## Using EventGhost running in Windows (VM) for USB-UIRT Multi-zone support with Linux

I recently switched my server to an UnRaid docker and still needed my USB-UIRT to support multiple zones to control multiple set top boxes, which the Linux driver doesn't support. So, I used my favorite utility program EventGhost on a Windows VM to handle it for me. Here is how to do it along with the files needed.

Note that UnRaid is not needed. This will run on any Windows system that can control the USB-UIRT.

1. On your Windows system (in my case a Win 8.1 VM on my UnRaid server that also serves as a SageTV network encoder with an HDPVR 2), **download and install EventGhost** from <a href="http://www.eventghost.net/">http://www.eventghost.net/</a>. I use the 0.4 R1722 release but this should work fine on the 0.5 pre-release. **Don't run it yet though.** 

2. **Install the USB-UIRT driver** found at <u>http://www.usbuirt.com/support.htm</u> and plug in the USB-UIRT. Plug in the IR emitter into the USB-UIRT that you should already have if you want to use multiple zones.

3. Unzip the attached files into an easy to find folder on the Windows system (C:\scripts\EG) in my case.

4. **Start EventGhost** (EG from here on), and if it minimizes then find the icon in the system tray (lower right) and double-click it to expand it.

5. Open the **EG-STBctrlMinimum.xml** file in your easy to find folder, which is an EG configuration file. Ignore any errors you may get for now. You should see something like this:



6. In the Autostart section look for **Plugin: Webserver** and double-click it. A configuration box will open. Set the HTML documents root folder to your easy to find folder, and set the TCP/IP port to your desired port or leave it at 8088.

WebSocket.	erver, that you can use to generate events through HTML-pages and						
	Support for this plugin can be found here						
ettings Description							
General Settings							
TCP/IP port:	8088 🚔						
HTML documents root:	C:\scripts\EG						
SSL certificate:							
SSL private key:							
Event prefix:	НТТР						
Basic Authentication							
Realm:	EventGhost						
Username:							
Password:							
Basic Authentication is n	ot required when WebSocket connections from dients						
Additional settings for pon-	A JAX POST requests						
String between list items:							
String between returned up	luce It						
Juing Detween returned va							
Automatically save the do	cument when the value of a persistent variable is changed						
Persistent variables	emporary variables Websocket clients Websocket servers						

NOTE: You can do a lot of things with the webserver, and examples can be found on the EG forum. For now though all we have is a simple "hello" web page if anyone actually looks at it.

7. In the **EG Options**, be sure to set "Autostart EG on system startup" and you might want to check "Minimize to system tray on close" as well.

	Options	×
General		
✔ Autost	art EventGhost on system startup	
<ul> <li>Minimiz</li> </ul>	e to system tray on close	
Use fix	ed font in the logger	
✔ Use pr	oportional resize	
Limit m	emory consumption while minimized to	8 🌲 MB
✔ Confin	n delete of tree items	
Languag	e	
	English (UK) 🗸	
	OK	Cancel

8. Here is the only tricky part. My config file knows IR commands for an Arris/Motorola STB. I had a Samsung STB for a while that also used this command set. If things don't work, then you'll need to change the IR commands for each number and optionally the Power command if you want to turn the power off/on remotely.

To change the digits, look under the "USB-UIRT Zone X IR Blaster" folders and then under the "Send Number X" macros you will see a command such as "Transmit 1". Double-click that to get to the setup options.

									_			
006c	0012	0002	0157	00ac	0013	00ac	0013	0056	0013	0056	0013	~
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ount			Infinit	2					Ie		IP Code	¥
ount;		•)•• -	] 111111110	5					Le	aman	IK COUE	àu.
Wait:	3	0 🌻 m	s of IR i	nactivit	y befor	re trans	mission					
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	006c 0013 0056 0157	006c 0012 0013 0056 0056 0013 0157 0057	006c 0012 0002 0013 0056 0013 0056 0013 0056 0157 0057 0013 Count: 4 -	006c 0012 0002 0157 0013 0056 0013 0056 0056 0013 0056 0013 0157 0057 0013 0d3c count: 4 🖕 Infinit Wait: 0 🐳 ms of IR i	006c 0012 0002 0157 00ac 0013 0056 0013 0056 0013 0056 0013 0056 0013 00ac 0157 0057 0013 0d3c Count: 4 🛫 🗆 Infinite Wait: 0 👻 ms of IR inactivit	006c 0012 0002 0157 00ac 0013 0013 0056 0013 0056 0013 0056 0056 0013 0056 0013 00ac 0013 0157 0057 0013 0d3c count: 4 - Infinite Wait: 0 - ms of IR inactivity befor	006c 0012 0002 0157 00ac 0013 00ac 0013 0056 0013 0056 0013 0056 0013 0056 0013 0056 0013 00ac 0013 00ac 0157 0057 0013 0d3c Count: 4 - Infinite Wait: 0 - ms of IR inactivity before trans	006c       0012       0002       0157       00ac       0013       00ac       0013         0013       0056       0013       0056       0013       0056       0013       0056         0056       0013       0056       0013       00ac       0013       00ac       0013         0056       0013       0056       0013       00ac       0013       00ac       0013         0157       0057       0013       0d3c       0       0       0       0         Count:       4          Infinite	006c       0012       0002       0157       00ac       0013       00ac       0013       0056       0013       0056       0013       0056       0013       0056       0013       0056       0013       00ac       0013       00ac	006c       0012       0002       0157       00ac       0013       00ac       0013       0056       0013         0013       0056       0013       0056       0013       0056       0013       0056       0013       0056       0013       0056       0013       0056       0013       00ac       0013       00ac	006c       0012       0002       0157       00ac       0013       0056       0013       0056       0013       0056       0013       0056       0013       0056       0013       0056       0013       0056       0013       0056       0013       0056       0013       0056       0013       0056       0013       0056       0013       00ac       0013       00ac	006c       0012       0002       0157       00ac       0013       0056

Now use the "Learn an IR code" button to teach EG the code for that digit using your remote control and the USB-UIRT. After the new code is learned you can use the Test button to try it out. Once you're done, Apply and OK to finish. Now do the other nine numbers in that folder, and then if you need to teach the codes for the other STB/Zones as well.

9. File->SAVE the EG configuration file or you'll lose all those changes you just made.

10. **Copy the "gentuner" file** from the zip file to your SageTV server folder on the Linux machine or docker and open it with a file editor.

```
IP="192.168.1.5:8088"
CMD=$1
REMOTE=$2
KEY=$3
CHANNEL=$3
if [ "$CMD" = "REMOTES" ]; then
    echo "STB1"
     echo "STB2"
     echo "STB3"
elif [ "$CMD" = "KEYS" ]; then
   echo "not required"
elif [ "$CMD" = "SEND" ]; then
    echo "not required"
    exit 1
elif [ "$CMD" = "TUNE" ]; then
    wget "http://$IP/index.htm?$REMOTE.$CHANNEL" > /dev/null 2>&1
```

```
elif [ "$CMD" = "CAN_TUNE" ]; then
        echo "OK"
else
        exit 1
fi
```

**Change the IP variable** to your EG/Windows system address and the port to whatever you set the EG webserver port to. Save your changes. **Make sure the file is executable** (chmod 777 gentuner).

If you look in this file, you will see that the command that gets sent to EG looks like

## http://\$IP/index.htm?\$REMOTE.\$CHANNEL

where \$IP is the IP address and port, \$REMOTE is STB1, STB2 or STB3 appropriately, and \$CHANNEL is the channel.

wget is used to send the command from a script. If for some reason your Linux system doesn't have wget installed then you'll need to install it.

11. At this point, you should be able to test it out by running a test command in Linux such as

## ./gentuner TUNE STB1 34

If it works then you'll see messages in the log window of EG showing a command received such as "HTTP.STB1.34[]" followed by a Python script that breaks out each digit and ultimately transmits the code for each digit.



If you poke around the Configuration Tree some you should be able to see what is going on.

Let me know if you have any questions or problems.

BTW EventGhost is an extremely powerful program and worth a look if you want to automate functions or need a way to get program A to interface to program B, interface with hardware, or even send messages from one system to another. This example doesn't even scratch the surface of what it can do.