HTTP long polling Streaming

WebSocket protocol Definition

Performance Evaluation of WebSocket Protocol for Implementation of Full-Duplex Web Streams

Oleg Bilovus

Università degli Studi di Salerno

1st Scalability Research Forum

Outline

WebSocket

Oleg Bilovus

Background

HTTP polling HTTP long polling Streaming

WebSocket protocol Definition

Background

HTTP polling HTTP long polling Streaming

WebSocket protocol
Definition

HTTP polling HTTP long polling Streaming

WebSocket protocol Definition

HTTP polling HTTP long polling Streaming

WebSocket protocol

HTTP polling HTTP long polling Streaming

WebSocket protocol

Background

HTTP polling HTTP long polling Streaming

WebSocket protocol Definition

Background

HTTP polling HTTP long polling Streaming

WebSocket protocol

HTTP polling HTTP long polling Streaming

WebSocket protocol Definition

HTTP polling HTTP long polling Streaming

WebSocket protocol

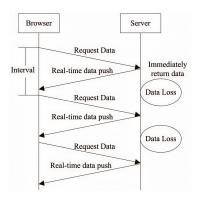
HTTP polling

this is a test hello hello hello WebSocket

Oleg Bilovus

Background

HTTP polling
HTTP long polling
Streaming



- this is a test hello hello hello
- this is a test hello hello hello

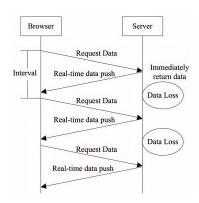
WebSocket

Oleg Bilovus

Background

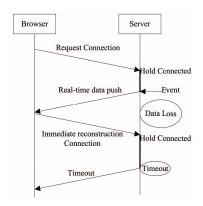
HTTP polling HTTP long polling Streaming

WebSocket protocol Definition



- this is a test hello hello hello
- this is a test hello hello hello
- this is a test hello hello hello

HTTP long Polling



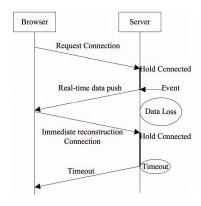
this is a test hello hello hello WebSocket

Oleg Bilovus

Background
HTTP polling

HTTP long polling Streaming

HTTP long Polling



- this is a test hello hello hello
- this is a test hello hello hello

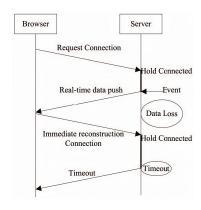
WebSocket

Oleg Bilovus

Background

HTTP polling
HTTP long polling
Streaming

HTTP long Polling



WebSocket

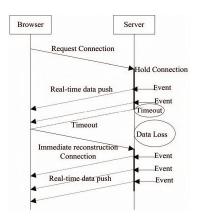
Oleg Bilovus

Background
HTTP polling

HTTP long polling Streaming

- this is a test hello hello hello
- this is a test hello hello hello
- this is a test hello hello hello

Streaming



this is a test hello hello hello WebSocket

Oleg Bilovus

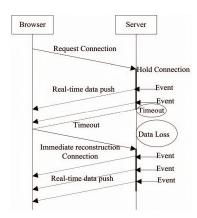
Background

HTTP polling

HTTP long polling

Streaming

Streaming



WebSocket

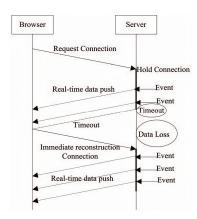
Oleg Bilovus

Background
HTTP polling
HTTP long polling

Streaming

- this is a test hello hello hello
- this is a test hello hello hello

Streaming



WebSocket

Oleg Bilovus

Background
HTTP polling
HTTP long polling

Streaming

- this is a test hello hello hello
- this is a test hello hello hello
- this is a test hello hello hello

Outline

 ${\sf WebSocket}$

Oleg Bilovus

Background
HTTP polling
HTTP long polling
Streaming

WebSocket protocol

Definition

Background
HTTP polling
HTTP long polling
Streaming

WebSocket protocol Definition

Keywords

➤ The WebSocket Protocol enables two-way communication between a client running untrusted code in a controlled environment to a remote host that has opted-in to communications from that code.

WebSocket

Oleg Bilovus

Background
HTTP polling
HTTP long polling

Streaming
WebSocket
protocol

Keywords

➤ The WebSocket Protocol enables two-way communication between a client running untrusted code in a controlled environment to a remote host that has opted-in to communications from that code.

WebSocket

Oleg Bilovus

Background
HTTP polling
HTTP long polling

Streaming
WebSocket
protocol

Keywords

➤ The WebSocket Protocol enables two-way communication between a client running untrusted code in a controlled environment to a remote host that has opted-in to communications from that code.

WebSocket

Oleg Bilovus

Background
HTTP polling
HTTP long polling

Streaming
WebSocket
protocol

Keywords

➤ The WebSocket Protocol enables two-way communication between a client running untrusted code in a controlled environment to a remote host that has opted-in to communications from that code.

WebSocket

Oleg Bilovus

Background
HTTP polling
HTTP long polling

Streaming
WebSocket
protocol

Keywords

➤ The WebSocket Protocol enables two-way communication between a client running untrusted code in a controlled environment to a remote host that has opted-in to communications from that code.

WebSocket

Oleg Bilovus

Background
HTTP polling
HTTP long polling

Streaming
WebSocket
protocol

- ➤ The WebSocket Protocol enables two-way communication between a client running untrusted code in a controlled environment to a remote host that has opted-in to communications from that code.
- ▶ The protocol consists of an opening handshake followed by basic message framing, layered over TCP.

- ► The WebSocket Protocol enables two-way communication between a client running untrusted code in a controlled environment to a remote host that has opted-in to communications from that code.
- ► The protocol consists of an opening handshake followed by basic message framing, layered over TCP.

- ➤ The WebSocket Protocol enables two-way communication between a client running untrusted code in a controlled environment to a remote host that has opted-in to communications from that code.
- ► The protocol consists of an opening handshake followed by basic message framing, layered over TCP.

WebSocket

Background
HTTP polling
HTTP long polling
Streaming

WebSocket protocol

- ➤ The WebSocket Protocol enables two-way communication between a client running untrusted code in a controlled environment to a remote host that has opted-in to communications from that code.
- ► The protocol consists of an opening handshake followed by basic message framing, layered over TCP.

Background
HTTP polling
HTTP long polling
Streaming

WebSocket protocol

- ➤ The WebSocket Protocol enables two-way communication between a client running untrusted code in a controlled environment to a remote host that has opted-in to communications from that code.
- ► The protocol consists of an opening handshake followed by basic message framing, layered over TCP.
- The goal of this technology is to provide a mechanism for browser-based applications that need two-way communication with servers.

Background HTTP polling HTTP long polling Streaming

WebSocket protocol

- ➤ The WebSocket Protocol enables two-way communication between a client running untrusted code in a controlled environment to a remote host that has opted-in to communications from that code.
- ► The protocol consists of an opening handshake followed by basic message framing, layered over TCP.
- The goal of this technology is to provide a mechanism for browser-based applications that need two-way communication with servers.