

Appendix

• Cisco VIM Wiring Diagrams, on page 1

Cisco VIM Wiring Diagrams

Figure 1: M4-Micropod with Cisco VIC

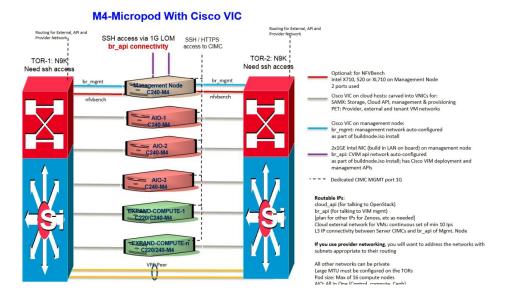


Figure 2: M4-Full-On with Cisco VIC

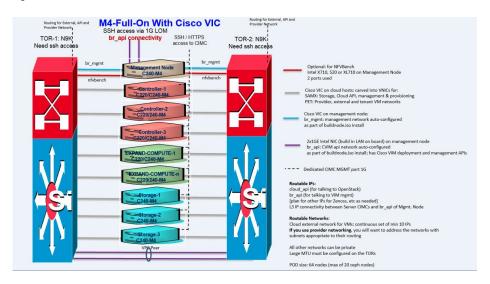
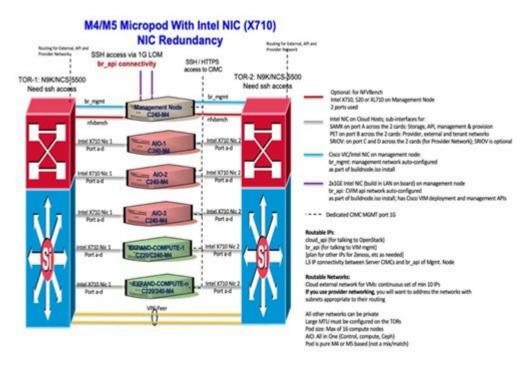


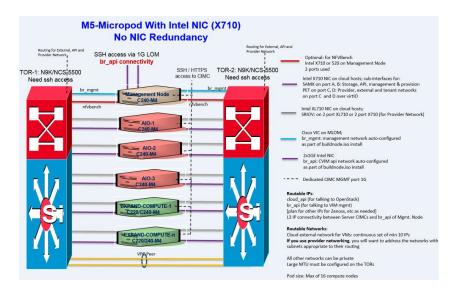
Figure 3: M4/M5 Micropod with Intel NIC (X710) - NIC Redundancy



M4 HC With Cisco VIC/NIC (1xX710) VPP based; no SRIOV outing for External, API and oulder Network, ssh for mgmt node oute to CMC of all servers Routing for External, API and Provide herwork, shi for regist node floute to CMC for all servers TOR-1: NSK SSH access via 1G LOM SSH / HTTPS access to CIMC TOR-2: N9K Optional: for NFVBench Intel X710 or 520 on Management Node 2 ports used Need ssh access br api connectivity Need ssh access br_mgmt Cisco VIC on cloud hosts: carved into VNICs for: SAMX: Storage, Cloud API, management & provisioning Intel NIC; 1x 2-port 520 for PET: Provider, external and tenant VM networks Over VPP Cisco VIC on management node: br_mgmt: management network auto-configured as part of buildnode.iso install 2x1GE Intel NIC (build in LAN on board) on management node Jasus stein ne, public in David in biology on management in be, api: CVIM api network auto-confligured as part of buildinode i/o install; sit connectivity has Closo VM deployment and management APIs: OMC of all servers have to be reachable from migret node. --- Dedicated CIMC MGMT port 1G Routable 8%: cloud, api (for talking to Opendrack) br_api (for talking to VMM mgmt) [plan for other 8% for Zenoss, etc as needed] L3 IP connectivity between Server CBMCs and br_api of Mgmt. Node Routable Networks: Cloud enternal network for VMs: continuous set of min 10 IPs if you use provider networking, you will want to address the networks with subnets appropriate to their routing: All other networks can be private Large MTU must be configured on the TORs

Figure 4: M4 Hyperconverged with Cisco VIC/NIC (1xX710) VPP based; no SRIOV

Figure 5: M5-Micropod with Intel NIC (X710) - No NIC Redundancy



M4/M5 Full-On With Intel NIC (X710) With NIC Redundancy SSH access via 1G LOM br api cong SSH/HTTPS TOR-2: N9K TOR-1: N9K access to CIMC Need ssh access Need ssh access Optional: for NFVBench Intel X710, X520 or XL710 on Management Node 2 ports used Intel X710 Nic 2 Intel X710 Nic. Port a,b Cisco VIC/Intel NIC on management node: br_mgmt: management network auto-configured as part of buildnode.iso install 2x1GE Intel NIC (build in LAN on board) on management node br_api: CVIM api network auto-configured as part of buildnode.iso install; Intel X710 Nic 2 Port a-d Intel X710 Nic 1 has Cisco VIM deployment and management APIs. EXPAND-COMPUTE-IT C220/240-M4 ntel X710 Nic 1 Intel X710 Nic 2 · - - - Dedicated CIMC MGMT port 1G Routable IPs: cloud_api (for talking to OpenStack) br_api (for talking to VIM mgmt) Intel X710 Nic 2 Port a, b ntel X710 Nic 1 [plan for other IPs for Zenoss, etc as needed]
L3 IP connectivity between Server CIMCs and br_api of Mgmt. Node Intel X710 Nic. Cloud external network for VMs: continuous set of min 10 IPs If you use provider networking, you will want to address the networks with subnets appropriate to their routing Intel X710 Nic 2 All other networks can be private Large MTU must be configured on the TORs Pod is pure M4 or M5 based (not a mix/match) POD size: 128 nodes (max of 20 ceph nodes)

Figure 6: M4/M5 Full-On with Intel NIC (X710) and with NIC Redundancy

Figure 7: M4/M5 Full-On with Cisco VIC/NIC (2xXL710/2x520)

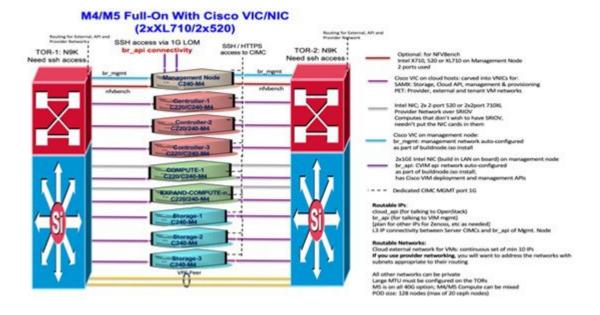


Figure 8: M4/M5 Micropod with Cisco VIC/NIC (2xXL710/2x520)

M4/M5 Micropod With Cisco VIC/NIC (2xXL710/2x520)

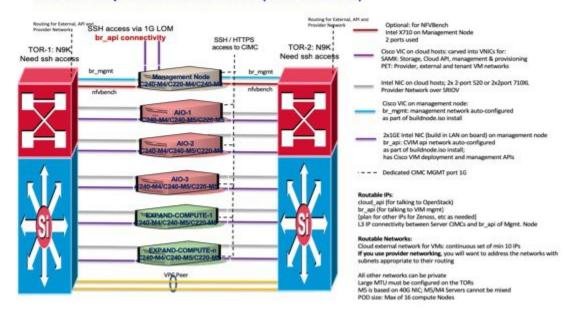
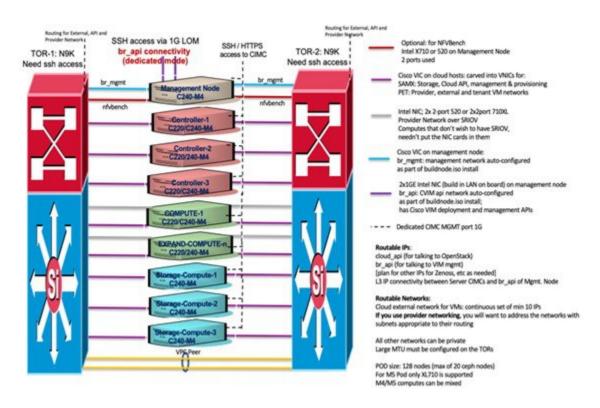


Figure 9: M4/M5-HC with Cisco VIC/NIC (2xXL710/2x520)



Quanta (D52BQ-2U) Fullon Pod with 25GE Intel NIC (xxv710) SSH access via 1G PCIE SSH/HTTPS TOR-2: N9K br_api coni TOR-1: N9K access to BMC Optional: for NFVBench Intel xxv710 (2 port), on Management Node Part of ACI Fabic Part of ACI Fabric SRIOV: 2 PICIE cards (xxv710 (2 port 25 GE) for Provider Network , on compute node only; xw710 in OCP slot on management node br_mgmt: management network auto-configured as part of buildnode iso install 2xSGE Intel NIC on management node br_api: CVIM ap network auto-configured as part of buildnode iso install; has Cisco VIM deployment and management APIs = = = Dedicated BMC MGMT port 1G Routable IPs: cloud_apt (for talking to OpenStack) br_apt (for talking to VM mgmt) 13 IP connectivity between Server CIMCs and br_apt of Mgmt. Node nourage retrievals. Could external network for VMs: continuous set of min 10 IPs If you use provider networking, you will want to address the networks with subnets appropriate to their routing All other networks can be private Large MTU must be confligured on the TORs POD size: 128 nodes (max of 20 cepth nodes with multi-backend option)

Figure 10: Quanta (D52BQ-2U 3UPI) Fullon Pod with 25GE Intel NIC (xxv710)

Figure 11: Quanta (D52BE-2U) Edge Pod with 25GE Intel NIC (xxv710)

Optional: for NPVBench uting for External, API and wider Networks SSH access via 1G PCIE Intel xxv710 (2 port), on Management Node br_api connectivity SSH / HTTPS access to BMC TOR-2: N9K TOR-1: N9K Need ssh access Need ssh access br mgmt SRIOV: 2 PICIE cards (xw/710 (2 port 25 GE) for Provider Network xvv710 in OCP slot on management node br_mgmt: management network auto-configured as part of buildnode iso install 2x1GE Intel NIC on management node br_api: CVIM api network auto-configured as part of buildnode iso install; has Cisco VIM deployment and management APIs --- Dedicated BMC MGMT port 1G cloud api (for talking to OpenStack) br_api (for talking to VIM mgmt) L3 IP connectivity between Server CIMCs and br_api of Mgmt. Node Routable Networks: Cloud external network for VMs: continuous set of min 10 IPs If you use provider networking, you will want to address the networks with subnets appropriate to their routing All other networks can be private Large MTU must be configured on the TORs POD size: Max of 16 compute Nodes Needs a Ceph pod for Glance image Service Edge cloud doesn't support persistent storage Management network of Edge and Ceph Pods are IP (v4 or v6) routable

Quanta (D52BE-2U) edge Pod with 25GE Intel NIC (xxv710))

Quanta (D52BQ-2U) ceph Pod with 25GE Intel NIC (xxv710)) fouring for External, API and Provider Networks SSH access via 1G PCIE br_api connectivity SSH / HTTPS access to BMC TOR-2: N9K TOR-1: N9K Need ssh access Need ssh access br_mgmt xv/710 in OCP slot on management node br_mgmt: management network auto-configured as part of buildnode.iso install 2x1GE Intel NIC on management node br_api: CVIM api network auto-configured as part of buildnode iso install; has Cisco VIM deployment and management APIs DS2BQ-2U --- Dedicated BMC MGMT port 1G br_api (for talking to VIM mgmt)
L3 IP connectivity between Server CIMCs and br_api of Mgmt. Node EXPAND-CephOSD-1 All other networks can be private Large MTU must be configured on the TORs POD size: Max of 16 compute Nodes Pod serves images via Glance service to Edge Pods Management network of Edge and Ceph Pods are IP (v4 or v6) routable

Figure 12: Quanta (D52BQ-2U 3UPI) Ceph Pod with 25GE Intel NIC (xxv710)

Appendix

Appendix