

Technical Specification — 24 Port Non-PoE Switch (Unit-1) 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/Attachment No' 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/Attachment No
1	24 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		
6		Routing / Switching	Layer 2/3		
7		Management	Fully Managed		
8	Included Accessories	Included Accessories	19 Inch Rack Kit (must be included)		
9	General		Shall be in the Gartner Quadrant Leader category for Enterprise Wired and Wireless LAN Infrastructure for the past 5 years.(or equivalent analyst recognition)		
10			Technical Specification for the Turnkey Procurement, Full Installation, and Integrated Commissioning of 24-Port Non-PoE Enterprise-Grade Managed Network Switches (Unit 1). The solution must be fully compatible and interoperable with the existing Aruba CX 6300M Core environment.		
Layer 2 Switching					
11	Spanning Tree		High link availability by allowing multiple spanning trees		
12			No. of STP instances should be 32 or above		
13			IEEE 802.1D Spanning Tree		
14			IEEE 802.1w Rapid Spanning Tree		
15	VLANs		Rapid Per-VLAN Spanning Tree (RPVST+ or vendor equivalent)		
16			RPVST+ number of VLANs 128 or above		
17			QinQ - SVLAN		
18			Allows automatic learning and dynamic assignment of VLANs using MVRP (Multiple VLAN Registration Protocol). GVRP support is optional.		
19			VLAN 2/3 support (IEEE 802.1Q)		
20			IEEE 802.1v protocol VLANs		
21			Up to 4094 VLAN IDs (512 simultaneously)		
22	Link Aggregation		Configurable Link Aggregation Interfaces 32 or above		
23			Number of physical ports per LAG 16 or above		
24			IEEE 802.3ad link-aggregation-control protocol (LACP) and port trunking		
25			Automatically configures VLAN assignments and Class of Service (CoS) profiles when an endpoint device is detected, using LLDP-MED or MAC-based profiling.		
Quality of Service					
26	Class of Service (CoS)		Layer 3 protocol, TCP/UDP port number, source port, and DiffServ		
27	Large buffers		Provide graceful congestion management (minimum 8 MB shared packet buffer or demonstrable equivalent ASIC architecture) Must be visible in OEM datasheet.		
28	Traffic prioritization		Classification into eight priority levels mapped to eight queues		
29	Layer 4 prioritization		Based on TCP/UDP port numbers		
Layer 3 Routing					
30	Routing		Mandatory: Static Routing, RIPv2, IPv6 Routing. Preferred (Higher Technical Scoring): OSPFv2/v3, IPv4/IPv6 Policy-Based Routing.		
31			Policy-based routing (preferred)		
32	Multicast		Mandatory: IGMPv2/v3 Snooping. Preferred (Higher Technical Scoring): PIM-SM, PIM-DM, or PIM-SSM with ACL support for 50+ group ranges.		
33			PIM-SSM - ACL support for PIM-SSM group range 50 or above (preferred)		
Features					
34			Software-defined ready with REST APIs (preferred)		
35	Stacking		The switch must support physical stacking or virtual chassis technology that creates a single logical switch from multiple physical units, with centralised management and control plane. • Minimum stack members supported: 6 units (8 or more preferred) • Stacking bandwidth: Minimum 40 Gbps (stacking interconnect) • Failover: Sub-second failover between stack members (<1 second) • Topology: Ring topology preferred; chain topology acceptable with documented limitations • Included accessories: All required stacking cables/modules must be included in the bid price. Vendor must clearly specify the stacking technology used (e.g., Aruba VSF, Cisco StackWise, Juniper Virtual Chassis). Note for Aruba bidders: VSF is the only supported stacking technology for CX 6300M compatibility. VSX is not supported on the 6300M series and will be rejected. Mixed stacks of Aruba 6200 and 6300 series are not supported.		
Security					
36	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+		Switch Management security administration		
38	Secure shell		Encrypts all transmitted data for secure remote CLI access over IP networks		
39	Port security		Access only to specified MAC addresses		
40	IP multicast snooping and data-driven IGMP		Automatically prevent flooding of IP multicast traffic		
41	TPM-based Security		Trusted Platform Module (TPM) – preferred		

42	STP BPDU port protection		Preventing forged BPDU attacks		
43	DHCP protection		Blocks DHCP packets from unauthorized DHCP servers, preventing denial-of-service attacks		
44	Storm Control		Broadcast, multicast, and unknown unicast		
Management					
45	Supported Interfaces		Shall support management through various interfaces, including Network Management software, web browser, command-line interface (CLI), configuration menu, out-of-band management (serial RS-232), Telnet, and SSH. Additionally, it shall provide a user-friendly interface for monitoring and configuration		
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	SNMP		SNMPv1, v2, and v3 supports increased security using encryption		
48	Advanced Monitoring		RMON and sFlow must be natively supported. XRMON support is optional.		
Port Types					
49	LAN Ports		24 RJ-45 10/100/1000 (non-PoE) autosensing ports, compliant with IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, and IEEE 802.3ab Type 1000BASE-T standards		
50	Uplink Connectivity & Transceivers		This includes populating all four (4) SFP+ ports with OEM-certified 10G SFP+ LC SR 300m MMF Transceivers. OEM-Specific Part Numbers (Mandatory - 4 units per switch): <ul style="list-style-type: none">• HPE Aruba: J9150D• Cisco: Cisco 10G-SR-SFP+ (or equivalent OEM-certified module)• Juniper: JNP-SFP-10G-SR (or equivalent OEM-certified module)• Other OEMs: Equivalent OEM-branded, warranty-compliant 10G SFP+ SR transceiver Prohibition: Third-party, white-box, or “compatible” transceivers are strictly prohibited. Only OEM-branded modules formally qualified and supported by the switch manufacturer under full warranty and technical support terms are acceptable. Bids quoting fewer than four (4) transceivers per switch or uncertified third-party optics will be disqualified. The solution must include all necessary CAT 6A factory-terminated patch cords required for a complete deployment.		
51	Console Port		1 dual-personality console port (RJ45 or USB-C), must support CLI access		
Power					
52	Power supply requirements		Single internal Power Supply		
Memory and Processor					
53			Minimum 1.8 GHz CPU, 8 GB RAM, minimum 8 MB dedicated shared packet buffer memory (or demonstrable equivalent traffic management capacity through ASIC architecture). Buffer architecture and burst handling capability must be clearly documented in the OEM datasheet. Buffer size must be explicitly stated; “or equivalent” claims must be substantiated with technical evidence.		
Mounting					
54			Mounts in an EIA-standard 19-inch telco rack or equipment cabinet (rack-mounting kit available and included)		
Performance					
55	1000 Mb Latency		< 2.28 µs (64-byte packets)		
56	10 Gbps Latency		< 1.46 µs (64-byte packets)		
57	Throughput		Throughput: Minimum 95 Mpps (64-byte packets) for non-blocking architecture. Vendor must provide verified OEM datasheet specification.		
58	Switching Capacity		Minimum 176 Gbps or higher (non-blocking).		
59	Routing Table Size: Hardware-Based Routing		Must support a minimum of 2000 IPv4 and 1000 IPv6 routing entries in hardware (not software-based routing).		
60	MAC Address Table Size		32000 entries or above		
Electrical Characteristics					
61	Voltage		100-127 / 200-240 VAC		
62	Frequency		50/60 Hz		
Other Peripherals					
63	Cable & Components		Cabling and Components: 1. Transceivers: All four (4) SFP+ uplink ports on each switch must be populated with OEM-certified 10G SFP+ LC SR 300m MMF transceivers as specified in Line 50. 2. Stacking Cables: If the proposed solution uses dedicated stacking ports or cables, these must be included for the maximum supported stack configuration (minimum 1m length). 3. Compatibility: The solution must support heterogeneous stacking between the 24-port Non-PoE switches and any existing or concurrently procured 48-port PoE switches of the same vendor family. 4. Documentation: Vendor must clearly identify stacking technology, cabling requirements, and maximum stack units supported.		
Warranty and Support					
64			5 Year Comprehensive Warranty with 24/7 TAC access & provide NBD Hardware Replacement & Local On-site Support.		
65			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).		
66			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 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.		
67			Original Manufacturer Authorization Letter (MAL) from the quoted Original Equipment Manufacturer (OEM), specific to this tender. <ul style="list-style-type: none">• 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.		
68			“A comprehensive support plan shall be included, detailing response times, support channels, and escalation procedures.”		
69			If the device fails, the supplier shall provide the backup device within 48h until replacing the faulty device from warranty and services within 5 years.		
70			The vendor must provide optional annual maintenance pricing for Years 6, 7, and 8 (post-warranty period). Pricing must be submitted as per Price Schedule Items 3.6–3.8 (Lot 3). Maintenance must include 24/7 TAC access, NBD hardware replacement, and firmware updates.		
Vendor Eligibility and Credibility					

71			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.		
72			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. Each reference must include the Organization Name, Contact Person, Designation, Official Email Address, and Phone Number for verification purposes.		
73			The vendor should have Valid Business Registration (BR) Certificate.		
74			The vendor have VAT Registration Certificate (Preferable).		
3-Year Maintenance Proposal					
75			A maintenance proposal covering three years of support shall be provided following the warranty period. Separate pricing as per Price Schedule Items 3.6–3.8 (Lot 3).		
Additional Features					
76			Please specify any additional features or functionalities that enhance the product offering. Separate pricing if applicable.		
Service Level Agreement					
77			SLA Requirements (Draft MUST accompany quotation): 1. Warranty Period (Years 1–5): <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 2. Post-Warranty Period (Years 6–8): <ul style="list-style-type: none">• 3-Year comprehensive maintenance proposal (separate pricing required – see Line 70 and Price Schedule Items 3.6–3.8)• Continued 24/7 TAC access• NBD hardware replacement• Firmware updates 3. Firmware Support Commitment: <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) 4. AI-Based Predictive Analytics (Preferred – Higher Technical Scoring): <ul style="list-style-type: none">• Solutions offering AI-driven network insights, anomaly detection, or predictive failure analysis will receive scoring preference. 5. Escalation Matrix: <ul style="list-style-type: none">• Clearly defined support response times based on severity levels (P1–P4) must be provided.		SLA (Draft) Attachment No
Cloud Management Platform Licensing					
78			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: <ul style="list-style-type: none">• 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, R8L82AAE/R3K05AAE for incompatible models) 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: <ul style="list-style-type: none">• Base 5-year license must be included in the main bid price (Item 3.4 of Price Schedule).• Separate pricing for optional maintenance years 6–8 must be provided in the designated price schedule.		
79			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 Aruba 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.		
Bid Validity Period & Delivery					
80		Bid Validity Period	(Please specify in days; minimum 90 days required from bid submission deadline)		
81		Delivery Period	(Please specify in weeks from contract award; maximum 8 weeks required)		
82	Additional Features				

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Bidder's Signature :
Company Name & Seal