

Socket.io

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What is it?

JavaScript-библиотека для веб-приложений и обмена данными в реальном времени. Состоит из двух частей: клиентской, которая запускается в браузере и серверной для node.js. Является событийно-ориентированным API.

Using Socket.IO

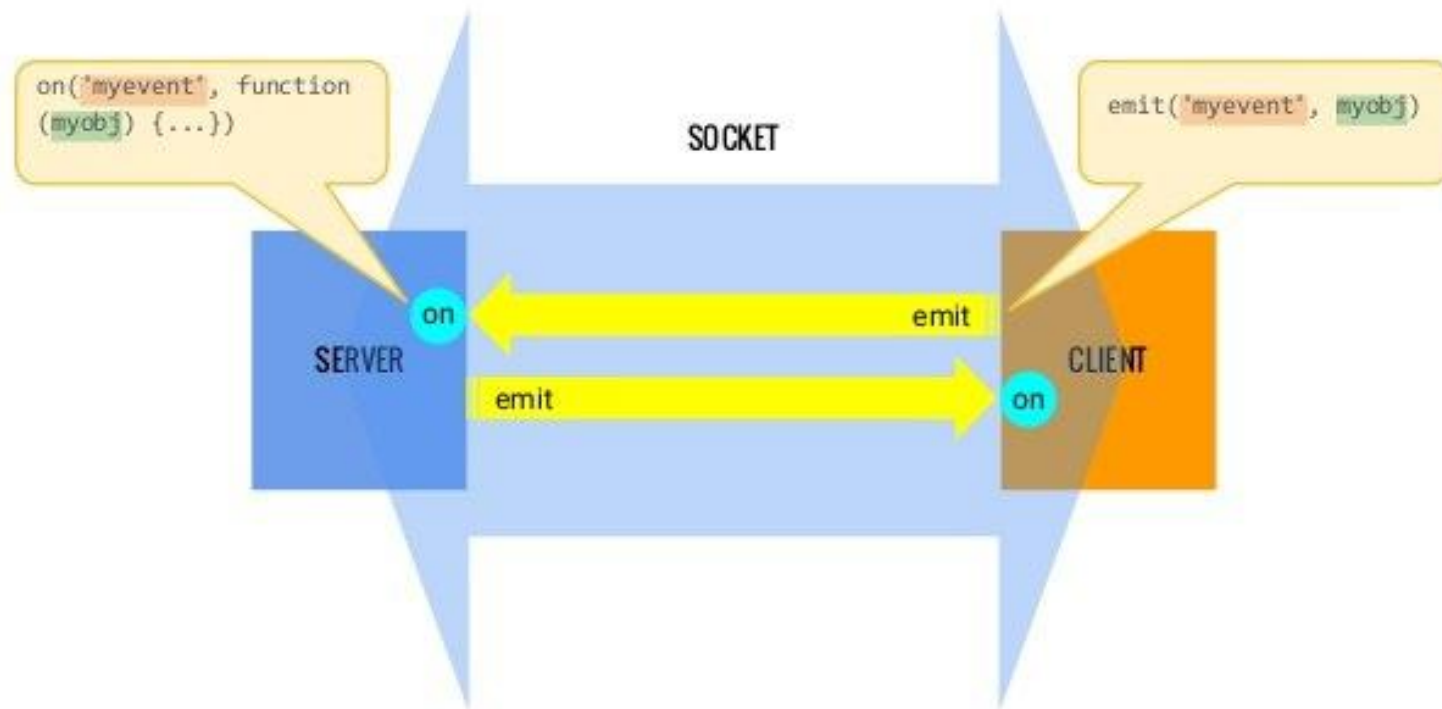
Ответ: real-time applications

Who use?

1. Microsoft Office
2. Yammer
3. Zendesk
4. Trello

```
{  
  "Type": "event-oriented",  
  "Author": "Guillermo Rauch",  
  "Version": "v2.0.3",  
  "work": "npm install --save socket.io"  
  "url": "github.com/socketio/socket.io",  
  "githubStars" : 37777  
}
```

Взаимодействие client-server



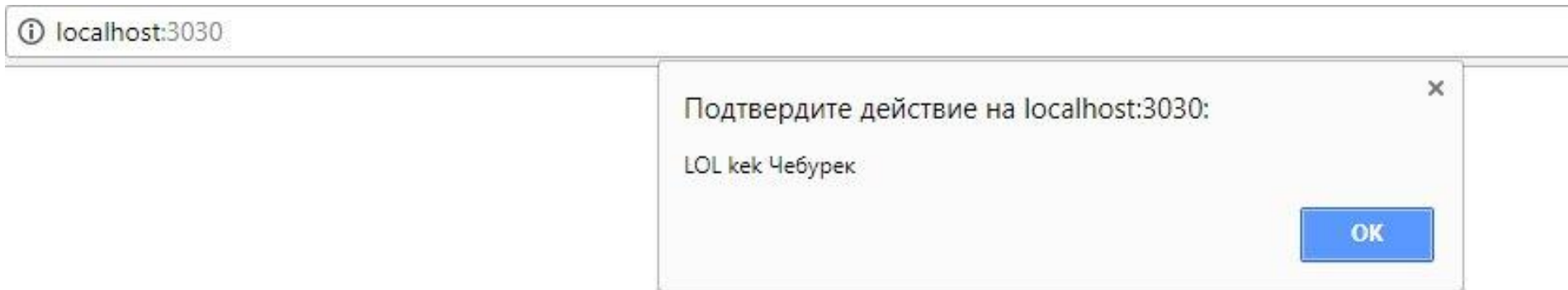
Server example

```
const app = require('express')();
const http = require('http').Server(app);
const io = require('socket.io')(http);
app.get('/', (req, res) => {
  res.sendFile(__dirname + '/index.html');
});
io.on('connection', (socket) => {
  socket.emit("hello", "LOL kek Чебурек");
});
http.listen(3030, '127.0.0.1', () => {
  console.log('Lol kek server is running');
});
```

Client example

```
<!DOCTYPE html>
<html lang="ru">
<head>
  <meta charset="UTF-8">
  <title>Socket.io</title>
  <script src="/socket.io/socket.io.js"></script>
</head>
<body>
  <script>
    const socket = io();
    socket.on("hello", (serverData) => {
      alert(serverData);
    });
  </script>
</body>
</html>
```

Result



Working in browsers

1. WebSocket
2. Adobe Flash Socket
3. AJAX long polling
4. AJAX multipart streaming
5. Forever Iframe
6. JSONP Polling

Main methods

- `sockets` - выбор всех подключённых клиентов
- `socket.send(TEXT)` - отправка сообщения TEXT
- `socket.json.send({})` - отправка JSON-сообщения
- `socket.broadcast.send` - широковещательное сообщение
- `socket.emit(EVENT, ANY)` - отправка сообщения по событию
- `socket.on(EVENT, CALLBACK)` - вызов метода в ответ на событие

send()

```
const app = require('express')();
const http = require('http').Server(app);
const io = require('socket.io')(http);
app.get('/', (req, res) => {
  res.sendFile(__dirname + '/index.html');
});
io.on('connection', (socket) => {
  socket.send("Это не фиаско");
});
http.listen(3030, '127.0.0.1', () => {
  console.log('Lol kek server is running');
});
```

```
<!DOCTYPE html>
<html lang="ru">
<head>
  <meta charset="UTF-8">
  <title>Socket.io</title>
  <script src="/socket.io/socket.io.js"></script>
</head>
<body>
  <script>
    const socket = io();
    socket.on("message", (serverData) => {
      alert(serverData);
    });
  </script>
</body>
</html>
```

localhost:3030

Подтвердите действие на localhost:3030:

Это не фиаско

OK

json.send({})

```
const app = require('express')();
const http = require('http').Server(app);
const io = require('socket.io')(http);
app.get('/', (req, res) => {
  res.sendFile(__dirname + '/index.html');
});
io.on('connection', (socket) => {
  socket.json.send({'id': socket.id});
});
http.listen(3030, '127.0.0.1', () => {
  console.log('Lol kek server is running');
});
```

```
<!DOCTYPE html>
<html lang="ru">
<head>
  <meta charset="UTF-8">
  <title>Socket.io</title>
  <script src="/socket.io/socket.io.js"></script>
</head>
<body>
  <script>
    const socket = io();
    socket.on('message', (data) => { alert (data.id); });
  </script>
</body>
</html>
```

localhost:3030

Подтвердите действие на localhost:3030:

wEflOPWr9YnzyqZYAAAD

OK

emit(EVENT,ANY)

Server side:

1. Connect
2. Reconnect
3. Disconnect
4. Ping
5. Leave
6. Message
7. Join

Client side:

1. Connect
2. Connect_error
3. Connect_timeout
4. Reconnect

Namespaces

```
const app = require('express')();
const http = require('http').Server(app);
const io = require('socket.io')(http);
app.get('/', (req, res) => {
  res.sendFile(__dirname + '/index.html');
});
const nsp = io.of('/my-namespace');
nsp.on('connection', (socket) => {
  nsp.emit('hi', 'Чё пацаны, аниме?');
});
http.listen(3030, '127.0.0.1', () => {
  console.log('Lol kek server is running');
});
```

```
<!DOCTYPE html>
<html lang="ru">
<head>
  <meta charset="UTF-8">
  <title>Socket.io</title>
  <script src="/socket.io/socket.io.js"></script>
</head>
<body>
  <script>
    const socket = io('/my-namespace');
    socket.on('hi', (data) => { alert (data); });
  </script>
</body>
</html>
```

localhost:3030

Подтвердите действие на localhost:3030:

Чё пацаны, аниме?

OK

Rooms

```
const app = require('express')();
const http = require('http').Server(app);
const io = require('socket.io')(http);
app.get('/', (req, res) => {
  res.sendFile(__dirname + '/index.html');
});
let roomno = 1;
io.on('connection', (socket)=> {
  if(io.nsp['/'].adapter.rooms["room-"+roomno]
    && io.nsp['/'].adapter.rooms["room-"+roomno].length > 1) roomno++;
  socket.join("room-"+roomno);
  io.sockets.in("room-"+roomno).emit('connectToRoom', "You are in room no. "+roomno);
})
http.listen(3030, '127.0.0.1', () => {
  console.log('Lol kek server is running');
});
```

```
<!DOCTYPE html>
<html lang="ru">
<head>
  <meta charset="UTF-8">
  <title>Socket.io</title>
  <script src="/socket.io/socket.io.js"></script>
</head>
<body>
  <script>
    const socket = io();
    socket.on('connectToRoom', (data) =>
    {
      document.body.innerHTML = data;
    });
  </script>
</body>
</html>
```

localhost:3030

You are in room no. 1

localhost:3030

You are in room no. 1

localhost:3030

You are in room no. 2

Спасибо за внимание!