Self Describing Data Object Tags

draft-tao-netmod-yang-node-tags-06

Qin Wu (bill.wu@huawei.com)
Benoit Claise (bclaise@cisco.com)
Liang Geng(gengliang@chinamobile.com)
Zongpeng Du  [duzongpeng@chinamobile.com]
Mohamed Boucadair (mohamed.boucadair@orange.com)
Recap

• The use of tags for classification and organization is fairly ubiquitous not only within IETF protocols, but in the internet itself (e.g., "#hashtags")
  • Module Tag defined in [I.D-ietf-netmod-module-tags] provides YANG modules classification and filter different discrete categories of YANG modules
  • Self describing Data Object Tags classify data objects from different YANG modules and identify characteristics data

• Self describing data object tags can be used in the streaming telemetry to reduce the amount of data exported to the destination.

• Self describing data object tags may be registered as well as assigned during the module definition; assigned by implementations; or dynamically defined and set by users.
Document Status

• Presented in NETMOD session 3 times (IETF106, IETF 107, IETF 108)
• IPR on draft-tao-netmod-yang-node-tags was issued in July 14 and has been disclosed in compliance with IETF IPR rules
• WG adoption call on draft-tao-netmod-yang-node-tags-05 was issue in August 17 and got a lot of support,
  – Many thanks to Juergen Schoenwaelder, Liu Peng, Duzhongpeng, Chang Liu, Paul, Wei Wang, YuanZhang, Lou Berger, YingzhengQu,
  – It was suggested by WG
    • Operation type definition should be specified in each device module definition
    • object-specific tags is interesting capability which provide general utility.
• Changes in v-06 since IETF 108
  – Remove operation-type extension statement together with metric-precision and metric-scale based on agreement during the first WG adoption call
  – Remove service-tag and task-tag extension statement since module tag can be reused
  – Rewrite the use cases section to clarify the Relation between Object, Property and Metric and opm tag usage.
  – Clean up YANG Data Object Tags Registry
  – Add one new coauthor Mohamed
• **OPM tag definition**

- Classify management and operation data into object, property subobject and metric subobject three categories.

![Diagram of OPM tag definition]

**Figure 1: The Relation between Object, Property and Metric**
Issue: Context Information tag

In addition to opm-tag, two context information tags are introduced which can be used to correlate data object from different module:

- **metric-group extension statement**: Provide metric subobjects classification (e.g., loss, jitter, delay) within the YANG module.
- **multi-source-tag extension statement**: Identify multi-source aggregation type (e.g., aggregated, non-aggregated) related to metric subobject.

The metric-group tag and multi-source-tag will be maintained in the tag list under /tags:module-tag/tags:module/ntags:data-object-tags/ntags:tag and only use tag name to distinguish from each other.

```
module: ietf-data-object-tags
  augment /tags:module-tags/tags:module:
    +++rw data-object-tags
      +++rw data-object* [object-name]
      +++rw object-name  nacm:node-instance-identifier
      +++rw tag*          tags:tag
      +++rw masked-tag*   tags:tag

"ietf-data-object-tags" module augments Module tag model and provides tag management.
```
Next Step

• Comments have been addressed
• Adopt it as WG work item?