FlashChat Socket Server

What is it?

The traditional mode of FlashChat operation is a periodic ping from the client SWF to the web server, checking for new messages and other events. The good thing about this method is that it's easy to install – just upload all files to your web server and run install.php from a browser – and it does not require a dedicated server. The drawback is that a lot of system resources are consumed during operation. If you exceed about 20 active chatters, then you run a risk of slowing the server down and consuming excessive CPU and memory resources.

A Socket Server solves this problem by keeping a dedicated line of communication open between the server and client, so continual pings by all clients are no longer needed. This substantially reduces server load, and allows for very quick messaging.

What do I need?

You must have a dedicated server, or the ability to run PHP processes on your remote host. Most *shared* web hosts do not permit this. You should consult with your web host to determine if they will allow this or not. If you have a dedicated server it's probably not an issue, because you can typically run any processes that you wish. You'll need some form of terminal access to your dedicated server.

PHP Sockets must be enabled on your server. To read more about how to do this, please see this reference: http://us2.php.net/manual/en/ref.sockets.php. The sockets extension must be enabled at compile time with the `--enable-sockets` option.

How do I start it?

Please use the following steps to enable the Socket Server:

1) Open /inc/config.php using a good text editor, like EditPlus or TextPad. Set the `enableSocketServer` line to "true". You can download a free trial version of TextPad from http://www.textpad.com

2) Open the /inc/patServer/config.socketSrv.php file, and edit the "host" value to your host name, and adjust any other values as you see fit. Be sure that the specified "port" is available: it should not be blocked by any server software, such as a firewall, and it should not be listening to any other Socket Server (FlashChat or otherwise).

3) If you are using *Microsoft Windows…*

   You may use the php.exe CLI version instead. This version can be found in your php\cli folder, which is part of the standard PHP distribution. You should copy the php\cli\php.exe file to the PHP root folder, where your current php.exe file is located. You may wish to rename the php.exe file from the cli folder to phpcli.exe, to avoid confusion with the existing php.exe file. Ensure that the path in runServer.bat correctly points to this file instead of your old php.exe file.

   Execute `winsrv.exe` or `winsrvHide.exe` by simply double-clicking on it. Those files are in FlashChat's /inc/patServer/ folder. You will use this application to start and shutdown the socket server. The difference between winsrv.exe and winsrvHide.exe is that winsrvHide.exe hides the DOS window, and instead runs the socket server in the Windows task bar. You *must* keep these .exe files in the /inc/patServer/ folder, although if you wish to run these executables from another location, you can create a shortcut to them.

There is a file called “winsrv.ini” in the /inc/patServer/ folder. You do NOT need to make any changes to this file. The variables in this file will be updated automatically by the .exe.

4) If you are using *Unix or Linux…*

   Go to the “/inc/patServer/linux” directory and follow the instructions in the crontab_todo.txt file.

5) Start FlashChat. You should now see a very small message latency – much less than the 3 seconds which are normally required, and your server CPU and memory load will be substantially reduced. This means that you can now accommodate hundreds of simultaneous active chatters.

What if it doesn’t work?

First, try installing FlashChat without the socket server option to ensure that your PHP and MySQL settings are correct. This is always a good idea so that you can at least confirm that the problem is with the socket server operation, and not with some other part of FlashChat.

If you get a blank, blue screen when attempting to start FlashChat with the socket server option, and you have already confirmed that FlashChat works in the default configuration, you can try the following:

1) In config.socketSrv.php, set:

   ```
   'debug_mode' => 'text';
   ```

   and

   ```
   'log_file' => 'socketServer.log';
   ```

   This will log all socket server errors to a text file. Then, re-try the socket server to begin the error logging.

   Open the /inc/patServer/ folder and check the `socketServer.log` file. If there are no messages in this file, then try to restart the socket server again. Try to interpret the error messages as best as you can.

2) Carefully scan the `config.socketSrv.php` file for incorrect settings. It’s possible that the value of *host* or *port* is not correct.

3) Try re-installing FlashChat from scratch and re-start the socket server. Sometimes repeating a sequence of steps reveals an error in the process.

4) Instead of using winsrv.exe, use \inc\patServer\runServer.bat, so that you can confirm the path to php.exe, and the path to \inc\patServer\runServer.php. You can use \inc\patServer\runServer.bat to start your server. Check for debug information in socketServerDBG.log

5) Some users have observed this message:

   ```
   [root@sls-ea23p2 linux]# ./fcssd
   Flash Chat socket server is not running, starting it...
   ./fcssd: line 14: screen: command not found
   Socket server could not be started.
   ```

   This means that you need to install the **screen** package before using the Socket Server. This is not a bug in FlashChat.

6) Check to ensure that PHP Sockets are enabled in your PHP setup. You can check for this by creating a simple PHP file with only this line:

```
<?php phpinfo(); ?>
```

7) If you are using *Microsoft Windows* and sockets are disabled, then before starting the Socket Server you'll need to make two changes to your php.ini file:

   (a) enable sockets by un-commenting this line:

   ```
   extension=php_sockets.dll;
   ```

   (b) change the value of `extension_dir` from "./" to the full path to your extensions directory (e.g. "c:\php\extensions"); This may vary from server to server.

FAQs

Q: What is the difference between the .exe files and runServer.bat?
A: Functionally, there is no difference. runServer.bat is provided for users who do not feel comfortable running a foreign executable on their server.

Q: Do the paths in runServer.bat need to be in double-quotes?
A: Yes, if you have spaces in the path. To be safe, I suggest leaving them there.

Q: Should winsrv.exe be placed in the Start menu of Windows? Should it be set up as a Windows service?
A: This is not necessary. In winsrv.exe there is an option to "auto start server with Windows".

Q: Can both runServer.bat and winsrv.exe run simultaneously? What about winsrvHide.exe?
A: The server can use only one port at a time, so you should use only one of these to start the Socket Server.

Q: Which versions of Linux work with the Socket Server? Will it work on Unix servers?
A: It has been tested on SuSE Linux 9.0, where PHP and MySQL were compiled with the *default* options. This will probably work on most Linux clones, and some Unix systems, but that hasn't been rigorously tested.

Q: Does it work with EasyPHP?
A: FlashChat 4.4.0 and higher should work with EasyPHP. You will need to do a fresh install of FlashChat if you have a previous version already installed.

Enjoy FlashChat! Any feedback on the Socket Server is appreciated, and can be posted on the TUFaT.com Forum: http://www.tufat.com/phpBB2/ in the "Socket Server" forum.

Special thanks to the RuAnSoft development team (www.ruansoft.net) for creating the Socket Server extension for FlashChat, and to Kelly Jones for helping test the Socket Server.

cheers,
Darren