

Servers

					Solution Rule		
	MT	Model	Description	Default	Min	Max	Comments
Customized Personality : 8001-12C Server Config 1 >> SYSTEM MANAGEMENT NODE Customization (Min 1; Max 1)							
	8001	12C	S821LC (8001)	1	1	**	
		Processor	EKP1 8-core POWER8 2.328 GHz	1	1	2	1x8 core
		Memory	EKM0 (PS) 4GB DDR4 MEMORY DIMM	8	4	16	32GB
		Bezel	EKB0 1S base system with LFF high-function drive midplane (NVMe drives supported.)	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	2	0	2	
				0	0	4	
		NVme PCI		0	4	2	
		GPU		0	0	1	
Customized Personality : 8001-12C Server Config 2 >> MASTER NODE Configuration (Min 3; Max Any)							
	8001	12C	S821LC (8001)	3	3	**	
		Processor	EKP2 10-core POWER8 2.095 GHz	2	2	2	2x 10Cores
		Memory	EKM2 (PS) 16GB DDR4 MEMORY DIMM	16	4	16	256GB
		Bezel	EKB4 2S base system with LFF high-function drive midplane (NVMe drives supported.)	1	1	1	
		Storage Adapter	Integrated Sata controller	1	1	1	Build-in HDDs : Integrate SATA controller + Optional SAS /RAID Controller
			EKAH PCIe3 SAS RAID Controller w/cable for 1U server, based on LSI MegaRAID 9361-8i 2GB	0	0	1	Optional - Exteral SAS adapter for Expansion SAS drawer
		Disks	128 GB SATA Disk on module SuperDOM	0	0	2	OS Boot Disk
			EKD2 4TB 3.5" SAS HDD	4	4	4	
		NVme PCI		0	4	2	
		GPU		0	0	1	
Customized Personality : 8001-12C Server Config 3 >> EDGE NODE Configuration (Min 1; Max Any)							
	8001	12C	S821LC (8001)	1	1	**	
		Processor	EKP2 10-core POWER8 2.095 GHz	2	2	2	2x 10Cores
		Memory	EKM2 (PS) 16GB DDR4 MEMORY DIMM	16	4	16	256GB
		Bezel	EKB4 2S base system with LFF high-function drive midplane (NVMe drives supported.)	1	1	1	
		Storage Adapter	Integrated Sata controller	1	1	1	Build-in HDDs : Integrate SATA controller + Optional SAS /RAID Controller
			EKAH PCIe3 SAS RAID Controller w/cable for 1U server, based on LSI MegaRAID 9361-8i 2GB	0	0	1	Optional - Exteral SAS adapter for Expansion SAS drawer
		Disks	128 GB SATA Disk on module SuperDOM	0	0	2	OS Boot Disk
			EKD2 4TB 3.5" SAS HDD	4	4	4	
		NVme PCI		0	4	2	
		GPU		0	0	1	

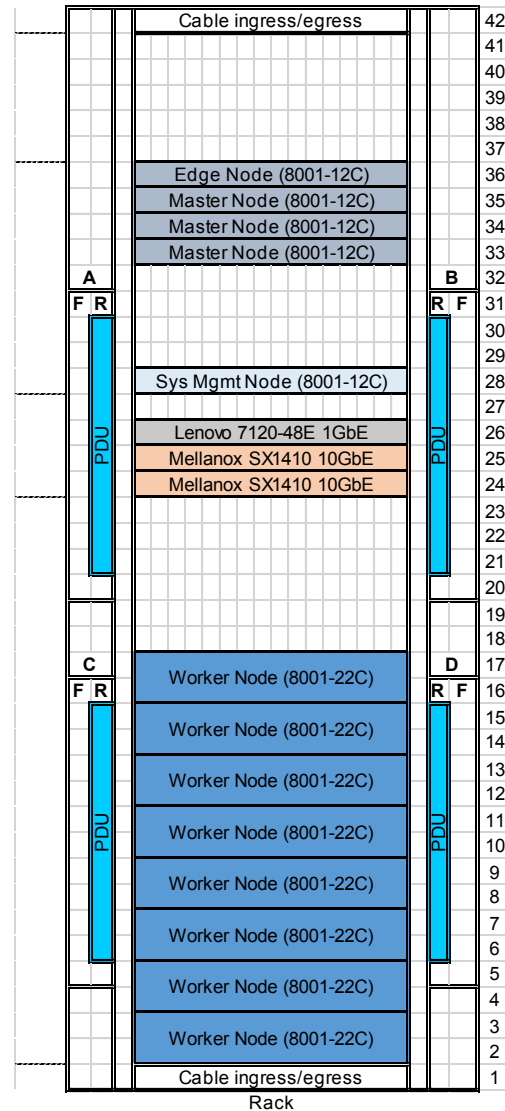
		Network Adapter	EKA2 PCIe3 2-port 10 GbE SFP+ Adapter, based on Intel XL710	1	1	1	additional bandwidth for ingest processing (total of 2 EKA2 adapters for edge nodes)
				0	0	1	Section IO device (optional)
S812C Server (Base config) -- Required Inter-connect							
		OS & Firm-ware	2147 Primary OS - Linux	1	1	1	
			EC16 - OpenPOWER Abstraction layer (OPAL)	1	1	1	
	Required for Mfg Genesis	Network Adapter	EKA2 PCIe3 2-port 10 GbE SFP+ Adapter, based on Intel XL710	1	1	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	0	1	*	(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
Customized Personality : 8001-22C Config 1 >> WORKER NODE - Balanced Config							
	8001	22C	ServerConfig- S822C	8	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)
		Processor	EKPA 11-core POWER8 2.89 GHz	2	2	2	2x 11 core offering
		Memory	EKM2 (PS) 16GB DDR4 MEMORY DIMM	16	16	16	256GB DIMM
		Bezel	EKB5 (PS) 2S BRIGGS LFF DIRECT ATTACH FAB ASSEMBLY	1	1	1	Need to Choose drive assembly 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
			EKEA PCIe3 SAS RAID Controller w/cable for 2U server, based on LSI MegaRAID 9361-8i	1	1	1	Exteral SAS adapter for Expansion SAS drawer
		Disks	EKSL 64GB SATA Disk on module, SuperDOM	0	0	2	
			EKD2 4TB 3.5" SAS HDD	12	12	12	12x 4TB SAS Drives
		NVme PCI		0	4	2	
		GPU		0	0	1	
S822C Server (Base config) -- Required Inter-connect							
		OS & Firm-ware	2147 Primary OS - Linux	1	1	1	
			EC16 - OpenPOWER Abstraction layer (OPAL)	1	1	1	
	Required for Mfg Genesis	Network Adapter	EKA2 (PS) INTEL 82599ES 2-PORT SFP+ 10G GEN2 x8 STANDARD	1	1	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	2	2	*	(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

					Con- fig	Per Rack		
					#1			
	MT	Model	FC	Description		Min	Max	Comments
1G Mgmt (Based)	7120	48E		Lenovo G8052 1GbE Switch (48x 10GbE ports + 4x 10GbE ports)	1	1*	1	* Qty 1 required per rack. An additional switch is needed, beyond the qty 1 per rack.
			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.				Note: FCs ESC0 & ESC1 are not announced and not applicable for switches
1G Mgmt (Base)	8831	S52		Mellanox 1Gb Switch	0	0	1	* Qty 1 required per rack. An additional switch is needed, beyond the qty 1 per rack.
			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.				Note: FCs ESC0 & ESC1 are not announced and not applicable for switches
10G Data Network	7120	64C		Lenovo G8264 ..10Gb Switch (48x10G + 4x40G)	0	1*	2	
			1118	CAT5E SWITCH CABLE, 3M, YELLOW	1	1		
				Include all existing FCs; except FC 4649, FC 0456 (Customer Specified Placement) and ESC1 (Shipping & Handling), do not include these FCs	2	2	2	
10G Data Network	8831	S48		Mellanox SX1410 ..10Gb Switch (48x10G + 12x40G)	2	1*	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	
IB Data Network	8828	E36		EDR InfiniBand Switch	0	1*	2	* Qty 1 required per rack. An additional switch is needed, beyond the qty 1 per rack.
			465x	Rack Indicator - Rack #x	1	1	1	FC 4651 min qty = 1. Use 4652 to 4666 min qty =1 for additional racks
			EDT4	1U AIR DUCT	1	1	1	
				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.				Note: FCs ESC0 & ESC1 are not announced & not applicable for switches. Power cable MFI BOMs and rail kit MFI BOMs are included with the 8828 & 8831 switches

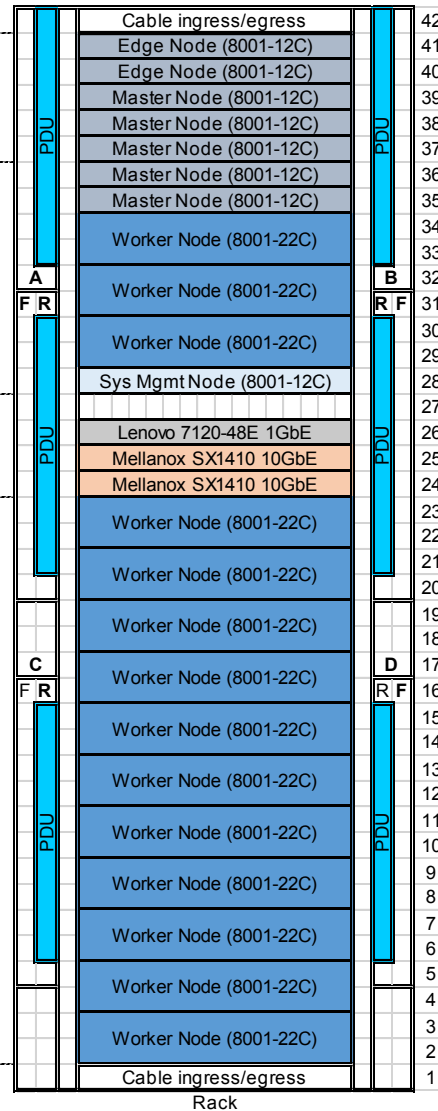
Single Rack Minimum Production Config

HDP
1smn+ 3mn + 1en + 8wn



**Single Rack
Fully Populated**

HDP
1smn+ 5mn + 2en + 14wn



Suggested Racking Rules

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)

Reserved **U24-U27** for **In-rack** Network Switches

Start at U2 and install from bottom up

Common Rule:

- Place Pod / same MTM / similar function
- Place Heavier MTM first starting U2
- Follow native MTM unique racking

Custom Racking Rules:

- Recommend (0 -18) 2U servers per Rack
- 2 racks per pair of 10GbE network switches

Reserved for accessibility