

Ericsson Rover Validation HW, Networking and IP plan

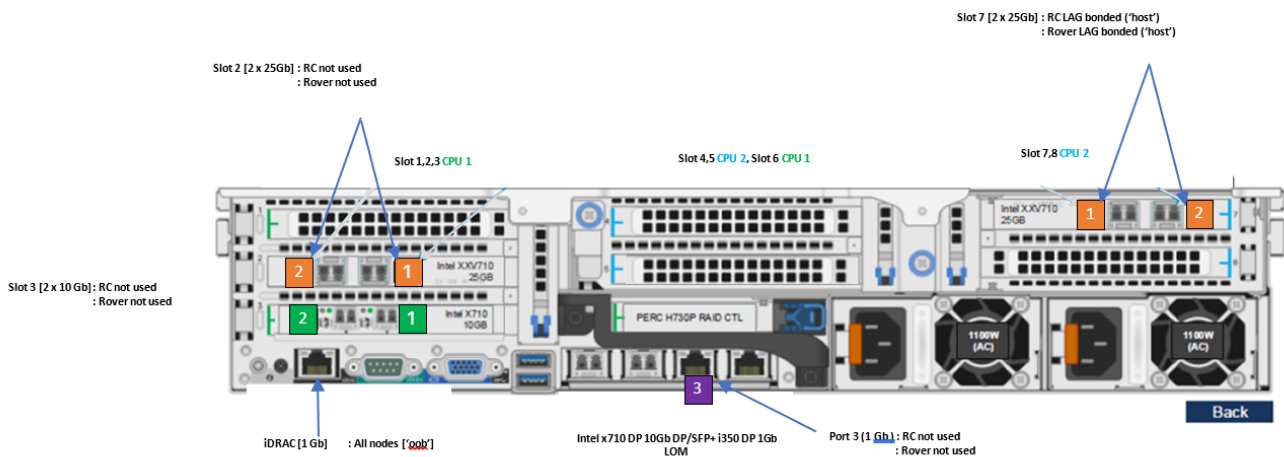
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Rover Validation Servers

Verification was based on a Build Server VM and two identical Dell 740XD servers, one for the Regional Controller and one for the Rover edge node itself.

Dell Purley 740XD Server

L2 networks '[oob](#)', '[host](#)' – Refer to IP plan [spreadsheet](#) for values and further details



PowerEdge R740XD Server



Components

- 1 PowerEdge R740/R740XD Motherboard
- 1 Intel Xeon Gold 6152 2.1G, 22C/44T, 10.4GT/s , 30M Cache, Turbo, HT (140W) DDR4-2666
- 1 iDRAC Group Manager, Enabled
- 1 iDRAC,Legacy Password
- 1 Chassis with Up to 24 x 2.5 Hard Drives for 2CPU, GPU Capable Configuration
- 1 Riser Config 6, 5 x8, 3 x16 slots
- 1 PowerEdge R740 Shipping Material
- 1 No Quick Sync
- 1 Performance Optimized
- 1 2666MT/s RDIMMs
- 12 32GB RDIMM 2666MT/s Dual Rank
- 1 Intel Xeon Gold 6152 2.1G, 22C/44T, 10.4GT/s , 30M Cache, Turbo, HT (140W) DDR4-2666
- 1 iDRAC9,Enterprise
- 4 480GB SSD SATA Read Intensive 6Gbps 512 2.5in Hot-plug AG Drive, 1 DWPD, 876 TBW
- 6 2.4TB 10K RPM SAS 12Gbps 512e 2.5in Hot-plug Hard Drive
- 1 PERC H730P RAID Controller, 2GB NV Cache, Adapter, Low Profile
- 2 C13 to C14, PDU Style, 10 AMP, 6.5 Feet (2m), Power Cord
- 1 Dual, Hot-plug, Redundant Power Supply (1+1), 1100W
- 1 No Trusted Platform Module
- 1 Order Configuration Shipbox Label (Ship Date, Model, Processor Speed, HDD Size, RAM)
- 1 GPU Ready Configuration Cable Install Kit
- 1 PE R740XD Luggage Tag
- 1 Intel X710 Dual Port 10Gb Direct Attach, SFP+, Converged Network Adapter
- 2 Intel XXV710 Dual Port 25GbE SFP28 PCIe Adapter, Full Height
- 1 Intel X710 DP 10Gb DA/SFP+, + I350 DP 1Gb Ethernet, Network Daughter Card
- 1 HS Install Kit,GPU Config.No cable
- 1 ReadyRails Sliding Rails Without Cable Management Arm
- 1 Unconfigured RAID
- 1 OME Server Configuration Management

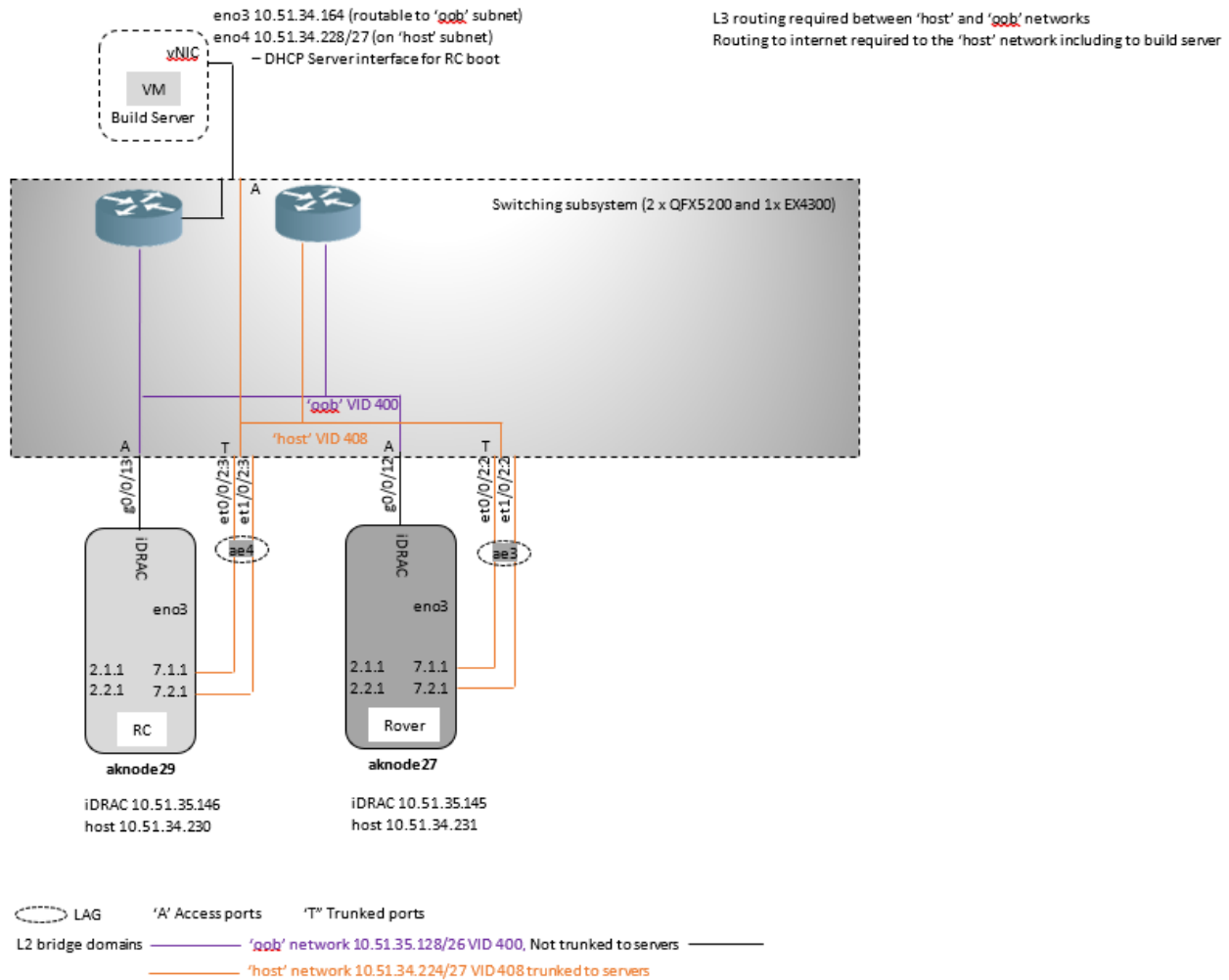
Software

- 1 6 Performance Fans forR740/740XD
- 1 Performance BIOS Settings
- 1 No Operating System
- 1 No Systems Documentation, No OpenManage DVD Kit

Rover Validation Networking

The diagram below shows the physical and L2 connectivity, the IP subnet plan, host and iDRAC addressing plan similar to that used during validation.

The Rover deployment does not configure the networking subsystem thus the choice of switch subsystem components is not restricted to those shown and they can be replaced with devices offering equivalent functionality.



Rover Validation IP/VLAN Plan

Below is an example similar to that used in the validation.

<small>NOTE: LAG groups always exist on 2 ports of the SAME NIC card on compute. LAG not split across NIC card slots. 2 x NIC NIC card not used NOTE: Build server is only used to create the Regional Controller. Once the RC is built the build server has no further role in the deployment of the Rover or Uniqity nodes and can be removed. Note: The RC uses the LAG bonded interfaces on 7.1.1 and 7.2.1 to send Flatfish API calls to the Rover and Uniqity nodes connected to the 'qob' network then routing between the 'host' and 'qob' networks is required.</small>											
Network name	Server	Network name	Compute BW	Present	NIC chassis	Port rate	LAG	VID	Subnet	Host address	Network name
'qob'	Build Server	qob	100	Yes	en0	10	No	10.51.35.128/26	10.51.35.146	10.51.35.146	'qob'
	Regional controller	qob	100	Yes	en0	10	No	10.51.35.128/26	10.51.35.145	10.51.35.145	
	Rover	qob	100	Yes	en0	10	No	10.51.35.128/26	10.51.35.145	10.51.35.145	
Network name	Server	Network name	Compute BW	Present	NIC chassis	Port rate	LAG	VID	Subnet	Host address	Network name
'host'	Build Server	host	100	Yes	en0	10	No	10.51.34.224/27	10.51.34.230	10.51.34.230	'host'
	Regional controller	host	100	Yes	en0	10	No	10.51.34.224/27	10.51.34.231	10.51.34.231	
	Rover	host	100	Yes	en0	10	No	10.51.34.224/27	10.51.34.231	10.51.34.231	

Rover LAG Details

The RC and Rover nodes boot via VLAN tagged 'host' interface which is pre-provisioned on the QFX switches with LAG bonding. Since booting occurs before the linux kernel can bring up its LAC-P signalling the QFX switches must be configured to pass traffic on their primary (first) link before the LAG bundle is up.

LAG	FORCE UP	DHCP and http pxe boot occurs over interfaces configured for LAG on JPR switches
LAG config on QFX5200		