

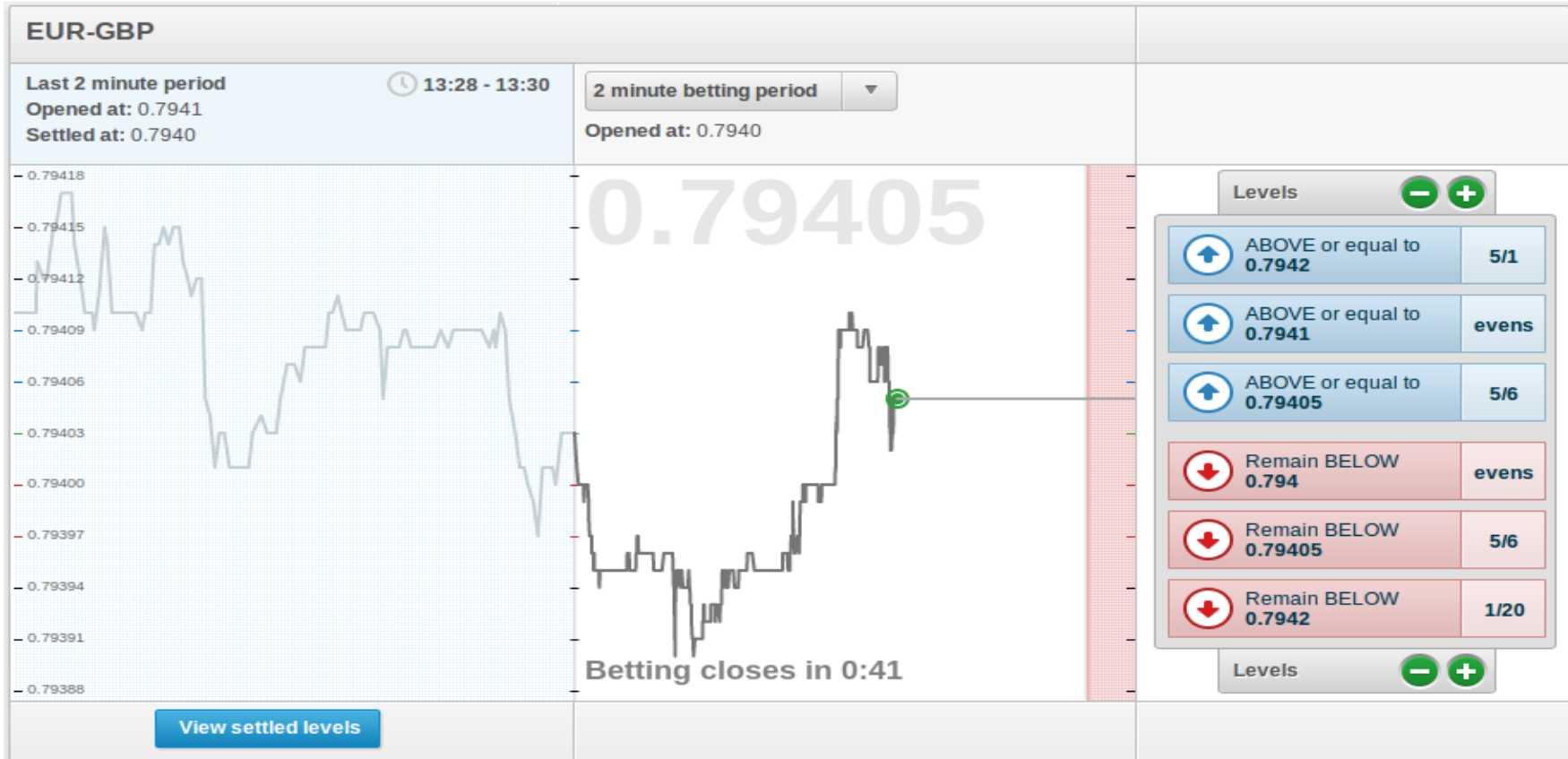
Realtime Apps With Lightstreamer, GWT & HTML5

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Agenda

- ✓ Intro into Lightstreamer
- ✓ Live chart demo
- ✓ Lightstreamer and GWT

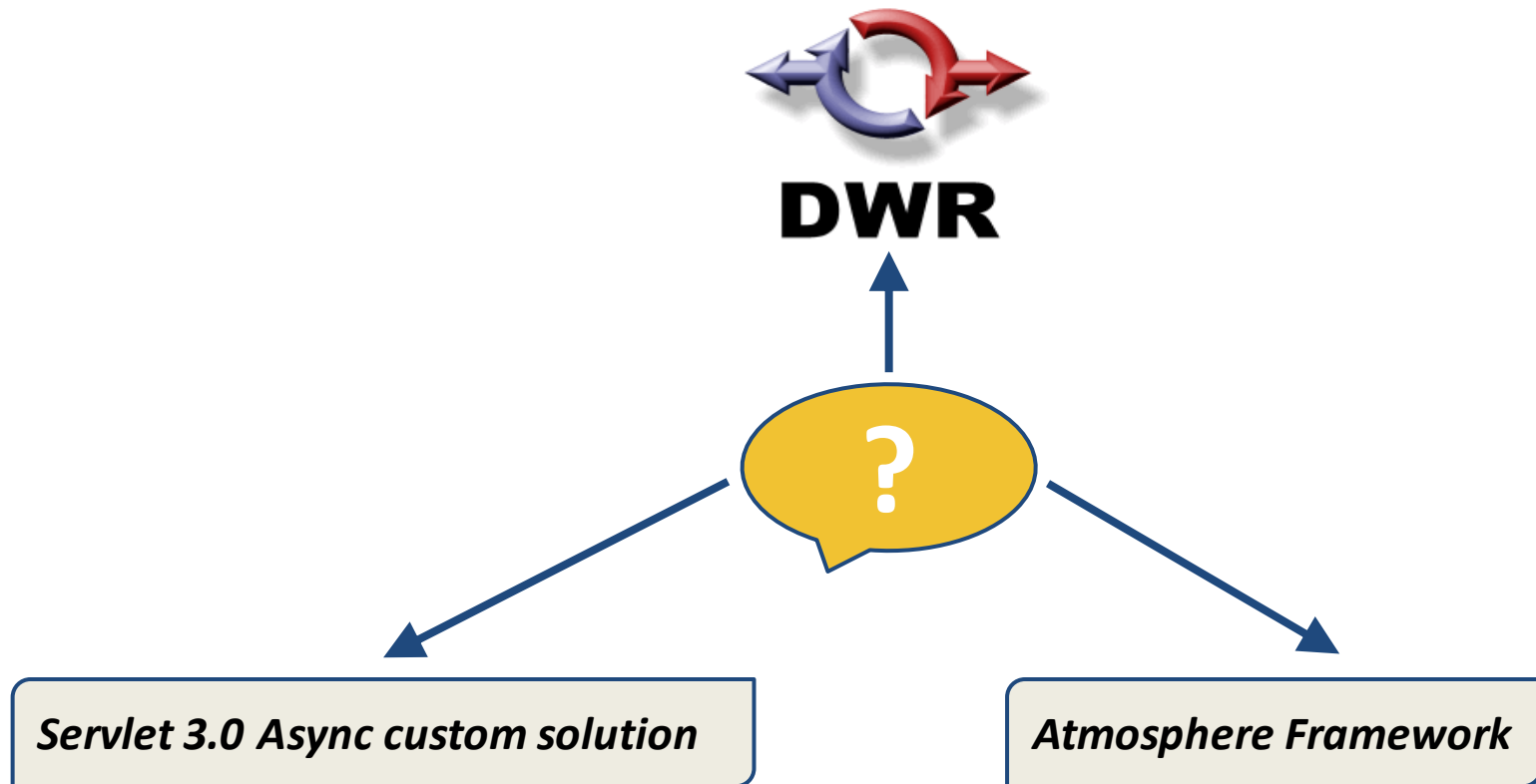
Challenges we met



Challenges we met

- Large amount of data per second
- No delays
- Large number of concurrent users
- Cross-browser support
- Support for mobile platforms

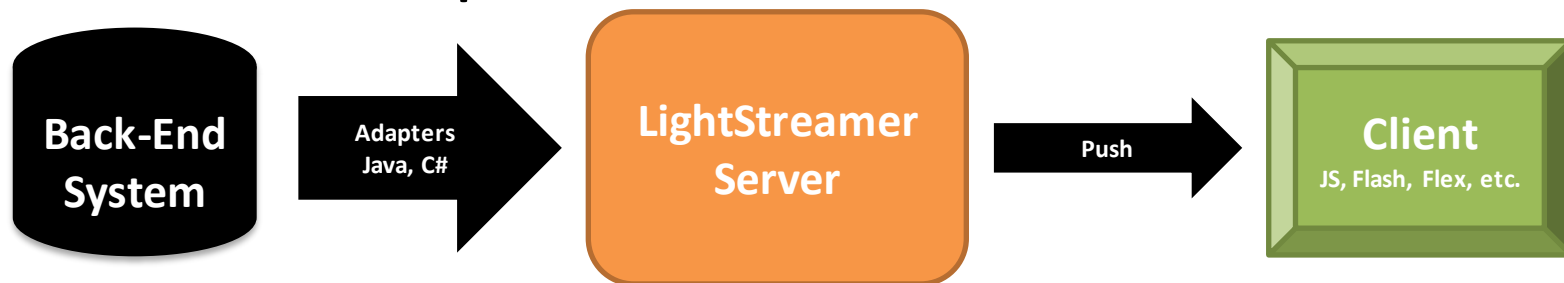
Considered solutions



The winner



- ✓ Standalone server, implemented in Java
- ✓ Java adapters
- ✓ Optimized for many years
- ✓ Paid and closed but the best we discovered
- ✓ Free developer edition



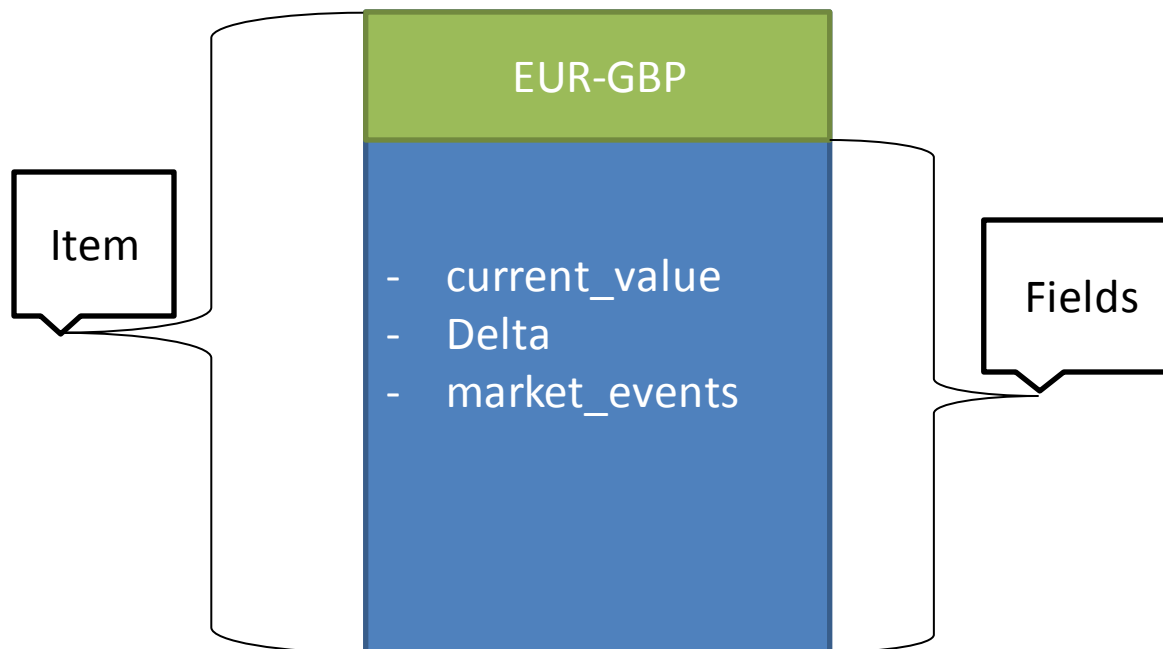
LightStreamer key advantages

- ✓ High scalability
- ✓ Low bandwidth consumption
- ✓ Adaptive data throttling
- ✓ Bandwidth control
- ✓ Graceful degradation when CPU is saturated
- ✓ Live monitoring



LightStreamer Data Model

Subscription for items and fields



LightStreamer Java adapters

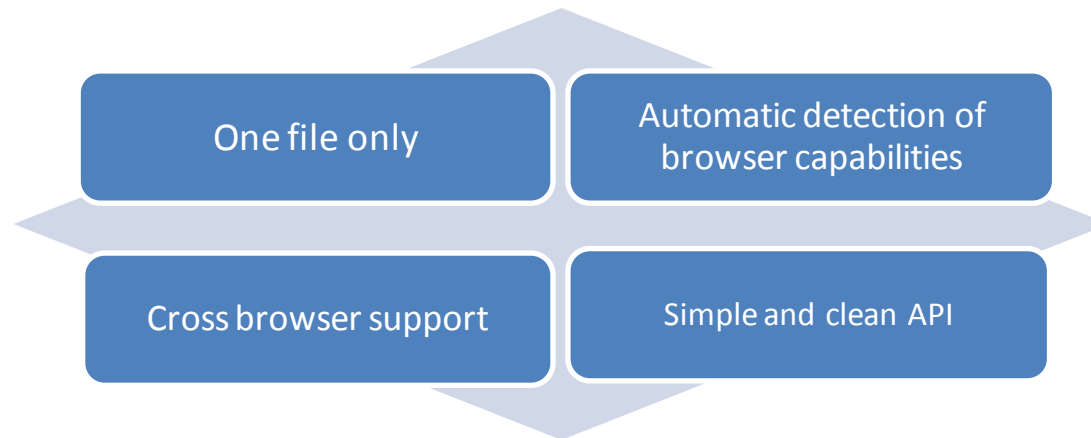
SmartDataProvider interface:

```
public class DataFeedLightStreamerAdapter implements SmartDataProvider {  
    public void setListener(final ItemEventListener itemEventListener) {}  
    public void subscribe(final String itemName, final Object itemHandle, final boolean needsIterator) {}  
    public void unsubscribe(final String itemName) throws SubscriptionException, {}
```

Push updates with ItemEventListener:

```
final Map<String, String> fieldsUpdateMap = new HashMap<String, String>();  
fieldsUpdateMap.put("value", String.valueOf(tick.getValue()));  
itemEventListener.smartUpdate(itemHandle, fieldsUpdateMap, false);
```

LightStreamer Javascript client

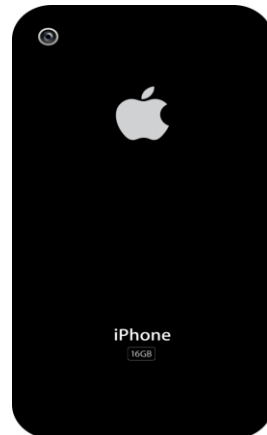


```
require(["LightstreamerClient", "Subscription"], function(LightstreamerClient, Subscription) {
    var client = new LightstreamerClient("http://localhost:8085", "LS-DEMO");

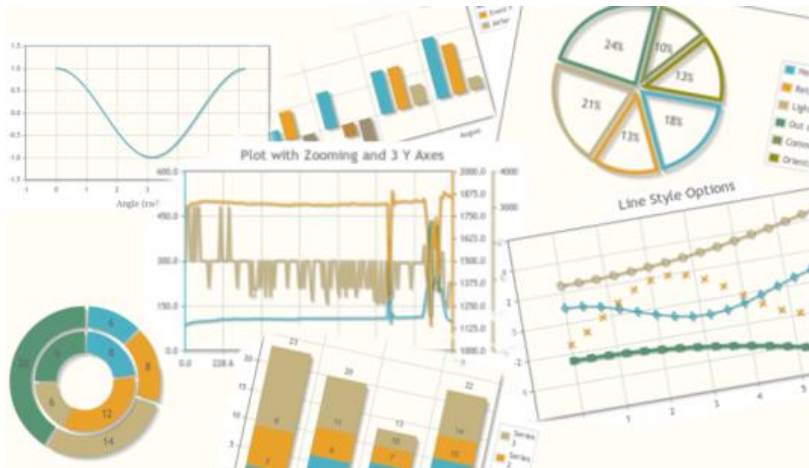
    client.connect();
    var subscription = new Subscription("MERGE", ["EUR-GBP"], ["value"]);
    subscription.addListener({
        onItemUpdate: function(updateObject) {
            // Handle the update here
        }
    });
    client.subscribe(subscription);
});
```

Non-JavaScript clients

Wide variety of clients for different platforms



jQPlot charting library



- ✓ Open Source
- ✓ jQuery plugin
- ✓ Wide variety of charts
- ✓ Based on canvas
- ✓ Cross-browser
- ✓ Extensible
- ✓ Dynamic updates

