

Open Storage Network (OSN) Logic View, Port Mappings and Labels v1



v1.0 – Initial document creation

D R A F T

CUSTOMER / END USER		CREATION DATE	DATE LAST MODIFIED
Open Storage Network (Phase 1)		5/20/2019	5/23/2019
DOCUMENT TEAM OWNER		ENGINEER / ARCHITECT	
JP Allport Supermicro SuperRack™ Solutions		JP ALLPORT Allport	
PAGE NAME	FILE LOCATION		
Changelog	ATLAS\L\WORKS\SUPERMICRO - SUPERRACK ONGOING PROJECTS\OPEN STORAGE NETWORK (POD)\CABLE AND SERVER LABELING\OSN RACKVIEW, PORT MAPPINGS AND LABELS (DISTRIBUTION) V1.1.XSD		

Open Storage Network Appliance - Rack Logical View



Key Components

- 3x SYS-1019P-WTR-01-CC089 / MS046 - Monitor Node
- 5x PIO-5049PE1C36-01-CC089 / MS046 - Object Storage Daemon Node
- Mellanox MSN2100-CB2F Spectrum, 100GbE, 16-Port, QSFP28, P2C Airflow (Front-end & Back-end Data)
- Netgear GSM4328S-100NES 24-Port M4300-28G/10GBASE-T/SFP+ C2P Airflow (Management)
- Raritan DLX-216 Dominion 16-Port KVM over IP Switch (Management and Provisioning)



CUSTOMER / END USER		CREATION DATE	DATE LAST MODIFIED
Open Storage Network (Phase 1)		5/20/2019	5/23/2019
DOCUMENT TEAM OWNER		ENGINEER / ARCHITECT	
JP Allport Supermicro SuperRack™ Solutions		JP ALLPORT Allport	
PAGE NAME	FILE LOCATION		
Logical Rack View	ATLAS\WORK\SUPERMICRO - SUPERACK\ONGOING PROJECTS\OPEN STORAGE NETWORK (POC)\CABLE AND SERVER LABELING\G3N RACKVIEW PORT MAPPING AND LABELS DISTRIBUTION\V1.1\G3N		

F I N A L

Open Storage Network Appliance - Network & Port Maps



This section provides a detailed overview of network connectivity for every component in this storage appliance.

OSN Appliance										Networking and Port Maps Chart											
PDU1		PDU2		1G Ethernet Netgear M4300-28G - <i>ngb1</i>						100G Ethernet Mellanox SN2100 - <i>mlx1</i>					KVM-over-IP Raritan DLX-216 - <i>kvm1</i>						
Geist MNU3EGW1		Geist MNU3EGW1		Rack Position: U40						Rack Position: U41					Rack Position: U42						
				Port	Connector	Gb	Device:Interface	Port Label	Comments	Port	Connector	Gb	Device:Interface	Port Label	Comments	Port	Connector	Type	Device:Interface	Port Label	Comments
C19 Outlet #24		C19 Outlet #24		1	RJ45	1	data01:BMC	ngb1:p1		1/1	QSFP28 Split-2	50	data01:p5p1	mlx1:p1	Cable prelabeled '1' plugs into p5p1 and '2' goes to p6p1	1	RJ45	KVM	data01:D2CIM	kvm1:p1	
C13 Outlet #23		C13 Outlet #23		2	RJ45	1	data02:BMC	ngb1:p2		1/2	QSFP28 Split-2	50	data01:p6p1	mlx1:p1		2	RJ45	KVM	data02:D2CIM	kvm1:p2	
C13 Outlet #22		C13 Outlet #22		3	RJ45	1	data03:BMC	ngb1:p3		2/1	QSFP28 Split-2	50	data02:p5p1	mlx1:p2	Cable prelabeled '1' plugs into p5p1 and '2' goes to p6p1	3	RJ45	KVM	data03:D2CIM	kvm1:p3	
C13 Outlet #21		C13 Outlet #21		4	RJ45	1	data04:BMC	ngb1:p4		2/2	QSFP28 Split-2	50	data02:p6p1	mlx1:p2		4	RJ45	KVM	data04:D2CIM	kvm1:p4	
C19 Outlet #20		C19 Outlet #20		5	RJ45	1	data05:BMC	ngb1:p5		3/1	QSFP28 Split-2	50	data03:p5p1	mlx1:p3	Cable prelabeled '1' plugs into p5p1 and '2' goes to p6p1	5	RJ45	KVM	data05:D2CIM	kvm1:p5	
C13 Outlet #19		C13 Outlet #19		6	RJ45	1				3/2	QSFP28 Split-2	50	data03:p6p1	mlx1:p3		6	RJ45	KVM			
C13 Outlet #18		C13 Outlet #18		7	RJ45	1				4/1	QSFP28 Split-2	50	data04:p5p1	mlx1:p4	Cable prelabeled '1' plugs into p5p1 and '2' goes to p6p1	7	RJ45	KVM			
C13 Outlet #17		C13 Outlet #17		8	RJ45	1				4/2	QSFP28 Split-2	50	data04:p6p1	mlx1:p4		8	RJ45	KVM			
C19 Outlet #16		C19 Outlet #16		9	RJ45	1				5/1	QSFP28 Split-2	50	data05:p5p1	mlx1:p5	Cable prelabeled '1' plugs into p5p1 and '2' goes to p6p1	9	RJ45	KVM			
C13 Outlet #15		C13 Outlet #15		10	RJ45	1				5/2	QSFP28 Split-2	50	data05:p6p1	mlx1:p5		10	RJ45	KVM			
C13 Outlet #14		C13 Outlet #14		11	RJ45	1				6	QSFP28	100				11	RJ45	KVM			
C13 Outlet #13		C13 Outlet #13		12	RJ45	1	mon01:BMC	ngb1:p12		7	QSFP28	100				12	RJ45	KVM	mon01:BMC	kvm1:p12	
Upper Circuit Breaker		Upper Circuit Breaker		13	RJ45	1	mon02:BMC	ngb1:p13		8	QSFP28	100				13	RJ45	KVM	mon02:BMC	kvm1:p13	
				14	RJ45	1	mon03:BMC	ngb1:p14		9	QSFP28	100				14	RJ45	KVM	mon03:BMC	kvm1:p14	
				15	RJ45	1				10	QSFP28 -> SFP+	10	ngb1:p27	mlx1:p10	M4300 Downlink	15	RJ45	KVM			
				16	RJ45	1				11	QSFP28 -> SFP+	10	ngb1:p28	mlx1:p11	M4300 Downlink	16	RJ45	KVM			
Eth1 Mgmt		Eth1 Mgmt		17	RJ45	1				12/1	QSFP28 Split-2	50	mon01:p1p1	mlx1:p12	Cable prelabeled '1' plugs into p1p1 and '2' goes to p3p1	Port Usage		KVM	8/16		
Eth2 Mgmt		Eth2 Mgmt		18	RJ45	1				12/2	QSFP28 Split-2	50	mon01:p3p1	mlx1:p12		LAN		1/1			
C19 Outlet #12		C19 Outlet #12		19	RJ45	1				13/1	QSFP28 Split-2	50	mon02:p1p1	mlx1:p13	Cable prelabeled '1' plugs into p1p1 and '2' goes to p3p1						
C13 Outlet #11		C13 Outlet #11		20	RJ45	1	mon3:em1	ngb1:p20	OoB/Edge Node	13/2	QSFP28 Split-2	50	mon02:p3p1	mlx1:p13							
C13 Outlet #10		C13 Outlet #10		21	RJ45	1	kvm1:LAN	ngb1:p21		14/1	QSFP28 Split-2	50	mon03:p1p1	mlx1:p14	Cable prelabeled '1' plugs into p1p1 and '2' goes to p3p1						
C13 Outlet #9		C13 Outlet #9		22	RJ45	1	mlx:LAN	ngb1:p22		14/2	QSFP28 Split-2	50	mon03:p3p1	mlx1:p14							
C19 Outlet #8		C19 Outlet #8		23	RJ45	1	pdu1:LAN1	ngb1:p23		15	QSFP28 -> MPO	100	SITE FIBER	i2: 100/40/10	100GbE Transceiver						
C13 Outlet #7		C13 Outlet #7		24	RJ45	1	pdu2:LAN1	ngb1:p24		16	QSFP28 -> MPO	100	SITE FIBER	i2: 100/40/10	100GbE Transceiver						
C19 Outlet #6		C19 Outlet #6		25	RJ45	10	mon01:em1	ngb1:p25	OoB/Edge Node	console1	RJ45	16000 Baud Rate	mon02:10 0	mlx1:serial	Console MGMT						
C13 Outlet #5		C13 Outlet #5		26	RJ45	10	mon02:em1	ngb1:p26	OoB/Edge Node	console2	Mini-USB	16000 Baud Rate	mon01:USB	mlx1:USB	Console MGMT (?)						
C19 Outlet #4		C19 Outlet #4		27	SFP+	10	mlx:p10	ngb1:p27	SN100 Uplink	Port Usage		100GbE	12/16								
C13 Outlet #3		C13 Outlet #3		28	SFP+	10	mlx:p11	ngb1:p28	SN100 Uplink			Console	2/2								
C13 Outlet #2		C13 Outlet #2		console1	RJ45	16000 Baud Rate	mon01:10 0	ngb1:serial	Console MGMT			OoB	1/1								
C13 Outlet #1		C13 Outlet #1		console2	Mini-USB	16000 Baud Rate	mon02:USB	ngb1:USB	Console MGMT												
Lower Circuit Breaker		Lower Circuit Breaker		OoB	RJ45	1															
				Port Usage	1GbE	13/24															
					10GbE	4/4															
					Console	2/2															
					OoB	0/1															

Open Storage Network Appliance - Power Maps

This section provides a detailed overview of power connectivity for every component in this storage appliance.



OSN Appliance

PDU1		PDU2		42		42	
Geist MNU3EGW1		Geist MNU3EGW1					
C19 Outlet #24		C19 Outlet #24				Raritan DLX-216 KVM — Management / Provisioning (kvm1)	
C13 Outlet #23		C13 Outlet #23				Mellanox MSN2100-CB2F — Data (mlx1)	
C13 Outlet #22		C13 Outlet #22				Netgear GSM4328S-100NES — Management (ngb1)	
C13 Outlet #21		C13 Outlet #21				SYS-1019P-WTR-01-CC089 / MS046 — Monitor Node (mon03)	
C19 Outlet #20		C19 Outlet #20				SYS-1019P-WTR-01-CC089 / MS046 — Monitor Node (mon02)	
C13 Outlet #19		C13 Outlet #19				SYS-1019P-WTR-01-CC089 / MS046 — Monitor Node (mon01)	
C13 Outlet #18		C13 Outlet #18				Blanking Panel	
C13 Outlet #17		C13 Outlet #17				Blanking Panel	
C19 Outlet #16		C19 Outlet #16				Blanking Panel	
C13 Outlet #15		C13 Outlet #15				Blanking Panel	
C13 Outlet #14		C13 Outlet #14				Blanking Panel	
C13 Outlet #13		C13 Outlet #13				Blanking Panel	
Upper Circuit Breaker		Upper Circuit Breaker				Blanking Panel	
Eth1 Mgmt RJ12		Eth1 Mgmt RJ12				Blanking Panel	
Eth2 Mgmt Exp. Port / USB		Eth2 Mgmt Exp. Port / USB				Blanking Panel	
LCD Panel		LCD Panel				Blanking Panel and APC / AR8122BLK 1U Fixed Shelf 250 lbs	
C19 Outlet #12		C19 Outlet #12				PIO-5049PE1C36-01-CC089 / MS046	
C13 Outlet #11		C13 Outlet #11				Object Storage Daemon Node (data05)	
C13 Outlet #10		C13 Outlet #10				PIO-5049PE1C36-01-CC089 / MS046	
C13 Outlet #9		C13 Outlet #9				Object Storage Daemon Node (data04)	
C19 Outlet #8		C19 Outlet #8				PIO-5049PE1C36-01-CC089 / MS046	
C13 Outlet #7		C13 Outlet #7				Object Storage Daemon Node (data03)	
C13 Outlet #6		C13 Outlet #6				PIO-5049PE1C36-01-CC089 / MS046	
C13 Outlet #5		C13 Outlet #5				Object Storage Daemon Node (data02)	
C19 Outlet #4		C19 Outlet #4				PIO-5049PE1C36-01-CC089 / MS046	
C13 Outlet #3		C13 Outlet #3				Object Storage Daemon Node (data01)	
C13 Outlet #2		C13 Outlet #2				PIO-5049PE1C36-01-CC089 / MS046	
C13 Outlet #1		C13 Outlet #1				Object Storage Daemon Node (data01)	
Lower Circuit Breaker		Lower Circuit Breaker				Input PDU1 (IEC60309 3P + E, 60A, Splashproof IP44)	
Input PDU2 (IEC60309 3P + E, 60A, Splashproof IP44)		Input PDU2 (IEC60309 3P + E, 60A, Splashproof IP44)					

Power Maps

PDU1				
Geist MNU3EGW1-24PH68-6PS15B0A10-S-A				
Location: Cabinet rear left wall, closest to outer edge				
Outlet	Type	Device PSU	Outlet Label	Comments
24	C19			
23	C13	kvm1 [PS1]	pdu1:o23	
22	C13	mlx1 [PS1]	pdu1:o22	
21	C13	ngb1 [PS1]	pdu1:o21	
20	C19			
19	C13	mon03 [PS1]	pdu1:o19	
18	C13	mon02 [PS1]	pdu1:o18	
17	C13	mon01 [PS1]	pdu1:o17	
16	C19			
15	C13	data09 [PS1]	pdu1:o15	
14	C13	data08 [PS1]	pdu1:o14	
13	C13	data07 [PS1]	pdu1:o13	
12	C19			
11	C13			
10	C13			
9	C13			
8	C19			
7	C13	data06 [PS1]	pdu1:o7	
6	C13	data05 [PS1]	pdu1:o6	
5	C13	data04 [PS1]	pdu1:o5	
4	C19			
3	C13	data03 [PS1]	pdu1:o3	
2	C13	data02 [PS1]	pdu1:o2	
1	C13	data01 [PS1]	pdu1:o1	
LAN1	RJ45	ngb1:p23	pdu1:LAN1	Management
LAN2	RJ45			
Port C13 15/18				
Usag C19 0/6				
e RJ45 1/2				
Input Connector (from SITE)				
IEC 60309 60A 3P4W				

PDU2				
Geist MNU3EGW1-24PH68-6PS15B0A10-S-A				
Location: Right side of PDU1				
Outlet	Type	Device PSU	Outlet Label	Comments
24	C19			
23	C13	kvm1 [PS2]	pdu2:o23	
22	C13	mlx1 [PS2]	pdu2:o22	
21	C13	ngb1 [PS2]	pdu2:o21	
20	C19			
19	C13	mon03 [PS2]	pdu2:o19	
18	C13	mon02 [PS2]	pdu2:o18	
17	C13	mon01 [PS2]	pdu2:o17	
16	C19			
15	C13	data09 [PS2]	pdu2:o15	
14	C13	data08 [PS2]	pdu2:o14	
13	C13	data07 [PS2]	pdu2:o13	
12	C19			
11	C13			
10	C13			
9	C13			
8	C19			
7	C13	data06 [PS2]	pdu2:o7	
6	C13	data05 [PS2]	pdu2:o6	
5	C13	data04 [PS2]	pdu2:o5	
4	C19			
3	C13	data03 [PS2]	pdu2:o3	
2	C13	data02 [PS2]	pdu2:o2	
1	C13	data01 [PS2]	pdu2:o1	
LAN1	RJ45	ngb1:p24	pdu1:LAN1	Management
LAN2	RJ45			
Port C13 15/18				
Usag C19 0/6				
e RJ45 1/2				
Input Connector (from SITE)				
IEC 60309 60A 3P4W				

Purple Text = Future/Scaled

F I N A L

CUSTOMER / END USER		CREATION DATE	DATE LAST MODIFIED
Open Storage Network (Phase 1)		5/20/2019	5/23/2019
DOCUMENT TEAM OWNER		ENGINEER / ARCHITECT	
JP Allport Supermicro SuperRack™ Solutions		JP ALLPORT Allport	
PAGE NAME	FILE LOCATION		
Power Maps	ATLAS\WORK\SUPERMICRO - SUPERRACK\ONLINE PROJECTS\OPEN STORAGE NETWORK\POD\CABLE AND SERVER LABELING\ON RACKVIEW, PORT MAPPING AND LABELS\ISTRIBUTION\VL1\OSN		