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## Especificação da sinalização

### 1. Especificação da sinalização:

#### a. Comunicação de voz:

Requisição	Resposta
GET /demos/ HTTP/1.1 Host: hoogrtc.ifsc.casa Connection: keep-alive Pragma: no-cache Cache-Control: no-cache DNT: 1 Upgrade-Insecure-Requests: 1 User-Agent: Mozilla/5.0(X11; Linux x86_64) AppleWebKit/537.3(KHTML,like Gecko) Chrome/78.0.3904.108 Safari/537.36 Sec-Fetch-User: ?1 Accept:text/html,application/xhtml+xml,application/xml;q=0.9,image/webp,image/apng,*/*;q=0.8,application/signed-exchange;v=b3 Sec-Fetch-Site: none Sec-Fetch-Mode: navigate Accept-Encoding: gzip, deflate, br Accept-Language: pt-BR,pt;q=0.9,en-US;q=0.8,en;q=0.7,pt-PT;q=0.6 Cookie: io=b3OHs8YESTERr9lzAAGa	HTTP/1.1 200 OK Server: nginx/1.14.0 (Ubuntu) Date: Wed, 11 Dec 2019 22:23:12 GMT Content-Type: text/html; charset=UTF-8 Transfer-Encoding: chunked Connection: keep-alive X-Powered-By: Express Cache-Control: public, max-age=0 Last-Modified: Tue, 10 Dec 2019 16:52:15 GMT ETag: W/"dd7-16ef0b9bfed" Content-Encoding: gzip
GET /demos/demo_audio_only.html HTTP/1.1 Host: hoogrtc.ifsc.casa Connection: keep-alive Pragma: no-cache Cache-Control: no-cache Upgrade-Insecure-Requests: 1 DNT: 1 User-Agent: Mozilla/5.0(X11;Linux x86_64) AppleWebKit/537.36(KHTML,like Gecko) Chrome/78.0.3904.108 Safari/537.36 Sec-Fetch-User: ?1 Accept:text/html,application/xhtml+xml,application/xml;q=0.9,image/webp,image/apng,*/*;q=0.8,application/signed-exchange;v=b3 Sec-Fetch-Site: same-origin Sec-Fetch-Mode: navigate Referer: https://hoogrtc.ifsc.casa/demos/ Accept-Encoding: gzip, deflate, br Accept-Language: pt-BR,pt;q=0.9,en-US;q=0.8,en;q=0.7,pt-PT;q=0.6 Cookie: io=b3OHs8YESTERr9lzAAGa	HTTP/1.1 200 OK Server: nginx/1.14.0 (Ubuntu) Date: Wed, 11 Dec 2019 22:28:26 GMT Content-Type: text/html; charset=UTF-8 Transfer-Encoding: chunked Connection: keep-alive X-Powered-By: Express Cache-Control: public, max-age=0 Last-Modified: Tue, 10 Dec 2019 16:50:14 GMT ETag: W/"18e9-16ef0b7e5ec" Content-Encoding: gzip
GET /demos/demo_audio_only.html HTTP/1.1	HTTP/1.1 200 OK

Host: hoogrtc.ifsc.casa Connection: keep-alive Pragma: no-cache Cache-Control: no-cache Upgrade-Insecure-Requests: 1 DNT: 1 User-Agent: Mozilla/5.0 (X11; Linux x86_64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/78.0.3904.108 Safari/537.36 Sec-Fetch-User: ?1 Accept: text/html,application/xhtml+xml,application/xml;q=0.9,image/webp,image/apng,*/*;q=0.8,application/signed-exchange;v=b3 Sec-Fetch-Site: same-origin Sec-Fetch-Mode: navigate Referer: https://hoogrtc.ifsc.casa/demos/ Accept-Encoding: gzip, deflate, br Accept-Language: pt-BR,pt;q=0.9,en-US;q=0.8,en;q=0.7,pt-PT;q=0.6 Cookie: io=b3OHs8YESTERr9IzAAGa	Server: nginx/1.14.0 (Ubuntu) Date: Wed, 11 Dec 2019 22:28:26 GMT Content-Type: text/html; charset=UTF-8 Transfer-Encoding: chunked Connection: keep-alive X-Powered-By: Express Cache-Control: public, max-age=0 Last-Modified: Tue, 10 Dec 2019 16:50:14 GMT ETag: W/"18e9-16ef0b7e5ec" Content-Encoding: gzip
GET /socket.io/?EIO=3&transport=polling&t=Mxt5dBI HTTP/1.1 Host: hoogrtc.ifsc.casa Connection: keep-alive Pragma: no-cache Cache-Control: no-cache Accept: /*/* DNT: 1 User-Agent: Mozilla/5.0 (X11; Linux x86_64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/78.0.3904.108 Safari/537.36 Sec-Fetch-Site: same-origin Sec-Fetch-Mode: cors Referer: https://hoogrtc.ifsc.casa/demos/demo_audio_only.html Accept-Encoding: gzip, deflate, br Accept-Language: pt-BR,pt;q=0.9,en-US;q=0.8,en;q=0.7,pt-PT;q=0.6 Cookie: io=b3OHs8YESTERr9IzAAGa	HTTP/1.1 200 OK Server: nginx/1.14.0 (Ubuntu) Date: Wed, 11 Dec 2019 22:31:15 GMT Content-Type: text/plain; charset=UTF-8 Content-Length: 103 Connection: keep-alive Access-Control-Allow-Origin: * Set-Cookie: io=Bw3OWhko7LYe-TmGAAGb; Path=/; HttpOnly
POST /socket.io/?EIO=3&transport=polling&t=Mxt5dL1&sid=Bw3OWhko7LYe-TmGAAGb HTTP/1.1 Host: hoogrtc.ifsc.casa Connection: keep-alive Content-Length: 376 Pragma: no-cache Cache-Control: no-cache Accept: /*/* Origin: https://hoogrtc.ifsc.casa User-Agent: Mozilla/5.0 (X11; Linux x86_64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/78.0.3904.108 Safari/537.36 DNT: 1 Content-type: text/plain; charset=UTF-8 Sec-Fetch-Site: same-origin Sec-Fetch-Mode: cors Referer: https://hoogrtc.ifsc.casa/demos/demo_audio_only.html Accept-Encoding: gzip, deflate, br Accept-Language: pt-BR,pt;q=0.9,en-US;q=0.8,en;q=0.7,pt-PT;q=0.6 Cookie: io=Bw3OWhko7LYe-TmGAAGb	HTTP/1.1 200 OK Server: nginx/1.14.0 (Ubuntu) Date: Wed, 11 Dec 2019 22:31:15 GMT Content-Type: text/html Content-Length: 2 Connection: keep-alive Access-Control-Allow-Credentials: true Access-Control-Allow-Origin: https://hoogrtc.ifsc.casa Set-Cookie: io=Bw3OWhko7LYe-TmGAAGb; Path=/; HttpOnly
GET /socket.io/?EIO=3&transport=polling&t=Mxt5dL4&sid=Bw3OWhko7LYe-TmGAAGb HTTP/1.1 Host: hoogrtc.ifsc.casa Connection: keep-alive Pragma: no-cache Cache-Control: no-cache Accept: /*/* DNT: 1 User-Agent: Mozilla/5.0 (X11; Linux x86_64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/78.0.3904.108 Safari/537.36 Sec-Fetch-Site: same-origin	HTTP/1.1 200 OK Server: nginx/1.14.0 (Ubuntu) Date: Wed, 11 Dec 2019 22:31:15 GMT Content-Type: text/plain; charset=UTF-8 Content-Length: 589 Connection: keep-alive Access-Control-Allow-Origin: * Set-Cookie: io=Bw3OWhko7LYe-TmGAAGb; Path=/; HttpOnly

Sec-Fetch-Mode: cors Referer: https://hoogrtc.ifsc.casa/demos/demo_audio_only.html Accept-Encoding: gzip, deflate, br Accept-Language: pt-BR,pt;q=0.9,en-US;q=0.8,en;q=0.7,pt-PT;q=0.6 Cookie: io=Bw3OWhko7LYe-TmGAAGb	
GET wss://hoogrtc.ifsc.casa/socket.io/?EIO=3&transport=websocket&sid=Bw3OWhko7LYe-TmGAAGb HTTP/1.1 Host: hoogrtc.ifsc.casa Connection: Upgrade Pragma: no-cache Cache-Control: no-cache User-Agent: Mozilla/5.0 (X11; Linux x86_64) AppleWebKit/537.36 (KHTML, like Gecko)Chrome/78.0.3904.10 8 Safari/537.36 Upgrade: websocket Origin: https://hoogrtc.ifsc.casa Sec-WebSocket-Version: 13 Accept-Encoding: gzip, deflate, br Accept-Language: pt-BR,pt;q=0.9,en-US;q=0.8,en;q=0.7,pt-PT;q=0.6 Sec-WebSocket-Key: m3zhm3vHaFVMhepxPX/Zng== Sec-WebSocket-Extensions: permessage-deflate; client_max_window_bits	HTTP/1.1 101 Switching Protocols Server: nginx/1.14.0 (Ubuntu) Date: Wed, 11 Dec 2019 22:31:16 GMT Connection: upgrade Upgrade: websocket Sec-WebSocket-Accept: eTdtBQnLVUFc6MSoLonFv7sx/Ak= Sec-WebSocket-Extensions: permessage-deflate
POST /socket.io/?EIO=3&transport=polling&t=Mxt5dRG&sid=Bw3OWhko7LYe-TmGAAGb HTTP/1.1 Host: hoogrtc.ifsc.casa Connection: keep-alive Content-Length: 58 Pragma: no-cache Cache-Control: no-cache Accept: */* Origin: https://hoogrtc.ifsc.casa User-Agent: Mozilla/5.0 (X11; Linux x86_64) AppleWebKit/537.36 (KHTML, like Gecko)Chrome/78.0.3904.10 8 Safari/537.36 DNT: 1 Content-type: text/plain;charset=UTF-8 Sec-Fetch-Site: same-origin Sec-Fetch-Mode: cors Referer: https://hoogrtc.ifsc.casa/demos/demo_audio_only.html Accept-Encoding: gzip, deflate, br Accept-Language: pt-BR,pt;q=0.9,en-US;q=0.8,en;q=0.7,pt-PT;q=0.6 Cookie: io=Bw3OWhko7LYe-TmGAAGb	HTTP/1.1 200 OK Server: nginx/1.14.0 (Ubuntu) Date: Wed, 11 Dec 2019 22:31:16 GMT Content-Type: text/html Content-Length: 2 Connection: keep-alive Access-Control-Allow-Credentials: true Access-Control-Allow-Origin: https://hoogrtc.ifsc.casa Set-Cookie: io=Bw3OWhko7LYe-TmGAAGb; Path=/; HttpOnly
GET /socket.io/?EIO=3&transport=polling&t=Mxt5dRL&sid=Bw3OWhko7LYe-TmGAAGb HTTP/1.1 Host: hoogrtc.ifsc.casa Connection: keep-alive Pragma: no-cache Cache-Control: no-cache Accept: */* DNT: 1 User-Agent: Mozilla/5.0 (X11; Linux x86_64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/78.0.3904.10 8 Safari/537.36 Sec-Fetch-Site: same-origin Sec-Fetch-Mode: cors Referer: https://hoogrtc.ifsc.casa/demos/demo_audio_only.html Accept-Encoding: gzip, deflate, br Accept-Language: pt-BR,pt;q=0.9,en-US;q=0.8,en;q=0.7,pt-PT;q=0.6 Cookie: io=Bw3OWhko7LYe-TmGAAGb	HTTP/1.1 200 OK Server: nginx/1.14.0 (Ubuntu) Date: Wed, 11 Dec 2019 22:31:16 GMT Content-Type: text/plain; charset=UTF-8 Content-Length: 25 Connection: keep-alive Access-Control-Allow-Origin: * Set-Cookie: io=Bw3OWhko7LYe-TmGAAGb; Path=/; HttpOnly

b. Comunicação de Vídeo:

GET /socket.io/?EIO=3&transport=polling&t=MyBYXX5 HTTP/1.1 Host: hoogrtc.ifsc.casa Connection: keep-alive Pragma: no-cache Cache-Control: no-cache Accept: */* DNT: 1 User-Agent: Mozilla/5.0 (X11; Linux x86_64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/78.0.3904.108 Safari/537.36 Sec-Fetch-Site: same-origin Sec-Fetch-Mode: cors Referer: https://hoogrtc.ifsc.casa/demos/demo_audio_video.html Accept-Encoding: gzip, deflate, br Accept-Language: pt-BR,pt;q=0.9,en-US;q=0.8,en;q=0.7,pt-PT;q=0.6 Cookie: io=BIB2BV6Viv1r2YjXAAHH	HTTP/1.1 200 OK Server: nginx/1.14.0 (Ubuntu) Date: Sun, 15 Dec 2019 21:49:57 GMT Content-Type: text/plain; charset=UTF-8 Content-Length: 103 Connection: keep-alive Access-Control-Allow-Origin: * Set-Cookie: io=0muoD0qjVhC5liEOAAHI; Path=/; HttpOnly
POST /socket.io/?EIO=3&transport=polling&t=MyBYXZr&sid=0muoD0qjVhC5liEOAAHI HTTP/1.1 Host: hoogrtc.ifsc.casa Connection: keep-alive Content-Length: 377 Pragma: no-cache Cache-Control: no-cache Accept: */* Origin: https://hoogrtc.ifsc.casa User-Agent: Mozilla/5.0 (X11; Linux x86_64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/78.0.3904.108 Safari/537.36 DNT: 1 Content-type: text/plain; charset=UTF-8 Sec-Fetch-Site: same-origin Sec-Fetch-Mode: cors Referer: https://hoogrtc.ifsc.casa/demos/demo_audio_video.html Accept-Encoding: gzip, deflate, br Accept-Language: pt-BR,pt;q=0.9,en-US;q=0.8,en;q=0.7,pt-PT;q=0.6 Cookie: io=0muoD0qjVhC5liEOAAHI	HTTP/1.1 200 OK Server: nginx/1.14.0 (Ubuntu) Date: Sun, 15 Dec 2019 21:49:57 GMT Content-Type: text/html Content-Length: 2 Connection: keep-alive Access-Control-Allow-Credentials: true Access-Control-Allow-Origin: https://hoogrtc.ifsc.casa Set-Cookie: io=0muoD0qjVhC5liEOAAHI; Path=/; HttpOnly
GET /socket.io/?EIO=3&transport=polling&t=MyBYXZt&sid=0muoD0qjVhC5liEOAAHI HTTP/1.1 Host: hoogrtc.ifsc.casa Connection: keep-alive Pragma: no-cache Cache-Control: no-cache Accept: */* DNT: 1 User-Agent: Mozilla/5.0 (X11; Linux x86_64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/78.0.3904.108 Safari/537.36 Sec-Fetch-Site: same-origin Sec-Fetch-Mode: cors Referer: https://hoogrtc.ifsc.casa/demos/demo_audio_video.html Accept-Encoding: gzip, deflate, br Accept-Language: pt-BR,pt;q=0.9,en-US;q=0.8,en;q=0.7,pt-PT;q=0.6 Cookie: io=0muoD0qjVhC5liEOAAHI	HTTP/1.1 200 OK Server: nginx/1.14.0 (Ubuntu) Date: Sun, 15 Dec 2019 21:49:57 GMT Content-Type: text/plain; charset=UTF-8 Content-Length: 777 Connection: keep-alive Access-Control-Allow-Origin: * Set-Cookie: io=0muoD0qjVhC5liEOAAHI; Path=/; HttpOnly
POST /socket.io/?EIO=3&transport=polling&t=MyBYXcW&sid=0muoD0qjVhC5liEOAAHI HTTP/1.1 Host: hoogrtc.ifsc.casa Connection: keep-alive Content-Length: 58	HTTP/1.1 200 OK Server: nginx/1.14.0 (Ubuntu) Date: Sun, 15 Dec 2019 21:49:57 GMT Content-Type: text/html Content-Length: 2 Connection: keep-alive

Pragma: no-cache Cache-Control: no-cache Accept: /*/* Origin: https://hoogrtc.ifsc.casa User-Agent: Mozilla/5.0 (X11; Linux x86_64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/78.0.3904.108 Safari/537.36 DNT: 1 Content-type: text/plain; charset=UTF-8 Sec-Fetch-Site: same-origin Sec-Fetch-Mode: cors Referer: https://hoogrtc.ifsc.casa/demos/demo_audio_video.html Accept-Encoding: gzip, deflate, br Accept-Language: pt-BR,pt;q=0.9,en-US;q=0.8,en;q=0.7,pt-PT;q=0.6 Cookie: io=0muoD0qjVhC5liEOAAHI	Access-Control-Allow-Credentials: true Access-Control-Allow-Origin: https://hoogrtc.ifsc.casa Set-Cookie: io=0muoD0qjVhC5liEOAAHI; Path=/; HttpOnly
GET /socket.io/?EIO=3&transport=polling&t=MyBYXcb&sid=0muoD0qjVhC5liEOAAHI HTTP/1.1 Host: hoogrtc.ifsc.casa Connection: keep-alive Pragma: no-cache Cache-Control: no-cache Accept: /*/* DNT: 1 User-Agent: Mozilla/5.0 (X11; Linux x86_64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/78.0.3904.108 Safari/537.36 Sec-Fetch-Site: same-origin Sec-Fetch-Mode: cors Referer: https://hoogrtc.ifsc.casa/demos/demo_audio_video.html Accept-Encoding: gzip, deflate, br Accept-Language: pt-BR,pt;q=0.9,en-US;q=0.8,en;q=0.7,pt-PT;q=0.6 Cookie: io=0muoD0qjVhC5liEOAAHI	HTTP/1.1 200 OK Server: nginx/1.14.0 (Ubuntu) Date: Sun, 15 Dec 2019 21:49:57 GMT Content-Type: text/plain; charset=UTF-8 Content-Length: 25 Connection: keep-alive Access-Control-Allow-Origin: * Set-Cookie: io=0muoD0qjVhC5liEOAAHI; Path=/; HttpOnly
GET wss://hoogrtc.ifsc.casa/socket.io/?EIO=3&transport=websocket&sid=0muoD0qjVhC5liEOAAHI HTTP/1.1 Host: hoogrtc.ifsc.casa Connection: Upgrade Pragma: no-cache Cache-Control: no-cache User-Agent: Mozilla/5.0 (X11; Linux x86_64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/78.0.3904.108 Safari/537.36 Upgrade: websocket Origin: https://hoogrtc.ifsc.casa Sec-WebSocket-Version: 13 Accept-Encoding: gzip, deflate, br Accept-Language: pt-BR,pt;q=0.9,en-US;q=0.8,en;q=0.7,pt-PT;q=0.6 Cookie: io=0muoD0qjVhC5liEOAAHI Sec-WebSocket-Key: ntg//ZAcUu9RZpHgMojlHg== Sec-WebSocket-Extensions: permessage-deflate; client_max_window_bits	HTTP/1.1 101 Switching Protocols Server: nginx/1.14.0 (Ubuntu) Date: Sun, 15 Dec 2019 21:49:57 GMT Connection: upgrade Upgrade: websocket Sec-WebSocket-Accept: rN4cdvaZh2Rkp8m51LgpyvTX0Jw= Sec-WebSocket-Extensions: permessage-deflate
POST /socket.io/?EIO=3&transport=polling&t=MyBYXf4&sid=0muoD0qjVhC5liEOAAHI HTTP/1.1 Host: hoogrtc.ifsc.casa Connection: keep-alive Content-Length: 166 Pragma: no-cache Cache-Control: no-cache Accept: /*/* Origin: https://hoogrtc.ifsc.casa User-Agent: Mozilla/5.0 (X11; Linux x86_64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/78.0.3904.108 Safari/537.36 DNT: 1 Content-type: text/plain; charset=UTF-8	HTTP/1.1 200 OK Server: nginx/1.14.0 (Ubuntu) Date: Sun, 15 Dec 2019 21:49:57 GMT Content-Type: text/html Content-Length: 2 Connection: keep-alive Access-Control-Allow-Credentials: true Access-Control-Allow-Origin: https://hoogrtc.ifsc.casa Set-Cookie: io=0muoD0qjVhC5liEOAAHI; Path=/; HttpOnly

Sec-Fetch-Site: same-origin Sec-Fetch-Mode: cors Referer: https://hoogrtc.ifsc.casa/demos/demo_audio_video.html Accept-Encoding: gzip, deflate, br Accept-Language: pt-BR;q=0.9,en-US;q=0.8,en;q=0.7,pt-PT;q=0.6 Cookie: io=0muoD0qjVhC5liEOAAHI	
GET /socket.io/?EIO=3&transport=polling&t=MyBYXfB&sid=0muoD0qjVhC5liEOAAHI HTTP/1.1 Host: hoogrtc.ifsc.casa Connection: keep-alive Pragma: no-cache Cache-Control: no-cache Accept: /*/* DNT: 1 User-Agent: Mozilla/5.0 (X11; Linux x86_64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/78.0.3904.108 Safari/537.36 Sec-Fetch-Site: same-origin Sec-Fetch-Mode: cors Referer: https://hoogrtc.ifsc.casa/demos/demo_audio_video.html Accept-Encoding: gzip, deflate, br Accept-Language: pt-BR;q=0.9,en-US;q=0.8,en;q=0.7,pt-PT;q=0.6 Cookie: io=0muoD0qjVhC5liEOAAHI	HTTP/1.1 200 OK Server: nginx/1.14.0 (Ubuntu) Date: Sun, 15 Dec 2019 21:49:57 GMT Content-Type: text/plain; charset=UTF-8 Content-Length: 335 Connection: keep-alive Access-Control-Allow-Origin: * Set-Cookie: io=0muoD0qjVhC5liEOAAHI; Path=/; HttpOnly
GET /socket.io/?EIO=3&transport=polling&t=MyBYXho&sid=0muoD0qjVhC5liEOAAHI HTTP/1.1 Host: hoogrtc.ifsc.casa Connection: keep-alive Pragma: no-cache Cache-Control: no-cache Accept: /*/* DNT: 1 User-Agent: Mozilla/5.0 (X11; Linux x86_64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/78.0.3904.108 Safari/537.36 Sec-Fetch-Site: same-origin Sec-Fetch-Mode: cors Referer: https://hoogrtc.ifsc.casa/demos/demo_audio_video.html Accept-Encoding: gzip, deflate, br Accept-Language: pt-BR;q=0.9,en-US;q=0.8,en;q=0.7,pt-PT;q=0.6 Cookie: io=0muoD0qjVhC5liEOAAHI	HTTP/1.1 200 OK Server: nginx/1.14.0 (Ubuntu) Date: Sun, 15 Dec 2019 21:49:57 GMT Content-Type: text/plain; charset=UTF-8 Content-Length: 3 Connection: keep-alive Access-Control-Allow-Origin: * Set-Cookie: io=0muoD0qjVhC5liEOAAHI; Path=/; HttpOnly

c. Comunicação de texto:

<p>GET /socket.io/?EIO=3&amp;transport=polling&amp;t=MyBmyAN HTTP/1.1  Host: hoogrtc.ifsc.casa  Connection: keep-alive  Pragma: no-cache  Cache-Control: no-cache  Accept: */*  DNT: 1  User-Agent: Mozilla/5.0 (X11; Linux x86_64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/78.0.3904.108 Safari/537.36  Sec-Fetch-Site: same-origin  Sec-Fetch-Mode: cors  Referer: https://hoogrtc.ifsc.casa/demos/demo_data_channel_messaging.html  Accept-Encoding: gzip, deflate, br  Accept-Language: pt-BR,pt;q=0.9,en-US;q=0.8,en;q=0.7,pt-PT;q=0.6  Cookie: io=0muoD0qjVhC5IiEOAAHI</p>	<p>HTTP/1.1 200 OK  Server: nginx/1.14.0 (Ubuntu)  Date: Sun, 15 Dec 2019 22:52:56 GMT  Content-Type: text/plain; charset=UTF-8  Content-Length: 103  Connection: keep-alive  Access-Control-Allow-Origin: *  Set-Cookie: io=Lirc-byqvCAdnRp3AAHJ; Path=/; HttpOnly</p>
<p>POST/socket.io/?EIO=3&amp;transport=polling&amp;t=MyBmyDX&amp;sid=Lirc-byqvCAdnRp3AAHJ HTTP/1.1  Host: hoogrtc.ifsc.casa  Connection: keep-alive  Content-Length: 380  Pragma: no-cache  Cache-Control: no-cache  Accept: */*  Origin: https://hoogrtc.ifsc.casa  User-Agent: Mozilla/5.0 (X11; Linux x86_64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/78.0.3904.108 Safari/537.36  DNT: 1  Content-type: text/plain; charset=UTF-8  Sec-Fetch-Site: same-origin  Sec-Fetch-Mode: cors  Referer: https://hoogrtc.ifsc.casa/demos/demo_data_channel_messaging.html  Accept-Encoding: gzip, deflate, br  Accept-Language: pt-BR,pt;q=0.9,en-US;q=0.8,en;q=0.7,pt-PT;q=0.6  Cookie: io=Lirc-byqvCAdnRp3AAHJ</p>	<p>HTTP/1.1 200 OK  Server: nginx/1.14.0 (Ubuntu)  Date: Sun, 15 Dec 2019 22:52:56 GMT  Content-Type: text/html  Content-Length: 2  Connection: keep-alive  Access-Control-Allow-Credentials: true  Access-Control-Allow-Origin: https://hoogrtc.ifsc.casa  Set-Cookie: io=Lirc-byqvCAdnRp3AAHJ; Path=/; HttpOnly</p>
<p>GET/socket.io/?EIO=3&amp;transport=polling&amp;t=MyBmyDd&amp;sid=Lirc-byqvCAdnRp3AAHJ HTTP/1.1  Host: hoogrtc.ifsc.casa  Connection: keep-alive  Pragma: no-cache  Cache-Control: no-cache  Accept: */*  DNT: 1  User-Agent: Mozilla/5.0 (X11; Linux x86_64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/78.0.3904.108 Safari/537.36  Sec-Fetch-Site: same-origin  Sec-Fetch-Mode: cors  Referer: https://hoogrtc.ifsc.casa/demos/demo_data_channel_messaging.html  Accept-Encoding: gzip, deflate, br  Accept-Language: pt-BR,pt;q=0.9,en-US;q=0.8,en;q=0.7,pt-PT;q=0.6  Cookie: io=Lirc-byqvCAdnRp3AAHJ</p>	<p>HTTP/1.1 200 OK  Server: nginx/1.14.0 (Ubuntu)  Date: Sun, 15 Dec 2019 22:52:56 GMT  Content-Type: text/plain; charset=UTF-8  Content-Length: 593  Connection: keep-alive  Access-Control-Allow-Origin: *  Set-Cookie: io=Lirc-byqvCAdnRp3AAHJ; Path=/; HttpOnly</p>
<p>POST/socket.io/?EIO=3&amp;transport=polling&amp;t=MyBmyGH&amp;sid=Lirc-byqvCAdnRp3AAHJ HTTP/1.1  Host: hoogrtc.ifsc.casa  Connection: keep-alive  Content-Length: 58  Pragma: no-cache  Cache-Control: no-cache</p>	<p>HTTP/1.1 200 OK  Server: nginx/1.14.0 (Ubuntu)  Date: Sun, 15 Dec 2019 22:52:56 GMT  Content-Type: text/html  Content-Length: 2  Connection: keep-alive  Access-Control-Allow-Credentials: true</p>

Accept: */* Origin: https://hoogrtc.ifsc.casa User-Agent: Mozilla/5.0 (X11; Linux x86_64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/78.0.3904.108 Safari/537.36 DNT: 1 Content-type: text/plain;charset=UTF-8 Sec-Fetch-Site: same-origin Sec-Fetch-Mode: cors Referer: https://hoogrtc.ifsc.casa/demos/demo_data_channel_messaging.html Accept-Encoding: gzip, deflate, br Accept-Language: pt-BR,pt;q=0.9,en-US;q=0.8,en;q=0.7,pt-PT;q=0.6 Cookie: io=Lirc-byqvCAdnRp3AAHJ	Access-Control-Allow-Origin: https://hoogrtc.ifsc.casa Set-Cookie: io=Lirc-byqvCAdnRp3AAHJ; Path=/; HttpOnly
GET/socket.io/?EIO=3&transport=polling&t=MyBmyGK&sid=Lirc-byqvCAdnRp3AAHJ HTTP/1.1 Host: hoogrtc.ifsc.casa Connection: keep-alive Pragma: no-cache Cache-Control: no-cache Accept: */* DNT: 1 User-Agent: Mozilla/5.0 (X11; Linux x86_64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/78.0.3904.108 Safari/537.36 Sec-Fetch-Site: same-origin Sec-Fetch-Mode: cors Referer: https://hoogrtc.ifsc.casa/demos/demo_data_channel_messaging.html Accept-Encoding: gzip, deflate, br Accept-Language: pt-BR,pt;q=0.9,en-US;q=0.8,en;q=0.7,pt-PT;q=0.6 Cookie: io=Lirc-byqvCAdnRp3AAHJ	HTTP/1.1 200 OK Server: nginx/1.14.0 (Ubuntu) Date: Sun, 15 Dec 2019 22:52:56 GMT Content-Type: text/plain; charset=UTF-8 Content-Length: 25 Connection: keep-alive Access-Control-Allow-Origin: * Set-Cookie: io=Lirc-byqvCAdnRp3AAHJ; Path=/; HttpOnly
GETwss://hoogrtc.ifsc.casa/socket.io/?EIO=3&transport=websocket&sid=Lirc-byqvCAdnRp3AAHJ HTTP/1.1 Host: hoogrtc.ifsc.casa Connection: Upgrade Pragma: no-cache Cache-Control: no-cache User-Agent: Mozilla/5.0 (X11; Linux x86_64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/78.0.3904.108 Safari/537.36 Upgrade: websocket Origin: https://hoogrtc.ifsc.casa Sec-WebSocket-Version: 13 Accept-Encoding: gzip, deflate, br Accept-Language: pt-BR,pt;q=0.9,en-US;q=0.8,en;q=0.7,pt-PT;q=0.6 Cookie: io=Lirc-byqvCAdnRp3AAHJ Sec-WebSocket-Key: wmny84uLp1Bh6m2bLE8NqA== Sec-WebSocket-Extensions: permessage-deflate; client_max_window_bits	HTTP/1.1 101 Switching Protocols Server: nginx/1.14.0 (Ubuntu) Date: Sun, 15 Dec 2019 22:52:56 GMT Connection: upgrade Upgrade: websocket Sec-WebSocket-Accept: RCIKCVDDI5s94tQsGFx+7wveSol= Sec-WebSocket-Extensions: permessage-deflate
GET/socket.io/?EIO=3&transport=polling&t=MyBmyJ0&sid=Lirc-byqvCAdnRp3AAHJ HTTP/1.1 Host: hoogrtc.ifsc.casa Connection: keep-alive Pragma: no-cache Cache-Control: no-cache Accept: */* DNT: 1 User-Agent: Mozilla/5.0 (X11; Linux x86_64) AppleWebKit/537.36 (KHTML, like Gecko) Chrome/78.0.3904.108 Safari/537.36 Sec-Fetch-Site: same-origin Sec-Fetch-Mode: cors Referer: https://hoogrtc.ifsc.casa/demos/demo_data_channel_messaging.html Accept-Encoding: gzip, deflate, br Accept-Language: pt-BR,pt;q=0.9,en-US;q=0.8,en;q=0.7,pt-PT;q=0.6 Cookie: io=Lirc-byqvCAdnRp3AAHJ	HTTP/1.1 200 OK Server: nginx/1.14.0 (Ubuntu) Date: Sun, 15 Dec 2019 22:52:57 GMT Content-Type: text/plain; charset=UTF-8 Content-Length: 3 Connection: keep-alive Access-Control-Allow-Origin: * Set-Cookie: io=Lirc-byqvCAdnRp3AAHJ; Path=/; HttpOnly



## 2. Especificação das mídias:

### a. Comunicação de áudio:

type: answer, sdp: v=0 m=audio 9 UDP/TLS/RTP/SAVPF 111 103 9 0 8 105 13 110 113 126 c=IN IP4 0.0.0.0 a=rtcp:9 IN IP4 0.0.0.0 a=rtcp-mux a=rtpmap:111 opus/48000/2 a=rtpmap:103 ISAC/16000 a=rtpmap:9 G722/8000 a=rtpmap:0 PCMU/8000 a=rtpmap:8 PCMA/8000 a=rtpmap:105 CN/16000 a=rtpmap:13 CN/8000 a=rtpmap:110 telephone-event/48000 a=rtpmap:113 telephone-event/16000 a=rtpmap:126 telephone-event/8000	type: offer, sdp: v=0 m=audio 9 UDP/TLS/RTP/SAVPF 111 103 104 9 0 8 106 105 13 110 112 113 126 c=IN IP4 0.0.0.0 a=rtcp:9 IN IP4 0.0.0.0 a=rtcp-mux a=rtpmap:111 opus/48000/2 a=rtpmap:103 ISAC/16000 a=rtpmap:104 ISAC/32000 a=rtpmap:9 G722/8000 a=rtpmap:0 PCMU/8000 a=rtpmap:8 PCMA/8000 a=rtpmap:106 CN/32000 a=rtpmap:105 CN/16000 a=rtpmap:13 CN/8000 a=rtpmap:110 telephone-event/48000 a=rtpmap:112 telephone-event/32000 a=rtpmap:113 telephone-event/16000 a=rtpmap:126 telephone-event/8000
---	--

#### ▼ RTCInboundRTPAudioStream\_226801267 (inbound-rtp)

##### Statistics RTCInboundRTPAudioStream\_226801267

timestamp	15/12/2019 20:39:20
ssrc	226801267
isRemote	false
mediaType	audio
kind	audio
trackId	RTCMediaStreamTrack_receiver_7
transportId	RTCTransport_0_1
packetsReceived	8000
[packetsReceived/s]	53.007999991224872
bytesReceived	452000
[bytesReceived/s]	2995.452070512923
packetsLost	0
jitter	0.012
codecId	RTCCodec_0_Inbound_111
[codec]	opus (payloadType: 111)
lastPacketReceivedTimestamp	58636.7

## b. Comunicação áudio e vídeo:

m=audio 9 UDP/TLS/RTP/SAVPF 111 103 104 9 0 8 106 105 13 110 112 113 126

m=video 9 UDP/TLS/RTP/SAVPF 96 97 98 99 100 101 102 122 127 121 125 107 108 109 124 120 123

m=application 9 UDP/DTLS/SCTP webrtc-datachannel

type: offer, sdp: v=0 c=IN IP4 0.0.0.0 a=rtcp:9 IN IP4 0.0.0.0 a=rtcp-mux a=rtpmap:111 opus/48000/2 a=rtpmap:103 ISAC/16000 a=rtpmap:104 ISAC/32000 a=rtpmap:9 G722/8000 a=rtpmap:0 PCMU/8000 a=rtpmap:8 PCMA/8000 a=rtpmap:106 CN/32000 a=rtpmap:105 CN/16000 a=rtpmap:13 CN/8000 a=rtpmap:110 telephone-event/48000 a=rtpmap:112 telephone-event/32000 a=rtpmap:113 telephone-event/16000 a=rtpmap:126 telephone-event/8000	type: offer, sdp: v=0 c=IN IP4 0.0.0.0 a=rtcp:9 IN IP4 0.0.0.0 a=rtpmap:96 VP8/90000 a=rtpmap:97 rtx/90000 a=fmtp:97 apt=96 a=rtpmap:98 VP9/90000 a=rtpmap:99 rtx/90000 a=rtpmap:100 VP9/90000 a=rtpmap:101 rtx/90000 a=rtpmap:102 H264/90000 a=rtpmap:122 rtx/90000 a=rtpmap:127 H264/90000 a=rtpmap:121 rtx/90000 a=rtpmap:125 H264/90000 a=rtpmap:107 rtx/90000 a=rtpmap:108 H264/90000 a=rtpmap:109 rtx/90000 a=rtpmap:124 red/90000 a=rtpmap:120 rtx/90000 a=rtpmap:123 ulpfec/90000	type: offer, sdp: v=0 c=IN IP4 0.0.0.0 a=ice-ufrag:32SM a=ice-pwd:7HczdADYh27o3alkdV/// eHI a=ice-options:trickle a=fingerprint:sha-256 a=setup:actpass a=mid:2 a=sctp-port:5000 a=max-message-size:262144
--	--	---

type: answer, sdp: v=0 m=audio 9 UDP/TLS/RTP/SAVPF 111 103 9 0 8 105 13 110 113 126 c=IN IP4 0.0.0.0 a=rtcp:9 IN IP4 0.0.0.0 a=rtcp-mux a=rtpmap:111 opus/48000/2 a=rtcp-fb:111 transport-cc a=fmtp:111 minptime=10;useinbandfec=1 a=rtpmap:103 ISAC/16000 a=rtpmap:9 G722/8000 a=rtpmap:0 PCMU/8000 a=rtpmap:8 PCMA/8000 a=rtpmap:105 CN/16000 a=rtpmap:13 CN/8000 a=rtpmap:110 telephone-event/48000 a=rtpmap:113 telephone-event/16000 a=rtpmap:126 telephone-event/8000	type: answer, sdp: v=0 m=video 9 UDP/TLS/RTP/SAVPF 96 97 98 99 125 107 124 120 123 c=IN IP4 0.0.0.0 a=rtcp:9 IN IP4 0.0.0.0 a=rtcp-mux a=rtcp-rsize a=rtpmap:96 VP8/90000 a=rtcp-fb:96 goog-remb a=rtcp-fb:96 transport-cc a=rtcp-fb:96 ccm fir a=rtcp-fb:96 nack a=rtcp-fb:96 nack pli a=rtpmap:97 rtx/90000 a=fmtp:97 apt=96 a=rtpmap:98 VP9/90000 a=rtpmap:99 rtx/90000 a=rtpmap:125 H264/90000 a=rtpmap:107 rtx/90000 a=rtpmap:124 red/90000 a=rtpmap:120 rtx/90000 a=rtpmap:123 ulpfec/90000	type: answer, sdp: v=0 m=application 9 UDP/DTLS/SCTP webrtc-datachannel c=IN IP4 0.0.0.0 b=AS:30 a=ice-ufrag:iX+0 a=ice-pwd:HSyvZAD72GiGE8ThU9 Ts7Rq2 a=ice-options:trickle a=setup:active a=mid:2 a=sctp-port:5000 a=max-message-size:262144
---	---	--

## ▼ RTCOutboundRTPAudioStream\_3860807244 (outbound-rtp)

## Statistics RTCOutboundRTPAudioStream\_3860807244

timestamp	15/12/2019 20:53:37
ssrc	3860807244
isRemote	false
mediaType	audio
kind	audio
trackId	RTCMediaStreamTrack_sender_8
transportId	RTCTransport_0_1
mediaSourceId	RTCAudioSource_8
packetsSent	13403
[packetsSent/s]	49.96971535291026
retransmittedPacketsSent	0
bytesSent	790773
[bytesSent/s]	2948.2132058217053
retransmittedBytesSent	0
codecId	RTCCodec_0_Outbound_111
[codec]	opus (payloadType: 111)

## ▼ RTCOutboundRTPVideoStream\_2131986031 (outbound-rtp)

## Statistics RTCOutboundRTPVideoStream\_2131986031

timestamp	15/12/2019 20:54:17
ssrc	2131986031
isRemote	false
mediaType	video
kind	video
trackId	RTCMediaStreamTrack_sender_9
transportId	RTCTransport_0_1
firCount	0
pliCount	0
nackCount	47
mediaSourceId	RTCVideoSource_9
packetsSent	38710
[packetsSent/s]	127.7873716195743
retransmittedPacketsSent	0
bytesSent	43092915
[bytesSent/s]	143697.89772505208
retransmittedBytesSent	0
framesEncoded	2353
[framesEncoded/s]	6.98837188544547
keyFramesEncoded	1
totalEncodeTime	30.194
[totalEncodeTime/framesEncoded_in_ms]	10.428571428571486
totalEncodedBytesTarget	61988047
[totalEncodedBytesTarget/s]	208358.3077645567
totalPacketSendDelay	2178.99
[totalPacketSendDelay/packetsSent_in_ms]	36.56249999999872
qualityLimitationReason	none
qualityLimitationResolutionChanges	0
codecId	RTCCodec_1_Outbound_96
[codec]	VP8 (payloadType: 96)
qpSum	5145
[qpSum/framesEncoded]	2

▼ RTCInboundRTPAudioStream\_2990648882 (inbound-rtp)  
Statistics RTCInboundRTPAudioStream\_2990648882

timestamp	15/12/2019 20:55:21
ssrc	2990648882
isRemote	false
mediaType	audio
kind	audio
trackId	RTCMediaStreamTrack_receiver_8
transportId	RTCTransport_0_1
packetsReceived	18583
[packetsReceived/s]	49.99959469170105
bytesReceived	1049941
[bytesReceived/s]	2823.9771081872755
packetsLost	16
jitter	0.016
codecId	RTCCodec_0_Inbound_111
[codec]	opus (payloadType: 111)
lastPacketReceivedTimestamp	59597.6

▼ RTCInboundRTPVideoStream\_1123211831 (inbound-rtp)  
Statistics RTCInboundRTPVideoStream\_1123211831

timestamp	15/12/2019 20:55:48
ssrc	1123211831
isRemote	false
mediaType	video
kind	video
trackId	RTCMediaStreamTrack_receiver_9
transportId	RTCTransport_0_1
firCount	0
pliCount	0
nackCount	32
packetsReceived	67713
[packetsReceived/s]	232.9023813280166
bytesReceived	71645790
[bytesReceived/s]	251361.64431507446
packetsLost	157
framesDecoded	9899
[framesDecoded/s]	26.988687965049134
keyFramesDecoded	4
totalDecodeTime	35.311
[totalDecodeTime/framesDecoded_in_ms]	3.3333333333334596
decoderImplementation	libvpx
codecId	RTCCodec_1_Inbound_96
[codec]	VP8 (payloadType: 96)
qpSum	154989
[qpSum/framesDecoded]	12.407407407407407
lastPacketReceivedTimestamp	59624.6

### c. Comunicação texto

type: offer, sdp: v=0 a=group:BUNDLE 0 a=ice-options:trickle a=msid-semantic:WMS * m=application 9 UDP/DTLS/SCTP webrtc-datachannel c=IN IP4 0.0.0.0 a=sendrecv a=ice-pwd:baf8167e99638bb5b24a64e12ddd1d6d a=ice-frag:380d3fba a=mid:0 a=setup:actpass a=sctp-port:5000 a=max-message-size:1073741823	type: answer, sdp: v=0 a=group:BUNDLE 0 a=msid-semantic: WMS m=application 9 UDP/DTLS/SCTP webrtc-datachannel c=IN IP4 0.0.0.0 b=AS:30 a=ice-frag:RYXs a=ice-pwd:4gWLM9sLTluHUdXnVfDIAyoA a=ice-options:trickle a=setup:active a=mid:0 a=sctp-port:5000 a=max-message-size:262144
---	---

## 3. Especificação do uso de relays:

### a. Comunicação via áudio:

[https://hoogrtc.ifsc.casa/demos/demo\\_audio\\_only.html](https://hoogrtc.ifsc.casa/demos/demo_audio_only.html),  
iceServers:  
stun:stun.l.google.com:19302  
stun:stun.sipgate.net,  
stun:217.10.68.152,  
stun:stun.sipgate.net:10000,  
stun:217.10.68.152:10000],  
iceTransportPolicy: all,  
bundlePolicy: balanced,  
rtcpMuxPolicy: require,  
iceCandidatePoolSize: 0,  
sdpSemantics: "unified-plan"

### b. Comunicação áudio e vídeo:

[https://hoogrtc.ifsc.casa/demos/demo\\_audio\\_video.html](https://hoogrtc.ifsc.casa/demos/demo_audio_video.html),  
iceServers:  
stun:stun.l.google.com:19302,  
stun:stun.sipgate.net,  
stun:217.10.68.152,  
stun:stun.sipgate.net:10000,  
stun:217.10.68.152:10000],  
iceTransportPolicy: all,  
bundlePolicy: balanced,  
rtcpMuxPolicy: require,  
iceCandidatePoolSize: 0,  
sdpSemantics: "unified-plan"

### c. Comunicação texto

```
https://hoogrtc.ifsc.casa/demos/demo_data_channel_messaging.html,  
iceServers:  
stun:stun.l.google.com:19302,  
stun:stun.sipgate.net,  
stun:217.10.68.152,  
stun:stun.sipgate.net:10000,  
stun:217.10.68.152:10000  
iceTransportPolicy: all,  
bundlePolicy: balanced,  
rtcpMuxPolicy: require,  
iceCandidatePoolSize: 0,
```

Não foram utilizados servidores relays, conforme a captura abaixo:

#### **iceServers:**

**Definição:** define como conectar-se a um único servidor ICE (como um servidor STUN ou TURN ). Inclui o URL e as credenciais necessárias, se houver, para se conectar ao servidor.

#### **iceTransportPolicy: all**

**Definição:** define constantes de sequência que podem ser usadas para limitar as políticas de transporte dos candidatos a ICE a serem consideradas durante o processo de conexão.

- **All:** Todos os candidatos a ICE serão considerados.
- **Public:** Somente candidatos com endereços IP públicos;
- **Relay:** Somente candidatos cujo endereços IP são retransmitidos.

#### **bundlePolicy: balanced**

**Definição:** define constantes de sequência de caracteres que são usadas para solicitar uma política específica para reunir candidatos a ICE se o ponto remoto não for compatível com o padrão SDP BUNDLE para agrupar vários fluxos de mídia em um único link de transporte.

- **balanced:** quando utilizada conexões compatíveis, com essa condição o agente ICE irá reunir todos os candidatos compatíveis com os tipos de mídias utilizada. Caso não seja possível, será negociado apenas uma faixa de áudio e de vídeo, transportados de forma individual.
- **max-compatible:** Nessa condição, o agente ICE irá reunir candidatos para cada faixa de mídia para as conexões que não são compatíveis com o BUNDLE.
- **max-bundle:** Nessa condição, o agente ICE reúne os candidatos para apenas uma faixa. Se a conexão for incompatível com o BUNDLE, o ICE irá negociar apenas uma faixa de mídia.

#### **rtcpMuxPolicy: require**

**Definição:** define as constantes de cadeia que especificam quais candidatos a ICE são reunidos para oferecer suporte a RTCP não multiplexado

- **negotiate:** O agente ICE receberá as instruções de como reunir candidatos RTP e RTCP. Em casos onde é possível realizar a multiplexação RTCP, os candidatos RTCP serão multiplexados com os candidatos RTP correspondentes.
- **require:** Informa ao agente do ICE para reunir candidatos ao ICE apenas para RTP e multiplexar o RTCP sobre eles. Se o ponto remoto não suportar a multiplexação RTCP, a negociação da sessão falhará.

### **iceCandidatePoolSize: 0;**

**Definição:** Valor inteiro de 16 bits não assinado que especifica o tamanho do pool candidato a ICE pré-buscado. O valor padrão é 0 (o que significa que nenhuma pré-busca de candidato ocorrerá).

### **sdpSemantics: "unified-plan"**

**Definição:** O SDP é usado pelo WebRTC para negociar os parâmetros da sessão.

Unified-plan é uma proposta preliminar da IETF para sinalizar várias fontes de mídia no SDP .

### **Glossário:**

GET	Solicitação de representação de dados;
POST	É usado quando o cliente deseja enviar dados para processamento ao servidor, como os dados de um formulário.
HOST	Especifica o nome de domínio do servidor e o número da porta TCP na qual o servidor está escutando.
Connection	Realiza o controle de conexão: Keep Alive: mantém ativo Close: fecha a conexão
Pragma	Usado para compatibilidade com versões anteriores com caches HTTP / 1.0 nos quais o cabeçalho HTTP / 1.1 do Cache-Control ainda não está presente.
Cache-Control	Especifica diretivas para mecanismos de armazenamento em cache em solicitações e respostas.
DNT	Permite que os usuários indiquem se preferem privacidade ao invés de conteúdo personalizado. 0 = O usuário prefere permitir o rastreamento no site de destino. 1 = O usuário prefere não ser rastreado no site de destino.
Upgrade-Insecure-Request	Envia um sinal ao servidor, expressando a preferência do cliente por uma resposta criptografada e autenticada, e que ele pode lidar com êxito com a diretiva CSP.
User-Agent	O cabeçalho de solicitação do agente do usuário é uma sequência de características que permite que servidores e pares de rede identifiquem o aplicativo, sistema operacional, fornecedor e / ou versão do agente do usuário solicitante .
Sec--Fetch-User	Expõe se uma solicitação de navegação foi ou não acionada pela ativação do usuário . É um cabeçalho estruturado cujo valor é um booleano
Accept	Anuncia quais tipos de conteúdo o cliente pode entender. O servidor seleciona uma das propostas, a usa e informa o cliente de sua escolha com o Content-Type cabeçalho de resposta.

Sec-Fetch-Site	Expõe o relacionamento entre a origem do iniciador de solicitação e a origem do seu destino. É um cabeçalho estruturado cujo valor é um token.
Sec-Fetch-Mode	expõe o modo de uma solicitação a um servidor.
Accept-Encoding	Anuncia qual codificação de conteúdo o cliente é capaz de entender.
Accept-Language	Anuncia quais idiomas o cliente é capaz de entender e qual variante de localidade é preferida.
SERVER	Contém informações sobre o software usado pelo servidor de origem para lidar com a solicitação.
X-Powered-By:	Fornecer informações da tecnologia usada no servidor
Cache-Control:	É usado para especificar diretivas para mecanismos de armazenamento em cache em solicitações e respostas.
Last-Modified:	Contém a data e a hora em que o servidor de origem foi modificado pela última vez.
Date:	Contém a data e a hora em que a mensagem foi originada.
Transfer-Encoding:	Especifica a forma de codificação usada para transferir com segurança o corpo da carga útil para o usuário.
Content-Encoding:	É usado para compactar o tipo de mídia. Quando presente, seu valor indica quais modificações foram aplicadas ao corpo da entidade. Ele permite que o cliente decodifique para obter o tipo de mídia referenciado pelo Content-Type cabeçalho.
ETag:	É um identificador para uma versão específica de um recurso. Ele permite que os caches sejam mais eficientes e economiza largura de banda, pois um servidor da Web não precisa reenviar uma resposta completa se o conteúdo não foi alterado. Além disso, as etags ajudam a impedir que atualizações simultâneas de um recurso se substituam ( "colisões no ar" ).
Refer	Contém o endereço da página da web anterior a partir da qual um link para a página solicitada no momento foi seguido
Access-Control-Allow - Origin:	Indica se a resposta pode ser compartilhada com o código solicitante da origem especificada.
Sec-WebSocket-Key:	É usado no handshake de abertura do WebSocket. Ele é enviado do cliente para o servidor para fornecer parte das informações usadas pelo servidor para provar que ele recebeu um handshake de abertura do WebSocket válido. Isso ajuda a garantir que o servidor não aceite conexões de clientes que não sejam do WebSocket que estão sendo abusados para enviar dados a servidores WebSocket incautos.
Content-Type:	Informa qual é o tipo de conteúdo que a resposta, de fato, tem. Alguns browsers vão realizar o chamado "MIME Sniffing" em alguns casos e não vão, necessariamente, seguir o valor declarado por este cabeçalho.
Content-Length:	indica o tamanho do corpo da entidade, em bytes, enviado ao destinatário.
Set-Cookie:	É usado para enviar cookies de um servidor para o agente usuário.