OPI networking APIs
- usecase -

KEYSIGHT
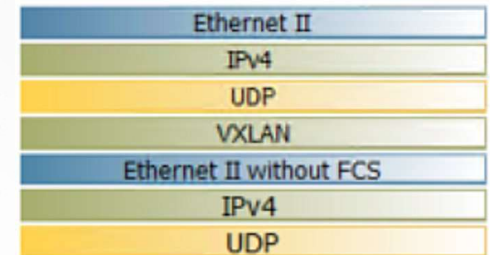TECHNOLOGIES

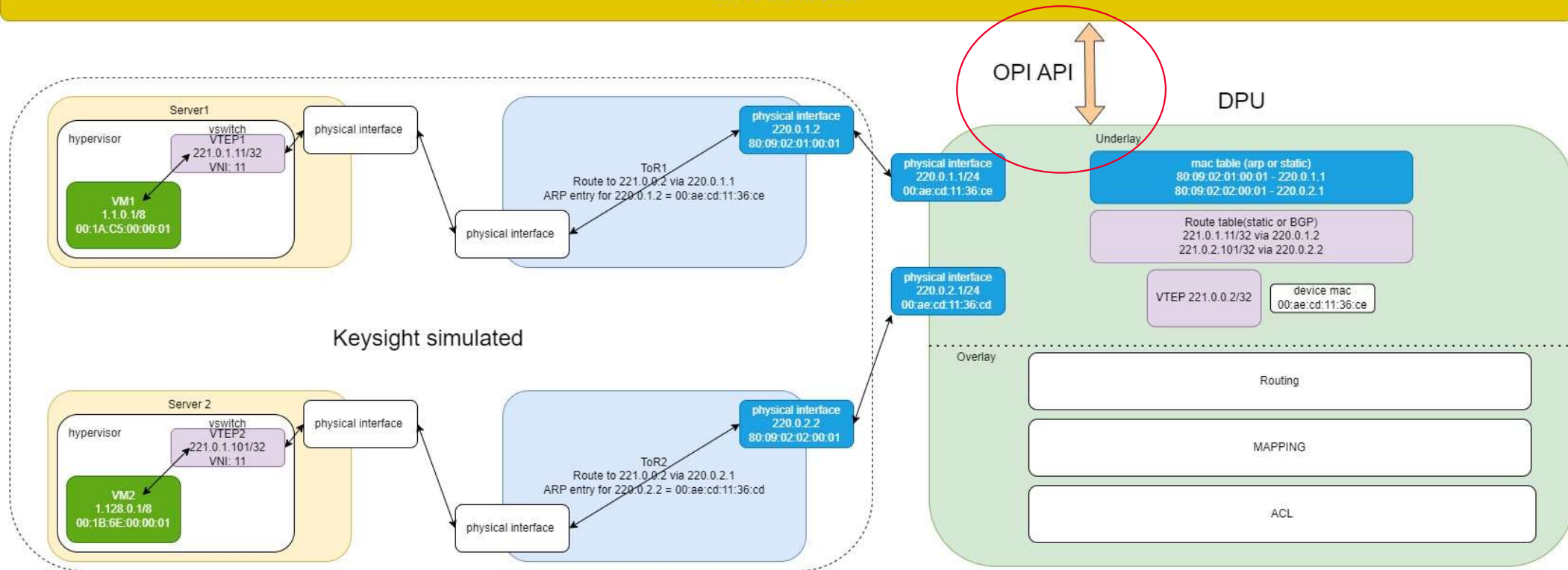# APIs

- rpc DeviceCreate (DeviceRequest) returns (DeviceResponse) {} *device.proto*
- **Directly connected interfaces:**
  - rpc InterfaceCreate (InterfaceRequest) returns (InterfaceResponse) {} *interface.proto*
  - *Layer 1 APIs*

- *Layer 2 connectivity (subsequent PR)*

- **Routing to ensure VTEPs are reachable:** *bgp.proto*
  - rpc BGPCreate (BGPRequest) returns (BGPResponse) {}
  - rpc BGPPeerCreate (BGPPeerRequest) returns (BGPPeerResponse) {}
  - rpc BGPPeerAfCreate (BGPPeerAfRequest) returns (BGPPeerAfResponse) {}
- Static routing instead of bgp to simplify

- **VXLAN tunneling:**
  - rpc VnicCreate (VnicRequest) returns (VnicResponse) {} *vnic.proto*
  - rpc VPCCreate (VPCRequest) returns (VPCResponse) {}
  - rpc SubnetCreate (SubnetRequest) returns (SubnetResponse) {}
  - rpc TunnelCreate (TunnelRequest) returns (TunnelResponse) {}
  - rpc MappingCreate (MappingRequest) returns (MappingResponse) {}
  - rpc RouteTableCreate (RouteTableRequest) returns (RouteTableResponse) {}
  - rpc RouteCreate (RouteRequest) returns (RouteResponse) {}

- **ACLs** *policy.proto*
  - rpc SecurityProfileCreate (SecurityProfileRequest) returns (SecurityProfileResponse) {}
  - rpc SecurityPolicyCreate (SecurityPolicyRequest) returns (SecurityPolicyResponse) {}
  - rpc SecurityRuleCreate (SecurityRuleRequest) returns (SecurityRuleResponse) {}
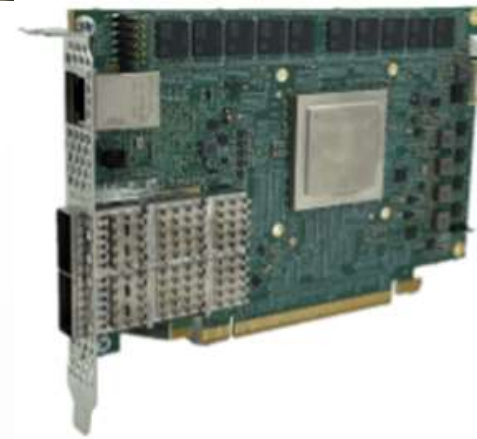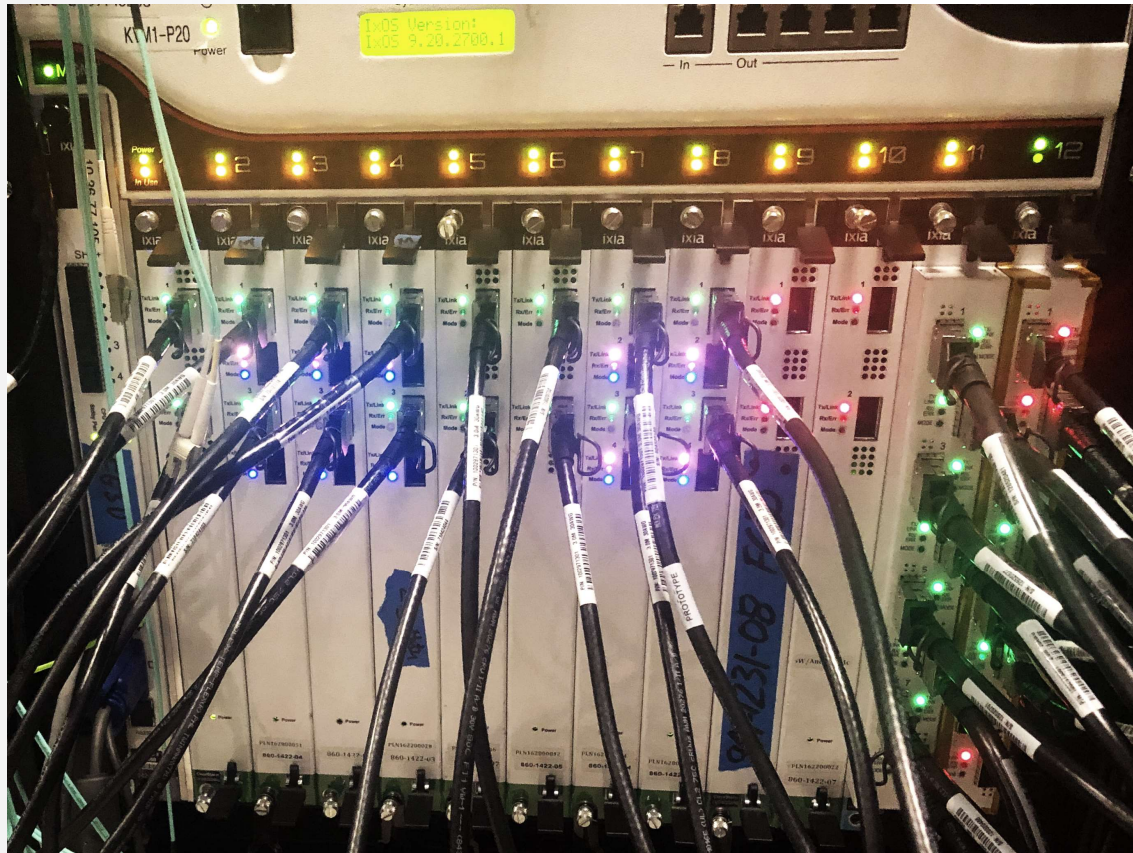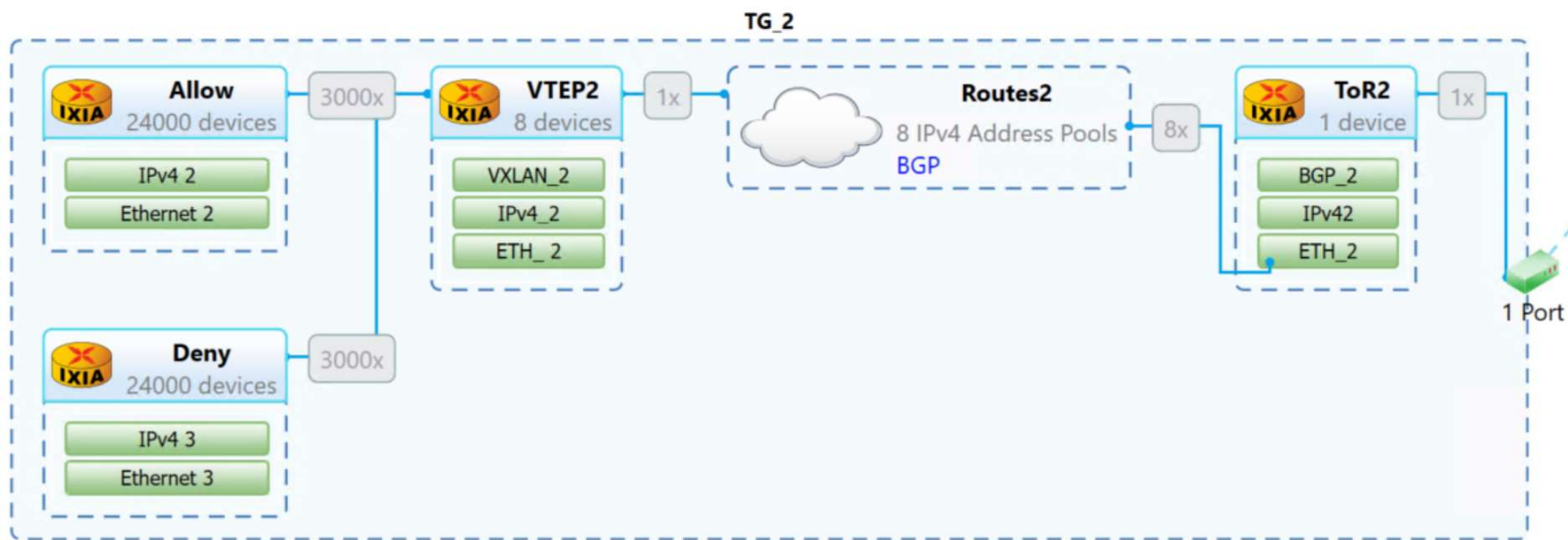
https://github.com/opiproject/opi-api/pull/128

| Ethernet II |
| IPv4 |
| UDP |
| VXLAN |
| Ethernet II without FCS |
| IPv4 |
| UDP |

KEYSIGHT TECHNOLOGIES
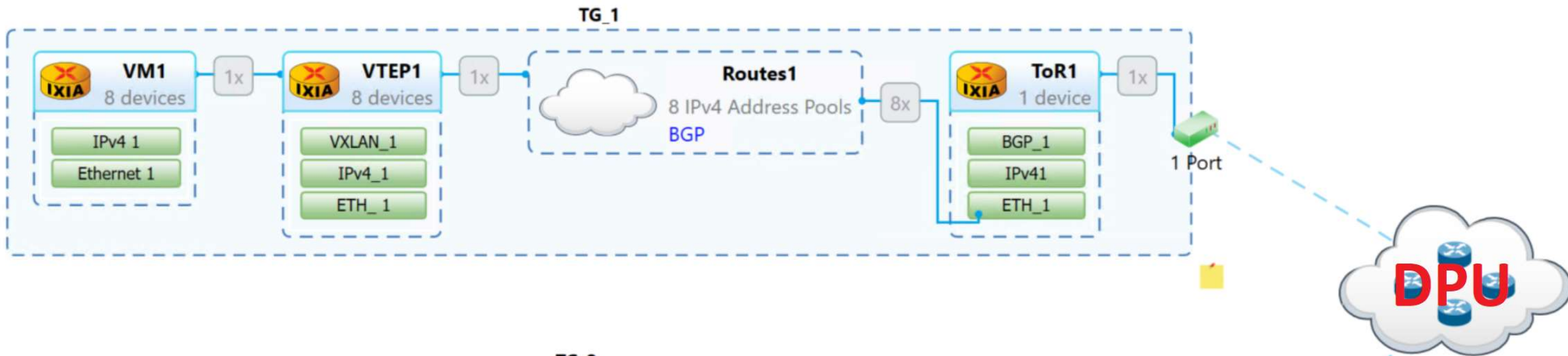
Demo topology

Testbed

DEMO

Traffic Item	Tx Frames	Rx Frames	Frames Delta	Loss %	Tx Frame Rate	Rx Frame Rate	Tx L1 Rate (bps)	Rx L1 Rate (bps)	Rx Bytes	Tx Rate (Bps)	Rx Rate (Bps)	Tx Rate (bps)	Rx Rate (bps)	Tx Rate (Kbps)	Rx Rate (Kbps)	Tx Rate (Mbps)	Rx Rate (Mbps)	Store-F		Traffic I
1	Allow	30,527,839	30,527,832	7	0.000	2,000,000.000	2,000,000.000	2,368,000,000.000	2,368,000,000.000	3,907,562,496	256,000,000.000	256,000,000.000	2,048,000,000.000	2,048,000,000.000	2,048,000.000	2,048,000.000	2,048.000	2,048.000		1	Allow
2	Deny	15,264	0	15,264	100.000	1,000.000	0.000	1,184,000.000	0.000	0	128,000.000	0.000	1,024,000.000	0.000	1,024.000	0.000	1.024	0.000		2	Deny