

**Networks**

Access to cluster using VPN. Preferably OpenVPN. VPN should give us access to "access" vlan and IPMI for disaster recovery or support.

**Interconnect on-board 1Gbe NICs (without vlan tag, may be native vlan) to be able to network boot ceph nodes using the control nodes.**

**VLANs**

- ACCESS** - vlan-id: X subnet: 10.10.x.0/23 - all warren nodes - NAT to access internet - should be accessible from VPN
- CLUSTER** - vlan-id: Q subnet: 10.10.110.0/23 - all warren nodes + all storage nodes (also called Ceph public)
- TUNGSTEN** - vlan-id: Y 10.10.100.0/23 - all warren nodes + router, virtual machine public IPs
- STORAGE** - vlan-id: Z subnet: 10.10.102.0/23 - all warren nodes + all storage nodes (also called Ceph public)
- CEPH\_PRIVATE** - vlan-id: ZY subnet: 10.10.104.0/23 - all storage nodes (Ceph internal traffic)
- PUBLIC** - vlan-id: W - all control nodes for service UI & API (not needed if there's possibility to use 1-on-1 NAT for control nodes access vlan)

**Bonding - LACP**

**VLAN mapping to Node**

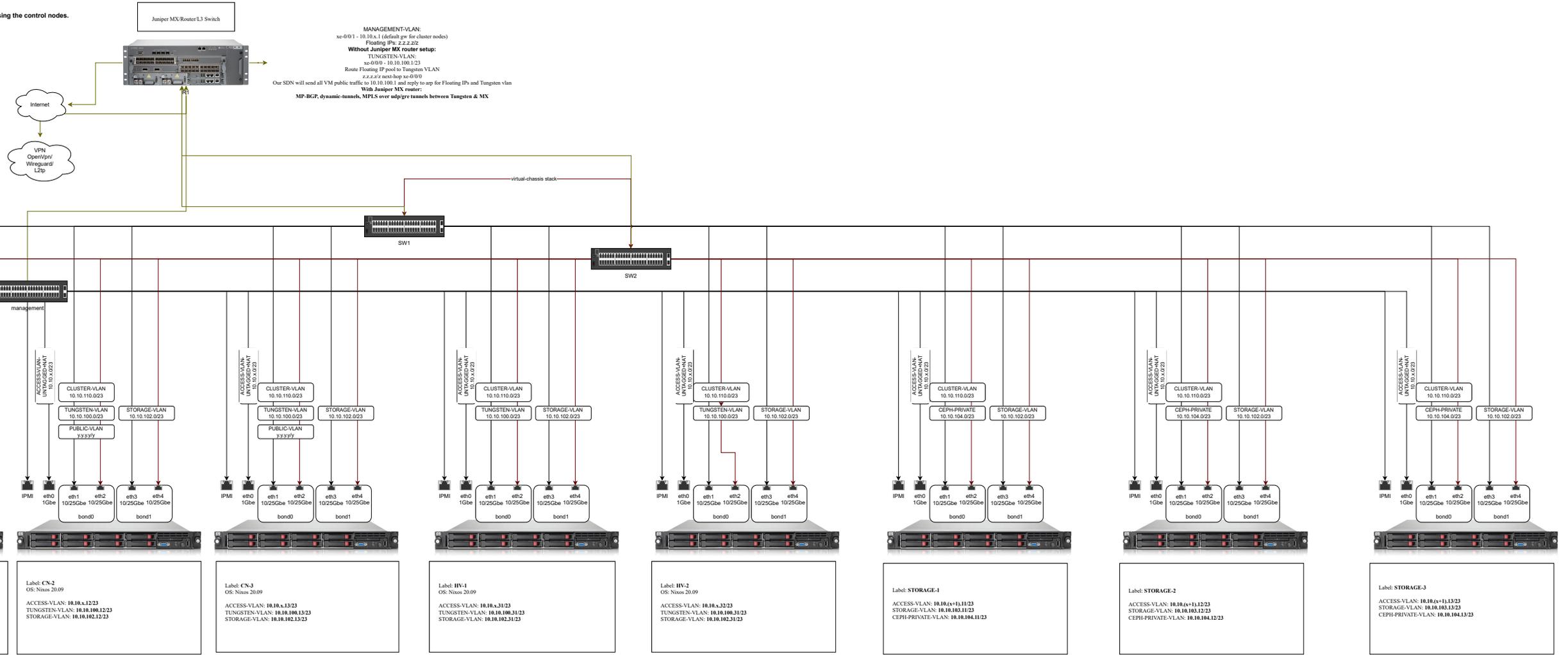
**Control/Warren nodes**

- 1Gbe - access**
- BOND0** 2x10Gbe+ - cluster / tungsten / public
- BOND1** (optional for Control) 2x25Gbe+ - storage

**Storage nodes**

- 1Gbe - access**
- BOND0** 2x25Gbe+ - cluster / ceph\_private
- BOND1** 2x25Gbe+ - storage

**Warren 2024**



MANAGEMENT-VLAN: xe-0/0/1 - 10.10.x.1 (default gw for cluster nodes)  
Floating IPs: z.z.z.z/2

**Without Juniper MX router setup:**  
TUNGSTEN-VLAN: xe-0/0 - 10.10.100.1/23

Route Floating IP pool to Tungsten VLAN z.z.z.z next-hop xe-0/0/0

Our SDN will send all VM public traffic to 10.10.100.1 and reply to asp for Floating IPs and Tungsten vlan  
With Juniper MX router:

MP-BGP, dynamic-tunnels, MPLS over sdpgre tunnels between Tungsten & MX