

A YANG Data Model for Network Hardware Inventory

CCAMP WG, IETF117

draft-ietf-ccamp-network-inventory-yang-02

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Major Updates Since IETF 116

➤ Provided a pattern for component's location

- ONF TR-547 provides a string pattern to describe the relative position of INVENTORY_ID property
- Though TR-547 is aimed to adopt in optical technology, we consider this string pattern is also applicable for other technologies
- The string pattern is concatenation of n tuple elements '/<field>=<index> ', the meaning of '<field>' includes:

<field>	meaning
ne	network element
r	rack
sh	chassis component
s_sh	sub-chassis component
sl	slot component
s_sl	sub-slot component
p	port component

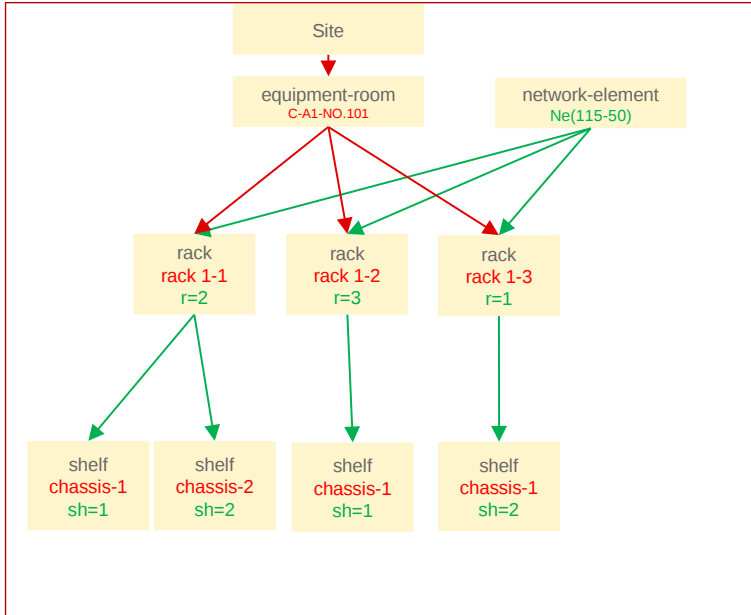
- Though Chassis has broader applicability, we still use the acronyms 'sh' and 's_sh' for consistency consideration

➤ Indicated that equipment-room and rack could be optional

Discussion of NE with multiple racks

Legend:

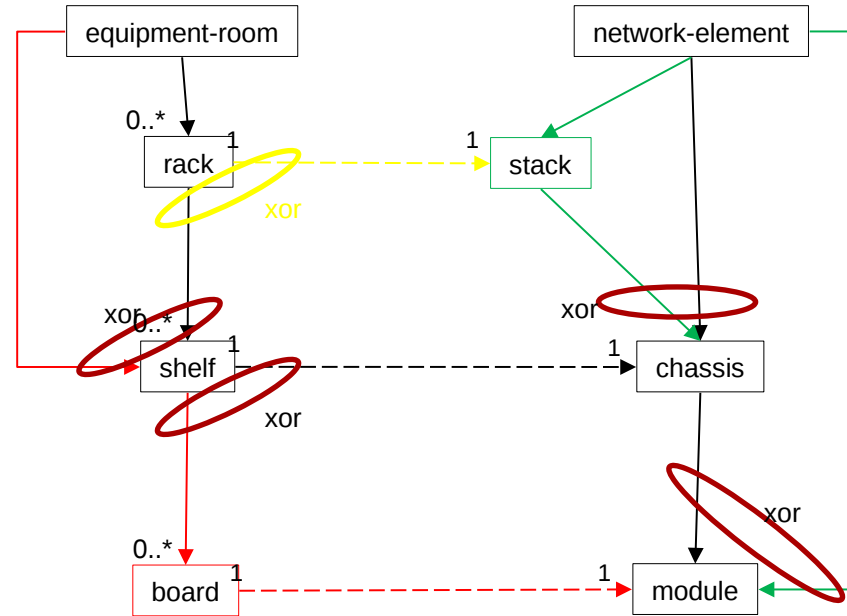
- chassis-1 relative position (with respect parent component)
- sh=3 component location (e.g. within Network Element)



Multi-rack NE:

- No other shelves from other NEs can be hosted on the same racks
- The first two shelves shall be located in the same rack

Possible changes to the I-D and the model



Legend:

- Described in the current I-D
- To be described in the current I-D, but supported by the current YANG model
- To be described in the current I-D, and to be supported by updated YANG model
- Not to be described in the current I-D, and not to be supported by the YANG model
- Containment association
- - - - - Navigation association

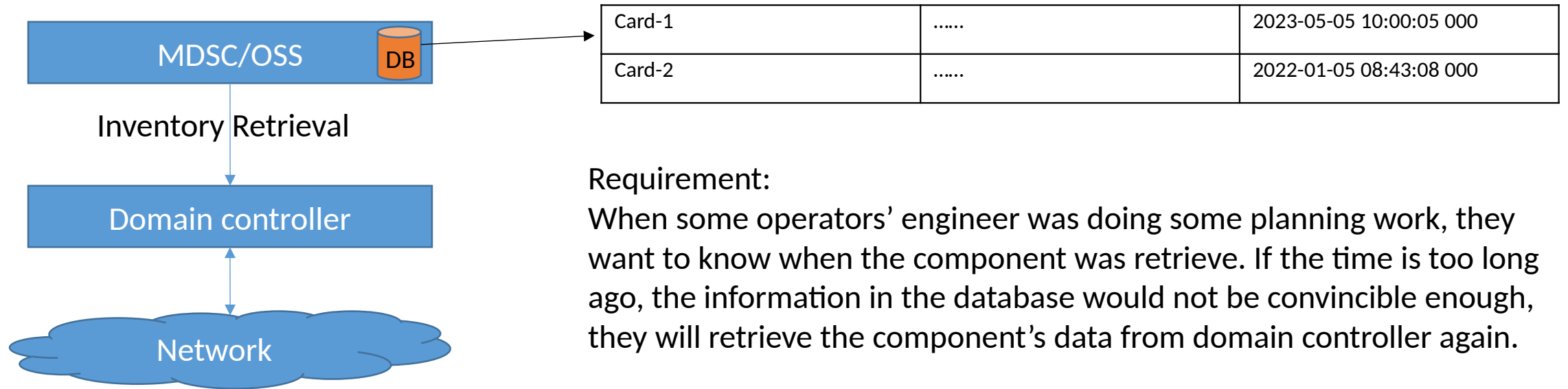
Thoughts of the authors:

- No need to have an association between the rack physical element and the stack component of a network-element. The association can still be kept between the shelf physical element and the chassis component as in the current model.
- The pizza box can be modeled as a chassis.
- The case of a single-board NE is not a common scenario, so we don't put it in the scope.

Management of equipment rooms and sites

- Discussion on-going on adding a list of sites
 - Whether to structure it in a recursive manner (such as a site can contain other sites)
 - For example, a campus can be a site which contains buildings and a building can be another site which contains equipment rooms, and so on
- **Proposal:** define a list of sites but focus only on equipment room type of site in the first phase

Requirement of timestamp when a component was retrieved



Requirement:

When some operators' engineer was doing some planning work, they want to know when the component was retrieve. If the time is too long ago, the information in the database would not be convincing enough, they will retrieve the component's data from domain controller again.

- Usually when there are any changes happened on the component, notifications should be reported to the MDSC/OSS. This timestamp can be got from the time when notification report.
- In case some of the notifications are missing, the MDSC/OSS can ask the domain controller to update the component's data from network. An RPC may be needed for this update operation. But for some undetectable object, such as equipment-room, rack, the RPC operation will not be applicable.

Next Steps

- Plan to move to IVY, if this draft is chosen as the base model
 - 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
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- Continue discussions in weekly open meetings (welcome to join)
 - Meeting slot: Wednesday 4pm CEST / 10am NA EDT / 10pm CST
 - Github: <https://github.com/ietf-ccamp-wg/ietf-network-inventory>

Thank You ☐