

Technical Specification — 24 Port PoE (9 Units) Switch 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. Where a remark or supporting document is attached, state the Attachment Number in the 'Remarks / Attachment No.' column.
- 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/Attachment No
1	24 Port 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		
6		Routing / Switching	Layer 2/3		
7		Management	Fully Managed		
8	Included Accessories	Included Accessories	Shall include standard mounting hardware for a 19-inch rack (rack ears, screws, rubber feet). All required stacking cables/modules must be included in bid price if stacking is supported.		
9	General		Vendor must be listed in Gartner Magic Quadrant Leaders / or equalant for Enterprise Wired and Wireless LAN Infrastructure within the past 5 years.		
10			Shall be enterprise grade network switch. Small business network switches are not acceptable.		
11			Technical Specification for the Turnkey Procurement, Full Installation, and Integrated Commissioning of 24-Port PoE Enterprise-Grade Managed Network Switches (Units 9). 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		
15			IEEE 802.1w Rapid Spanning Tree		
16	VLANs		Rapid Per-VLAN Spanning Tree (RPVST+) or vendor equivalent supported, 128 minimum.		
17			Supports QinQ and dynamic VLAN assignment using MVRP (Multiple VLAN Registration Protocol). GVRP support is optional		
18			VLAN 2/3 support (IEEE 802.1Q)		
19			IEEE 802.1v protocol VLANs		
20			Up to 4094 VLAN IDs with support for at least 2048 active VLANs simultaneously		
21	Link Aggregation		Configurable Link Aggregation Interfaces 32 or above		
22			Number of physical ports per LAG 16 or above		
23			IEEE 802.3ad link-aggregation-control protocol (LACP) and port trunking		
24	Auto Configuration		Automatically configures VLAN, CoS, LLDP-MED power negotiation, and PoE priority when an IEEE 802.3at/bt device is detected		
25	Quality of Service	Class of Service (CoS)	Layer 3 protocol, TCP/UDP port number, source port, and DiffServ		
26		Large buffers	Provide graceful congestion management (minimum 8 MB shared packet buffer or demonstrable equivalent ASIC architecture) Must be visible in OEM datasheet.		
27		Traffic prioritization	Classification into eight priority levels mapped to eight queues		
28		Layer 4 prioritization	Based on TCP/UDP port numbers		
29	Layer 3 Routing	Routing	Mandatory: Static Routing, RIPv2, IPv6 Routing. Preferred (Higher Technical Scoring): OSPFv2/v3, IPv4/IPv6 Policy-Based Routing.		
30			Policy-based routing (preferred)		
31	Multicast		Mandatory: IGMPv2/v3 Snooping. Preferred (Higher Technical Scoring): PIM-SM, PIM-DM, or PIM-SSM with ACL support for 50+ group ranges.		
32			PIM-SSM - ACL support for PIM-SSM group range 50 or above (preferred)		
33	Features		Software-defined ready with REST APIs and OpenFlow support (preferred)		
34			Shall support front-plane stacking creating a single logical switch from up to six switches (support for eight or more switches preferred). All required stacking modules and cables 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 the only stacking technology compatible with CX 6300M core. VSX not supported. Mixed stacks not supported.		
35			No. of Configurable User Based Tunnels (UBT) should be 1000 or above		
36	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		
37		RADIUS/TACACS+	Management security administration (centralized control)		
38		Secure shell	Encrypts all transmitted data for secure remote CLI access over IP networks (SSHv2)		
39		Port security	Access only to specified MAC addresses (static and dynamic)		
40		IP multicast snooping and data-driven IGMP	Automatically prevent flooding of IP multicast traffic		
41		TPM-based Security	TPM preferred for enhanced hardware security, if available		
42		STP BPDU port protection	Preventing forged BPDU attacks (BPDU Guard)		
43		DHCP protection	Shall block unauthorized DHCP servers to prevent IP spoofing and DoS attacks (DHCP Snooping)		
44		Storm Control	Broadcast, multicast, and unknown unicast storm control with configurable thresholds		
45		ACL	Access Control Lists (L2-L4) for traffic filtering and security policy enforcement		

46		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.		
47	Management	Management Interfaces	The switch shall support multiple management interfaces, including web-based GUI, CLI via SSH/Telnet, out-of-band management (console), SNMP, and role-based access control (RBAC) for enhanced security and usability.		
48		SNMP	SNMPv1, v2, and v3 supports increased security using encryption		
49		Advanced Monitoring	RMON and sFlow must be natively supported. XRMON support is optional. NetFlow/IPFIX support is optional but preferred.		
50	Port Types	LAN Ports	24 RJ-45 autosensing 10/100/1000 PoE+ ports supporting IEEE 802.3af/at standards. PoE++ (802.3bt) support preferred.		
51		SFP+ Ports	Convenient built-in 10 Gbps Ethernet (4 x SFP+) uplinks. All four (4) SFP+ ports must be populated with OEM-certified 10G SFP+ LC SR 300m MMF Transceivers. OEM-Specific Part Numbers: <ul style="list-style-type: none">• 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.		
52		Console Port	1 dual-personality (RJ45 or USB-C) serial console port for out-of-band management.		
53	Power	Power supply requirements	Internal Power Supply (redundant/fixed). Single internal supply acceptable; dual hot-swappable preferred.		
54		PoE Power	Minimum 370W total PoE budget (IEEE 802.3at/bt compliant), delivering: <ul style="list-style-type: none">- 30W per port (min. 24 ports simultaneously) for 802.3at- 60W per port for 802.3bt-capable ports (if supported)- LLDP-MED power negotiation for dynamic allocation- Real-time per-port power monitoring with ±5% accuracy		
55		Max power draw	445W maximum (including full PoE load) or as per OEM specification		
56	Memory and Processor		Minimum 1.8 GHz CPU, 8 GB DDR3 SDRAM; Packet buffer size: 8MB minimum (or demonstrable equivalent ASIC architecture) Must be visible in OEM datasheet.		
57	Mounting		Mounts in an EIA-standard 19-inch telco rack or equipment cabinet (rack-mounting kit included)		
58	Performance	1000 Mb Latency	< 2.28 µs (64-byte packets)		
59		10 Gbps Latency	< 1.46 µs (64-byte packets)		
60		Throughput	Minimum 95 Mpps (64-byte packets) for non-blocking architecture; up to 130 Mpps preferred		
61		Switching Capacity	Minimum 176 Gbps switching capacity (non-blocking)		
62		Routing Table Size	Supports minimum 2000 IPv4 and 1000 IPv6 entries in hardware (not software-only routing)		
63		MAC Address Table Size	32000 entries or above (32K minimum; 128K preferred)		
64	Electrical Characteristics	Voltage	100-127 / 200-240 VAC, auto-ranging		
65		Frequency	50/60 Hz		
66	Other Peripherals	Cable & Components	All four (4) SFP+ ports must be populated with OEM-certified transceivers as specified in Line 50. 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).		
67	Warranty and Support		5 Year Comprehensive Warranty with 24/7 TAC access, NBD Hardware Replacement, and Local On-site Support		
68			All the above-mentioned features shall be included in the price mentioned (no recurring subscriptions or licensing fee will be entertained) – except where explicitly noted (cloud license is part of base price)		
69			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). <ul style="list-style-type: none">• For 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.		
70			Original Manufacturer Authorization Letter (MAL) from the quoted Original Equipment Manufacturer (OEM), specific to this tender. <ul style="list-style-type: none">• 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.		
71			A comprehensive support plan shall be included, detailing response times, support channels, and escalation procedures.		
72			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.		
73			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 item (2.6–2.8 (Lot 2)		
74	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.		
75			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.		
76			Valid Business Registration Certificate (BR) must be provided.		
77			VAT Registration Certificate (submission is preferable).		
78	Bid Validity Period		(Please specify in days; minimum 90 days required from bid submission deadline)		
79	Delivery Period		(Please specify in weeks from contract award; maximum 8 weeks required)		
80	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 2.6–2.8 (Lot 2).		
81	Additional Features		Please specify any additional features or functionalities that enhance the product offering. Separate pricing if applicable.		

82	Service Level Agreement		<p>SLA Requirements (Draft MUST accompany quotation):</p> <p>1. Warranty Period (Years 1–5):</p> <ul style="list-style-type: none"> • 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. <p>2. Post-Warranty Period (Years 6–8):</p> <ul style="list-style-type: none"> • 3-Year comprehensive maintenance proposal (separate pricing required) • Continued 24/7 TAC access • NBD hardware replacement • Firmware updates. <p>3. Firmware Support Commitment:</p> <ul style="list-style-type: none"> • Minimum 7 years total firmware availability from commencement date (5-year warranty + 2-year post-warranty, or 5+3 coverage). <p>4. AI-Based Predictive Analytics (Preferred – Higher Technical Scoring):</p> <ul style="list-style-type: none"> • Solutions offering AI-driven network insights, anomaly detection, or predictive failure analysis will receive scoring preference. <p>5. Escalation Matrix:</p> <ul style="list-style-type: none"> • Clearly defined support response times based on severity levels (P1–P4) must be provided. 		
83	Turnkey Completion Obligation		<p>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 (OEM CX 6300M). This obligation includes, but is not limited to:</p> <ul style="list-style-type: none"> • Four (4) OEM-certified 10G SFP+ SR transceivers per switch (as specified in Line 51) • 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). <p>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.</p>		
84	Cloud Management Platform Licensing		<p>Cloud Network Management Platform Licensing (5-Year Subscription) – Mandatory Requirement:</p> <p>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:</p> <ul style="list-style-type: none"> • 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. <p>Pricing: Base 5-year license must be included in the main bid price (Item 2.4 of Price Schedule). Separate pricing for optional maintenance years 6–8 must be provided in the designated price schedule.</p>		
85	Note – Interoperability Study		<p>Mandatory Interoperability & Integration Study: A formal interoperability study must be conducted and submitted with the bid, validating:</p> <ol style="list-style-type: none"> 1. VSF (Virtual Switching Framework) compatibility if proposing an Aruba VSF-based stacking solution. Note: The existing HPE Aruba CX 6300M core uses VSF only; VSW 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 HPE 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). <p>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.</p>		
86	Bid Validity Period		(Please specify in days; minimum 90 days required from bid submission deadline)		
87	Delivery Period		(Please specify in weeks from contract award; maximum 8 weeks required)		
88	Additional Features				

Contact Details for 0112369244 / 01122587933 asstdirit@survey.gov.lk

Bidder's Signature :
Company Name & Seal