



**ONAP**  
OPEN NETWORK AUTOMATION PLATFORM

# Future Prospects on R3+ Resource IM Requirements

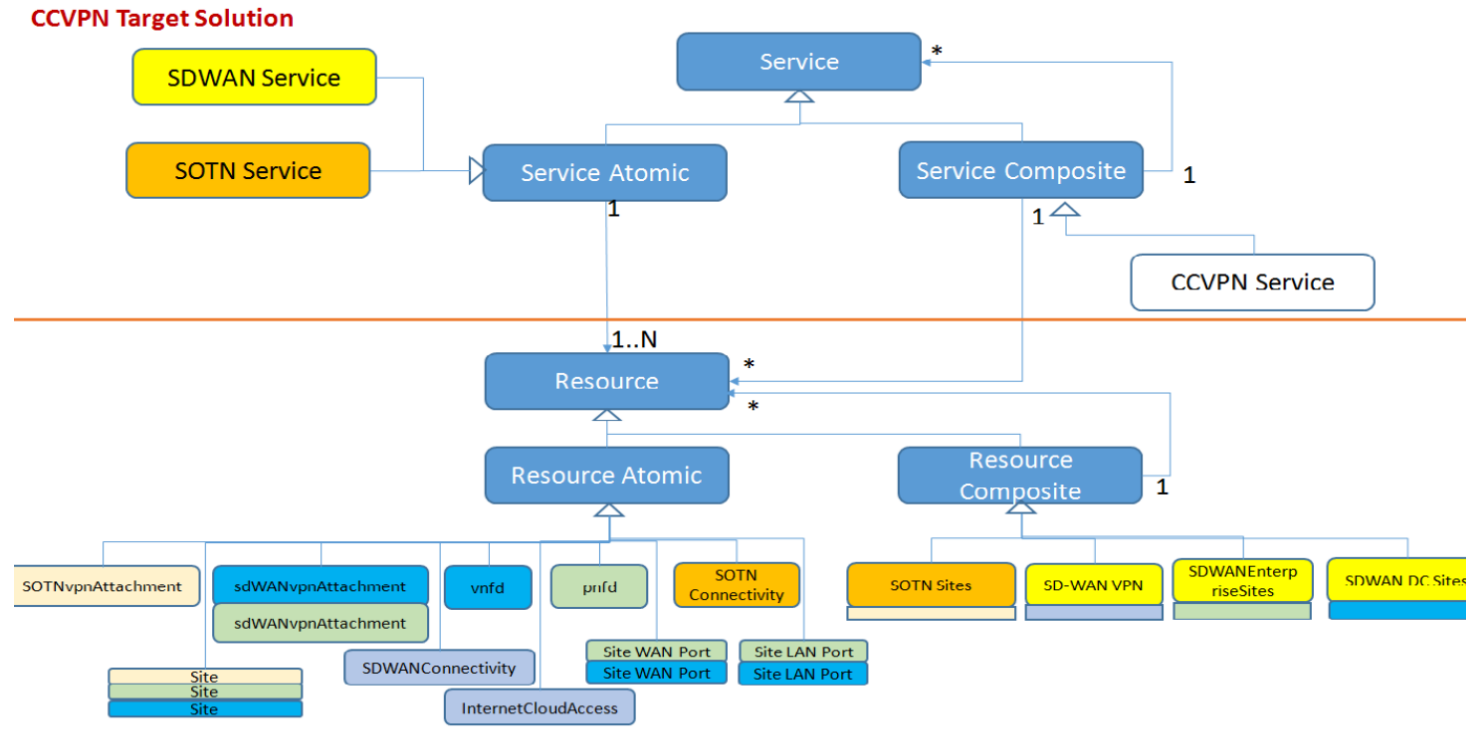
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# Outline

- CCVPN Requirements
- Hardware Acceleration Design Requirements
- Container Orchestration Requirements

# CCVPN Requirements

- CCVPN IM proposal



- Build CCVPN resource IM

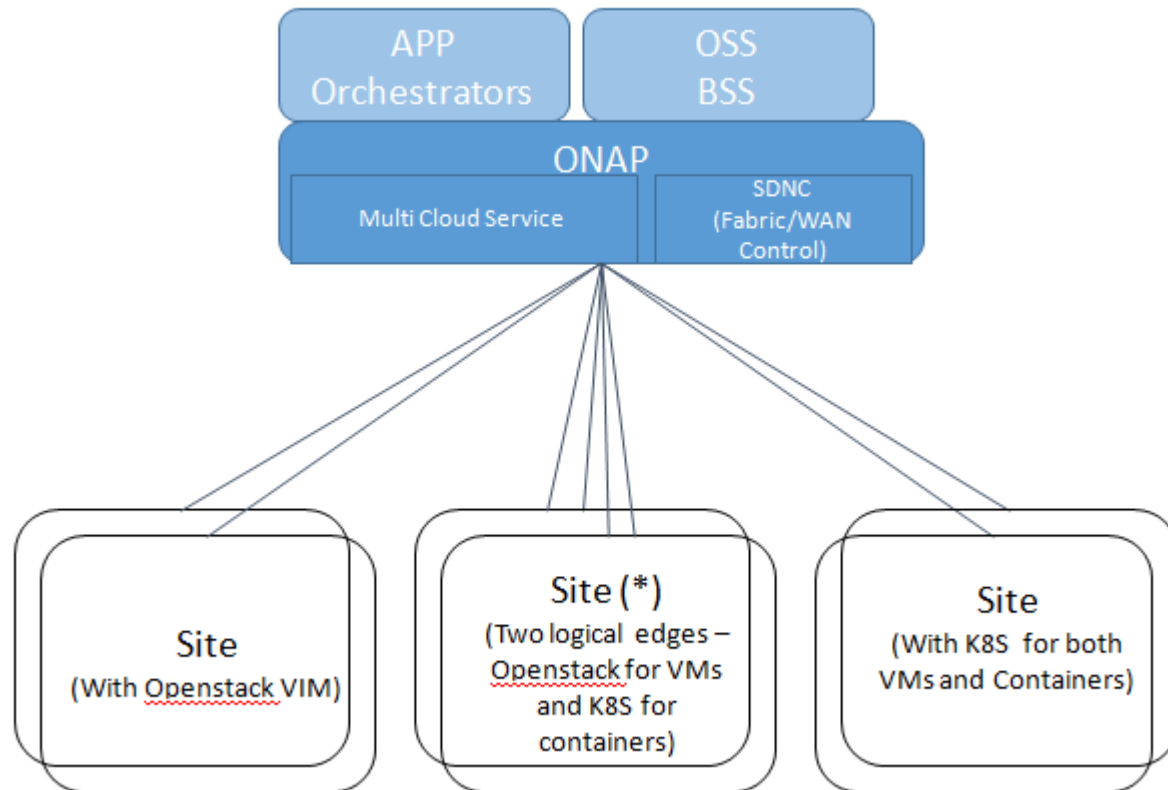
- A unified modeling management on PNF devices
- A unified modeling management on the hierarchical topology of the L1 link in the transport network

# Hardware Acceleration Design Requirements

- 5G Network Edge computing use case
  - Expected features:
    - Scalability
      - Ability to address large number of Edge Clouds, switches at Edges, Support various edge controller technologies
      - ONAP Enhancements :Optimization needed to address large number of edge-clouds  
Parent-Child ONAP (Distributed), DB Enhancements etc, Auto enrollment of edges, Fabric Control.
    - Security
      - Infrastructure verifications, Securing secrets/keys
      - Mutual TLS with Edges, Secrets/keys protection (HSM/DHSM), Hardware rooted security, Verification of Edge stack (Attestation), Centralized security for FaaS.
    - Performance
      - Very low latency, High performance, Performance determinism, data reduction, Lesser utilization of resources
      - Containerized VNFs (ONAP talking to K8S based Edge Clouds)  
SRIOV-NIC, FPGA-NIC support (HPA++) – Enhancements needed in ONAP, Fabric Control
- How to describe acceleration resource requirements of VNF in VNFD ?
- How could VIM report the acceleration capability of the underlying platform (including software and hardware)?

# Container orchestration Requirements

- Support for k8s based remote regions in ONAP



- How to design container model?
- Unified container modeling on resource layer using TOSAC or directly artifacts mode?
- Should container resource IM follow the example of VM model or a new defined system?



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*Thank you!*