Bug Fixes

If there is an issue while parsing the remote definition file, the code will now print out the offending line number instead of crashing.

There was bug that prevented setting the 1920x1080 resolution

There was a bug that caused a crash if the host operating system hadn't been updated with the recommended TCP buffer sizes. The code now catches this and prints a warning message.

There was a crash if the user attempted to set the VideoSource to an invalid value for the slingbox type. This is now caught and an error message generated. Some slingboxes don't recover nicely from this error and may require a reset. Not a Factory Reset! A power cycle will do or a quick press of the reset button on the back.

[SERVER] maxstreams now works as originally intended. See maxstreams section below for details.

Fixed an issue where a certain media player was shutting down the HTTP stream after receiving the 200 OK message from the server.

The program will now generate an error if you try to start it with Python 2.

If you had port forwarding enabled for your server it was possible for a hacker/port scanner to crash the server will some bogus data in the packet.

Fixed some sundry memory leaks.

New Features

New Slingbox supported

The code now supports the old SB240-100. Set sbtype="240" in config.ini. Thanks to idenny1!
It is also reported the M2 works as well. Use the 350/500/M1 sbtype.

Custom URL for Server

Many people have asked for a way to use their own URL to connect to the server instead of "slingbox". Well today is their lucky day.

In the [SERVER] section of the config.ini file you can override the default "slingbox" with your own string by defining the URLbase option like so:

[SERVER]
; local port number for the server to listen on for connections
; port number+1 is used by the remote control code.

port=65432
maxstreams=4
URLbase=Gerry

To get to your server you would give your streaming client http://ipaddess:port/Gerry.
Or maybe, for example URLbase=SB500. To get to your server you would give your streaming client http://ipaddess:port/SB500.

The following characters are reserved by the HTTP standard and cannot be used:
! * ' ( ) ; : @ & = + $, / ? % # [ ]

The space character is theoretically allowed but some clients I tested didn't properly parse the escaped character sequence so I've disallowed that as an option too. Note: Case is significant.

Single Config file for all Slingboxes

Many of the Servers' users have more than one slingbox. The previous software relied on the user to remember and maintain a number of server port configurations and router port forwarding and firewall rules to allow the software to route requests to the proper slingbox.

The new unified config file allows the user to access the proper slingbox configuration by name and not port number and now only one server port is needed. This feature isn't only for when you have multiple slingboxes, you can just define a single slingbox in the config file and then access your slingbox by name. Following is a sample unified config.ini file

[SLINGBOXES]
sb1=500
sb2=Solo
sb3=M1

[500]
sbtype="350/500/M1"
password=xxxxxxxxxxxxxxx
;finderid=BAD844CF70531865D73650A16A0A536
ipaddress=192.168.117.110
port=5201
Resolution=12
FrameRate=30
VideoBandwidth=2000
VideoSmoothness=63
VideoSource=1
Remote=500_remote.txt

[M1]

```
sbtype="350/500/M1"
password=xxxxxxxxxxx
;finderid=BAD6A7405882C03A076502246DAD632F
ipaddress=192.168.117.122
port=5301
Resolution=5
FrameRate=30
VideoBandwidth=2000
VideoSmoothness=63
VideoSource=2
Remote=m1_remote.txt

[Solo]
sbtype="Solo/Pro/ProHD"
password=xxxxxxxxxx
;finderid=BAD95DAED609364C8204F2BC5FBDC363
ipaddress=192.168.117.133
port=5001
Resolution=12
FrameRate=30
VideoBandwidth=2000
VideoSmoothness=63
VideoSource=1
Remote=solo_remote.txt

[SERVER]
; local port number for the server to listen on for connections
; port number+1 is used by server for internal communications.
port=65432
maxstreams=3
URLbase=Gerry
```

You'll notice a new section header [SLINGBOXES]. In this section list all the names you'll use to access your slingboxes by name. Like the [SERVER] URLbase documented previously, names are case sensitive and can't contain any of the HTTP reserved characters or spaces.
For each defined slingbox name there is a corresponding [SlingboxName] section. This is equivalent to the previous [SLINGBOX] section in the existing config.ini files with a few minor exceptions. You'll notice that in this section you can configure your custom remote control configuration file. There is no longer a separate [REMOTE] section. Setting VideoSource is highly recommended. If you don't set VideoSource you must supply "RemoteCode=x" where x is the video source to allow the software to send the proper IR messages to the slingbox.

To startup a video stream from one of your slingboxes you would use a URL like
http://serverip:serverport/URLbase/SlingboxName
Given the sample file you would connect to
http://192.168.117.100:65432/Gerry/500

http://192.168.117.100:65432/Gerry/Solo

http://192.168.117.100:65432/Gerry/M1

To access the remote control web page you would use
http://serverip:serverport/Remote/SlingboxName

Maxstreams

The previous implementation was essential broken after the 2.1 series of releases. Here is the scoop.

The original intent for this number was to allow the user to limit the number of remote over the WAN streaming connections in an attempt to limit the used WAN up-link bandwidth to make sure existing remote video streams were not impacted by oversubscribing the available bandwidth. For example, if your Internet connection uplink has a maximum of 10Mb/s and VideoBandwidth was set to 3000, you could set maxstreams to 3. If you wanted to reserve some additional bandwidth for other services on your host, you could set it to 2. To block all remote connections from the WAN you could set it to 0. Although, not having a port forwarding rule on your router would achieve the same goal.

This now works as intended. I've added maxremotestreams as an option in the [SERVER] section to make the intent more obvious but in the interest of backwards compatibility you can still use maxstreams for now. Change your config file when you get a chance.

There is some new functionality. You can now specify "maxstreams" on a per slingbox basis in the [SLINGBOX] or [SlingboxName] section of the config file. This is the maximum number of allowed streams for the slingbox, remote and local. For example, if you don't want to share your slingbox, you could set maxstreams to 1. If left unspecified, the default is 10.

Start Channel

You can now add the "StartChannel" option to the [SLINGBOX] or [SlingboxName] section. This will make the server tune to that channel when a stream starts.

i.e. StartChannel=155

You may want to configure this, if you have a favourite channel and don't want to have to bring up the Remote web page to tune to it when starting your stream. Although this capability might have limited utility due to the following feature.

If you don't want a fixed channel on start up you can now pass the start channel on the streaming URL.
i.e. http://yourip:yourport/YourBASEurl/YourSlingboxName?channel= xxx

Where xxx is the channel you want to tune to when the stream starts.

This also allows the user to implement some rudimentary DVR functionality by automatically tuning to a channel at a specific time and recording the stream. On Linux this would be easily accomplished with a "cron" job and a small shell script. On Windows this link might be useful, https://active-directory-wp.com/docs/Usage/How_to_add_a_cron_job_on_Windows/Scheduled_tasks_and_cron_jobs_on_Windows/index.html

An example bash script might look like:

```
#!/bin/bash
curl http://yourserverip:yourserverport/YourBASEurl/YourSlingboxName?channel= xxx >
recording_file_name &
curl_pid=$!
sleep 3600
kill $curl_pid
```

Remote Lock

You can now add the "RemoteLock" option to the [SLINGBOX] or [SlingboxName] section. This will make the server only respond to remote control requests from the host that started the initial video stream from the slingbox. In other words, people who connect after the first stream will not be able to change the channel etc. while you're watching your stream. This could be useful with the StartChannel option when implementing a stream recording to stop someone from changing the channel while recording.

i.e. RemoteLock=yes

Other Updates

Remote RT, 1920x1080 and 1280x720 buttons

Now that we know what the magic number used for sending IR requests is VideoSource, I'm removing the RT button from the default remote control configuration file. The RT button will no longer work.

The attempt at remotely setting the aspect ratio for when the next primary stream starts made some sense in the 1.0 days but this has been broken for a long time. Removing it from default remote config. If you inadvertently click those buttons, depending on your remote, channels might get changed to 4 or 8.

FINDERIDs

Finderids should ONLY be configured if you meet ALL of the following requirements:

1) You don't have a static WAN IP address. Note: many service providers don't regularly change your external ip address. My IP address hasn't changed in two years and probably won't unless I change out my router so it would get a new IP address from my providers' DHCP server. So, if you're in the same boat as me you probably don't need my service and can manage on the rare occasions when your ip address does change.
2) You don't already subscribe to a Dynamic DNS service like dyndns.org or something similar.

3) You actually intend to connect to your server from outside your local network.
4) (Rant on) You are prepared to make the needed configuration changes on your router and local firewall rules to make the service work by putting in place the required port forwarding and firewall rules. If you're seeing PING failures reported by the server, either fix it or turn if off. You're wasting valuable resources on my cloud server. (Rant off)

That said. If you need to setup up a non one-to-one port map on your router i.e. 65432->8080 because 8080 is being used for something else. You need to give the server a hint on what external port number it uses to verify the port forwarding rules for remote access. In this case add the mapped external port number, in this example 65432, to the finderid with a colon.

Finderid=blahblahblahblah:65432

Remote Control Configuration

The program now accepts a comma separated list of key codes in the button definition. For example, here's a line that makes a button labeled MSNBC and will turn to channel 155.

'MSNBC' : 9,13,13

Not these are the keycodes for the digits not the digits themselves. This is only one example, I'm sure users will come up with their own buttons for common remote control sequences.

Tips and Tricks

Need some help figuring out the proper key codes for your remote? Thanks to f520k510 for this tip.

If you have a prohd or solo, install slingplayer 2.0.4. Open sbcore.ini located in C:\ProgramData\Sling Media\SlingPlayer\2.0 and add DebugRemote=1 under [main] Then, when you hover over each button on the actual remote, it will show the mapped key code.