

SC Remote Server – How To ...

20181223/Cassini

Additional Infrastructure Setup

WebServer

Any web server supporting PHP will do

I found UwAmp to be least intrusive and it was setup in a minute:

<https://www.uwamp.com>

Download the latest ZIP version.

Extract into an empty directory

Run UwAmp.exe ...

Configure PHP 7 (may be 5 would do)

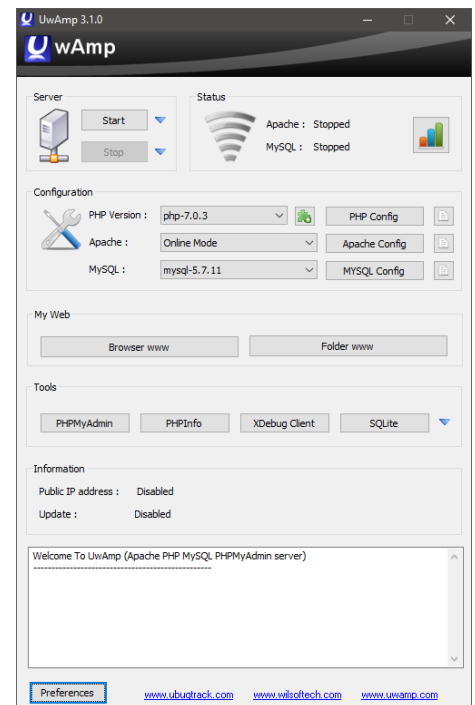
Configure 'Online Mode' if you want to access from the intranet (else it works on loopback only)

Configure a Web Server Port (default is :80)

START via blue arrow → (Apache is enough, MySql is not required)

Target your browser to `webServerIP:80` (or the port you defined)

You find the default page that was supplied with the package.



Note: You may run the remote site on any web server with PHP anywhere e.g. also on a small rasPi.

SCJoyServer

Get the package here:

<https://github.com/SCToolsfactory/SCJoyServer/releases>

Extract into an empty directory on your Game PC.

Run SCJoyServer.exe

Configure your Game PC IP and the port to use (must be a free one)
IANA would suggest:

Dynamic and/or Private Ports are those from 49152 through 65535.
But for your in house use the default one is usually good enough.

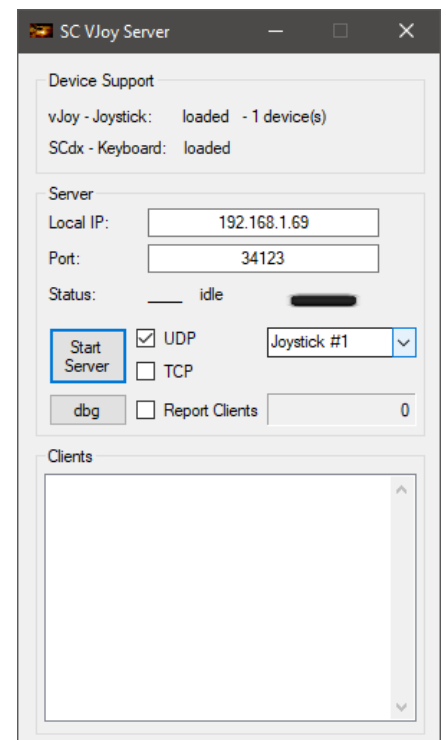
You may see if a vJoy device is found – it is not required but then you can only use keyboard commands. Select one of the Joysticks if there are any.

Start the Server once you want to receive commands.

→ Beware keystroke commands are now supplied to your active window on that PC i.e. you may feed keys into the wrong application – some Window shortcuts such as Alt F4 (Close App) have unexpected results...

The Server reports commands received by incrementing the number at Report Clients.

dbg opens a window that may help to find issues.



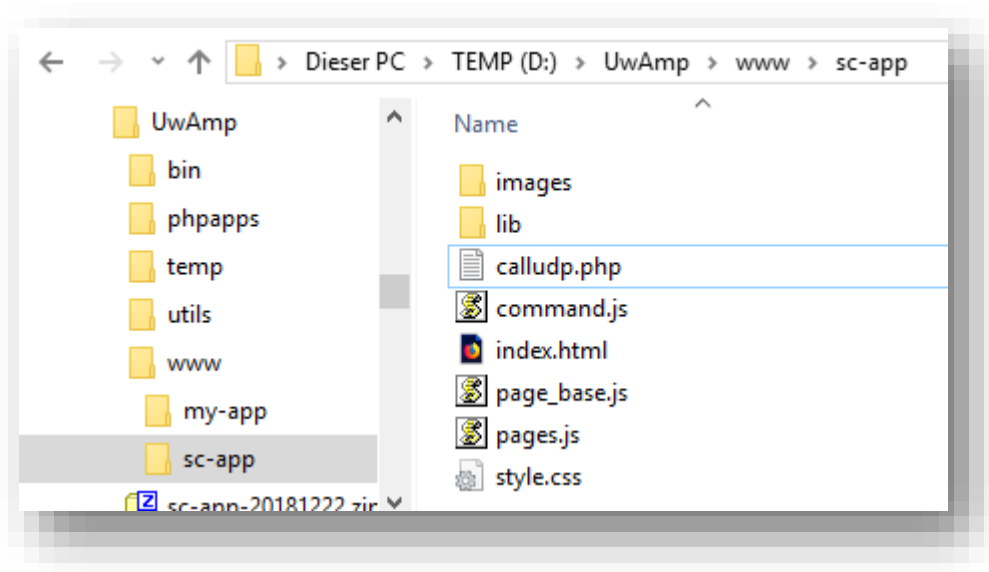
vJoy Driver

is located here:

<http://vjoystick.sourceforge.net/site/index.php/download-a-install/download>

Setup of the SCRemoteServer Web Site

Copy all of `sc-app` to the UwAmp Web directory (`www`)



Should then look as above.

Any directory added to `www` is exposed by the web server and can be accessed using:

`http://webServerIP:80/directory/`

e.g. our new site as `http://webServerIP:80/sc-app/`

Note `webServerIP` is something like: `192.168.1.68` i.e. the IP address of the machine where the web server is running.

If you now start your UwAmp Apache server it will serve `index.html` with the default setup.

To test the site you may need to change the `SCJoyServer` address and port to your game PC.

Edit `pages.js` with Notepad

Find:

```
// the vJoy Command Server IP
const IP = '192.168.1.69';
// the vJoy Command Server PORT (UDP protocol)
const PORT = 34123;
```

Change it to the values you set in the `SCJoyServer`.

Server	
Local IP:	<input type="text" value="192.168.1.69"/>
Port:	<input type="text" value="34123"/>

Now you should be able to navigate to `http://webServerIP:80/sc-app/` and your browser should show the following (see next page)



Click the Tabs (top row thumbnails) to change the page.

The DEBUG information is showing what command was issued later.

If you click and hold the mouse on the buttons it should issue a Press command, Releasing issues the release to the key or button. i.e. it presses as long as you click or touch the item.

Clicking Lock doors shows:

```
{"K":{"Modifier":"rc","VKcode":113,"Mode":"r"}} IP:192.168.1.69 Port:34123
```

You may see Mode: “p” while pressing and “r” once released

The Keycode was 113 – which is F2

Modifier is “rc” which is Right Ctrl – so the key sent was RCtrl+F2.

On page 2..4 you may see gray circles which are unaligned hit targets for illustration only.

Page 5 (Emergency) is more like it should be and has its hit targets properly aligned.

However as Lock Doors is not assigned in the Game I’ve set it to 0 until I map it manually to some key binding.

Now you are ready to play with your own customization..

Customization

The workflow is:

- Design one up to 5 pages (images) size is currently fixed to 1366x768 pixels
- Edit `pages.js` to setup your hit targets.

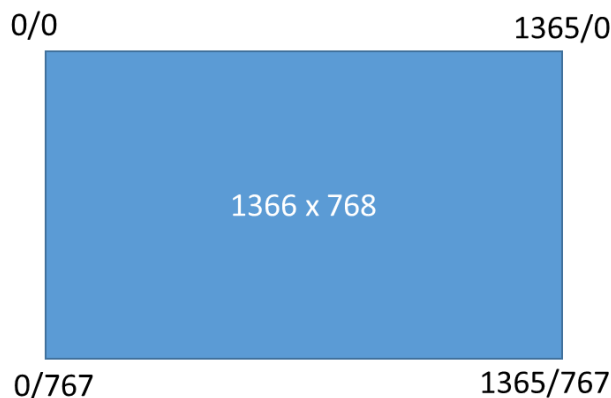
That's it.

Drawing images

Format can be either PNG or JPG, Size is 1366x768 pixels.

Images go into the `images` directory.

To identify hit targets you must record the X and Y pixel location and the size of the hit target. Locations are top – down and left right oriented. I.e. top left corner is 0/0.



The example buttons are about 100x100 pixels which is an acceptable touch target size on an iPad 2.

Editing `pages.js`

- ➔ Use only notepad or a similar code editor (never Wordpad or Word or any other word processor)
- Make a backup copy before you edit...

The file consist of 5 similar parts for each of the 5 supported pages:

```
// PAGE 1 Construction
const page_1_obj = new Page_Base_obj(
  "Test Page 1",
  'images/page_1.png',
  [
    new Target("my1", 200, 100, 90, ItemTypeKey, VK_F2, ItemModNone),
    new Target("my2", 200, 300, 90, ItemTypeKey, VK_F3, ItemModLCtrl),
    new Target("my3", 500, 300, 90, ItemTypeKey, VK_F6, ItemModRAlt),
    new Target("my4", 700, 500, 90, ItemTypeKey, VK_F5, ItemModNone),
  ]
);
```

The **page name** – it is also shown below the Tab for easy navigation.

The **image path and filename** – it refers to the image to load as background image.

You may change them according to your need and image file naming.

Then there are as many **Target definitions** as hit areas you want to use on that page.

My Test Page has 4 buttons and 5 Axis parts (blue bubbles) and hence 4 + 5 entries for the hit targets.

A Target is defined as:

Name e.g. "my1" this must be a unique name within the page but serves only internal purposes.

X, Y, D Center of the hit target (X/Y) and the radius of the hit area my 100x100 buttons get a diameter of 90 pixels in order to show properly. Hit targets are marked with a semi-transparent circle that gets whiter when pressed (alpha 0.1 vs. 0.4 – defined in `page_base.js`).

Key and Button activation

A **selector** whether a **Key** or a **Button** is triggered (ItemTypeKey, ItemTypeButton are valid here)

The **Key Code** or **button index** (1.. max button).

The last one is a **Key modifier** such as Left Alt + Key.

```
new Target("my1", 200, 100, 90, ItemTypeKey, VK_F2, ItemModRCtrl), // RightCtrl + F2
new Target("my2", 200, 300, 90, ItemTypeButton, 3, ItemModNone), // vJoy Button 3
```

For keys you may use the symbols defined in the file command.js. Those are VK_something. E.g. VK_A is an A pressed, VK_3 is the 3 key one on the main keyboard, 3 on the num pad would be VK_NUMPAD3.

Note: if you are using a non US (QWERTY) keyboard/language setting you are punished with the same issues that the game gets the input from the key location rather than the imprint on the key. I.e. QWERTZ keyboards issue a Y Key but the game sees it as Z input. Here you may use the same letter key assignment as on the keyboard imprint.

For special chars use the ones you really need e.g. VK_SEMICOLON issues really a semicolon.

You may need to check what arrives in e.g. notepad as receiving active window.

Valid key modifiers are:

ItemModNone, ItemModLCtrl, ItemModRCtrl, ItemModLAlt, ItemModRAlt

Once edited and saved you have to reload the page in your browser to make it active (F5)

NOTE: if you use it on your PC where the SCvJoyServer runs you just issue the keys into your active window – the browser – and you may see strange effects when using Function keys.. or other browser short cuts. Alternatively use a tablet to test the web client and make the active window on your PC an application that does not bother with keys sent – e.g. an empty notepad window.

Axis and Slider activation

You may also issue axis and slider actions with a value.

Value range is always 0...1000 (min ... max).

An X axis command with a value of 500 (center point) looks like:

```
new Target("ax2", 1100, 300, 90, ItemTypeXaxis, 500, ItemModNone),
```

The names for the axis and slider are:

ItemTypeXaxis, ItemTypeYaxis, ItemTypeZaxis,
ItemTypeRXaxis, ItemTypeRYaxis, ItemTypeRZaxis,
ItemTypeSL1, ItemTypeSL2

The items here are as above:

Name, CenterX, CenterY, Diameter, Type, Value, Mod (where mod is ignored)

Note: there is no 'real' analog slider supported. You may have to define click/touch targets with distinct values.

You may use e.g. 5 targets to cover 0, 250, 500, 750, 1000 as in the example page 1.