

CCAMP: Transport NBI Design Team

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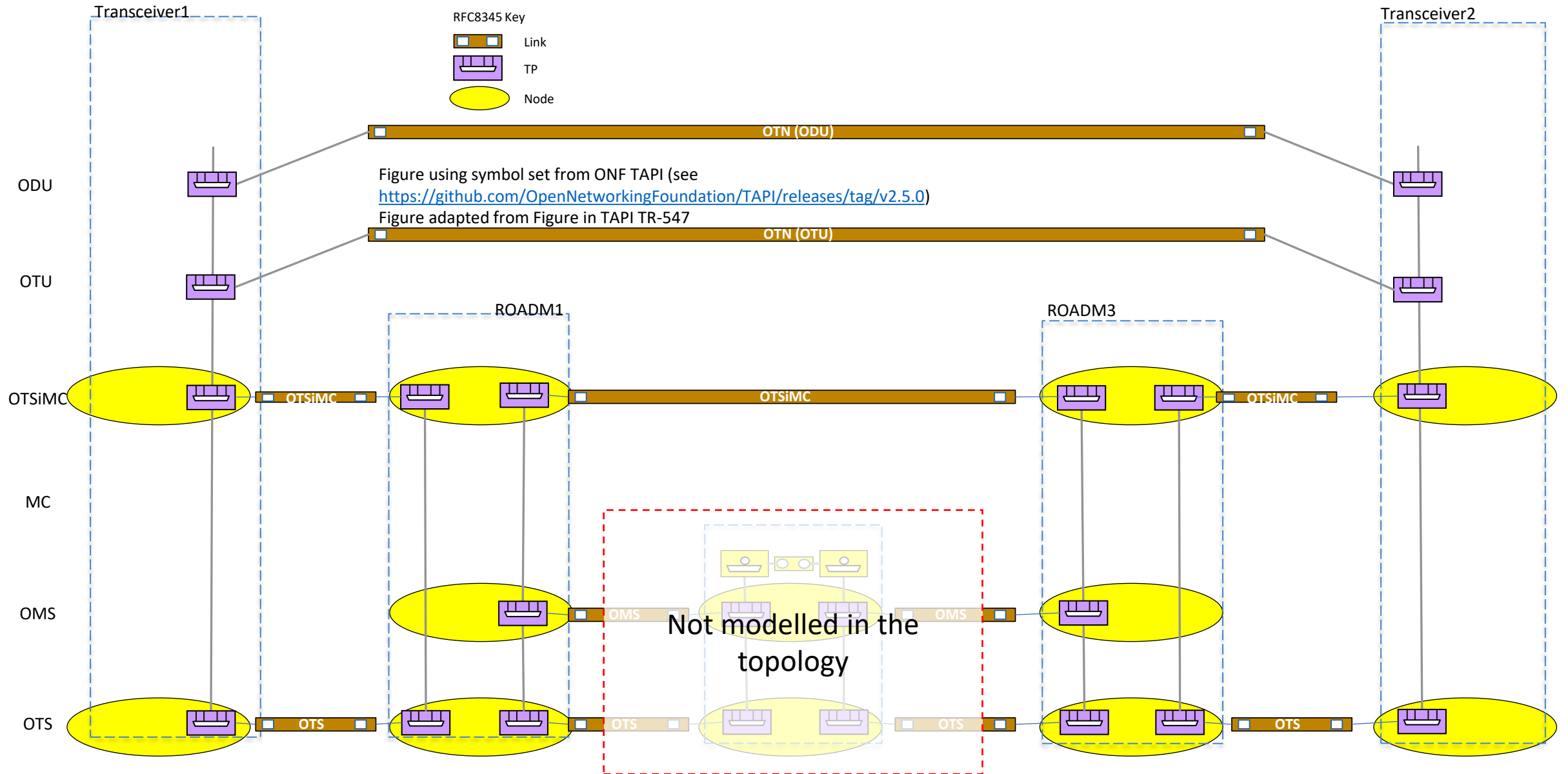
Scope of the Transport NBI Design Team

- A CCAMP Working Group Design Team was created to discuss the use cases and applicability of CCAMP, and related YANG models for the Northbound Interface used to communicate with Transport Network resources
- The Design Team will provide guidelines regarding how all the relevant models can solve agreed and well-identified transport network use cases
- It was agreed that the Design Team members and interested participants should use a non-WG mailing list
 - <https://mailarchive.ietf.org/arch/browse/transport-nbi-dt/>
- The Design Team will publish via the CCAMP GitHub and Wiki
 - <https://github.com/ietf-ccamp-wg/transport-nbi>
 - List is open access; anyone may join and attend
- JSON Examples will be agnostic to deployment architectures

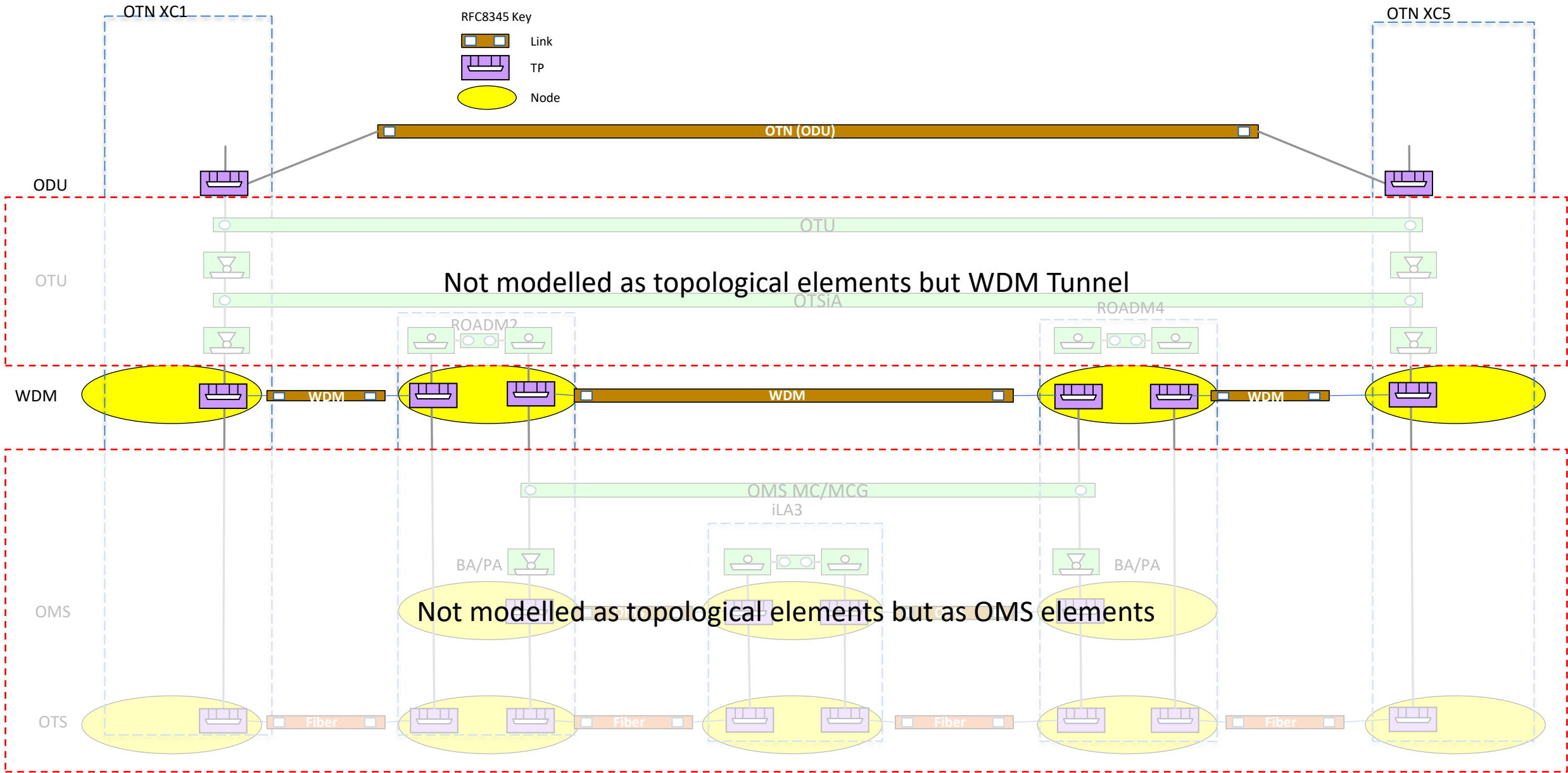
Transport NBI Design Team Meeting Recap

- The DT will help people utilise CCAMP models and IETF protocols.
- Publish best practice and examples via Wiki, GitHub, or a combination.
- DT Discussions are based on Use Cases and Scenarios
 - Use Case: A use case is a broader concept that describes a set of components, actions/steps, and may define the interactions between functional components to achieve requested objective(s).
 - Scenario: A scenario may refer to a specific narrative, technology and set of steps or events.
- Started meeting formally after IETF 118, a key discussion was which "use case(s)" should we focus on first?
 - We agreed to work on, initially
 - 1. Inventory Management
 - 2. Multi-layer Topology Management
- We also agreed that we can potentially reuse the existing work, scenarios and examples from our earlier work:
 - <https://datatracker.ietf.org/doc/html/draft-ietf-ccamp-transport-nbi-app-statement-17#name-json-code>

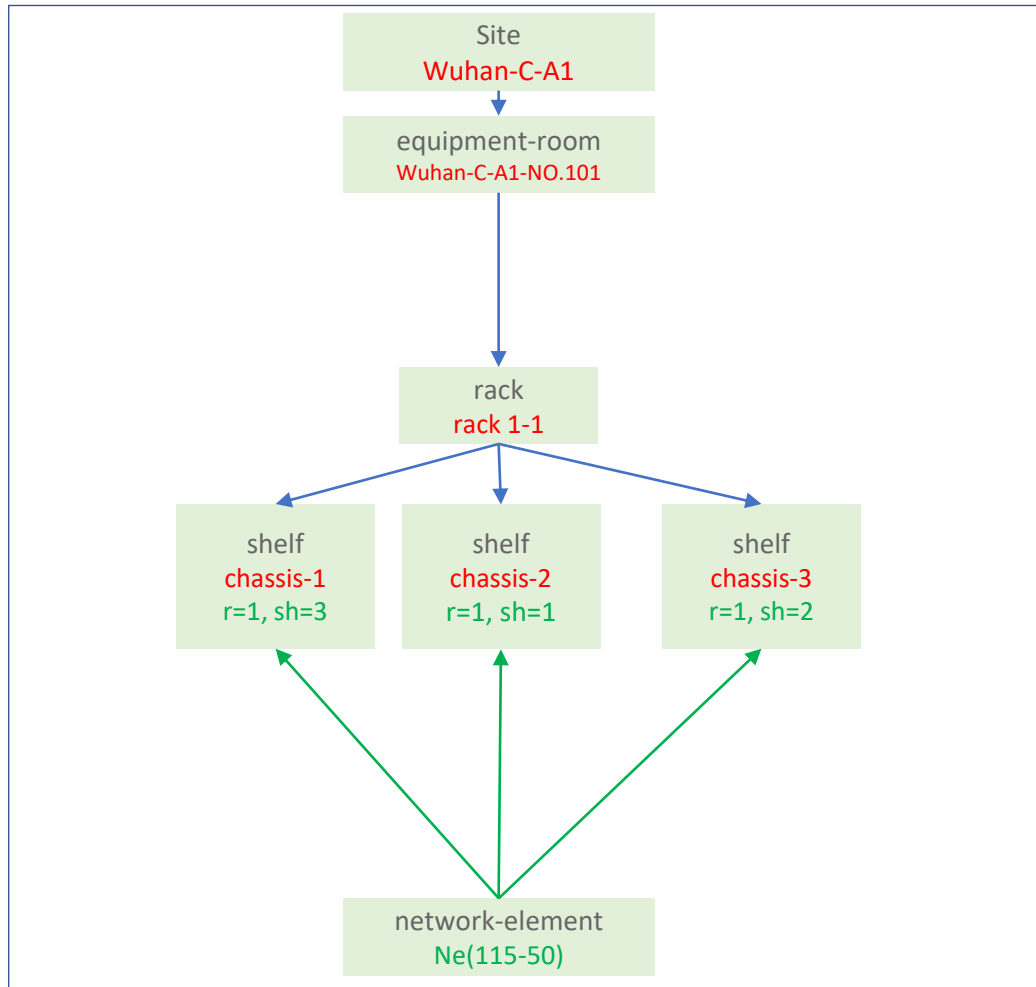
Initial Layering Model



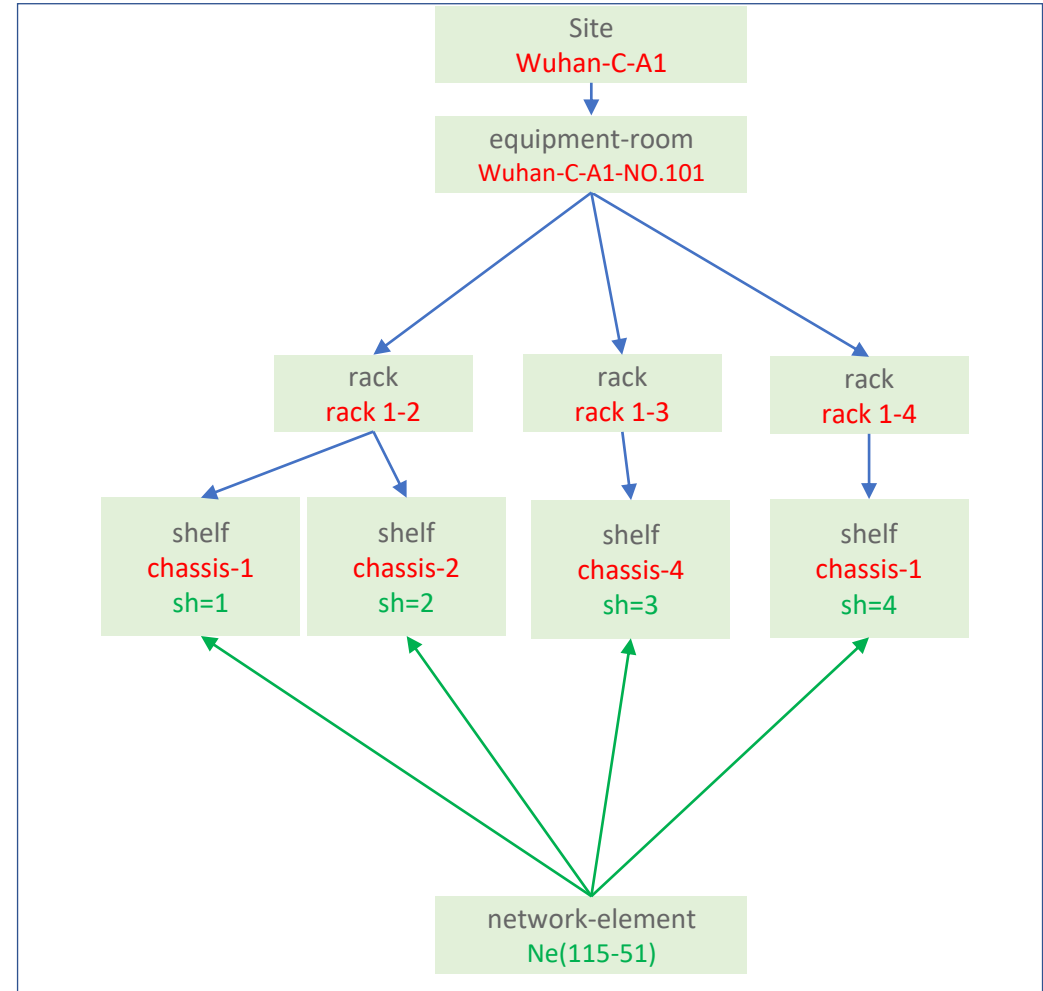
Layering Model Used



Inventory Used



Where the NE occupies a full rack



Where the NEs share the same rack

On the Wire

```
1  {
2    "ietf-network-inventory:network-inventory": {
3      "network-elements": {
4        "network-element": [
5          {
6            "ne-id": "08763e00-8006-455f-816e-ecd4d086bdba",
7            "name": "Ne(115-50)",
8            "description": "NE with multiple shelves occupying a full rack",
9            "components": {
10             "component": [
11               {
12                 "component-id": "5d3bbcba-ad7a-4e55-bf0d-003bb23562c8",
13                 "name": "A1-101-1-1-2",
14                 "description": "Chassis 2 of rack 1 in row 1 of room Wuhan-C-A1-NO.101: location=/ne=Ne(115-50)/sh=1",
15                 "class": "iana-hardware:chassis",
16                 "parent-rel-pos": 1
17               },
18               {
19                 "component-id": "0071f989-0b87-4807-bd0b-e4d7b829c06e",
20                 "name": "A1-101-1-1-3",
21                 "description": "Chassis 3 of rack 1 in row 1 of room Wuhan-C-A1-NO.101: location=/ne=Ne(115-50)/sh=2",
22                 "class": "iana-hardware:chassis",
23                 "parent-rel-pos": 2
24               },
25             ]
9            }
10          }
11        ]
12      }
13    }
14  }
```

TNBI Progress

- Success so far!
 - Addressed Two Use T-NBI Cases
 - 1. Inventory Management
 - 2. Multi-layer Topology
 - Synched TAPI and IETF Terminology
 - Agreed the layering model
 - Examples provided
 - Agreed the inventory model
 - Examples provided
 - Identified issues and reported them
 - Including: “case + when” construct creates duplicated information and should be avoided

What Next?

- Next Steps

- Documenting the Use Cases and Guidelines
 - In the process of writing up the YANG fragments used, including properties, process and best practice
 - Ongoing JSON generation
 - Currently done by hand, thanks Italo, but tools being investigated
 - All output is published on GitHub
 - <https://github.com/ietf-ccamp-wg/transport-nbi>
- Agree the next Use Cases for T-NBI to work on
 - Discovery (links: access, external, inter-domain), Fault Identification, Performance Monitoring, Tunnel Model, et al.
- Next series of T-NBI calls will start in September