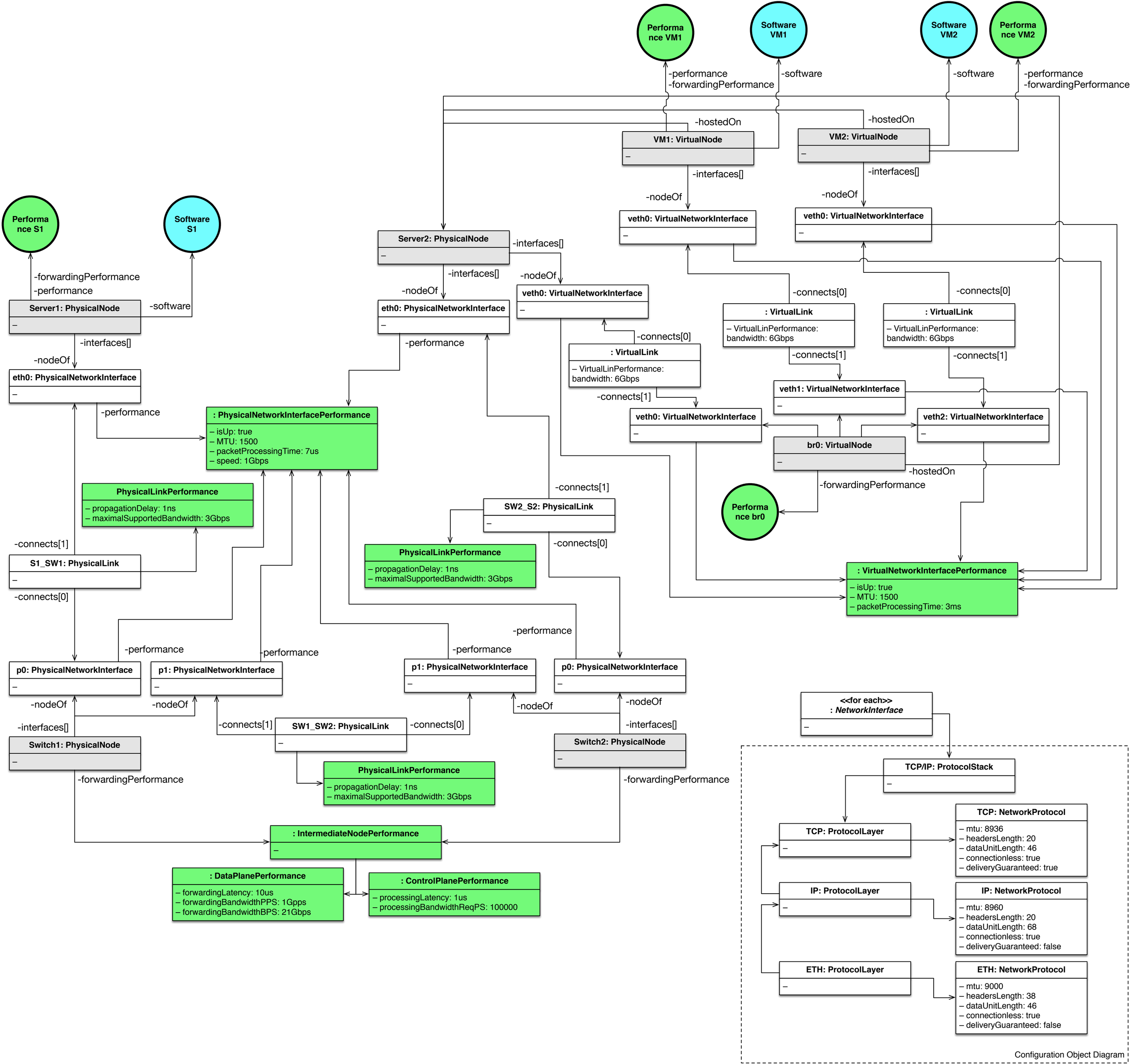
Performance VM1
Software VM1
Software VM2
Performance VM2
-performance
-forwardingPerformance
-software
-software
-performance
-forwardingPerformance
-hostedOn
-hostedOn
VM1: VirtualNode
–
VM2: VirtualNode
–
-interfaces[]
-interfaces[]
-nodeOf
-nodeOf
veth0: VirtualNetworkInterface
–
veth0: VirtualNetworkInterface
–
Performance S1
Software S1
Server2: PhysicalNode
–
-interfaces[]
-forwardingPerformance
-performance
-interfaces[]
-nodeOf
-nodeOf
-nodeOf
Server1: PhysicalNode
–
-software
eth0: PhysicalNetworkInterface
–
veth0: VirtualNetworkInterface
–
-connects[0]
-connects[0]
-interfaces[]
-nodeOf
eth0: PhysicalNetworkInterface
–
-performance
: VirtualLink
– VirtualLinPerformance:
bandwidth: 6Gbps
: VirtualLink
– VirtualLinPerformance:
bandwidth: 6Gbps
-connects[0]
-connects[1]
-connects[1]
: VirtualLink
– VirtualLinPerformance:
bandwidth: 6Gbps
-connects[1]
-performance
veth1: VirtualNetworkInterface
–
: PhysicalNetworkInterfacePerformance
– isUp: true
– MTU: 1500
– packetProcessingTime: 7us
– speed: 1Gbps
veth0: VirtualNetworkInterface
–
veth2: VirtualNetworkInterface
–
br0: VirtualNode
–
-hostedOn
-forwardingPerformance
PhysicalLinkPerformance
– propagationDelay: 1ns
– maximalSupportedBandwidth: 3Gbps
-connects[1]
SW2_S2: PhysicalLink
–
Performance br0
-connects[1]
-connects[0]
PhysicalLinkPerformance
– propagationDelay: 1ns
– maximalSupportedBandwidth: 3Gbps
S1_SW1: PhysicalLink
–
-connects[0]
: VirtualNetworkInterfacePerformance
– isUp: true
– MTU: 1500
– packetProcessingTime: 3ms
-performance
-performance
-performance
-performance
p0: PhysicalNetworkInterface
–
p1: PhysicalNetworkInterface
–
p1: PhysicalNetworkInterface
–
p0: PhysicalNetworkInterface
–
-nodeOf
-nodeOf
-nodeOf
-nodeOf
-interfaces[]
-connects[1]
SW1_SW2: PhysicalLink
–
-connects[0]
-interfaces[]
Switch1: PhysicalNode
–
Switch2: PhysicalNode
–
PhysicalLinkPerformance
– propagationDelay: 1ns
– maximalSupportedBandwidth: 3Gbps
-forwardingPerformance
-forwardingPerformance
: IntermediateNodePerformance
–
: DataPlanePerformance
– forwardingLatency: 10us
– forwardingBandwidthPPS: 1Gpps
– forwardingBandwidthBPS: 21Gbps
: ControlPlanePerformance
– processingLatency: 1us
– processingBandwidthReqPS: 100000
<<for each>>
: NetworkInterface
–
TCP/IP: ProtocolStack
–
TCP: ProtocolLayer
–
TCP: NetworkProtocol
– mtu: 8936
– headersLength: 20
– dataUnitLength: 46
– connectionless: true
– deliveryGuaranteed: true
IP: ProtocolLayer
–
IP: NetworkProtocol
– mtu: 8960
– headersLength: 20
– dataUnitLength: 68
– connectionless: true
– deliveryGuaranteed: false
ETH: ProtocolLayer
–
ETH: NetworkProtocol
– mtu: 9000
– headersLength: 38
– dataUnitLength: 46
– connectionless: true
– deliveryGuaranteed: false
Configuration Object Diagram