
JSON Encoding of Data Modeled with YANG

`draft-ietf-netmod-yang-json-03`

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Main Changes since -01

- Rules for namespace encoding were reformulated without RFC 2119 keywords.
- Namespace encoding of *instance-identifier* was aligned with the encoding of the data tree.
- Text about the order of *(leaf-)list* entries was added.
- Specification of *anyxml* encoding was extended and clarified.

Namespace Encoding

Data tree:

```
"ietf-interfaces:interfaces": {  
  "interface": {  
    "name": "eth0",  
    ...  
    "ietf-ip:ipv4": {  
      "ip": "198.51.100.1",  
      ...  
    }  
  }  
}
```

instance-identifier:

```
/ietf-interfaces:interfaces/interface[name='eth0']/ietf-ip:ipv4/ip
```

Order of *(leaf-)list* entries

The ordering of array elements follows the same rules as the ordering of XML elements representing leaf-list entries in the XML encoding. Specifically, the “ordered-by” properties (sec. 7.7.5 in [RFC6020]) MUST be observed.

anyxml

An anyxml instance is encoded as a name/value pair. The value can be of any valid JSON type, i.e. an object, array, number, string or one of the literals “true”, “false” and “null”.

This document imposes no other restrictions on the contents of JSON-encoded anyxml instances. It also doesn't define any universal mapping between the contents of JSON- and XML-encoded anyxml instances – note that such a mapping is not needed for the purposes of validation (Section 3) because anyxml contents are not subject to YANG-based validation (see sec. 7.10 in [RFC6020]). However, each definition of an anyxml node MAY specify, in its “description” statement, appropriate syntactic, semantic and mapping rules for the values of that anyxml data node.

Implementations

- RESTCONF [draft-ietf-netconf-restconf-04],
- pyang: schema-aware XML→JSON and JSON→XML conversions, including metadata annotations.

Conclusions

- No open issues.
- To the maximum possible extent, the encoding supports the use of standard JSON parsers (I-JSON compliance, namespace encoding).
- The I-D is ready for WGLC.