

RESTCONF Update to Support the NMDA

draft-dsdt-netconf-restconf-nmda-00

NETCONF WG
IETF 99 (Prague)

Introduction

The solution presented is backwards compatible for existing RESTCONF servers

Backwards compatibility is achieved by only adding new top-level resources.

- thereby leaving the semantics of all existing resources alone...

Summary of Updates to RFC 8040

- Adds new top-level resource `"/ds"`.
- Adds new query parameter `'with-origin'`.
- States that Section 3.5.4, Paragraph 3 doesn't apply for all the `/ds/<datastore>` resources
 - i.e. in-use values are always returned...
 - **Note: draft incorrectly states that this doesn't apply only for `<operational>`.**
- Note: this draft does NOT deprecate the `/data` resource
 - but maybe it should...

The `{+restconf}/ds/<datastore>` Resource

`<datastore>` is encoded as an 'identity'

Examples:

- `{+restconf}/ds/ietf-datastores:running`
- `{+restconf}/ds/ietf-datastores:intended`
- `{+restconf}/ds/ietf-datastores:operational`
- `{+restconf}/ds/example-ds-ephemeral:ds-ephemeral`

Conformance Verification

Clients can test either if:

- `<operational>` exists:
 - HEAD `{+restconf}/ds/operational`
- or if the “yang-library” container exists:
 - HEAD/GET `{+restconf}/ds/operational/ietf-yang-library:yang-library`
 - HEAD/GET `{+restconf}/data/ietf-yang-library:yang-library`

Note: NMDA-aware clients are discouraged from using `/data`, so that resource may be deprecated more easily some day.

Protocol Operations

For the most part:

- all existing protocol operations defined in [RFC8040] for the `{+restconf}/data` resource are apply to the new datastores

With some exceptions... (next slide)

RESTCONF Protocol Exceptions

- Dynamic datastores are excluded
 - as each dynamic datastore definition needs to be reviewed for what protocol operations it supports.
- Some datastores are read-only by nature (e.g., <intended>)
 - hence any attempt to modify these datastores will fail.
- RFC 8040, Section 3.5.4, Paragraph 3 does not apply when interacting any of the /ds/<datastore> resources
 - use standard “basic-mode” default-handling
- New query parameter 'with-origin' (default: false)
 - to request the 'origin' attributes when querying <operational>.

Questions, comments, concerns?