User Acceptance Test

Distributed Instrument Cluster

## Items used for the test.

Minimum 2 Computers

The remote device for the test should be a windows pc ideally.

1 Crestron cable

1 Video Capture device (Webcam or Capture card)

Get the latest commit from Github.

<https://github.com/Mikael-og-Andre/Distributed-Instrument-Cluster/tree/Master>

Visual Studio 2019 – (Used in development)

Web browser - Google Chrome or Firefox (These browsers were used in testing, and support Pointer lock APIs in the browser)

## Setup With a development version

TBD

## Scenario 1 Guest Login

**Precondition**: Backend web server is running

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| **Step #** | **Action** | **Task Description** | **Input Data** | **Expected Result** | **Passed/Failed** |
| 1 | Enter Website | Enter the URL into your Browser, and press enter | URL: The URL selected in the setup stage | The website front page loads with the login fields and buttons in less than 10 seconds |  |
| 2 | Login as a guest | Press the login/enter as guest button on the bottom of the screen |  | You are transferred to the device selection page |  |
| 3 | Check profile Information | In the top bar of the device selection page, left click the profile button, it looks like a face/human |  | A drop-down menu should appear showing your information as guest |  |

## Scenario 2 Select a device

**Precondition**: Logged in as a guest, on the device selection screen, and a remote device is connected to the server

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| **Step#** | **Action** | **Task Description** | **Input Data** | **Expected Result** | **Passed/Failed** |
| 1 | Refresh Connection List | In the upper middle of the screen, there is a button that looks like 2 arrows, left click it to refresh the list of connections. |  | The page should display a loading animation, the loading should not last longer than 10 seconds |  |
| 2 | Check for a connected device | If a device has connected, there should be a list of all connected devices in the middle of the device selection screen. confirm that the device shows up on the screen |  | A device should show on the screen with, the name, location, and type, and a button that says select |  |
| 3 | Check for the connection types | A device can have multiple video and controller connections, check what connections it lists |  | The device should show 1 video connection and 1 control connection, if you have a default Crestron, video device setup |  |

## Scenario 3 View video as guest

**Precondition:** Video device is outputting frames to the server, selected a Device, logged in as Guest

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| **Step#** | **Action** | **Task Description** | **Input Data** | **Expected Result** | **Passed/Failed** |
| 1 | Functioning video | In the middle of the screen there should now be a video stream |  | Video is showing on the webpage |  |
| 2 | No admin controls | Check if there is a control bar above the video |  | There should not be a control bar when in guest mode |  |
| 3 | Check delay | Either use the direct control if you are capturing video from a pc, or wave your hand in front of the webcam, and then look at how long it takes to update |  | The video delay should be less than 15 seconds |  |

## Scenario 4 Register account

**Precondition**: starting at the login page

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| **Step#** | **Action** | **Task Description** | **Input Data** | **Expected Result** | **Passed/Failed** |
| 1 | Go to registration page | At the bottom of the screen left click on the button that says Submit |  | The page should change to the registration page |  |
| 2 | Check email validation | In the email field, write “hello”, then left click the submit button |  | At the top of the screen, below the Register title, there is a red notification saying, “The email field is not a valid e-mail address.” |  |
| 3 | Test notifications | In the text field called Email enter an email in the format “word@word.com”, and left click the submit button |  | A red notification appears at the top of the screen with the following text.  “the username field is required” “the password field is required.”  “the Confirm Password field is required” |  |
| 4 | Fill in a username | Enter a username into the username field, left click the submit button |  | At the top of the screen the notifications read “The password is required” “The confirm password field is required” |  |
| 5 | Hidden Password | Write hello in the password field |  | The text in the password field is obscured |  |
| 6 | Test password check | In the password field enter a password, now enter a different Password in the confirm password field. Left click the submit button. |  | A red notification appears at the top of the screen saying “confirm password and password do not match” |  |
| 7 | Reset button | Left click the reset button |  | All the fields have the text you put in removed |  |
| 8 | Register an account | Write a username in the username field, a valid email in the email field, write a password in the password field, write the same password in the confirm password field. Left click the submit button. |  | The registration should be successful, and you should be sent to the login page again |  |

## Scenario 5 Account Login

**Precondition:** registered an account successfully, starting at the login page

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| **Step#** | **Action** | **Task Description** | **Input Data** | **Expected Result** | **Passed/failed** |
| 1 | Empty Login | Left click the submit button at the bottom of the screen with an empty username and password field |  | A Red notification appears at the top of the screen.  “The username field is required.”  “The password field is required.” |  |
| 2 | Empty password | Enter the username in the username field |  | A red notification appears.  “The password field is required” |  |
| 3 | Wrong password | Enter the correct username in the username field, and enter a different password from when you registered |  | A red notification should appear denying you access |  |
| 4 | Test a user | Enter the username and password from the registration stage |  | You should be moved to the device selection page |  |
| 5 | Check account information | In the top right of your screen, left click the profile icon. Looks like face/human |  | A dropdown menu should appear below the button, showing that you are logged in with the email from the previous step |  |

## Scenario 6 Control Device

**Precondition:** Starting after a device is already selected, logged in to an account, remote device selected is a computer with capture card, and Crestron connected

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| --- | --- | --- | --- | --- | --- |
| **Step#** | **Action** | **Task Description** | **Input Data** | **Expected Result** | **Passed/failed** |
| 1 | Connect to device | Locate the button on the page that has the text “connect” and left click it. |  | After pressing the text “status: not controlling” should update to display “status: Waiting”, and after less than 5 seconds it should display “status: controlling” |  |
| 2 | Open development tools | Depending on the browser this might be different. On google chrome press ctrl+shift+I to open the development tools. Make sure the tab “Console” is selected in the development tools |  | A tab on the right side of the browser should have opened, with a blue bar under the tab console at the top. |  |
| 3 | Lock mouse to device | Locate the button that has the text “Lock mouse” and left click it |  | After pressing your mouse should disappear from the screen, and a popup at the top of the screen should read “press escape to unlock” |  |
| 4 | Check mouse movement | Drag your mouse to the right. |  | The video should update showing your mouse move to the right after max 3 seconds |  |
| 5 | Check left click | Hover the mouse cursor over desktop icon element and press the right mouse button once. |  | The element should respond to being clicked, with a highlight. |  |
| 6 | Check right click | Hover the mouse on the desktop background and press the right mouse button. |  | A dropdown menu appears. |  |
| 7 | Open notepad on the remote computer | Open a notepad or other application where you can type text and highlight it so you can start writing in the application. |  | A text application should be open on the remote device. |  |
| 8 | Check normal letters | On your keyboard tap the following letters  q,w,e,r,t,y,u,I,o,p,a,s,d,f,g,h,j,k,l,z,x,c,v,b,n,m |  | The letters  q,w,e,r,t,y,u,I,o,p,a,s,d,f,g,h,j,k,l,z,x,c,v,b,n,m  have been entered in the text document on the remote device, and in the google chrome console as “a” followed by “a break”.  If they appeared in uppercase, press the caps lock key, and repeat the step. |  |
| 9 | Check shift key | Hold down the shift key on your  keyboard.  Then press the key a.  Release the shift key. |  | The letter A has appeared in the document in uppercase.  In the google chrome console, there is a log saying “shift” and “shift break” |  |
| 10 | Check backspace  key | Press and release the backspace key. |  | The A letter should be deleted from the text document.  In the google chrome console there is a backspace log. |  |
| 11 | Check holding down backspace | Hold down the backspace key for 4 seconds |  | The letters will be erased from the text document.  In the google chrome console,  A “backspace” log appears when you press the key down, and a “backspace break” appears when you release the key |  |
| 12 | Check Scrolling | Scroll the wheel on your mouse up, then down |  | In the google chrome console there should be a scrolling log. |  |
| 13 | Check F1 keys | Press and release the F1-F12 Keys |  | In the google Chrome console there is a log for each key press. “F1” “F1 break” |  |

## Scenario 7 Website keyboard

**Precondition:** Starting after a device is already selected, logged in to an account, remote device selected is a computer with capture card, and Crestron connected

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| --- | --- | --- | --- | --- | --- |
| **Step#** | **Action** | **Task Description** | **Input Data** | **Expected Result** | **Passed/failed** |
| 1 | Connect to device | Locate the button on the page that has the text “connect” and left click it. |  | After pressing the text “status: not controlling” should update to display “status: Waiting”, and after less than 5 seconds it should display “status: controlling” |  |
| 2 | Open development tools | Depending on the browser this might be different. On google chrome press ctrl+shift+I to open the development tools. Make sure the tab “Console” is selected in the development tools |  | A tab on the right side of the browser should have opened, with a blue bar under the tab console at the top. |  |
| 3 | Open website keyboard | Locate the button that has the text “Keyboard” and left click it |  | After pressing your mouse should disappear from the screen, and a popup at the top of the screen should read “press escape to unlock” |  |
| 4 | Open notepad on remote computer | Open a notepad or other application where you can type text and highlight it so you can start writing in the application. |  | A text application should be open on the remote device. |  |
| 5 | Check normal letters | On the website keyboard tap the following letters  q,w,e,r,t,y,u,I,o,p,a,s,d,f,g,h,j,k,l,z,x,c,v,b,n,m |  | The letters  q,w,e,r,t,y,u,I,o,p,a,s,d,f,g,h,j,k,l,z,x,c,v,b,n,m  have been entered in the text document on the remote device, and in the google chrome console as “a” followed by “a break”.  If they appeared in uppercase, press the caps lock key, and repeat the step. |  |
| 6 | Check shift key | Hold down the shift key on the website  keyboard.  Then press the key a.  Release the shift key. |  | The letter A has appeared in the document in uppercase.  In the google chrome console, there is a log saying “shift” and “shift break” |  |
| 7 | Check backspace  key | Press and release the backspace key on the website keyboard. |  | The A letter should be deleted from the text document.  In the google chrome console there is a backspace log. |  |
| 8 | Check holding down backspace | Hold down the backspace key for 4 seconds on the website keyboard |  | The letters will be erased from the text document.  In the google chrome console,  A “backspace” log appears when you press the key down, and a “backspace break” appears when you release the key |  |
| 9 | Check F1 keys | Press and release the F1-F12 Keys on the website keyboard |  | In the google Chrome console there is a log for each key press. “F1” “F1 break” |  |

**Tests performed:**

**Tests passed:**

**Signature:**

**Date:**