

removing
the “*suck*” out of

WEBSUCKETS

&

start building those real-time

ENTERPRISE

ready connections





whoami*



nodejitsu



3rdEden



3rd-Eden

Let's talk about WebSockets



draft-hixie-thewebsocketprotocol - XX

version	released	details
0	Jan 2009	Initial version
53	Oct 2009	Sub protocol
76	May 2010	

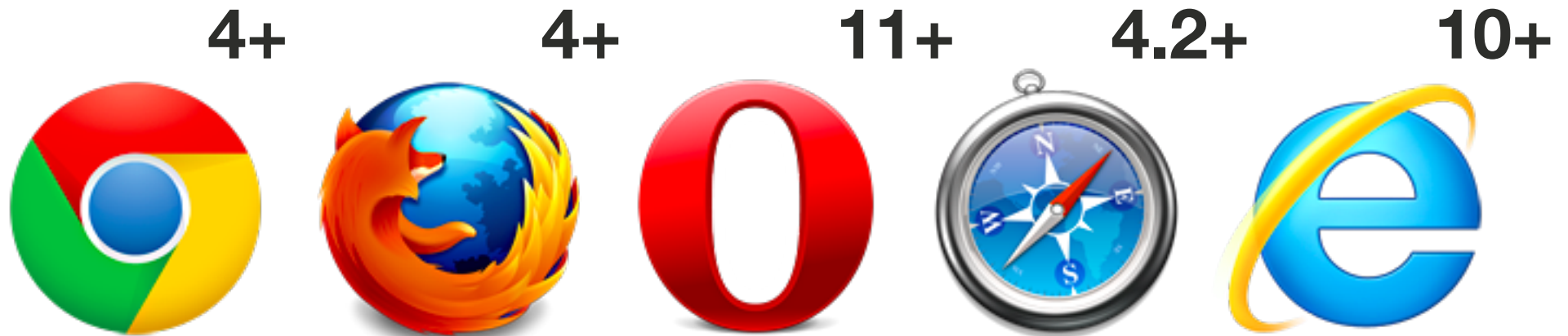
draft-ietf-hybi-thewebsocketprotocol - XX

version	released	details
I	Aug 2010	Binary support
4	Jan 2011	Security issues
14	Sep 2011	Versioning
RFC 6455	Dec 2011	Final

**Ok, I get it there
are many protocols**



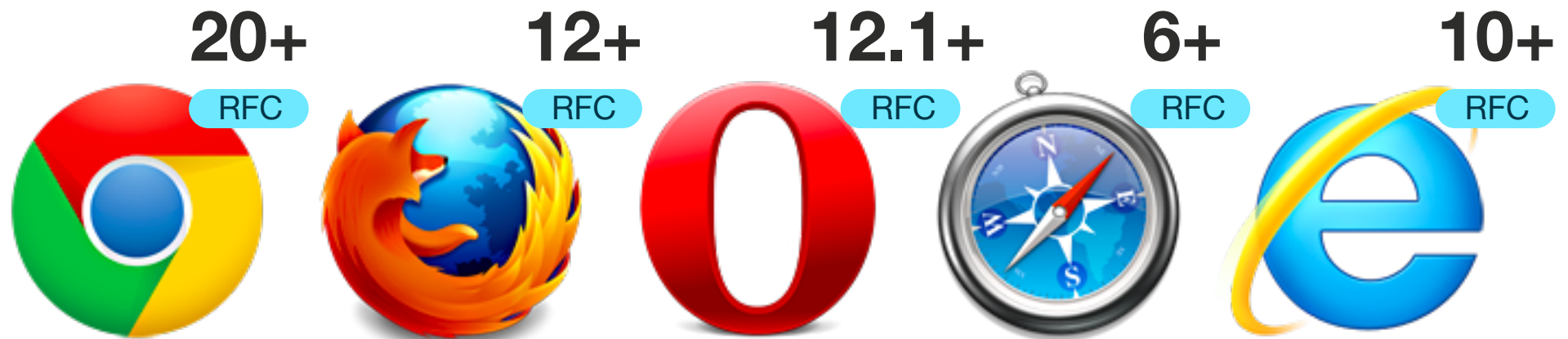
Supports a WebSocket protocol



Chrome for android 18+
Firefox for android 15+
Opera Mobile 12+

LULZ, no android browser

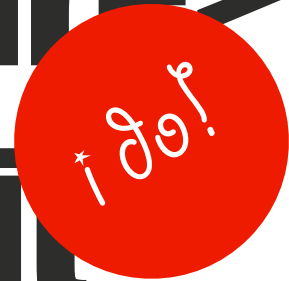
Supports latest RFC 6455 protocol



RFC Chrome for android 18+
RFC Firefox for android 15+
RFC Opera Mobile 12+

TROLOLOL no android browser

**But, I don't `</care>`
about old shit**





“known” issues



Usage or detecting a HTTP proxy
(AutoProxyDiscovery) crashes < Safari
5.1.4 and Mobile Webkit

This includes tabs and full browser crashes, not “feature” detectable



```
if (  
  // target safari browsers  
  $.browser.safari  
  
  // not chrome  
  && !$.browser.chrome  
  
  // and correct webkit version  
  && parseFloat($.browser.version) < 534.54  
) {  
  // don't use websockets  
}
```



Writing to a closed WebSocket
connection can crash the browser & tabs

Caused by a race condition on Mobile devices



```
var ws = new WebSocket("wss://localhost:8080/");

ws.onmessage = function(event) {
  // wrap sends in a setTimeout out to allow the readyState
  // to be correctly set to closed
  setTimeout(function () {
    ws.send("g'day realtimeconf");
  });
};
```



```
var ws = new WebSocket("wss://localhost:8080/");

ws.onmessage = function(event) {
    // wrap sends in a setTimeout out to allow the readyState
    // to be correctly set to closed, make this only happen
    // on mobile devices
    if (mobile) return setTimeout(function () {
        ws.send("g'day realtimeconf");
    });

    ws.send("g'day realtimeconf");
};
```



3G doesn't always work with WebSocket
or causes a crash

Not detectable



```
var ua = navigator.userAgent.toLowerCase();

// detect all possible mobile phones to filter out
// websockets
if (
    ~ua.indexOf('mobile')
    || ~ua.indexOf('android')
    || .. and more ..
) {
    // don't use websockets
}
```



Pressing ESC in Firefox will drop the established connection. Even after the page has fully loaded.

Capture the event early and try to cancel it, still happening in latest firefox but they are “working” on it



```
$( 'body' ).keydown(function (e) {  
    // make sure that you capture the `esc` key and prevent  
    // it's default action from happening  
    if (e.which === 27) e.preventDefault();  
});
```



Sending “invalid” UTF-8 can drop the connection, for example emoji’s

escape & encodeURI your data, yes both



```
var ws = new WebSocket("wss://localhost:8080/");

ws.onopen = function(event) {
  // encode and then unescape all messages that contain
  // utf8, and also user input
  ws.send(unescape(encodeURIComponent(💩)));
};
```




Firefox doesn't connect to ws:// from a secure https page.

they called it a security “feature”, but I call it annoying



Safari doesn't allow you to connect using self signed certificates

if you do this in production you are a nut head, but it can be annoying for development

**It can't be worse
than that right?**





**connection
blockage**

doing painful research



browser



firewall
anti-virus
browser plugins



server

port testing



**~3% of all requests on port 4000
were blocked**

out of the unique 100k connections tested



**enterprise proxies usually block
everything except port
80,443,843**

and virus scanners usually target port 80 for scanning & blocking

virus scanner & proxy testing



[Forum Start](#) > [English Forums - Battlelog Discussions](#) > [Problems with chat, invites and events? Read this!](#)


Problems with chat, invites and events? Read this!

< 1 2 ... 15 >

Tottenizer

BATTLELOG B2K



 Enlisted: 2011-10-22

2011-10-25 12:08 , edited 2011-10-28 12:13 by Tottenizer

Since beta we have made extensive testing with a lot of anti-virus programs to get around them blocking events and messages from being received by the browser.

We have done all these anti-virus program tests with standard installation with default settings. If you have an anti-virus program in "aggressive", "paranoia", "super safe" or the alike, then this could have an impact.

We are now doing new sets of tests based on the feedback we are getting from you all to be able to find Battlelog from working with each anti-virus respectively. Therefore it is crucial that we get proper feedback on problems with realtime events.

First up:

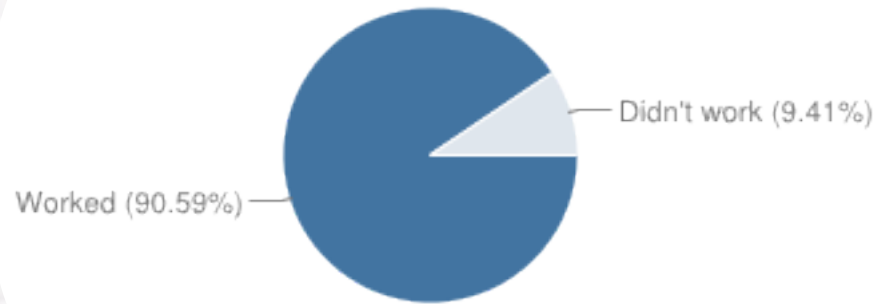
Visit <http://www.adobe.com/software/flash/about/> [adobe.com] and make sure you have version 11 or an update available.

Update your anti-virus to the latest version

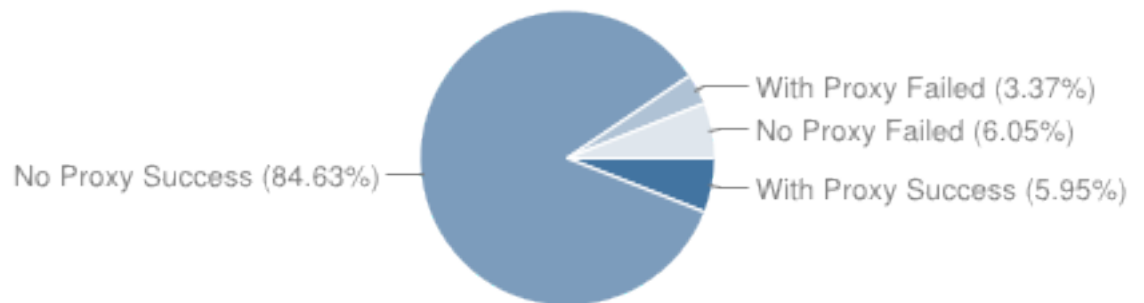
AVG, Bitdefender, Avast, and most other anti-virus programs offer free upgrades to the latest version. Old versions are not up to date and may block legit connections.

Success rate

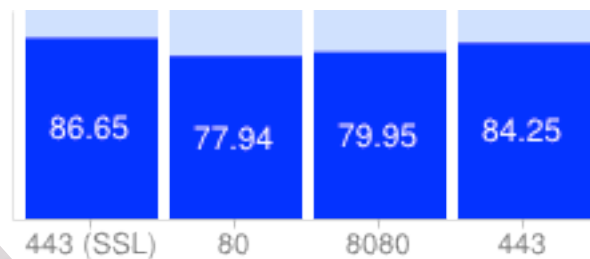
includes SSL & different ports



Proxy breakdown



Port breakdown



tl;dl *to long, didn't listen*

Recommendations

which you should really follow, srsly



Always use SSL



Upgrade from fallbacks

WebSocket



Plugins



Streaming



Polling



JSONP

WebSocket



Polling



JSONP

BLOCKED

WebSocket



Plugins



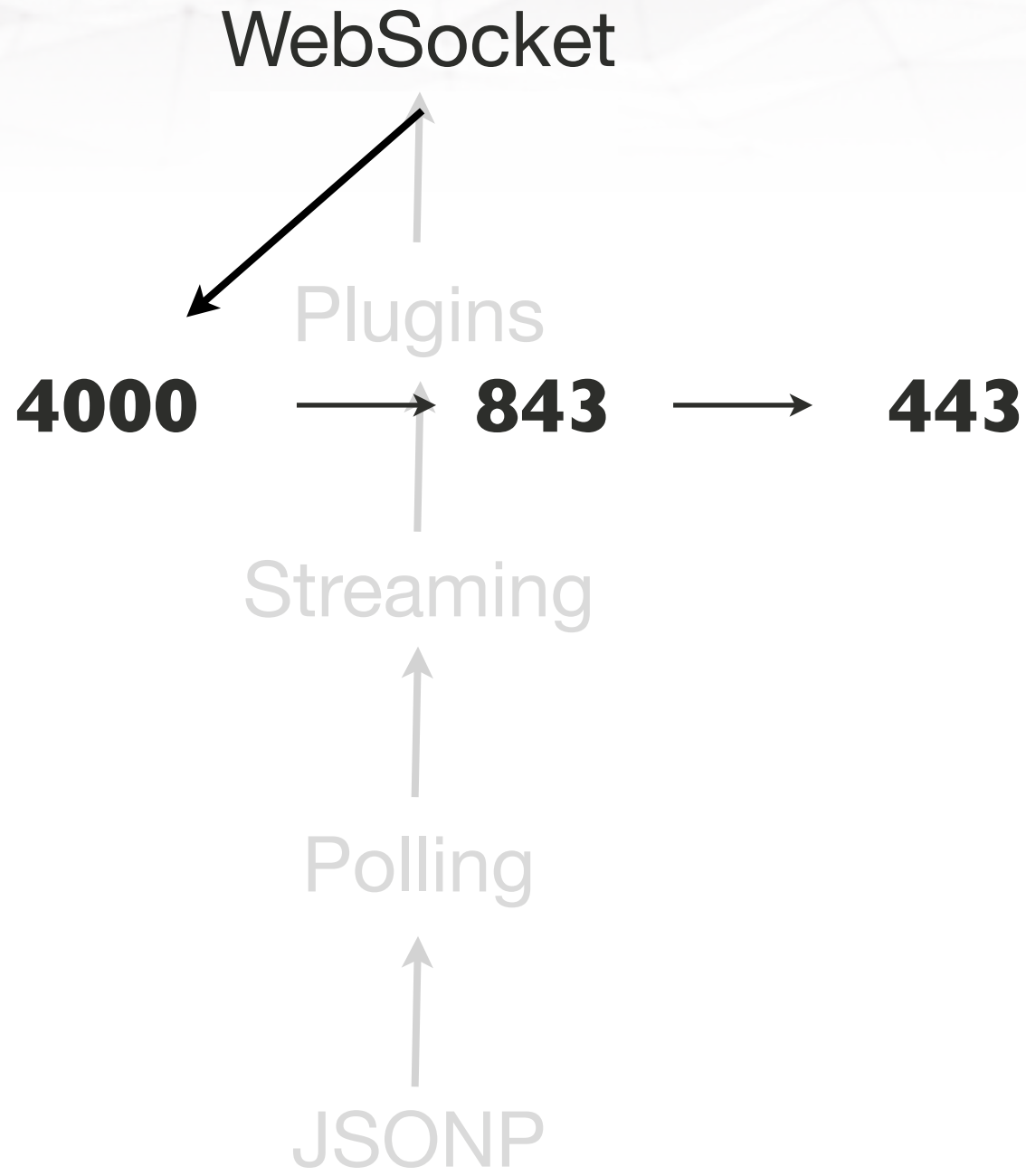
Streaming



Polling



JSONP





**Don't use WebSockets on
mobile**

Educating the web





<http://realtimeplatform.org/>

Sharing is caring



Sharing is caring

```
var indicator = document
    && "MozAppearance" in document.documentElement.style;

if (indicator) {
    setTimeout(function () {
        // creating and removing an iframe is enough to
        // kill a loading indicator
        var iframe = document.createElement('iframe');
        document.body.appendChild(iframe);
        document.body.removeChild(iframe);
    }, 100);
}
```





keep your eyes on it

<http://realtimeplatform.org/>



That's all Folks!



That's all folks