How to use

SpeedOf.Me API in your website

Version 2.8

To use SpeedOf.Me API in your site, you first need to include the JavaScript library from http://speedof.me/api/api.js in your web page <head> tag:

```
<script src="//speedof.me/api/api.js" type="text/javascript"></script>
```

After api.js is completely loaded, you can configure and use `SomApi` object in your JavaScript source code. All initial settings must be done before starting a test.

`SomApi` Object

`SomApi.account`

It's your account number (or API Key). You can get it from http://speedof.me/api/user if you don't have one already. Account number looks like this: "SOM123456543210".

`SomApi.domainName`

It's your website domain or sub-domain. It should be something like this: "speedtest.example.com".

Please keep in mind that the 'Domain' in the [User Settings](#), 'domainName' in the JavaScript code and the actual website domain that you are testing on must all match.

`SomApi.config`

This object is used to configure the speed test and the way it behaves. Here you can see this object with its default property values:
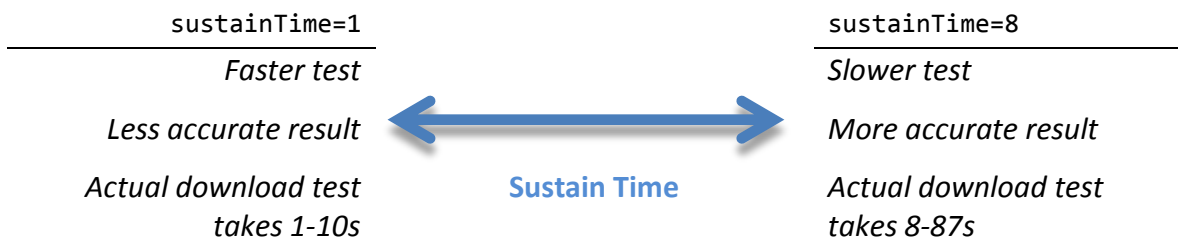
```
SomApi.config = {
        sustainTime: 4,
        testServerEnabled: true,
        userInfoEnabled: true,
        latencyTestEnabled: true,
        uploadTestEnabled: true,
        progress: {
                enabled: true,
                verbose: false
        }
}
```

Now let's take a look at each property.

`SomApi.config.sustainTime`

As you may know, SpeedOf.Me website sustains the download for 8 seconds for the sake of accuracy (read more here: http://speedof.me/howitworks.html).

You can adjust this time to best suit your needs. You may choose from 1 to 8 seconds. (Default value is 4 seconds). The higher this number, the more accurate and time consuming the test would be.

sustainTime=1		sustainTime=8
Faster test		*Slower test*
Less accurate result	**Sustain Time**	*More accurate result*
Actual download test takes 1-10s		*Actual download test takes 8-87s*

You also need to add some time for the upload test. Since the upload sample file size is determined based on the last downloaded sample, `sustainTime` can indirectly affect the upload test sample file size and the entire speed test time.

`SomApi.config.testServerEnabled`

Determines whether to find the test server name or not. If you don't care about what test server has been used for the test, you may disable this feature by setting its value to `false`. The default value is `true`.

`SomApi.config.userInfoEnabled`

Determines whether to find the user information such as IP address and hostname or not. If you don't need this kind of information, you may disable this feature by setting its value to `false`. The default value is `true`.

`SomApi.config.latencyTestEnabled`

Determines whether to perform latency (ping) and jitter test or not. If you don't want to do this test, you may disable this feature by setting its value to `false`. The default value is `true`.

`SomApi.config.uploadTestEnabled`

Determines whether to perform upload test or not. If you want to measure download speed only, you may disable this feature by setting its value to `false`. The default value is `true`.

SomApi.config.progress

This is an object itself and is used to configure the progress event feature:

```
SomApi.config.progress = {
        enabled: true,
        verbose: false
}
```

SomApi.config.progress.enabled

Determines whether to send progress events or not. By enabling it, onProgress event will be activated. If you don't want to show real-time progress to the user, you may disable this feature by setting its value to false. If enabled, SomApi.onProgress callback will be called whenever there is a progress in the test. The default value is true.

SomApi.config.progress.verbose

This only works if SomApi.config.progress.enabled is true. If enabled, it includes and sends real-time current speed in the progress event. This is useful when you want to show and visualize whatever is happening behind the scene (like what SpeedOf.Me public website does). See SomApi.onProgress for more information. The default value is false.

SomApi.startTest

Call this function to start the test. All test configuration and settings must be done before calling this function.

SomApi.onTestCompleted

When the test is completed, the callback to this method will be called and you will be notified that the test is over and the test result is ready. Test result will be passed as an event args to the callback function. The testResult object has the following properties:

```
testResult = {
        download,
        upload,
        latency,
        jitter,
        testServer,
        ip_address,
        hostname
}
```

testResult.download: Download speed in Mbps.

testResult.upload: Upload speed in Mbps. It will be empty string if
SomApi.config.uploadTestEnabled is false.

testResult.latency: Latency (ping) in milliseconds. It will be empty string if
SomApi.config.latencyTestEnabled is false.

testResult.jitter: Jitter in milliseconds. It will be empty string if
SomApi.config.latencyTestEnabled is false.

testResult.testServer: Test server name. It will be empty string if
SomApi.config.testServerEnabled is false.

testResult.ip_address: User IP Address. It will be empty string if
SomApi.config.userInfoEnabled is false.

testResult.hostname: User ISP host name. It will be empty string if
SomApi.config.userInfoEnabled is false.

You can always access a copy of the test result directly by reading SomApi.testResult.

SomApi.onProgress

If SomApi.config.progress.enabled is true, the callback to this method will be called
whenever there is a progress in the test. It receives a progressObject as its argument which
includes the following properties:

```
progressObject = {
      type,
      pass,
      percentDone,
      currentSpeed
}
```


progressObject.type: Progress type can be "latency", "download" or "upload". It
helps you know what to expect from other progressObject properties.

progressObject.pass: It is the current test pass. It is only meaningful for progress
types of "download" or "upload" and shows the current pass of the test process. For
download test it can be 1 to 11 and for upload test it is always 1. *(With current
algorithm. It may change in future)* and for latency test it is always an empty string.

progressObject.percentDone: It is the percentage of competition for the latency
test or the current test pass in download/upload tests. It's a number between 0 and
100. It does not show the percentage of the entire test.
For instance, if the download test occurs in five passes and the upload test in one pass,
percentDone will be counted from 0 to 100 six times.

progressObject.currentSpeed: It is the real-time current speed in download/upload test. It will be empty string if SomApi.config.progress.verbose is `false` or if the progress type is "latency".

SomApi.onError

You may specify a callback to this method. If something goes wrong, the error details will be passed to your callback function. You may or may not show the error details to the users. The error object has the following properties:

```
error = {
        code,
        message
}
```

Sample Code

The below source code is a simple example of using SpeedOf.Me API. You can see this sample page in action here: http://speedof.me/api/doc/sample.html

If you want to see a more advanced sample code which uses most recent features like progress event, please visit:

http://speedof.me/api/doc/samplecode_advanced.html (Source code)
http://speedof.me/api/doc/sample_advanced.html (Hosted)

```html
<html>
<head>
      <script src="//speedof.me/api/api.js" type="text/javascript"></script>
</head>
<body>
<h2>SpeedOf.Me API Consumer - Sample Page</h2>
<button id="btnStart" type="button" onclick="btnStartClick()"><h3>Start Test</h3></button>
<div id="msg"></div>
<script type="text/javascript">
      SomApi.account = "SOM524dca9d0aae6";   //your API Key here
      SomApi.domainName = "speedof.me";       //your domain or sub-domain here
      SomApi.config.sustainTime = 4;
      SomApi.onTestCompleted = onTestCompleted;
      SomApi.onError = onError;

      var msgDiv = document.getElementById("msg");

      function btnStartClick() {
             msgDiv.innerHTML = "<h3>Speed test in progress. Please wait...</h3>";
             SomApi.startTest();
      }

      function onTestCompleted(testResult) {
             msgDiv.innerHTML =
             "<h3>"+
                    "Download: "   +testResult.download +"Mbps <br/>"+
                    "Upload: "     +testResult.upload    +"Mbps <br/>"+
                    "Latency: "    +testResult.latency  +"ms <br/>"+
                    "Jitter: "     +testResult.jitter   +"ms <br/>"+
                    "Test Server: "+testResult.testServer +"<br/>"+
                    "IP: "         +testResult.ip_address +"<br/>"+
                    "Hostname: "   +testResult.hostname +"<br/>"+
             "</h3>";
      }

      function onError(error) {
             msgDiv.innerHTML = "Error "+ error.code + ": "+error.message;
      }
</script>
</body>
</html>
```

Please feel free to contact our technical support team for questions and comments about SpeedOf.Me API.