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Part 11: Using JSON with TTCN-3

**ETSI Standard**

Reference

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## B.3.5 Number of fraction digits

***Syntactical structure(s)***

**variant** """ fractionDigits <an integer value>"""

***Applicable to (TTCN-3)***

Types and fields of *JSON.Number* type.

***Description***

By default, the number of fraction digits, and/or the use of the exponent part is a tool implementation option. The "fractionDigits" encoding instruction, at encoding constraints the maximum number of fractional digits following the decimal point in the encoded JSON value. TTCN-3 allows using either the decimal point notation or the E‑notation for float values (see clause 6.1.0 of ETSI ES 201 873-1 [1]). In the encoding process, at most the number of fraction digits specified in the instruction shall be used. If representing the actual value does not require the number of fraction digits specified by this instruction, the encoder shall use the needed number of digits. If representing the actual (numeric) value would require more fraction digits than specified by this instruction, the encoder shall use a mixed fraction part + exponent part representation.

NOTE: The "fractionDigits 0" instruction will enforce the encoder to use the exponent part exclusively.

EXAMPLE: Number of fraction digits

If:

**const** JSON.Number c\_number1 := <actual value> **with** (**variant** "fractionDigits 3");

then

|  |  |
| --- | --- |
| <actual value> | encoded JSON value |
| 0.0 | 0.0 |
| 3.14 | 3.14 |
| 3.142 | 3.142 |
| 3.1415 | 31.415E-1or 31.415e-1 |

If:

**const** JSON.Number c\_number2 := <actual value> **with** (**variant** "fractionDigits 0");

then

|  |  |
| --- | --- |
| <actual value> | encoded JSON value |
| 0.0 | 0E-1 or 0e-1 |
| 3.14 | 314E-2 or 314e-2 |
| 3.142 | 3142E-3 or 3142e-3 |
| 3.1415 | 31415E-4 or 31415e-4 |

This encoding instruction has no effect at decoding of JSON values.