

# YANG Open Issues

draft-ietf-netmod-yang-04

IETF 74

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# Summary of changes since -02

- The type 'keyref' is renamed to 'leafref', and can refer to any leaf.
- Added 'require-instance' to specify if a leafref or instance-identifier must exist.
- Import by revision text added.
- The Payload Parsing section now specifies which NETCONF error codes to generate for different error cases.
- Rewrote the description of YIN to a declarative style.
- Editorial fixes, bug fixes...

# Order of XML elements

- Currently the draft specifies that all XML elements are encoded in the same order as specified in the YANG model.
- Proposal: remove this restriction, and specify that XML elements can be encoded in any order. This maps nicely to RelaxNG.

# Float vs. decimal 1(2)

A number of problems with the floating point datatypes have been identified on the ML. Specifically, how they are handled by XPath and the canonical form.

Proposal: Replace the float types with a (fixed point) decimal64 type. The value space of decimal64 is the set of real numbers that can be obtained by multiplying a 64 bit signed integer by a negative power of ten:

$$i \times 10^{-n} \text{ where } 1 \leq n \leq 18$$

A decimal64 type must be defined with a 'fraction-digits' substatement which defines 'n'.

# Float vs. decimal 2(2)

For example:

```
typedef hundredth {  
    type decimal64 {  
        fraction-digits 2;  
        range 0..100;  
    }  
}
```

Valid value: “46.68”

Canonical form: No + sign, no leading or trailing zeros, except that there must be one digit on both sides of the decimal point: “3.0” “0.4668”

Alternative: No trailing zeros at all, and no decimal point unless needed: “3”