

Java: JSON Fundamentals

WHAT IS JSON?



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JavaScript Object Notation

A language independent, human readable data interchange format

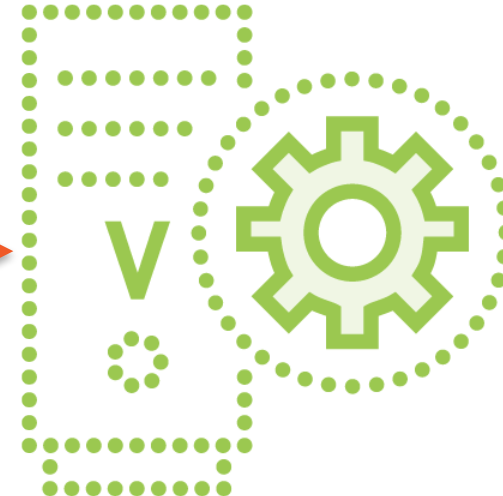


1. Communicating with Web Browsers



Web Browser

Sends and receives JSON



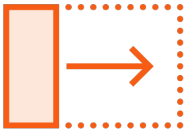
Web Service

Sends and receives JSON

Communication Patterns



Remote procedure calls over HTTP



Server sent events – Unidirectional streams of events



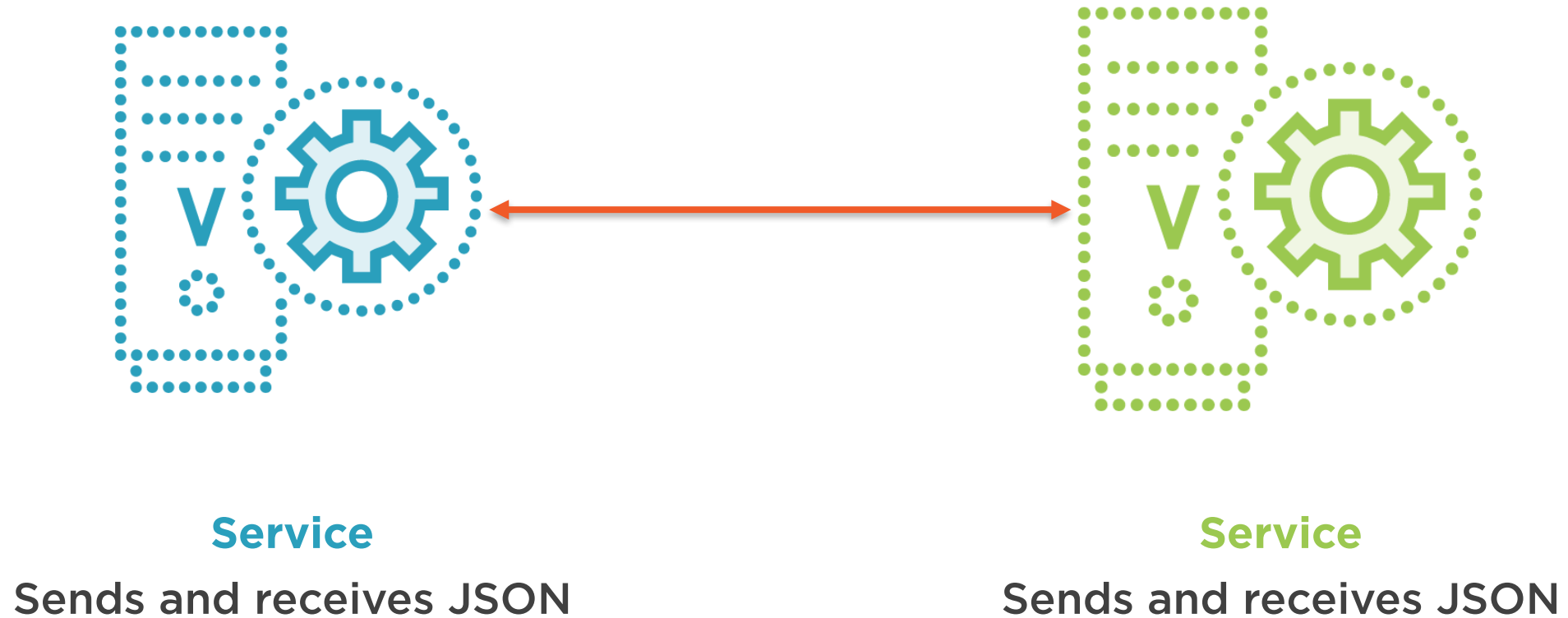
Websockets – Bidirectional streams of events



JSON represents data. It is
not tied to a transport
technology



2. Communicating Between Services

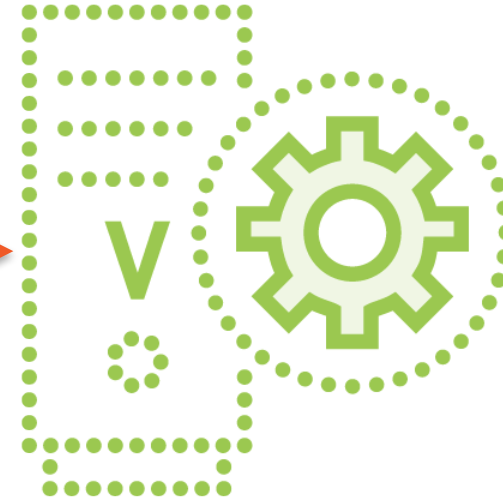


3. Data Storage



File

Stores data as JSON



Service

Reads and writes to the file (eg: npm)



JSON as a File Format

Pros

- Human readable
- Tool support
- Easy to produce and consume
- Well understood
- Language/platform agnostic

Cons

- No schema – type errors
- Inefficient for large documents
- Hard to concurrently access



JSON files shouldn't be
used as a Database!

Good for simple config files



JSON in More Detail

RFC 4627

Standardized - helps
improve compatibility

Represents an Object Tree

Just like a POJO can

Object Oriented Admittance

Each JSON object
nicely maps to a Java
object



Demo



Time to see some JSON in action!

Write a JSON document to represent a bank loan

Understand the syntax and style



Course Structure

Producing JSON

Consuming JSON
with a DOM API

Consuming JSON
with a Binding API

Consuming JSON
with a SAX API

JSON Information
Architecture

Integrating JSON



Summary



The use cases and syntax of JSON

Now you know what JSON is!

Next we will use JSON with Java

