YANG Schema Mount

draft-ietf-schema-mount-08

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Issues Arising from WGLC

- Prefix/namespace declaration for parent references
- Support for NMDA
- NACM considerations
- Integration of YANG library and schema mount specification
Prefix/namespace declaration

Parent references are specified with XPath expressions, so we need to be able to declare namespace prefixes. Current solution:

```
+-ro schema-mounts
  +-ro namespace* [prefix]
    |  +-ro prefix yang:yang-identifier
    |  +-ro uri inet:uri
```

Options:

1. no change
2. replace uri with module name
3. use both URI and module name

Proposal: 1
NMDA Support

The use-schema method should just work – it is an augment with externally specified target node.

The inline method poses some problems because the mounted schema for all datastores is specified by instance data (YANG library) present only in ⟨operational⟩. What if it is not present?

Example: A mount point instance in ⟨intended⟩ is a part of pre-provisioned configuration. But then it doesn’t exist in ⟨operational⟩ and we don’t have the schema for ⟨intended⟩ (i.e. it cannot be validated).

If the inline method is used, it has to be ensured that this cannot happen.
NACM Considerations

With the `use-schema` method, the `ietf-netconf-acm` should be only in the top-level schema.

For the `inline` method, it may be also a part of the mounted schema (e.g. in split management). Reasonable rules:

- Top-level NACM rules apply to the host management session (they may cover instances in mounted tree).
- NACM rules in the mounted tree apply to the LNE session. They cannot refer to the parent data tree (not even via parent references).

Options:

1. Specify such rules in this document
2. Address it in the NACM document.

Proposal: 1
YANG Library & Schema Mount Integration

YANG library and schema-mounts data both describe how YANG modules are combined in the overall schema. It makes a lot of sense to integrate them – the result could be simpler and easier to understand.

Two concrete proposals:

- https://www.ietf.org/mail-archive/web/netconf/current/msg13646.html

This would take some time, but it is really fundamental.
Proposed Re-Organization

**Document 1:** A small meta-modelling language (meta = granularity of entire YANG modules) to specify
- a collection of YANG modules (YANG library),
- how the modules are combined into the overall schema (use-schema structure)

**Document 2:** The inline case of schema mount, possibly covering other aspects such as
- use cases (to fit into NMDA)
- NACM,
- configuration and provisioning of mounted data.