Compute Node

				T-Shirt Sizes (example)	Solution Rule		
	MT	Model	Description	Mfg Config #1	Min	Max	Comments
Customized Personality : S812C Server Config = Compute Node							
	8001	12C	S821LC (8001)	2	1	**	
		Solution ID	Solution Specify Code (for grouping only)	1	1	1	n/a
		Pod Type	Login Server Specify Code	1	1	1	n/a
		Processor	8-core POWER8 2.328 GHz	2	1	2	
		Memory	EKM2 (PS) 16GB DDR4 MEMORY DIMM	8	4	16	
		Bezel	EKB2 (PS) 1S STRATTON SFF FAB ASSEMBLY	1	1	1	
		Storage Adapter	Integrated Sata controller	1	1	1	Build-in HDDs : Integrate SATA controller + Optional SAS /RAID Controller
				0	0	1	Optional - Exteral SAS adapter for Expansion SAS drawer
		Disks	EKDB 4TB 3.5" SATA HDD	1	2	2	OS Boot Disk
				0	0	4	If SAS drive is selected, please choose Bezel Assembly to match drive size (.5"
S812C Server (Base config) -- Required Inter-connect							
Required for Mfg Genesis		Network Adapter	EKA2 PCIe3 2-port 10 GbE SFP+ Adapter, based on Intel XL710	2	2	3	**(Required) For High Speed Network**
				0	0	3	Section IO device (optional)
		Power	EKLJ (PS #6665) PWR CBL DRWR TO IBM PDU, 2.8m (9.2ft), 250V/10A, IEC320/C13, IEC320/C20	2	2	2	Select Proper Line cord if not connected to IBM PDU
		Cables	CAT5E SWITCH CABLE, BLUE (2M)	1	1	*	**(Required) For OS 1G Network (Recommended 2M length min)**
			CAT5E SWITCH CABLE, GREEN (2M)	1	1	*	**(Required) For IPMI 1G Network (Recommended 2M length min)**
			EKC1 3M- Active Twinax cable	4	4	*	**(Required) For High Speed Network (Recommended 2M length min)**
		Misc	No rack integration	1	1	1	
			Country specific FCs (keyboards, language groups) are selectable	1	1	1	User select
			Shipping and Handling	1	1	1	User select

Swift Node

				T-Shirt Sizes (example)	Solution Rule		
	MT	Model	Description	Mfg Config #1	Min	Max	Comments
Customized Personality : S812C Server Config = Swift Object / Metadata Node							
	8001	12C	S821LC (8001)	**3**	**3**	**	
		Solution ID	Solution Specify Code (for grouping only)	1	1	1	n/a
		Pod Type	Login Server Specify Code	1	1	1	n/a
		Processor	8-core POWER8 2.328 GHz	2	1	2	
		Memory	EKM2 (PS) 16GB DDR4 MEMORY DIMM	8	4	16	
		Bezel	EKB4 2S base system with LFF high-function drive midplane (NVMe d	1	1	1	
		Storage Adapter	Integrated Sata controller	0	0	1	Build-in HDDs : Integrate SATA controller + Optional SAS /RAID Controller
			EKAD Storage Adapter SAS-3 3008 Chipset 8 Ports external for 1U	1	1	1	Optional - Exteral SAS adapter for Expansion SAS drawer
		Disks	128 GB SATA Disk on module SuperDOM	0	0	2	OS Boot Disk
				0	0	4	If SAS drive is selected, please choose Bezel Assembly to match drive size (.5"
		HDD Drawer	90 LFF JBOD Storage 90 LFF – 2TB SAS HDDs	1	1	1	Supermicro CSE-946ED-R2KJBOD 4U Rackmount https://www.supermicro.com/products/chassis/4u/946/SC946ED-R2KJBOD
S812C Server (Base config) -- Required Inter-connect							
Required for Mfg Genesis		Network Adapter	EKA2 PCIe3 2-port 10 GbE SFP+ Adapter, based on Intel XL710	2	2	3	**(Required) For High Speed Network**
				0	0	3	Section IO device (optional)
		Power	EKLJ (PS #6665) PWR CBL DRWR TO IBM PDU, 2.8m (9.2ft), 250V/10A, IEC320/C13, IEC320/C20	2	2	2	Select Proper Line cord if not connected to IBM PDU
		Cables	CAT5E SWITCH CABLE, BLUE (2M)	1	1	*	**(Required) For OS 1G Network (Recommended 2M length min)**
			CAT5E SWITCH CABLE, GREEN (2M)	1	1	*	**(Required) For IPMI 1G Network (Recommended 2M length min)**
			EKC1 3M- Active Twinax cable	4	4	*	**(Required) For High Speed Network (Recommended 2M length min)**
		Misc	No rack integration	1	1	1	
			Country specific FCs (keyboards, language groups) are selectable	1	1	1	User select
			Shipping and Handling	1	1	1	User select

Ceph Node

				T-Shirt Sizes (example)	Solution Rule		
	MT	Model	Description	Mfg Config #1	Min	Max	Comments
Customized Personality : S822C Server Config : Ceph Node							
	8001	22C	ServerConfig- S822C	**3**	**3**	**	This section Defined the **Common config of the Server node** (in group servers) -- **Next Section :** Defined any unique config that you may need (Optional)
		Solution ID	Solution Specify Code (for grouping only)	1	1	1	Optional FC -- used to specify Solution specific config .. Need econfig support
		Pod Type	Compute Server Type 2 Specify Code	1	1	1	Optional FC -- used to specify node type/ config .. Need econfig support
		Processor	EKP4 EKP4 (PS)8-core 3.32 GHz POWER8 processor	2	1	2	
		Memory	EKM2 (PS) 16GB DDR4 MEMORY DIMM	8	4	16	
		Bezel	EKB9 2S base system with LFF high function drive midplane (NVMe d	1	1	1	Need to Choose drive assembly to match your Disks (LFF/SFF) and Controller type (SAS)
		Storage Adapter	Integrated Sata controller	1	1	1	Build-in HDDs : Integrate SATA controller + Optional SAS /RAID Controller
			EKEB PCIe3 SAS RAID Controller w/cable for 2U server, based on LSI 30	1	1	1	Optional - Exteral SAS adapter for Expansion SAS drawer
		Disks	EKS1 240 GB, SFF SATA SSD; 1.2 Disk Writes Per Day (DWPD) kit	1	0	2	OS Boot Disk
			EKS1 240 GB, SFF SATA SSD; 1.2 Disk Writes Per Day (DWPD) kit	2	0	4	If SAS drive is selected, please choose Bezel Assembly to match drive size (.5"
			EKDD 8TB 3.5" SATA HDD	9	0	4	If SAS drive is selected, please choose Bezel Assembly to match drive size (.5"
S822C Server (Base config) -- Required Inter-connect							
Required for Mfg Genesis		Network Adapter	EKA2 (PS) INTEL 82599ES 2-PORT SFP+ 10G GEN2 x8 STANDARD	2	2	3	**(Required) For High Speed Network**
				0	0	3	Section IO device (optional)
		Power	EKLJ (PS #6665) PWR CBL DRWR TO IBM PDU, 2.8m (9.2ft), 250V/10A, IEC320/C13, IEC320/C20	2	2	2	Select Proper Line cord if not connected to IBM PDU
		Cables	CAT5E SWITCH CABLE, BLUE (2M)	1	1	*	**(Required) For OS 1G Network (Recommended 2M length min)**
			CAT5E SWITCH CABLE, GREEN (2M)	1	1	*	**(Required) For IPMI 1G Network (Recommended 2M length min)**
			EKC1 3M- Active Twinax cable	4	4	*	**(Required) For High Speed Network (Recommended 2M length min)**
		Misc	Country specific FCs (keyboards, language groups) are selectable	1	1	1	User select
			Shipping and Handling	1	1	1	User select

Controller Node

				T-Shirt Sizes (example)	Solution Rule		
	MT	Model	Description	Mfg Config #1	Min	Max	Comments
Customized Personality : S822C Server Config : Controller Node							
	8001	22C	ServerConfig- S822C	3	3	**	This section Defined the **Common config of the Server node** (in group servers) -- **Next Section :** Defined any unique config that you may need (Optional)
		Solution ID	Solution Specify Code (for grouping only)	1	1	1	Optional FC -- used to specify Solution specific config .. Need econfig support
		Pod Type	Compute Server Type 2 Specify Code	1	1	1	Optional FC -- used to specify node type/ config .. Need econfig support
		Processor	EKP5 10-core POWER8 2.92 GHz	2	1	2	
		Memory	EKM2 (PS) 16GB DDR4 MEMORY DIMM	8	4	16	
		Bezel	EKB5 (PS) 2S BRIGGS LFF DIRECT ATTACH FAB ASSEMBLY	1	1	1	Need to Choose drive assemply to match your Disks (LFF/SFF) and Controler type (SAS)
		Storage Adapter	Integrated Sata controller	1	1	1	Build-in HDDs : Integrate SATA controller + Optional SAS /RAID Controller
				0	0	1	Optional - Exteral SAS adapter for Expansion SAS drawer
		Disks	EKS5 1.9 TB, SFF SATA SSD; 1.2 DWPD Kit	1	0	2	OS Boot Disk
				0	0	4	If SAS drive is selected, please choose Bezel Assembly to match drive size (.5"
S822C Server (Base config) -- Required Inter-connect							
Required for Mfg Genesis		Network Adapter	EKA2 (PS) INTEL 82599ES 2-PORT SFP+ 10G GEN2 x8 STANDARD	2	2	3	**(Required) For High Speed Network**
				0	0	3	Section IO device (optional)
		Power	EKLJ (PS #6665) PWR CBL DRWR TO IBM PDU, 2.8m (9.2ft), 250V/10A, IEC320/C13, IEC320/C20	2	2	2	Select Proper Line cord if not connected to IBM PDU
		Cables	CAT5E SWITCH CABLE, BLUE (2M)	1	1	*	**(Required) For OS 1G Network (Recommended 2M length min)**
			CAT5E SWITCH CABLE, GREEN (2M)	1	1	*	**(Required) For IPMI 1G Network (Recommended 2M length min)**
			EKC1 3M- Active Twinax cable	4	4	*	**(Required) For High Speed Network (Recommended 2M length min)**
		Misc	Country specific FCs (keyboards, language groups) are selectable	1	1	1	User select
			Shipping and Handling	1	1	1	User select

Switches

					Config #1	Per Rack	
	MT	Model	FC	Description		Min	Max
1G Mgmt (Base)	7120	48E		Lenovo G8052 1GbE Switch (48x 1GbE ports + 4x 10GbE ports)	1	1*	1
			1118	CAT5E SWITCH CABLE, 3M, YELLOW	1	1	
			6577	PWR CBL, DRWR TO IBM PDU, MFG SEL LENGTH, 200-240V/10A, IEC320/C13, IEC320/C14	2	2	2
				Include all existing FCs; except FCs 0010, 0011, 0712, 0714, EGSx, EHKx, EHLA, 4649 (Rack Integration Services), and 0456 (Customer Specified Placement); do not include these FCs.			
10G Data	8831	S48		Mellanox 1410 ..10GB Switch (48x10G + 12x40G)	2	2	2
			EDT6	1U AIR DUCT FOR S48	1	1	1
				Include all existing FCs; except FC 4649, FC 0456 (Customer Specified Placement) and ESC1 (Shipping & Handling), do not include these FCs	1	1	1

Suggested Racking Rule

Reserved for accessibility

Reserved **U37-U41** for **Rack-Rack** Switches
if ordered

--Any component placed above 32U should be accessed by the Compliance team for Tipping (if use MFG factory rack integration) ..
--MTM required sliding rail should not be place above U38 (Service)

Reserved U24-U26 for In-rack Network Switches

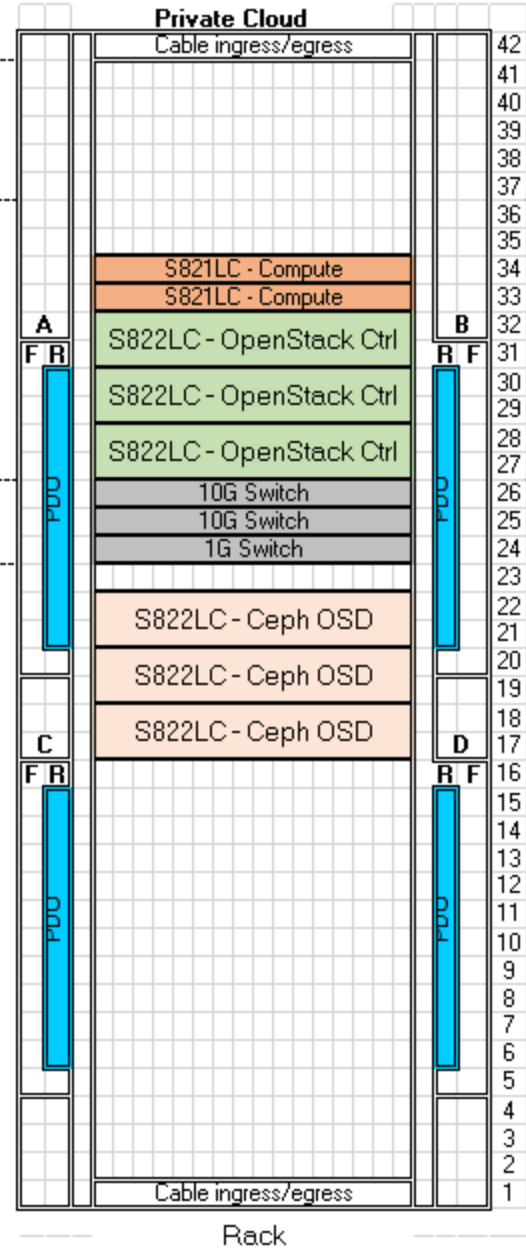
Start at U2and go UP
Common Rule:
–Place Pod / same MTM / Similar Funtion together

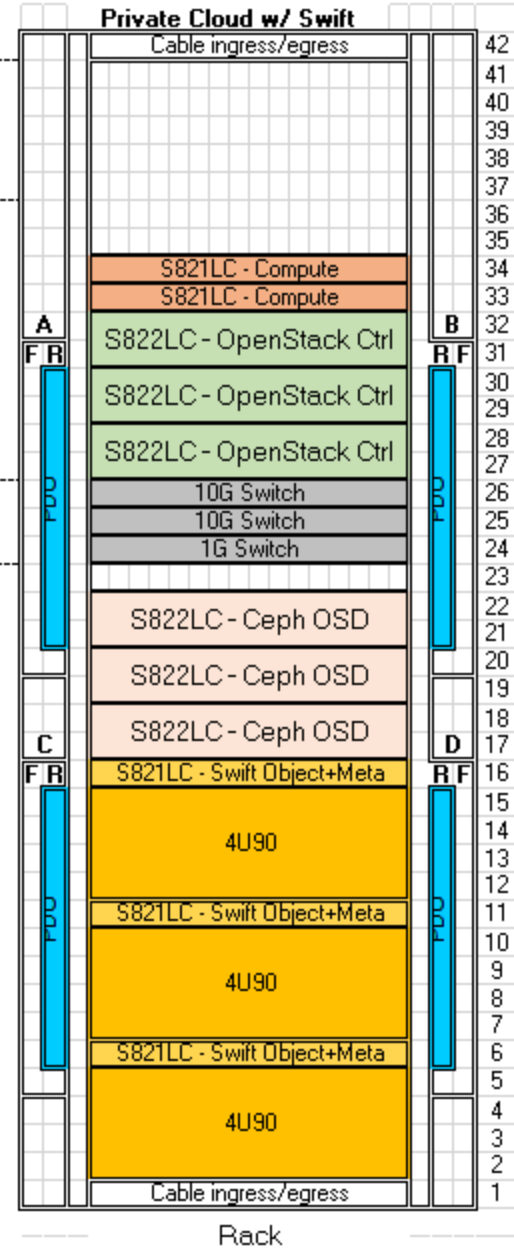
–Place Heavier MTM first starting U2
–Follow native MTM unique racking requirement

Your own Racking Rules:

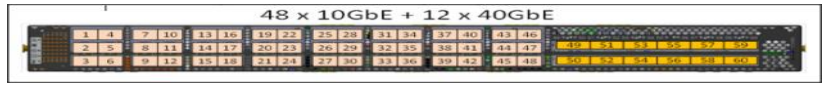
– Recommend (0 -18) 2U Servers per Rack
– CEPH node and Swift node are placed in the lower part of the rack
– Openstack controller and compute follow
– 2 racks per Set of network switch

Reserved for accessibility

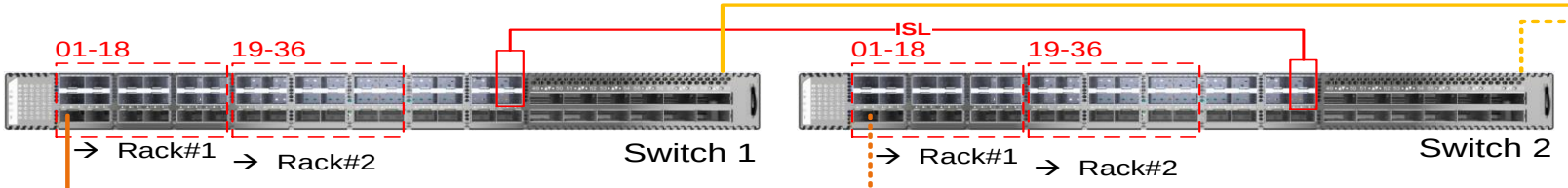


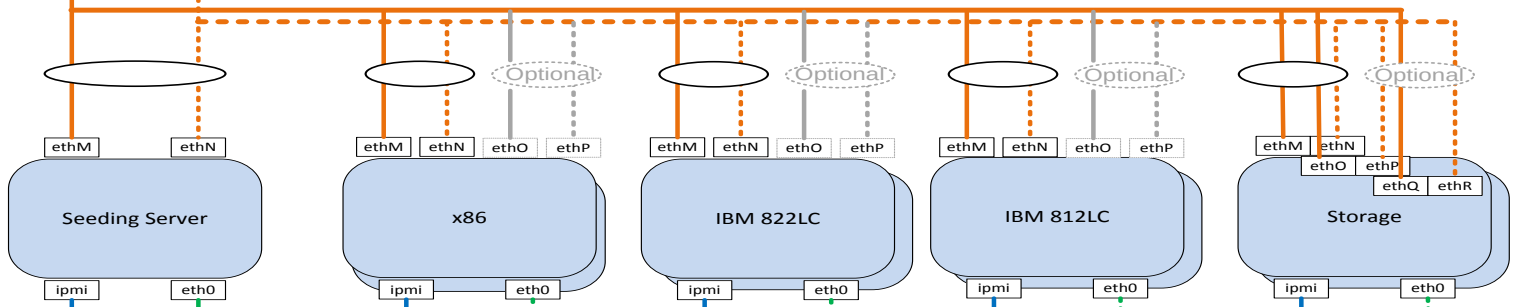


Network

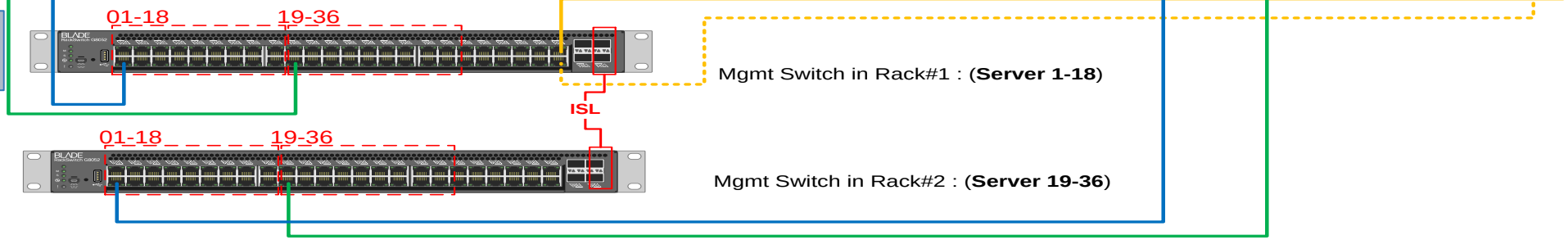


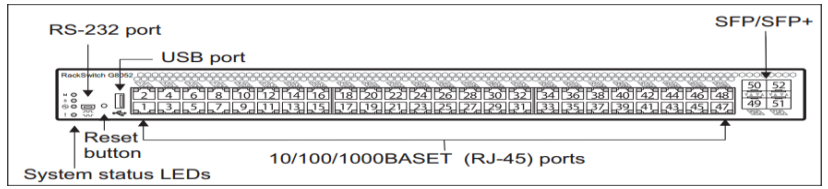
Mellanox SX1410 10G Switches





Lenovo G8052 1G Switch or Equivalent





Notes:
Rack #2 is for future expansion

Cabling

8001-12C/22C Stratton/Briggs

	adapter	PCI slot	Port	Cabling
Primary NIC	10GbE	slot 3	T1	yes
			T2	yes
Optional NIC	10GbE	slot 4	T1	yes
			T2	yes
Mgmt-OS	1GbE	LOM	T1	yes
BMC	1GbE	LOM	impi	yes

Cable P2P Label for H_TOR#1-2

		10GbE	10GbE	10GbE	10GbE	1GbE	1GbE
		H_TOR_1	H_TOR_2	H_TOR_2	H_TOR_1	M_TOR_1	M_TOR_1
Server #	Name <opt>	P2P Data network Cable Label	P2P Data network Cable Label	P2P Data network Cable Label	P2P Data network Cable Label	P2P Mgmt RJ4-5 Cable Label	P2P IPMI RJ-45 Cable Label
1		1A/SVR1/slot 3/T1 <> H_TOR_1/Port1	1A/SVR1/slot 3/T2 <> H_TOR_2/Port1	1A/SVR1/slot 4/T1 <> H_TOR_2/Port4	1A/SVR1/slot 4/T2 <> H_TOR_1/Port4	1A/SVR1/LOM/T1 <> M_TOR_1/Port1	1A/SVR1/LOM/impi <> M_TOR_1/Port4
2		1A/SVR2/slot 3/T1 <> H_TOR_1/Port2	1A/SVR2/slot 3/T2 <> H_TOR_2/Port2	1A/SVR2/slot 4/T1 <> H_TOR_2/Port5	1A/SVR2/slot 4/T2 <> H_TOR_1/Port5	1A/SVR2/LOM/T1 <> M_TOR_1/Port2	1A/SVR2/LOM/impi <> M_TOR_1/Port5
3		1A/SVR3/slot 3/T1 <> H_TOR_1/Port3	1A/SVR3/slot 3/T2 <> H_TOR_2/Port3	1A/SVR3/slot 4/T1 <> H_TOR_2/Port6	1A/SVR3/slot 4/T2 <> H_TOR_1/Port6	1A/SVR3/LOM/T1 <> M_TOR_1/Port3	1A/SVR3/LOM/impi <> M_TOR_1/Port6
4		1A/SVR4/slot 3/T1 <> H_TOR_1/Port7	1A/SVR4/slot 3/T2 <> H_TOR_2/Port7	1A/SVR4/slot 4/T1 <> H_TOR_2/Port10	1A/SVR4/slot 4/T2 <> H_TOR_1/Port10	1A/SVR4/LOM/T1 <> M_TOR_1/Port7	1A/SVR4/LOM/impi <> M_TOR_1/Port10
5		1A/SVR5/slot 3/T1 <> H_TOR_1/Port8	1A/SVR5/slot 3/T2 <> H_TOR_2/Port8	1A/SVR5/slot 4/T1 <> H_TOR_2/Port11	1A/SVR5/slot 4/T2 <> H_TOR_1/Port11	1A/SVR5/LOM/T1 <> M_TOR_1/Port8	1A/SVR5/LOM/impi <> M_TOR_1/Port11
6		1A/SVR6/slot 3/T1 <> H_TOR_1/Port9	1A/SVR6/slot 3/T2 <> H_TOR_2/Port9	1A/SVR6/slot 4/T1 <> H_TOR_2/Port12	1A/SVR6/slot 4/T2 <> H_TOR_1/Port12	1A/SVR6/LOM/T1 <> M_TOR_1/Port9	1A/SVR6/LOM/impi <> M_TOR_1/Port12
7		1A/SVR7/slot 3/T1 <> H_TOR_1/Port13	1A/SVR7/slot 3/T2 <> H_TOR_2/Port13	1A/SVR7/slot 4/T1 <> H_TOR_2/Port16	1A/SVR7/slot 4/T2 <> H_TOR_1/Port16	1A/SVR7/LOM/T1 <> M_TOR_1/Port13	1A/SVR7/LOM/impi <> M_TOR_1/Port16
8		1A/SVR8/slot 3/T1 <> H_TOR_1/Port14	1A/SVR8/slot 3/T2 <> H_TOR_2/Port14	1A/SVR8/slot 4/T1 <> H_TOR_2/Port17	1A/SVR8/slot 4/T2 <> H_TOR_1/Port17	1A/SVR8/LOM/T1 <> M_TOR_1/Port14	1A/SVR8/LOM/impi <> M_TOR_1/Port17
9		1A/SVR9/slot 3/T1 <> H_TOR_1/Port15	1A/SVR9/slot 3/T2 <> H_TOR_2/Port15	1A/SVR9/slot 4/T1 <> H_TOR_2/Port18	1A/SVR9/slot 4/T2 <> H_TOR_1/Port18	1A/SVR9/LOM/T1 <> M_TOR_1/Port15	1A/SVR9/LOM/impi <> M_TOR_1/Port18
10		1A/SVR10/slot 3/T1 <> H_TOR_1/Port19	1A/SVR10/slot 3/T2 <> H_TOR_2/Port19	1A/SVR10/slot 4/T1 <> H_TOR_2/Port22	1A/SVR10/slot 4/T2 <> H_TOR_1/Port22	1A/SVR10/LOM/T1 <> M_TOR_1/Port19	1A/SVR10/LOM/impi <> M_TOR_1/Port22
11		1A/SVR11/slot 3/T1 <> H_TOR_1/Port20	1A/SVR11/slot 3/T2 <> H_TOR_2/Port20	1A/SVR11/slot 4/T1 <> H_TOR_2/Port23	1A/SVR11/slot 4/T2 <> H_TOR_1/Port23	1A/SVR11/LOM/T1 <> M_TOR_1/Port20	1A/SVR11/LOM/impi <> M_TOR_1/Port23
12		1A/SVR12/slot 3/T1 <> H_TOR_1/Port21	1A/SVR12/slot 3/T2 <> H_TOR_2/Port21	1A/SVR12/slot 4/T1 <> H_TOR_2/Port24	1A/SVR12/slot 4/T2 <> H_TOR_1/Port24	1A/SVR12/LOM/T1 <> M_TOR_1/Port21	1A/SVR12/LOM/impi <> M_TOR_1/Port24
13		1A/SVR13/slot 3/T1 <> H_TOR_1/Port25	1A/SVR13/slot 3/T2 <> H_TOR_2/Port25	1A/SVR13/slot 4/T1 <> H_TOR_2/Port28	1A/SVR13/slot 4/T2 <> H_TOR_1/Port28	1A/SVR13/LOM/T1 <> M_TOR_1/Port25	1A/SVR13/LOM/impi <> M_TOR_1/Port28
14		1A/SVR14/slot 3/T1 <> H_TOR_1/Port26	1A/SVR14/slot 3/T2 <> H_TOR_2/Port26	1A/SVR14/slot 4/T1 <> H_TOR_2/Port29	1A/SVR14/slot 4/T2 <> H_TOR_1/Port29	1A/SVR14/LOM/T1 <> M_TOR_1/Port26	1A/SVR14/LOM/impi <> M_TOR_1/Port29
15		1A/SVR15/slot 3/T1 <> H_TOR_1/Port27	1A/SVR15/slot 3/T2 <> H_TOR_2/Port27	1A/SVR15/slot 4/T1 <> H_TOR_2/Port30	1A/SVR15/slot 4/T2 <> H_TOR_1/Port30	1A/SVR15/LOM/T1 <> M_TOR_1/Port27	1A/SVR15/LOM/impi <> M_TOR_1/Port30
16		1A/SVR16/slot 3/T1 <> H_TOR_1/Port31	1A/SVR16/slot 3/T2 <> H_TOR_2/Port31	1A/SVR16/slot 4/T1 <> H_TOR_2/Port34	1A/SVR16/slot 4/T2 <> H_TOR_1/Port34	1A/SVR16/LOM/T1 <> M_TOR_1/Port31	1A/SVR16/LOM/impi <> M_TOR_1/Port34
17		1A/SVR17/slot 3/T1 <> H_TOR_1/Port32	1A/SVR17/slot 3/T2 <> H_TOR_2/Port32	1A/SVR17/slot 4/T1 <> H_TOR_2/Port35	1A/SVR17/slot 4/T2 <> H_TOR_1/Port35	1A/SVR17/LOM/T1 <> M_TOR_1/Port32	1A/SVR17/LOM/impi <> M_TOR_1/Port35
18		1A/SVR18/slot 3/T1 <> H_TOR_1/Port33	1A/SVR18/slot 3/T2 <> H_TOR_2/Port33	1A/SVR18/slot 4/T1 <> H_TOR_2/Port36	1A/SVR18/slot 4/T2 <> H_TOR_1/Port36	1A/SVR18/LOM/T1 <> M_TOR_1/Port33	1A/SVR18/LOM/impi <> M_TOR_1/Port36