YANG Data Extensions

draft-bierman-netmod-data-ext-01

IETF 100

Andy Bierman <andy@yumaworks.com>
Martin Björklund <mbj@tail-f.com>
Kent Watsen <kwatsen@juniper.net>
The problem

- The YANG extension statement yang-data in the module ietf-restconf can be used to define a data structure that is not intended to be part of a datastore.
- Original use case was RESTCONF resources and errors, but since then it has been used to define file formats, contents of protocol messages etc.
- However, this solution has a couple of limitations:
  - The structure cannot be augmented
  - The structure must define exactly one container
  - Creates a dependency to RFC 8040 RESTCONF
The solution

A separate document that defines two new extension statements:

- **yang-data**: intended to replace `ietf-restconf:yang-data`. Semantics the same, but removes the limitation that the top-level node must be a single container.

- **augment-yang-data**: can be used to augment a structure defined with `yang-data`. 
Open Issue B.1

Should we also define a new statement uses-yang-data that can be used just like normal uses, in all places where uses can be used?

Drawback: we get two ways of defining reusable structures, grouping and yd:yang-data.
Open Issue B.2

Currently there is no way to define special `<error-info>` content for an rpc/action. Yd:yangdata could be used to define the structure. But should we also define a new extension that can be used in rpc/action to refer to such a structure?

```xml
<yang:yang-data name="my-error-info">
  ...
</yang:yang-data>

rpc my-rpc {
  input {
    ...
  }
  output {
    ...
  }
  yd:map-error-info name="my-error-info";
}
```