to the right is Ctrl+Alt+Delete.

   ✓ Select the text box and enter the keystrokes. This will automatically select the modifier keys you used in your keystrokes.

There are certain keys that cannot be entered as keystrokes (such as Tab, which will cause your focus to move to the next field) and must be selected from the menu.

Modifying a Keystroke

1. In the Filtered Keys dialog, select the keystroke you wish to modify.

2. Click on the Modify button. The Configure Filtered Keystroke dialog box opens.

3. Make your modifications. (For instructions, see Adding Filtered Keys above.)

Removing a Keystroke

1. In the Filtered Keys dialog, select the keystroke you wish to remove.

2. Click on the Remove button. The keystroke will be removed from the list.

Simulated Keystrokes

Simulated keystrokes can be sent to a host system when remote controlling an Application Sharing session from a computer running a different operating system than the host system. For example, you may want to remotely control a Macintosh from your Windows system. Since Windows does not have a ⌘ key, you can simulate Macintosh accelerator keys such as ⌘C by defining them using the Simulated Keys feature of Elluminate Live!
Within the Simulated Keys panel of the Preferences dialog, you can add new keystrokes, modify the existing keystrokes or remove the keystrokes from the list.

The default set of simulated keystrokes that may be sent is defined on a per-platform basis.

Change the Simulated Keys in the Preferences dialog.

1. Open the Preferences dialog in one of the following ways:
   - From the Tools menu, select Preferences… (Windows, Linux & Solaris)
   - From the Elluminate Live! menu, select Preferences (Macintosh)
   - Enter Ctrl+Comma (Windows, Linux & Solaris)
   - Enter ⌘, (Macintosh)

2. In the left pane of the Preferences dialog, select Application Sharing > Simulated Keys. The Simulated Keys preferences panel appears.

3. Add, modify or remove keystrokes. (See subsections below.)

4. Click on OK to save your preferences and close the Preferences dialog, Apply to save your preferences and leave the Preferences dialog open or Cancel to close the Preference dialog without saving any of your changes.
When you configure Simulated Keys settings, Elluminate Live! will remember these settings each time you remotely control an Application Sharing session.

You can restore the Application Sharing Simulated Keys settings to the default. For details on restoring default preferences, see Restoring Default Settings on page 11.

Adding Simulated Keys

1. In the Simulated Keys dialog, click on the Add button. The Configure Keystroke dialog box opens.

2. Enter new keystrokes in one of two ways:
   - Click on the down arrow to select a key from the key option list, and then select the desired modifier keys by clicking on their check boxes. For example, the keystroke to the right is Alt+Tab.
   - Select the text box and enter the keystrokes. This will automatically select the modifier keys you used in your keystrokes.

3. Enter a trigger keystroke (optional). Sending the triggered keystroke in the Application Sharing window will not send the typed triggered keystroke, but the associated simulated keystroke.

4. You may further define the keystroke to be applicable only on a specified host client. The choices here are Windows, Mac OS and Linux/Solaris.
Example Definition

Since you cannot type the Command ⌘ key from a Windows system, you could define a simulated keystroke as follows:

- **Keystroke to send:** Meta+X
- **Trigger on:** Ctrl+X
- **Only when host is:** Macintosh

This will then automatically translate the Windows Ctrl+X (cut command) gesture to the appropriate Macintosh gesture and only do it when remote controlling an application on a Macintosh.

Modifying Simulated Keys

1. In the Simulated Keys dialog, select the keystroke you wish to modify.
2. Click on the **Modify** button. The Configure Keystroke dialog box opens.
3. Make your modifications. (For instructions, see *Adding Simulated Keys* above.)

Removing Simulated Keys

1. In the Simulated Keys dialog, select the keystroke you wish to remove.
2. Click on the **Remove** button. The keystroke will be removed from the list.

Use OpenGL Option (Macintosh only)

OpenGL is a 3D imaging system used by many Macintosh programs (e.g., Keynote) for performing 3D graphics effects directly on the video card (i.e., not rendered by the system CPU). OpenGL is the preferred screen capture mechanism on a Macintosh as it will capture screen images from virtually all applications correctly.

To get the best results in Application Sharing, select the Use OpenGL option (Tools > Application Sharing > User OpenGL).

The only exception is if you are using an older Macintosh with a video card that lacks the memory required to render the images, in which case Application Sharing will fail. If you experience problems, turn Use OpenGL off.
Activity Lights and Indicators

You can monitor the state of Application Sharing transmissions through various lights and indicators displayed in the Application Sharing permission column of the Participants list.

Activity Indicators

The table below lists the icons that are used in the Participant List to indicate what a session attendee is doing while using Application Sharing.

<table>
<thead>
<tr>
<th>Activity Indicator</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>![Icon]</td>
<td>The Application Sharing icon indicates that the person has Hosting Application Sharing permission (but is currently not hosting). The red arrow indicates that the person currently has control of someone else’s desktop or shared application.</td>
</tr>
<tr>
<td>![Icon]</td>
<td>The Application Sharing icon plus the yellow halo and the red arrow indicates that the person is hosting the Application Sharing session and has control of their own desktop or shared application.</td>
</tr>
<tr>
<td>![Icon]</td>
<td>A yellow halo behind the host Application Sharing icon indicates that this person is currently hosting the Application Sharing session, but does not currently have control of their desktop or shared application.</td>
</tr>
<tr>
<td>![Icon]</td>
<td>The Application Sharing icon plus the red arrow indicates that a Participant has been given control of a person’s desktop or shared application. Because this person does not have the permission to host an Application Sharing session, they will not be able to host their own Application Sharing session or request to share another person’s desktop.</td>
</tr>
</tbody>
</table>

Status Indicators

Application Sharing status indicators appear in the Application Sharing permission column in the Participants list indicating if any of the session attendees are experiencing delays in the Application Sharing transmission. Only the person currently hosting the Application Sharing session will be able to see the status indicators.

- When you see an orange or orange-and-red indicator next to the host’s name, it means that the host has a backlog of information to send to the server.
- When you see an orange or orange-and-red indicator next to an Application Sharing viewer’s name, it means they are delayed in receiving Application Sharing information from the Elluminate Live! server.
- A orange-and-red indicator indicates more of a delay just an orange light.
- When there are no indicator lights visible, it means that the viewer’s Application Sharing display is in sync with the person hosting the Application Sharing session.
In the example below, the orange indicator next to the Application Sharing host’s name (Mike), indicates that Mike is sending information to the server. The status indicators next to Amanda and John’s names show that they have not received all of the shared content, with Amanda being further behind than John. Deborah and Elizabeth do not have an indicator next to their names, which means they have received all of the information.

Hosting Application Sharing Sessions on Windows Vista

Microsoft’s Window’s Vista operating system provides security through its User Account Control (UAC) feature. With User Account Control, users logged on as administrators can run most applications and processes with normal privileges but must obtain elevated Vista privileges for administrative tasks requiring higher security. When administrators encounter tasks that require elevated Vista privileges, such as attempting to run Device Manager, UAC presents them with a secure desktop dialog (such as one of the two shown below), prompting them for permission (to Continue or Allow).

Which dialog will be presented depends on whether or not the requested application is properly signed (and thus recognized by Vista).
Typically, when users logged on in **standard** user mode attempt to perform tasks requiring elevated Vista privileges, UAC presents them with a secure desktop dialog, prompting them for administrator credentials: password and possibly user name (see JoeAdministrator login below).

There are a few exceptions in which standard users will be denied their attempt to perform tasks requiring elevated Vista privileges, such as when attempting to run Device Manager.

![Device Manager](image)

### User Account Control and Application Sharing

When UAC is enabled on Vista, Application Sharing in Elluminate Live! may be hosted with or without elevated Application Sharing privileges.

![User Account Control](image)

Modifying the default Vista system settings may prevent you from being able to request elevated Application Sharing privileges (the *Request Elevated Privileges* option will be unavailable). Contact your system administrator for assistance.

If you do not have elevated privileges, anything that brings up a UAC dialog on Vista will cause Application Sharing to terminate.44

<table>
<thead>
<tr>
<th>User</th>
<th>Elevated Application Sharing privileges on?</th>
<th>Result of requesting to do an operation requiring elevated Vista privileges within an Application Sharing session</th>
</tr>
</thead>
<tbody>
<tr>
<td>Admin</td>
<td>Yes</td>
<td>automatically granted</td>
</tr>
<tr>
<td>Admin</td>
<td>No</td>
<td>UAC dialog presented and application sharing terminated</td>
</tr>
<tr>
<td>Standard</td>
<td>Yes</td>
<td>automatically denied</td>
</tr>
<tr>
<td>Standard</td>
<td>No</td>
<td>UAC dialog presented and application sharing terminated</td>
</tr>
</tbody>
</table>

44 A UAC dialog causes a switch to a secure desktop, which is what ultimately causes the termination of Application Sharing.
To prevent Vista from posting any UAC dialogs (and, thus, prevent termination of Application Sharing), you need to request elevated Application Sharing privileges. Then, in situations where Vista would ordinarily post a UAC dialog, instead it will automatically grant or deny consent, depending on whether the user is an administrator or a standard user (respectively).  

Elevated Application Sharing privileges affect the hosting user only – not viewers of the Application Sharing session. Also, these privileges have no effect on operations performed by the host outside of the Application Sharing session.

For example, when administrators attempt to change Date and Time settings within an Application Sharing session with elevated privileges, the Date and Time dialog will open and Application Sharing will continue – administrators will not be prompted to provide consent. When standard users attempt to change Date and Time settings within an Application Sharing session with elevated privileges, they will get a message stating that they are not able to continue and, therefore, will not be able to change the Date and Time settings; however, their Application Sharing session will continue. When either user (administrator or standard user) attempts to change Date and Time settings within an Application Sharing session without elevated privileges, a UAC dialog will be posted and Application Sharing will be terminated.

All Vista users (including standard, non-administrators) need administrator credentials to acquire elevated Application Sharing privileges. Those who don’t have these administrator credentials will have to run Application Sharing without elevated privileges.

**Requesting Elevated Privileges**

When you first join an Elluminate Live! session, you can see that you don’t have elevated privileges by the appearance of an amber triangle in the Application Sharing button on the toolbar:

To request elevated privileges, do the following:

If you are logged on to Vista as a standard user, you will need an administrator password (and possibly user name) in order to request elevated privileges. Please obtain this information from your system administrator.

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45 This automatic allowance for administrators and automatic denial for standard users mimics what happens on XP when it is asked to do something that requires administrator privileges.

If you do not see the Request Elevated Privileges option, contact your system administrator for assistance to modify your Vista system settings.

2. Respond to the UAC dialog presented to you:
   - If you are logged on to Vista as a standard user, enter an administrator password (and possibly user name) for your computer.
If you are logged on to Vista as an administrator, click on **Allow**.

The disappearance of the amber bar in the **Application Sharing** button on the toolbar indicates you now have elevated Application Sharing privileges. The button now displays the same icon used by non-Vista implementations of Elluminate Live!.

Your elevated privileges last for the duration of the session. If you leave a session and re-enter it, you will retain your privileges. If you join a different session, you will need to request elevated privileges again.

To relinquish elevated privileges, select **Tools > Application Sharing > Yield Elevated Privileges** (returning you to standard privileges).

Because of the demands placed on your computer’s CPU, if you are using an old, slow computer, you can improve the performance of Application Sharing on Vista if you run **with** elevated privileges – even if the application being shared does not require them. (This is not necessary for sharing your desktop.)

**Example Scenarios**

**Sharing Secure Applications with Elevated Privileges**

To illustrate Application Sharing **with** elevated privileges, let’s look at both a standard user and an administrator trying to change the Date and Time settings.

1. Request and obtain elevated privileges (as described above).

2. Share your entire desktop (Tools > Application Sharing > Share Entire Desktop).

3. Select Date and Time from the Control Panel.
4. Click on the button **Change date and time**…
   - If you are logged on to Vista as a standard user, you will receive the following error message, indicating you are not able to continue.
   
   ![Screen shot of Unable to continue error message](image)
   
   - If you are logged on to Vista as an administrator, the Date and Time Settings dialog will open and you will be able to change the Date and Time settings.

**Sharing Secure Applications without Elevated Privileges**

To illustrate Application Sharing **without** elevated privileges, again we’ll look at both a standard user and an administrator trying to change the Date and Time.

1. Share your entire desktop (Tools > Application Sharing > Share Entire Desktop).
2. Select Date and Time from the Control Panel.
3. Click on the button **Change date and time**…
   - If you are logged on to Vista as a standard user, you will receive the “Unable to continue” error message and Application Sharing will terminate.
   - If you are logged on to Vista as an administrator, you will be prompted to **Continue** and Application Sharing will terminate.

**Allowing the Remote Control of your Application or Desktop**

If you grant remote control of your application or desktop to another user when you are **without** elevated Application Sharing privileges, the remote user will not be able to control any applications that prompt you with a UAC dialog (Application Sharing will be terminated).

> As long as the UAC dialog or Application Sharing Terminated error is open on your desktop, any attempt by a remotely controlling user to regain control of your desktop will result in a “Remote Start Failed” error message. Once you cancel the dialog and error message, or they cancel themselves (after about 90 seconds), the remote user again will be able to request remote control of your desktop.
When you **have** elevated privileges, a remotely controlling user can control any applications that you can: if you are logged on to Vista as a standard user, your access (and that of the remote user) to some applications will be restricted; if you are logged on as an administrator, you (and an associated remote user) will have greater access.