

# System-defined Configuration

## **draft-ietf-netmod-system-config-04**

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# Document status

- Adopted in November 2022
  - Describes how a management client and server handle YANG-modeled configuration data that is defined by the server itself.
- High-level updates since last IETF meeting
  - Define a NETCONF capability identifier for “resolve-system” parameter
  - Add some consideration for the client to use “resolve-system” parameter
  - State that servers MAY upgrade system configuration as well as any copied system nodes in <running> when license change or device upgrade.
- Open Issues tracked in <https://github.com/netmod-wg/system-config>
  - Must offline-validation of <running> alone be required? I.e., Must referenced system config always be copied into <running>? (<https://github.com/netmod-wg/system-config/issues/2>)
  - Should the “origin=system” be required for system configuration copied into <running>? (<https://github.com/netmod-wg/system-config/issues/3>)

# Open Issue #1: offline-validation of <running> alone

Must offline-validation of <running> alone be required?

<https://mailarchive.ietf.org/arch/msg/netmod/1MwXYMoUjkYlg4LfjLHFKVqdSJ4/>

## Options

1. Yes, offline-validation of <running> alone must be required
2. No, offline-validation of <running> MAY consider other datastores as well
  1. Treat it as a bug-fix in existing RFCs (might break legacy clients and tool chains)
  2. Wait for a new version of YANG/NC/RC (might incur delay)

Note: Is it a prerequisite to first standardize the config transformation between <running> and <intended>?

**The current document complies with option 1 (i.e., mandate the validity of <running> alone), no changes?**

**OR**

**A possible compromise:** Stating in the draft as <running> MUST always be a valid configuration data tree, and reference to RFC 8342 and RFC 7950; instead of explicitly stating referenced system configuration MUST be present in <running>.

Thoughts?

# Open Issue #2: “origin” value for system nodes copied into <running>?

- The current draft doesn't limit which origin should be used, should this be clearly defined?
- What if the copied system nodes are immutable? This is the case where configuration in <running> should not take precedence.

```
<applications xmlns="urn:example:application">
  <application>
    <name>ftp</name>
    <protocol>tcp</protocol>
    <destination-port>21</destination-port>
  </application>
  <application>
    <name>tftp</name>
    <protocol>udp</protocol>
    <destination-port>69</destination-port>
  </application>
</applications>
```

The config of “applications” in <system>

```
<applications xmlns="urn:example:application">
  <application>
    <name>ftp</name>
  </application>
  <application>
    <name>tftp</name>
  </application>
</applications>
```

The config of “applications” in <running>

```
<applications xmlns="urn:example:application"
  xmlns:or="urn:ietf:params:xml:ns:yang:ietf-origin"
  or:origin="or:system">
  <application>
    <name>ftp</name>
    <protocol>tcp</protocol>
    <destination-port>21</destination-port>
  </application>
  <application>
    <name>tftp</name>
    <protocol>udp</protocol>
    <destination-port>69</destination-port>
  </application>
</applications>
```

Option 1

```
<applications xmlns="urn:example:application"
  xmlns:or="urn:ietf:params:xml:ns:yang:ietf-origin"
  or:origin="or:intended">
  <application>
    <name>ftp</name>
    <protocol or:origin="or:system">tcp</protocol>
    <destination-port or:origin="or:system">21</destination-port>
  </application>
  <application>
    <name>tftp</name>
    <protocol or:origin="or:system">udp</protocol>
    <destination-port or:origin="or:system">69</destination-port>
  </application>
</applications>
```

Option 2

Comments, Questions, Concerns?