

A YANG Data Model for Network Hardware Inventory

CCAMP WG, IETF115

draft-yg3bp-ccamp-network-inventory-yang-02

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Major Updates Since IETF 114

➤ Made some editorial changes on the draft

- Indicated that state data, such as admin-state, oper-state and so on, is not in the scope of this draft
- Indicated that some attributes but not all attributes defined in RFC8348 are applicable for NE
- Refreshed the session of efficiency issue, indicated more clearly that, the efficiency issue should be solved at protocol level rather than data model level.
- Indicated more clearly the reason why we designed a generic data model instead of hierarchical data model is, a generic data model which is based on component is more flexible and much easier for backward compatibility, as it is easily augmented.

➤ Closed some issues which were fixed or aligned

- Issue #32 #21: Integration efficiency issues which are out of scope of this draft
- Issue #19 #17 #14 #9 #2: Relationship with RFC8348 or RFC8345
- Issue #27 #26 #12 #4: Motivation and the concept of inventory

➤ Compared our current data model and openconfig-platform

Comparison Between Current Data Model and openconfig-platform

Attributes in oc-platform	Attributes in our model	remark
name	name	
type	class	
id	uuid	
location	location	
description	description	
mfg-name	mfg-name	
mfg-date	mfg-date	
hardware-version	hardware-rev	
firmware-version	firmware-rev	
software-version	software-rev	
serial-no	serial-num	
part-no	part-number	
clei-code		TBD
removable	is-fru	
oper-status		state data
empty	contained-child	
parent	parent-references	
redundant-role		TBD
last-switchover-reason		state data
last-switchover-time		state data
last-reboot-reason		state data
last-reboot-time		state data
switchover-ready		state data

Attributes in oc-platform	Attributes in our model	remark
temperature		performance data
memory		performance data
allocated-power		TBD
used-power		TBD
pcie		alarm data
properties		TBD
subcomponents	contained-child	
chassis	chassis-specific-info	
port	port-specific-info	
power-supply		TBD
fan		Fan is considered as a specific board. And no need to define as a single component
fabric		TBD
storage		For Optical and IP technology, no need to manage storage on network element
cpu		For Optical and IP technology, no need to manage CPU on network element
integrated-circuit	board-specific-info	
backplane		Backplane is considered as a part of board. And no need to define as a single component
software-module		TBD
controller-card		Controller card is considered as a specific functional board. And no need to define as a single component

Currently most of the attributes defined in oc-platform can be covered by our current data model:

- As agreed, state data is not in the scope of our data model;
- Performance and alarm attributes are suggested to define in other data models;
- Some component types defined by oc-platform are already considered by our data model, such as fan and controller-card. And for some components, we considered there was no need to manage it from operator perspective, such as CPU and storage.

Next Step

- Request CCAMP WG adoption
- Get more input from IP and microwave technologies
- Identify some more component-specific attributes and introduce more component types
- Progressing to fix the remaining issues

Welcome to join our weekly discussion

- Meeting slot: Wednesday 3-4pm CET (9-10am EST)
- Github: <https://github.com/italobusi/ietf-network-inventory>

Thank You ☐