

RFC 4741bis Status

draft-ietf-netconf-4741bis-01

IETF 76

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Issue tracker

We track issues at the NETCONF WG wiki:

http://trac.tools.ietf.org/wg/netconf/trac/wiki/Issues_4741bis

The numbers on the remaining slides refer to issues on that page.

007: return from XPath filter (new)

- RFC 4741 says that a XPath filter must return a node set, but it does not specify how this node set is serialized into XML. For example given:

```
list interface {  
  key name;  
  ...  
  leaf mtu { ... }  
}
```

What should the expression: `select="/interface/mtu"` return?

```
<nc:data>  
  <if:interface>  
    <if:mtu>1500</if:mtu>  
  </if:interface>  
  <if:interface>  
    <if:mtu>1500</if:mtu>  
  </if:interface>  
</nc:data>
```

```
<nc:data>  
  <if:interface>  
    <if:name>eth0</if:name>  
    <if:mtu>1500</if:mtu>  
  </if:interface>  
  <if:interface>  
    <if:name>eth2</if:name>  
    <if:mtu>1500</if:mtu>  
  </if:interface>  
</nc:data>
```

011: duplicate edit-config modifications(new)

- Consider this example:

```
<if:interface nc:operation="merge">  
  <if:name>eth0</if:name>  
  <if:mtu>100</if:mtu>  
  <if:mtu>1500</if:mtu>  
</if:interface>
```

- Proposal: If the same object is modified twice in an edit-config, the result is implementation specific.

017: New reference figure (open)

	Layer	Example	
(4)	Content	Configuration data	Notification data
(3)	Operations	<edit-config>	
(2)	Messages	<rpc>, <rpc-reply>	<notification>
(1)	Secure Transports	SSH, TLS, BEEP/TLS, SOAP/HTTP/TLS, ...	

Changes from 4741:

RPC -> Messages

Transports -> Secure Transports (and better examples)

Addition of Notification example

018: Lock and commit (open)

- Does a lock on candidate prevent <commit>?
- Several existing implementations do this, but it seems a bit odd - a lock on A prevents modifications of A, but <commit> does not modify the candidate.

004: error-severity (open)

- The error-severity 'warning' is not used – there are no error-tags that may use the 'warning' error-severity.
- It is unclear how warnings are supposed to work. As a result of an operation, an rpc-error is returned with a warning. Did the operation succeed? Note that it cannot be returned together with <ok/> (according to the XSD).
- Proposal 1: deprecate or remove 'warning' (but for backwards compatibility keep <error-severity>)
- Proposal 2: add a new error-tag which can be used for warnings.
- IETF75 rough consensus was “Fix Warnings”. We need a proposal from someone who has an idea of how warnings should be used.

014: capability changes (open)

- We need to describe what happens if the device changes its capabilities while there are active NETCONF sessions.
- Proposal: Add an error code 'capabilities-changed', and text:

A server MUST reply with a 'capabilities-changed' error if the client sends a request which is affected by a modified capability.

- Can we add a new error-code, or do we have to use 'operation-failed' with a standard error-app-tag (it would be our first...)
- IETF75 rough consensus was to add this error.

Still not clear if it should be a new error-tag or an error-app-tag

013: confirmed-commit (new)

- If the session dies, a pending confirmed commit is reverted.

Thus, if a config change is done so that the session dies, the config change will immediately be reverted.

- Proposal: add a confirmed-commit:1.1 capability which adds a parameter <persist> to the <commit>.
- It is unclear (existing implementations behave differently) if the confirming commit can be sent from another session or not. Seems insecure to allow other session to do it.

But in the persist example above, the confirming commit **MUST** be sent from another session (since the first session died).

- Proposal: Allow other session to explicitly confirm.
- If a client takes a lock when the confirming-commit is pending, it will be surprised if the config changes due to a rollback. Proposal: do not allow lock when a confirming-commit is pending.

Other issues

- The rest of the issues need more ML discussion, according to the IETF75 session.

003: error-path (open)

- error-path root node different depending on if the node is present in the PDU or not? Current text:

This element will not be present if no appropriate payload element can be associated with a particular error condition

- It seems useful to report the path to the node with error if <validate> or <commit> fails (and at least two implementations does this)

You will get one of:

- /nc:rpc/...
- /foo:top/... (data model top node)
- TODO: Martin to send proposed text to ML

006: multiple namespaces (open)

- Can namespaces in subtree filters really be used to select format, i.e. text vs. XML? So namespaces are used to indicate both data models, and format. If so, what is returned when no filter is specified?
- Proposal: remove this text
- IETF75 consensus was to remove this text.

010: namespace wildcarding (new)

- Can / should no namespace in subtree filter be interpreted as a wildcard, e.g.

```
<nc:filter>  
  <interface/>  
</nc:filter>
```

could return:

```
<nc:data>  
  <if:interface>  
    ...  
  </if:interface/>  
  <ospf:interface>  
    ...  
  </ospf:interface>  
</nc:data>
```

- IETF75: needs more discussion on ML

015: UTF-8 and UTF-16 (open)

- Can we require that NETCONF servers support UTF-8 only?
- IETF75 consensus was to make UTF-8 required and be silent on other encodings.

009: partial-operation error (new)

- This error is presumably returned when continue-on-error is used. Also stop-on-error? This should be clarified.
- This error contains a list of 'ok-element', 'err-element', and 'noop-element', as QNames (note; not as paths!)
- Proposal: deprecate this error, and clarify that if continue-on-error is used, a set of <rpc-error> are returned.
- IETF75: needs more discussion on ML

012: format of copy-config (new)

- There is no description of the format of copy-config to/from URL – but a top-level XML element is needed.
- Suggest that <nc:config> is used:

```
<nc:config>  
  <if:interface>  
    ...  
  </if:interface/>  
  <foo:top>  
    ...  
  </foo:top>  
</nc:config>
```

- IETF75: needs more discussion on ML