

Consuming with a Streaming API



Richard Warburton

@richardwarburto www.monotonic.co.uk



The Problems



Generic JSON Processing

Tools

Apply common understanding to different JSON docs, eg: jq, formatting

Validation

Check that all fields in a doc have a certain property

Transformation

Modification of any JSON documents



Binding APIs support
specific types, not
generic/unstructured
documents



Performance



DOM and Binding APIs are slower

Convert the entire document into an in-memory object



Streaming uses less memory + CPU

Processes each token in the JSON document one-by-one so you only need to do the minimal work



API Usage



Demo



Basic API usage

Parse the Bank Loan document



Demo



Servlet Integration

Approve/Deny the a loan application



Demo



Performance comparison

- Example parsing benchmark
- Memory consumption for a large document



Conclusions



Streaming Comparison

Pros

Better performance

Faster

Less memory

Generic code possible

Cons

API is much harder to use

Less productive for developers



Summary



Streaming API: 3rd consuming option

Best performance

Generic code on unstructured JSON

