

Real-time Networking with Node.js

Agenda

- **Real-time Networking with NodeJS**
 - What is WebSocket?
 - What is Socket.io?
 - Getting Started with Socket.io
 - Client-side of Socket.io
 - Broadcasting with Socket.io
 - Using Rooms with Socket.io

WHAT IS WEBSOCKET?

Full-duplex communication over TCP for
web browsers and servers.



WEBSOCKET



BI-DIRECTIONAL



**PERSISTENT
TUNNEL**



**PROXY/FIREWALL
FRIENDLY**



**STANDARDS
BASED**

WEBSOCKET

Solves many bi-directional problems on the web

- Depends on modern browsers
- Relies on HTTP for handshake only
- Rely on libraries to simplify the raw features



WHAT IS SOCKET.IO?

Enabling real-time apps in browser (and mobile).





SOCKET.IO IS AN ABSTRACTION OVER
DIFFERENT TRANSPORTS INCLUDING
WEBSOCKETS

EFFECTIVELY SIGNALR FOR NODE.JS

SOCKET.IO

Simplifies creating communications and multicasting in real-time apps

- Server and client libraries work together
- Works side-by-side with Express or other frameworks
- Works well with AngularJS too





demonstration

GETTING STARTED WITH SOCKET.IO



demonstration

CLIENT-SIDE OF SOCKET.IO



demonstration

BROADCASTING WITH SOCKET.IO



demonstration

USING ROOMS WITH SOCKET.IO

Summary

- **Real-time Networking with NodeJS**

- The WebSocket standard means we have a non-hacky way of doing bi-directional communication
- Socket.io represents library that works with Node.js to deliver bi-direction communication
- Socket.io uses WebSockets when they're available, but will drop down into other solutions
- You'll need to build both the server and client side of the Socket.io communication layer
- You can broadcast messages to all connected clients with Socket.io
- You can subset the number of users for broadcast by using rooms in Socket.io