

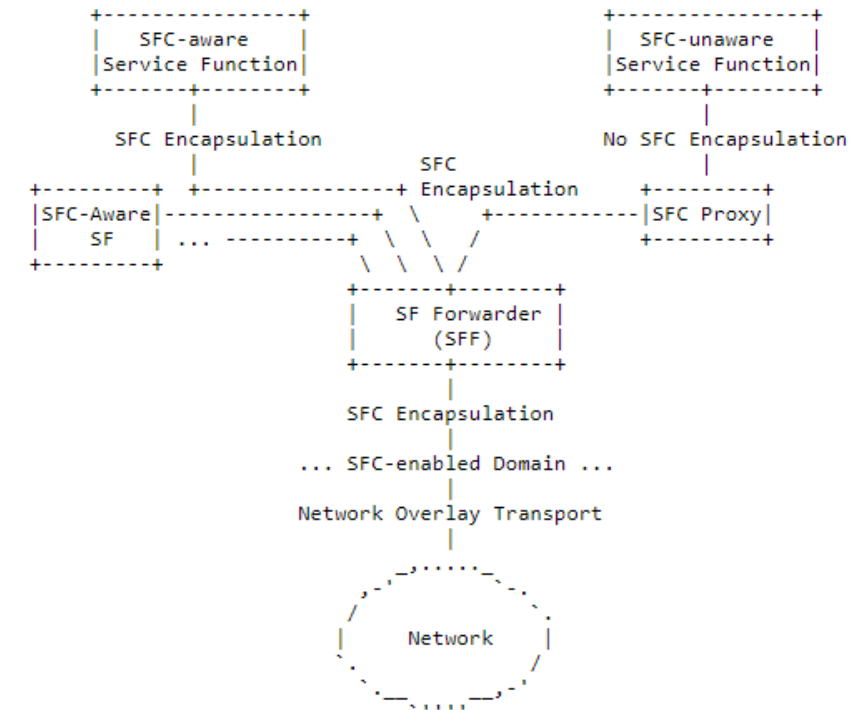
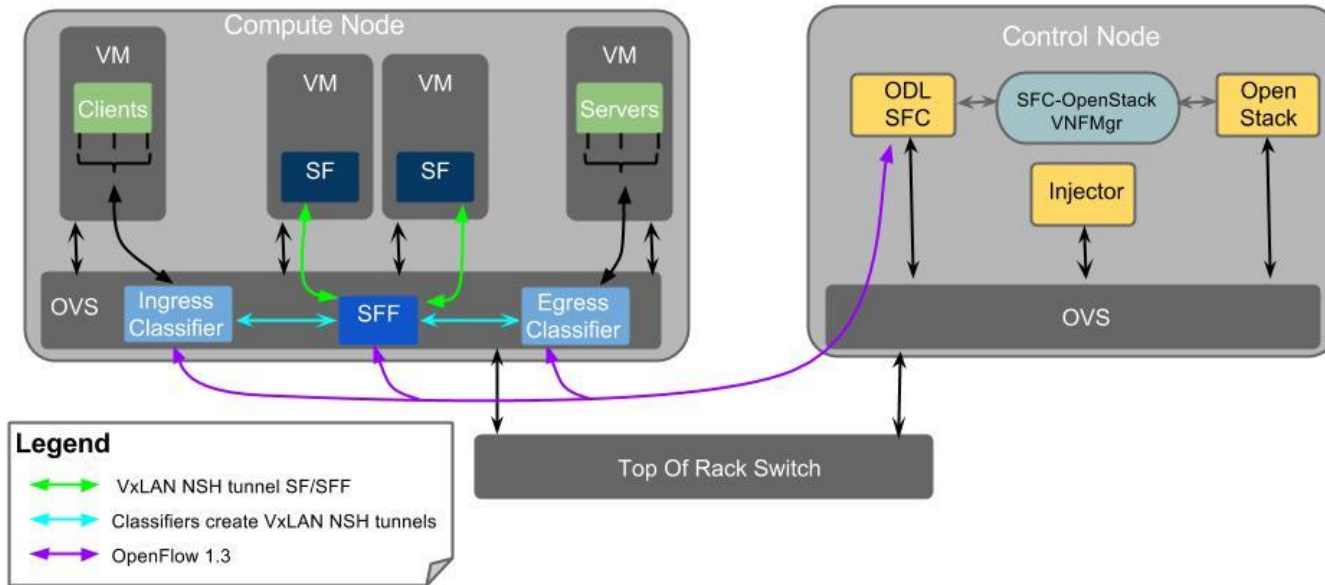


# Optimization Framework Use Cases

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# Service Chaining – OPNFV SFC Project (for context)

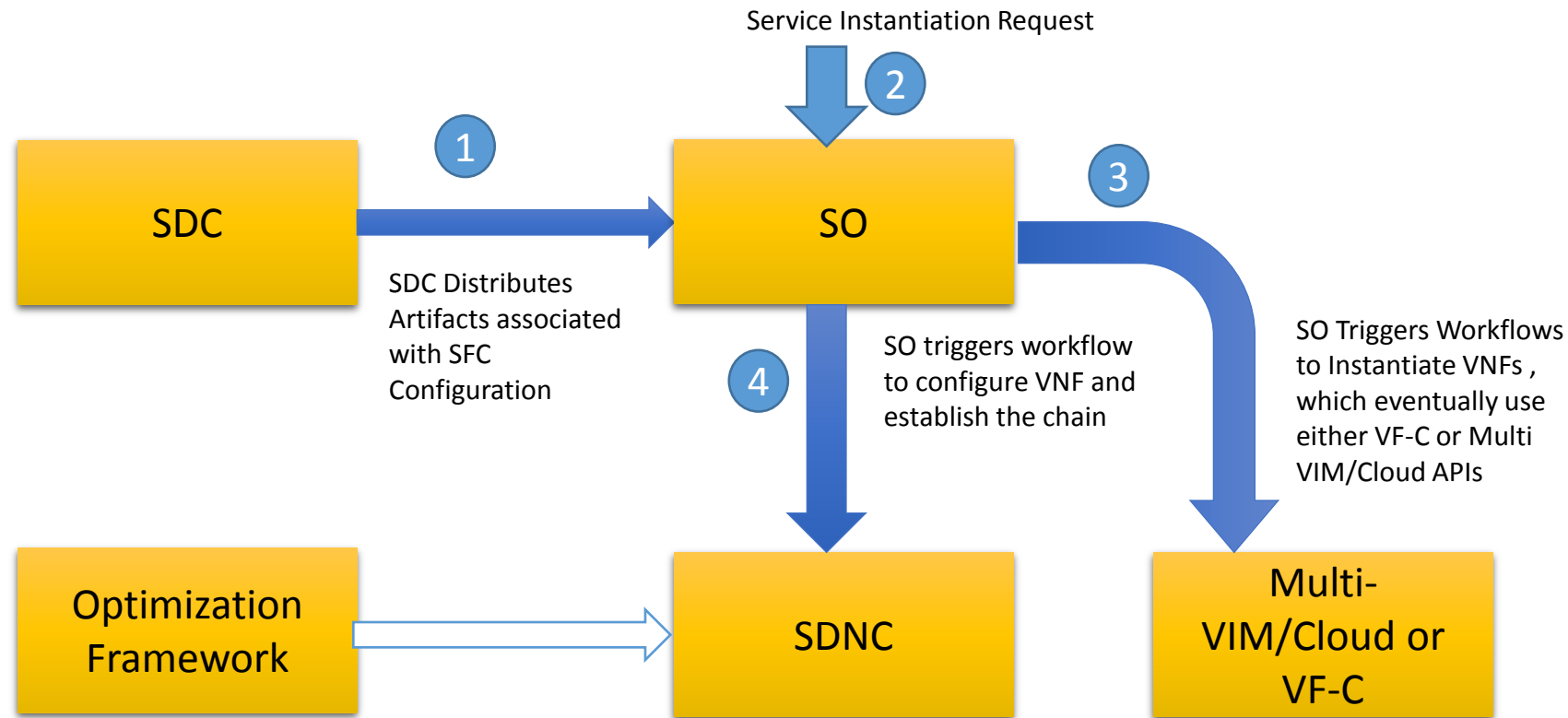
## OPNFV SFC Initial NW Topology



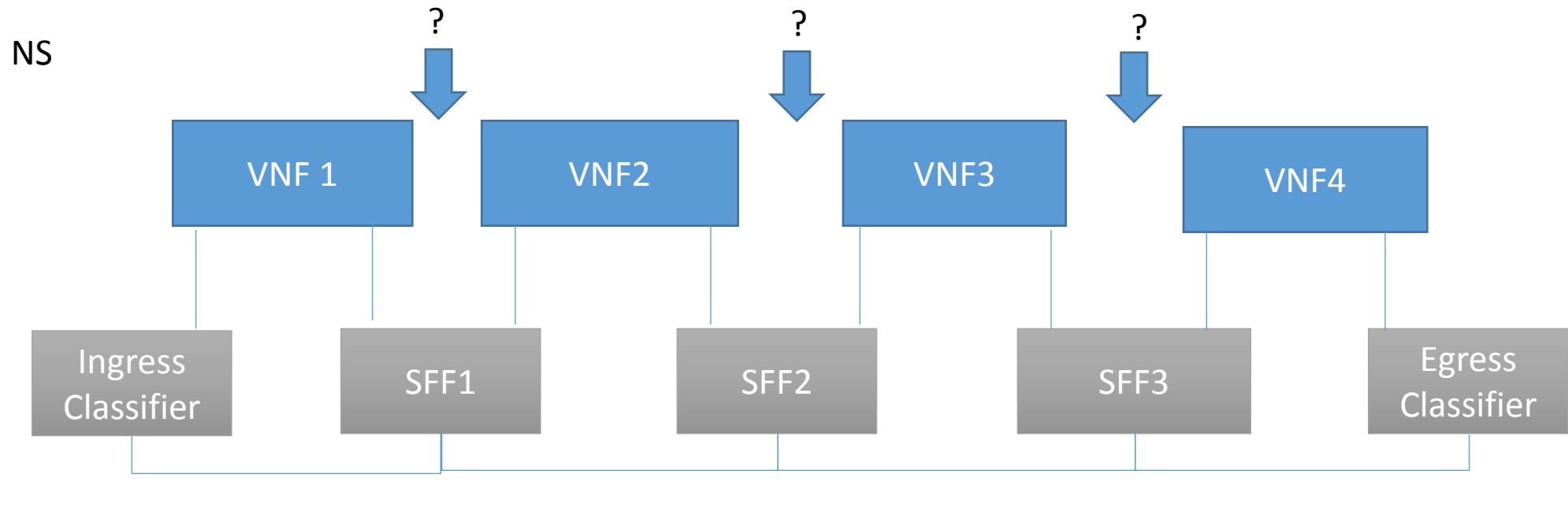
Reference : OPNFV ([link](#))

<https://tools.ietf.org/html/rfc7665>

# Potential ONAP Service Chain Configuration



# Service Chain – Potential Cases : VNF Placement



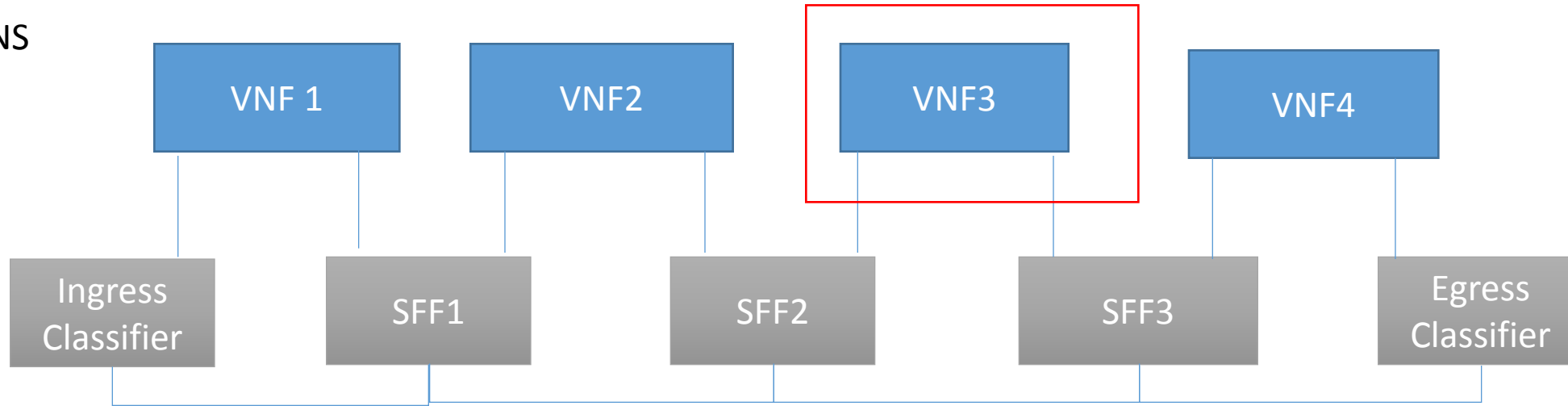
1. New VNF to be added in to the chain and potential placement constraints
2. A VNF in the chain need to be deleted and potential placement constraint evaluation

Some sample to be considered ?

- Security – FW should always be the first VNF in the SFP
- Optimization – WAN Optimizer should be placed after Web Server
- Business requirement – All outgoing packets and incoming packets should be passed through DPI , Redundancy constraints
- Test Requirement – Traffic Analyzer VNF should be placed at the edge of the service chain to measure the end to end service quality
- Classification - (More advanced case) – What is the classification rule to be applied so that an SFP is selected with low latency low packet drop path

# Service Chain – Potential Cases: VNF Maintenance

NS



One or more of the VNF in a service chain is marked for maintenance

Some sample constraints to be considered

- Change management optimization – Scheduling of maintenance when the traffic is low or when a redundant VNF is activated
- Maintenance Request Clearing – VNF Maintenance (Upgrade or Healing) can be activated only when there is a Load balancer VNF placed in front of the target VNF in SFP

# Service Chain – Potential Cases: NS Interconnection

Customer E2E Service



Customer subscribed for a new NS and should be attached to existing list of NS

Some sample constraints to be considered

- NS Chaining Constraint – Customer has VPN service, FW Service, Web Hosting Service and he wants to add a Virus Scanner Service . What is the right order of chaining set of NSs
- NS Chaining Optimization – Customer subscribed for a VoLTE on top of the existing 4G Service. Identify the optimum EPC and IMS instances to be attached to customer.
- NS Chaining Optimization – Customer has ‘monitoring as service’ subscribed . A new DC is commissioned. How/Where the new DC telemetry traffic be integrated with monitoring service – Regional, Cloud based or Central DC based.