# SRS-42UCEPH-OSN SCALABLE RACK APPLIANCE ("POD") HARDWARE CONFIGURATION (TESTED)

| Component | PN | Description/Comments |
|---|---|---|
| All hardware components have been thoroughly tested for compatibility and functionality by IDIES@JHU. | | |
| Integration | SRS-INTSRV-10SN-SM-01 | HW/SW integration, testing service up to 10 nodes (includes BIOS settings, firmware updates, making 'pod' turnkey-ready) |
| Rack | SRK-42SE-75 [AR3350] | APC AR3350 NetShelter SX 42U (750mm x 1200mm) Enclosure |
| Rack Accessory | SRK-00AS-53 [AR7706] | APC AR7706 NetShelter SX 750mm Mounting Rail Brush Strip (for cable pass-through to front-facing Netgear 1Gb switch) |
| Rack Accessory | SRK-01PN-01 | (2x) 1U Mesh Blanking Panel (mounted in front of the rear-facing Mellanox 100Gb switch and behind the Netgear 1Gb switch) |
| Rack Accessory | – [AR7540] | APC Toolless Cable Management Rings (Qty 10) |
| Rack Accessory | – [AR8101BLK ] | APC Airflow Management. 1U, 2U, 4U, 8U blanking panels (black) Rack Positions 22–36 (fills 15U gap between shelf and the top-of-rack gear) |
| Rack Accessory | – [AR8122BLK] | APC Fixed Shelf 250lbs/114kg Black (1U) Rack Position 21 (ensures top 4U data node can slide freely in rack for service) |
| Rack Accessory | – [AR8108BLK] | APC 1U Airflow Management Blanking Panel Kit (Qty 2) (shelf does not include a blank) |
| PDU | [MNU3EGW1] | (2x) Vertiv (Geist) Managed, Switched Outlet PDU (IEC 60309 60A 3P4W) |
| Cable, CAT6 | [Green, 7ft] | (2x) [LAN=>Netgear] Ethernet,CAT6,RJ45,Snagless,STP,7ft (green) (for remote PDU management via command module) |
| Switch, KVM | [DLX-216] | Raritan Dominion LX 2- IP User, 16-Port KVM Switch Rack Position 42 |
| Cable, Power | [Black, 4ft] | [PS1=>PDU1] Power C14 to C13,4ft,15a/250v 14/3 SJT (black) (non-redundant) |
| Cable, CAT6 | [Green, 7ft] | [LAN=>Netgear] Ethernet,CAT6,RJ45,Snagless,STP,7ft (green) (remote access via KVM-over-IP) |
| Switch, 100Gb | [MSN2100-CB2F] | Mellanox SN2100 16-port 100GbE Ethernet Switch Rack Position 41 |
| Rack Kit | [MTEF-KIT-D] | Mellanox Rack Installation Kit for SN2100/SN2010 series 1U half width switches |
| Cable, Power | [PFC1414E72] | [PS1=>PDU1] Power C14 to C13,6ft,15a/250v 14/3 SJT (black) |
| Cable, Power | [PFC1414E72A] | [PS2=>PDU2] Power C14 to C13,6ft,15a/250v 14/3 SJT (gray) |
| Optics | [MMA1B00-C100D] | Mellanox Optical Transceiver 100GbE QSFP28 MPO 850nm SR4 up to 100m DDMI (also supports 40Gb) (LAG uplink to SITE switch) |
| Cable, CAT6 | [Green, 7ft] | [LAN=>Netgear] Ethernet,CAT6,RJ45,Snagless,STP,7ft (green) (remote management) |
| Cable, Serial | [CAB-CONSOLE-RJ45] | [RS232=>monX:COM1] DB9 to RJ45 Console, 6ft (light blue) (out-of-band console connection #1) |
| Cable, Serial | [CAB-CONSOLE-USB] | [miniB=>monY:USB] USB Type A to mini-B Console, 6ft (light blue) (out-of-band console connection #2) |

| Component | PN | Description/Comments |
|---|---|---|
| Switch, 1Gb | [M4300-28G] | Netgear M4300- 28G 1U RM L3 Managed Switch 24xGbE 2x10GbE 2x10GbE SFP+ 1x250W<br>Rack Position 40 |
| PSU | [APS150W-100NES] | Netgear ProSafe 150W Power Module for M4300-28G |
| Cable, Power | [PFC1414E72] | [PS1=>PDU1] Power C14 to C13,6ft,15a/250v 14/3 SJT (black) |
| Cable, Power | [PFC1414E72A] | [PS2=>PDU2] Power C14 to C13,6ft,15a/250v 14/3 SJT (gray) |
| Cable, 10Gb | [MC2309130-002] | (2x) Mellanox Passive Copper Hybrid Ethernet 10GbE QSFP to SFP+ 2m (LAG uplink to Mellanox SN2100) |
| Cable, Serial | [CAB-CONSOLE-RJ45] | [RS232=>monX:COM1] DB9 to RJ45 Console, 6ft (light blue)<br>(out-of-band console connection #1) |
| Cable, Serial | [CAB-CONSOLE-USB] | [miniB=>monY:USB] USB Type A to mini-B Console, 6ft (light blue)<br>(out-of-band console connection #2) |
| OSN Monitor Node | SYS-1019P-OSN-01-MS046 | (3x) 1U rackmount server (see detailed worksheet)<br>Rack Positions 37,38,39 |
| Monitor Node 'Short Cable' Bundle (One per Monitor Node) | | |
| Cable, Power | [PFC1414E48] | (3x) [PS1=>PDU1] Power C14 to C13,4ft,15a/250v 14/3 SJT (black) |
| Cable, Power | [PFC1414E48A] | (3x) [PS2=>PDU2] Power C14 to C13,4ft,15a/250v 14/3 SJT (gray) |
| Cable, 50Gb | [MCP7H00-G01] | (3x) Mellanox Hybrid Ethernet<br>100Gb/s to 2x50Gb/s QSFP28 to 2xQSFP28 1m 30AWG<br>(high-speed network interconnect) |
| Interface Module | [D2CIM-DVUSB] | (3x) Raritan CIM<br>1x HDDB15 male, 2x USB Type A male, 1x RJ-45 female |
| Cable, CAT6 | [Yellow, 7ft] | (3x) [CIM=>KVM] Ethernet,CAT6,RJ45,Snagless,STP,7ft (yellow)<br>(remote console management via KVM-over-IP) |
| Cable, CAT6 | [Green, 7ft] | (3x) [BMC=>Netgear] Ethernet,CAT6,RJ45,Snagless,STP,7ft (green)<br>(remote management via IPMI) |
| Cable, CAT6 | [Red, 7ft] | (3x) [em1=>Netgear] Ethernet,CAT6,RJ45,Snagless,STP,7ft (red)<br>(edge node access to 1Gb management network) |
| OSN Data Node | SYS-5049P-OSN-01-MS046 | (5x) 4U rackmount server (see detailed worksheet)<br>Rack Positions 1–4,5–8,9–12,13–16,17–20 |
| Data Node 'Long Cable' Bundle (One per Data Node) | | |
| Cable, Power | [PFC1414E72] | (5x) [PS1=>PDU1] Power C14 to C13,6ft,15a/250v 14/3 SJT (black) |
| Cable, Power | [PFC1414E72A] | (5x) [PS2=>PDU2] Power C14 to C13,6ft,15a/250v 14/3 SJT (gray) |
| Cable, 50Gb | [MCP7H00-G03] | (5x) Mellanox Hybrid Ethernet<br>100Gb/s to 2x50Gb/s QSFP28 to 2xQSFP28 3m 30AWG<br>(high-speed network interconnect) |
| Interface Module | [D2CIM-DVUSB] | (5x) Raritan CIM<br>1x HDDB15 male, 2x USB Type A male, 1x RJ-45 female |
| Cable, CAT6 | [Yellow, 10ft] | (5x) [CIM=>KVM] Ethernet,CAT6,RJ45,Snagless,STP,10ft (yellow)<br>(remote console management via KVM-over-IP) |
| Cable, CAT6 | [Green, 10ft] | (5x) [BMC=>Netgear] Ethernet,CAT6,RJ45,Snagless,STP,10ft (green)<br>(remote management via IPMI) |