

# json

## Reading and Writing JSON

3.0.0

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# Chapter 1

## GAP-JSON mapping

This package defines a mapping between the JSON markup language and GAP. The built-in datatypes of GAP provide an easy mapping to and from JSON. This package uses the following mapping between GAP and JSON.

- JSON lists are mapped to GAP lists
- JSON dictionaries are mapped to GAP records
- JSON strings are mapped to GAP strings
- Integers are mapped to GAP integers, non-integer numbers are mapped to Floats
- true, false and null are mapped to true, false and fail respectively
- Non-finite GAP floats use the Python-compatible non-standard spellings NaN, Infinity and -Infinity.
- The historical lowercase spellings nan, inf and -inf are accepted on input.

Note that this library is *\*NOT\** intended to provide a general purpose library for transmitting any GAP object. If you wish to do this, look at the openmath package, or IO\_Pickle in the IO package.

### 1.1 Methods

#### 1.1.1 GapToJsonStream

▷ GapToJsonStream(*stream*, *value*) (function)

Converts the *value* to JSON, and outputs it to *stream*. This function disables GAP's usual line splitting while JSON is being outputted.

#### 1.1.2 GapToJsonString

▷ GapToJsonString(*value*) (function)

**Returns:** string

Converts a GAP *value* to a JSON string.

### 1.1.3 JsonStringToGap

▷ `JsonStringToGap(string)` (function)

**Returns:** value

Converts a JSON *string* into a GAP value.

### 1.1.4 JsonStreamToGap

▷ `JsonStreamToGap(stream)` (function)

**Returns:** value

Reads a single JSON object from a *stream* and converts it to a GAP value.

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