draft-ietf-netconf-4741bis-02
March 2010

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Agenda

- base:1.1 capability

- open issues on wiki:

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

base:1.1 capability

- The base capability associated with the updated specification needs to change:
  - Clearly identify versions in each RFC
  - Allows bugs to be fixed for new-client/new-server, without breaking old-client/new-server behavior
  - Client and server advertise both 1.0 and 1.1
    - Highest version in common is used
  - Server MAY use 1.1 clarifications in 1.0
  - Continue using base:1.0 for XML namespace

capability extension

- Issue: cannot advertise base:1.1 as XML namespace, need to add a capability instead

- Proposal: add nc:capability extension

```
namespace "urn:ietf:params:xml:ns:netconf:base:1.0";

nc:capability "urn:ietf:params:netconf:base:1.1";

extension capability {

  argument uri;

  description     "Used as capability identifier instead of the namespace";

}
```

base:1.1 <hello>

```xml
<hello  xmlns="urn:ietf:params:xml:ns:netconf:base:1.0">
   <capability>
      urn:ietf:params:netconf:base:1.0
   </capability>

   <capability>
      urn:ietf:params:netconf:base:1.1?module=ietf-
netconf&revision=2010-xx-xx
   </capability>

</hello>
```

004: error-severity

- Issue: warnings do not work

- Resolution:
    - leave error-severity intact in case rpc-warning added in the future
    - do not add support for warnings until some standard protocol warnings are needed
    - Do not add any text saying warnings do not work

006: multiple namespaces

- Issue: Text in 7.1 says multiple formats may be available

- Resolution:
    - Remove this text
    - All NETCONF messages are encoded in XML
    - A vendor can define a data model with or without nested elements
    - Not a protocol decision, but rather a data modeling decision

008 - subtree filtering

- Issue: subtree filtering needs clarifications

- Resolution:

  – Rewrite namespace selection node text so that xmlns attributaes are not relevant to the filter; just the effective namespace

  – Clarify content match node for multiple instances

    - at least 1 instance match; not all instances must match

009: partial-operation error

- Issue: partial-operation not implemented or useful

- Resolution:
    - The 'partial-operation' error-tag will be removed in the base:1.1 spec
    - Does not really impact 1.0 servers; they can still generate this error-tag in 1.0 session

010: filter namespace wildcard

- Issue: Selecting all nodes with the same local-name is cumbersome

- Resolution:

    - In base:1.1, it will be OK for the NULL namespace to be used, to indicate "match all namespaces with this local-name"

012: format of copy-config

- Issue: copy config to/from <url> parameter is not standardized

- Resolution:

    - The top-level element MUST be the <nc:config> element.

013: confirmed-commit

- Issue: procedures need improvement

- Resolution:

    - Adopt confirmed-commit:1.1 capability

        - adds new parameters to allow the confirming commit to be issued by a different session

        - allows config changes to disrupt the NETCONF session without destroying the confirmed-commit utility

        - [new issue: what about a notification?]

014: capability change

- Issue: dynamic capability changes ignored

- Resolution:

    - Add new error-tag in base:1.1 for capability-changed

    - Add resynch <hello> command by Juergen

    - Any cap-change, even module upgrade, requires resynch procedure

    - No error added to base:1.0; stays the same

019: clarify copy-config

- Issue: some corner-cases not clear

- Resolution:

  - copy from running to candidate

    - same as discard-changes

  - copy from candidate to running

    - not the same as commit

      - top-level replace vs. specific node replace

  - need to resolve access control details for copy-config vs. commit

020: changes during commit

- Issue: Are changes to the running config allowed during a confirmed-commit?

- Resolution:

  - Yes: they will get clobbered if the commit times out, or they will get added if the confirming commit is received

    - Issue: Access control problem in the candidate; must prevent confirming commit by superuser from applying unauthorized changes

021: default data

- Issue: handling of default data not clear

- Resolution:

  - This is handled in the with-defaults spec.

  - The protocol does not say how a server needs to return default data in <rpc-reply> or <notification> messages

  - A copy-config from running to startup SHOULD be done in the server 'basic' mode.

022: capabilities text

- Issue: Some clarifiying text for capabilities

- Resolution

    – Text from netconf-monitoring draft will not be added.

    – New capability-changed error and resynch will be added instead

New Issue: YANG features

- Issue: YANG features should be used for ietf-netconf.yang instead of capabilities for optional protocol behavior

- Resolution:

  - Will examine converting capabilities to YANG features in base:1.1 only

  - Not likely because this requires many edits

  - Not sure how the capability template would need to change for features