

Technical Specification — 48 Port Non-PoE Switch (Units- 10) Procurement and Installation for Department of Survey

Compliance Checklist & Bid Response Sheet

BIDDER INSTRUCTIONS					
1. Complete the ‘Compliance (Yes/No)’ column for every item. Leave no field blank. 2. State the Attachment Number in ‘Remarks and Attachment Number’ where a document is attached. 3. Attach OEM datasheets, compatibility matrices, certification copies, and the signed Turnkey Declaration with the bid submission.					
No	Features	Sub Features	Minimum Specification	Compliance (Yes/No)	Remarks and Attachment Number
1	48 Port Non POE Switch	Make	(Please specify)		
2		Model	(Please specify)		
3		Country of Origin	(Please specify)		
4	Product	Part Number	(Please specify exact OEM part number)		
5		Switch Type	Fixed Port (modular/chassis switches not accepted)		
6		Routing / Switching	Layer 2/3		
7		Management	Fully Managed. Must support centralized management via vendor’s own NMS and third-party SNMP-based tools.		
8	Included Accessories	Included Accessories	19-inch Rack Mount Kit must be included. Dedicated Stacking Cables must be supplied if stacking is supported (as specified in Line 35). All required stacking cables/modules must be included in bid price.		
9	General		The OEM must be listed in the Leader Quadrant of Gartner Magic Quadrant/ or equalant for Wired and Wireless LAN Infrastructure for at least any 3 of the last 5 years.		
10			The switch must be enterprise-grade, designed for distribution/core layer in medium to large organizations. Small business/SMB models not accepted.		
11			Technical Specification for the Turnkey Procurement, Full Installation, and Integrated Commissioning of 48-Port Non-PoE Enterprise-Grade Managed Network Switches (Units 10). The solution must be fully compatible and interoperable with the existing Aruba CX 6300M Core environment.		
12	Layer 2 Switching	Spanning Tree	High link availability by allowing multiple spanning trees		
13			No. of STP instances should be 32 or above		
14			IEEE 802.1D Spanning Tree, IEEE 802.1s (MSTP) also supported for spanning tree scalability.		
15			IEEE 802.1w Rapid Spanning Tree		
16	VLANs		Rapid Per-VLAN Spanning Tree (RPVST+) or vendor equivalent		
17			RPVST+ number of VLANs 512 or above		
18			STP Convergence <1sec for RPVST+		
19			QinQ - SVLAN: QinQ (802.1ad) must support SVLAN/CVLAN separation and tag stacking.		
20			Allows automatic learning and dynamic assignment of VLANs using MVRP (Multiple VLAN Registration Protocol). GVRP support is optional.		
21			VLAN 2/3 support (IEEE 802.1Q)		
22			IEEE 802.1v protocol VLANs		
23			Up to 4094 VLAN IDs with support for at least 2048 active VLANs simultaneously		
24	Link Aggregation		Support for minimum 32 Link Aggregation Groups (LAGs) with at least 16 physical ports per group; must support cross-device (IRF/VSF/Stack) LACP.		
25			Number of physical ports per LAG 16 or above		
26			IEEE 802.3ad link-aggregation-control protocol (LACP) and port trunking		
27	Quality of Service	Class of Service (CoS)	Layer 3 protocol, TCP/UDP port number, source port, 8 queues per port and DiffServ		
28		Large buffers	Provide graceful congestion management (minimum 8 MB shared packet buffer; 16 MB preferred) Must be visible in OEM datasheet.		
29		Traffic prioritization	Classification into eight priority levels mapped to eight queues		
30		Layer 4 prioritization	Based on TCP/UDP port numbers		
31	Layer 3 Routing	Routing	Mandatory: Static Routing, RIPv2, IPv6 Routing, OSPFv2/v3 in hardware (no separate licenses). Preferred: BGP, IPv4/IPv6 Policy-Based Routing.		
32			Policy-based routing (preferred)		
33	Multicast		Mandatory: IGMPv2/v3 Snooping. Preferred (Higher Technical Scoring): PIM-SM, PIM-DM, or PIM-SSM with ACL support for 50+ group ranges.		
34			PIM-SSM - ACL support for PIM-SSM group range 50 or above (preferred)		
35	Features		Must support open RESTful APIs for integration with Ansible, Python, and third-party orchestration tools (preferred).		
36	Stacking		Front plane stacking creates one virtual resilient switch from up to eight switches. Stacking must allow creation of a single logical switch with minimum 8 members. Stacking bandwidth must be specified (minimum 40 Gbps). All required stacking cables/modules must be included in bid price. Vendor must specify stacking technology (e.g., Aruba VSF, Cisco StackWise, Juniper Virtual Chassis). Note for Aruba bidders: VSF is only stacking technology compatible with CX 6300M core. VSX not supported. Mixed stacks not supported.		
37			No. of Configurable User Based Tunnels (UBT) should be 1000 or above		
38	Security	Multiple user authentication	IEEE 802.1X supplicant on the client in conjunction with a RADIUS server to authenticate Web-based authentication, MAC-based authentication, Concurrent IEEE 802.1X, Web, and MAC authentication schemes per port		
39		RADIUS/TACACS+	Switch Management security administration (centralized control)		
40		Secure shell	Encrypts all transmitted data for secure remote CLI access over IP networks (SSHv2)		
41		Port security	Access only to specified MAC addresses (static and dynamic)		
42		IP multicast snooping and data-driven IGMP	Automatically prevent flooding of IP multicast traffic		
43		TPM-based Security	Trusted Platform Module (TPM) preferred – if available. MACsec (802.1AE) support preferred, license-free or embedded.		
44		STP BPDU port protection	Preventing forged BPDU attacks (BPDU Guard)		
45		DHCP protection	Shall block unauthorized DHCP servers to prevent IP spoofing and DoS attacks (DHCP Snooping)		
46		Storm Control	Broadcast, multicast, and unknown unicast storm control with configurable thresholds		

47		ARP Inspection	Dynamic ARP Inspection (DAI) must be supported in hardware to prevent ARP spoofing and man-in-the-middle attacks. The feature may be disabled by default but must be configurable.		
48		ACL	Access Control Lists (L2-L4) for traffic filtering and security policy enforcement		
49	Management	Management Interfaces	Should be able to manage through Network Management software, Web browser, command-line interface (CLI), configuration menu, out-of-band management (serial RS-232), Telnet, SSH. Role-based access control (RBAC) preferred.		
50		SNMP	SNMPv1, v2, and v3 supports increased security using encryption		
51		Advanced Monitoring	RMON, XRMON, and sFlow must be natively supported without additional hardware. NetFlow/IPFIX support is optional but preferred.		
52	Port Types	LAN Ports	48 RJ-45 autosensing 10/100/1000 ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T)		
53		SFP+ Ports	10 Gbps Ethernet (4 x SFP+) ports. All four (4) SFP+ ports must be populated with OEM-certified 10G SFP+ LC SR 300m MMF Transceivers. OEM-Specific Part Numbers: • HPE Aruba: J9150D • Cisco: 10G-SR-SFP+ • Juniper: JNP-SFP-10G-SR • Other OEMs: Equivalent OEM-branded, warranty-compliant module. Third-party/compatible optics strictly prohibited.		
54		Console Port	1 dual-personality (RJ45 or USB-C) serial console port. Console port must support both RJ45 and USB-C console access.		
55	Power	Power supply requirements	Single Internal Power Supply required. Support for modular/redundant/hot-swappable PSU is preferred for high availability.		
56		Maximum Power Rating	As per OEM specification (typical 46.6W for non-PoE)		
57	Memory and Processor		CPU: Quad-core 1.8 GHz or above. Memory: 8 GB DDR3 or higher. Packet Buffer: minimum 8 MB; 16 MB preferred (or demonstrable equivalent ASIC architecture). Buffer size must be documented. Must be visible in OEM datasheet.		
58		CPU Cores	Quad-core minimum		
59	Mounting		Mounts in an EIA-standard 19-inch telco rack or equipment cabinet (rack-mounting kit included)		
60	Performance	1000 Mb Latency	< 2.28 µs (64-byte packets)		
61		10 Gbps Latency	< 1.46 µs (64-byte packets)		
62		Throughput	Minimum 130 Mpps (64-byte packets) for non-blocking architecture. Vendor must provide verified OEM datasheet specification.		
63		Switching Capacity	Switching capacity must be clearly specified in Gbps. Minimum 176 Gbps; 220 Gbps full duplex preferred.		
64		Routing Table Size	Minimum 2000 IPv4 and 1000 IPv6 entries in hardware (not software-only routing)		
65		MAC Address Table Size	32000 entries or above (32K minimum; 128K preferred for future scalability).		
66	Electrical Characteristics	Voltage	100-127 / 200-240 VAC, auto-ranging		
67		Frequency	50/60 Hz		
68	Other Peripherals	Cable & Components	All four (4) SFP+ ports must be populated with OEM-certified transceivers as specified in Line 53. If stacking is supported, all required stacking cables/modules must be included. Solution must include all necessary CAT6A factory-terminated patch cords for complete deployment. Any component missing but required for full 10G uplink operation to Aruba CX 6300M core shall be provided at vendor's cost (Turnkey Completion Obligation).		
69	Warranty and Support		5 Year Comprehensive Warranty with 24/7 TAC access, NBD Hardware Replacement, and Local On-site Support		
70			The price must include all required licenses/features for full operation. No subscription-based or recurring license charges allowed – except where explicitly noted (cloud license is part of base price).		
71			The bidder must have a minimum of two (2) certified engineers holding valid, current professional-level technical certifications from the quoted Original Equipment Manufacturer (OEM). • For HPE Aruba: Aruba Certified Switching Professional (ACSP) or equivalent • For Cisco: CCNP Enterprise or equivalent • For Juniper: JNCIP-ENT or equivalent • For other OEMs: Equivalent professional-level certification as verified by the Procurement Authority. Certificates must be attached. Failure to provide OEM-specific certifications will result in disqualification.		
72			Original Manufacturer Authorization Letter (MAL) from the quoted Original Equipment Manufacturer (OEM), specific to this tender. • HPE Aruba solution: HPE/Aruba MAL • Cisco solution: Cisco MAL • Juniper solution: Juniper MAL • Other Gartner-recognized OEM: OEM-issued MAL. Bids without the correct OEM-specific MAL will be deemed technically non-responsive.		
73			A comprehensive support plan shall be included, detailing response times, support channels, and escalation procedures.		
74			If the device fails, the supplier shall provide a backup device within 48 hours until the faulty device is replaced under warranty, for the full 5-year warranty period.		
75			The vendor must provide optional annual maintenance pricing for Years 6, 7, and 8 (post-warranty period). Maintenance must include 24/7 TAC access, NBD hardware replacement, and firmware updates. Pricing must be submitted as per Price Schedule Items 4.6–4.8 (Lot 4).		
76	Bid Validity Period		(Please specify in days; minimum 90 days required from bid submission deadline)		
77	Delivery Period		(Please specify in weeks from contract award; maximum 8 weeks required)		
78	Vendor Eligibility		The Bidder must possess a minimum of seven (7) years of verifiable experience in the supply, installation, and technical support of enterprise-level network switching solutions within Sri Lanka. Preference (Higher Technical Scoring): Demonstrated experience in the Government or Public Sector of Sri Lanka. Proof of experience: Minimum three (3) project completion certificates or reference letters from successfully completed projects of similar scale and complexity. Each reference must include Organization Name, Contact Person, Designation, Official Email Address, and Phone Number for verification purposes.		
79			The bidder must provide a minimum of three (3) formal references from Government or Large Enterprise clients for similar network switch deployments completed within the last five years.		
80			Valid Business Registration Certificate (BR) must be provided.		
81			VAT Registration Certificate (submission is preferable).		
82	3-Year Maintenance Proposal		A maintenance proposal covering three years of support shall be provided following the warranty period. Separate pricing as per Price Schedule Items 4.6–4.8 (Lot 4).		
83	Additional Features		Please specify any additional features or functionalities that enhance the product offering. Separate pricing if applicable.		

84	Service Level Agreement		SLA Requirements (Draft MUST accompany quotation): 1. Warranty Period (Years 1–5): • 5-Year Comprehensive Hardware Warranty (OEM-backed) • 24/7 OEM Technical Assistance Center (TAC) access • Next Business Day (NBD) hardware replacement • All firmware and software updates during warranty period. 2. Post-Warranty Period (Years 6–8): • 3-Year comprehensive maintenance proposal (separate pricing required) • Continued 24/7 TAC access • NBD hardware replacement • Firmware updates. 3. Firmware Support Commitment: • Minimum 7 years total firmware availability from commencement date (5-year warranty + 2-year post-warranty, or 5+3 coverage). 4. AI-Based Predictive Analytics (Preferred – Higher Technical Scoring): • Solutions offering AI-driven network insights, anomaly detection, or predictive failure analysis will receive scoring preference. 5. Escalation Matrix: • Clearly defined support response times based on severity levels (P1–P4) must be provided.		
85	Turnkey Completion Obligation		The bidder is responsible for delivering a fully operational, end-to-end 10G fibre connectivity between each proposed access switch and the existing core switching infrastructure (HPE Aruba CX 6300M). This obligation includes, but is not limited to: • Four (4) OEM-certified 10G SFP+ SR transceivers per switch (as specified in Line 53) • All required fibre patch cords (LC-LC, multi-mode OM3/OM4, appropriate lengths) • Any necessary media converters or interface adapters • Rack mounting hardware, power cords, console cables • Stacking cables/modules (if applicable to the proposed solution) • Console cables (RJ45-rollover or USB as required). Any item, whether explicitly listed or implied by operational necessity, that is required to establish functional 10G uplink connectivity shall be provided at no additional cost. Discovery of missing components during installation shall be remediated immediately by the vendor at vendor's sole expense. A signed declaration accepting this Turnkey Completion Obligation must be submitted with the bid. Failure to provide this declaration will result in disqualification.		
86	Cloud Management Platform Licensing		Cloud Network Management Platform Licensing (5-Year Subscription) – Mandatory Requirement: The proposed solution must include a 5-year subscription license for the OEM's cloud-based network management platform providing centralised configuration, monitoring, and firmware management for all switches in this procurement. OEM-Specific Requirements: • HPE Aruba: Bidder must quote the correct Aruba Central Foundation 5-Year subscription applicable to the specific switch model offered. Quoting incorrect SKUs (e.g., Q9Y70AAE for 12-port switches) will result in disqualification. • Cisco: Cisco DNA Essentials 5-Year subscription • Juniper: Juniper Mist Wired Assurance 5-Year subscription • Other OEMs: Equivalent OEM-certified cloud management license with 5-year term. Pricing: Base 5-year license must be included in the main bid price (Item 4.4 of Price Schedule). Separate pricing for optional maintenance years 6–8 must be provided in the designated price schedule.		
87	Note – Interoperability Study		Mandatory Interoperability & Integration Study: A formal interoperability study must be conducted and submitted with the bid, validating: 1. VSF (Virtual Switching Framework) compatibility if proposing an HPE VSF-based stacking solution. Note: The existing HPE Aruba CX 6300M core uses VSF only; VSX and MLAG (for stacking) are not compatible with the 6300M series. 2. Alternative stacking / virtual chassis technology compatibility if proposing a non-Aruba solution (e.g., Cisco StackWise, Juniper Virtual Chassis). 3. LACP cross-stack link aggregation functionality between the proposed switch(es) and the existing Aruba CX 6300M core. 4. Firmware interoperability – supported software versions for cross-vendor operation. 5. Failover timing & convergence benchmarking – sub-second failover (<1 second) is mandatory. 6. Split-brain detection and recovery mechanisms (if applicable). Evidence must include: OEM compatibility matrix, test report, or formal letter from the OEM confirming successful interoperability with HPE Aruba CX 6300M. Bids without this study will be rejected.		
88	Bid Validity Period		(Please specify in days; minimum 90 days required from bid submission deadline)		
89	Delivery Period		(Please specify in weeks from contract award; maximum 8 weeks required)		
90	Additional Features				

Contact Details for

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Bidder's Signature :

Company Name & Seal