

REQUEST FOR QUOTATION
FOR
THE SUPPLY, INSTALLATION AND COMMISSIONING OF
SCHOOLS COMPUTERISATION AND INTERNET CONNECTIVITY
TO MOENG

CLOSING DATE: Wednesday 29 January 2020 at 1700hrs

1. Moeng College

	Requirements
<ul style="list-style-type: none"> 9 cabled blocks 	<ul style="list-style-type: none"> Upgrade Local Area Network in the school Supply, Install and configure PC's for the school
Upgrade Local Area Network	
Job	Specifications
<ul style="list-style-type: none"> Existing Network Points <ul style="list-style-type: none"> Library- 10 Art Lab- 20 Computer Lab - 30 Admin Block 1 – 8 Admin Block 2 – 6 Staff Room 1 – 10 Staff Room 2 – 4 D & T Lab – 20 Supplies – 20 	<ul style="list-style-type: none"> Test all existing network points Repair all identified faulty network points in the school Install 30 additional Network Points at Library Provide network test results documentation for all installed network points
<ul style="list-style-type: none"> Supply, install and configure 1 * Cisco RV 340 Edge Intelligent Router 	<ul style="list-style-type: none"> 4 Ports Connectivity type: Wired IPSEC VPN: 600Mbps, NAT: 900Mbps; SSL 35Mbps; PPTP 100 Mbps Tunnels: Ipv6 VPN: 50; Anyconnect SSL: 50; PPTP: 25; TCP Concurrent Sessions: 40000 Network / Transport ProtocolPPTP, Layer 2 Transport Protocol (L2TP), IPsec, Point-to-Point Protocol over Ethernet (PPPoE), DHCP Routing ProtocolRouting Information Protocol (RIP) v1 and v2, and RIP for IPv6 (RIPng) Inter-VLAN routing Static routing, IGMP proxy Remote Management ProtocolSNMP 1, SNMP 2, SNMP 3, HTTP, HTTPS, REST API (beta) Encryption AlgorithmTriple DES, Secure Hash Algorithm, Message Digest Algorithm (MD5), AES Authentication methodlocal user; external radius FeaturesCisco Anyconnect, Dynamic Websecurity, Client Identification, App Identification, Web Policies, Firewall protection, NAT support, Port Address Translation (PAT) support, Network Address Port Translation (NAPT), SPI, DoS attack prevention, port mirroring, IPv6 support, VPN passthrough, URL filtering, domain blocking, QoS, DHCP server, port forwarding, port triggering, DHCP client, USB 3G/4G modem broadband support Compliance standardsIEEE802.3, IEEE802.3u, IEEE802.3ab

	<ul style="list-style-type: none"> • Status IndicatorsPort status, system, DMZ, DMZ/Internet, diagnostic •
<ul style="list-style-type: none"> • Supply, install and configure 1 * Cisco 3850 Distribution Switch 	<ul style="list-style-type: none"> • 12 Port 10/100/1000BaseT SFP Autosensing ports. • Minimum of twelve SFP Gigabit interfaces for interconnectivity to other Campus Switches. • Version 3 SNMP management • Layer 3 Routing • Layer 2 Switching • IEEE802.1Q VLAN • IEEE802.1p Prioritisation • 4096 VLANs • Rack mountable • Management port • Console port • Multimode SFP compatible with access switch • 1000BaseSX Multimode SFP module with LC connections
<ul style="list-style-type: none"> • Supply, install and configure 2 * Cisco 3650 Access Switches 	<ul style="list-style-type: none"> • 48 * IEEE 10/100/1000BaseT Autosensing ports • Rack mountable. • Two fixed 1000base-FX uplink ports • Layer 2 switching • VLAN support • Manageable • Port trunking. • Power Over Ethernet + (PoE +) • 2 Small form-factor pluggable module (Transceivers) • Mini USB console port • Hot plug power supply • Authentication: • Secure Shell (SSH), RADIUS, TACACS+
<ul style="list-style-type: none"> • Supply, install and configure 7 * Cisco 3650 Access Switches (<ul style="list-style-type: none"> • 24 * IEEE 10/100/1000BaseT Autosensing ports • Rack mountable. • Two fixed 1000base-FX uplink ports • Layer 2 switching • VLAN support • Manageable • Port trunking. • Power Over Ethernet + (PoE +) • 2 Small form-factor pluggable module (Transceivers) • Mini USB console port • Hot plug power supply • Authentication:

	<ul style="list-style-type: none"> Secure Shell (SSH), RADIUS, TACACS+
<ul style="list-style-type: none"> Supply, install and configure 1 * Cisco 3504 Wireless controller, setup three Wireless networks (Staff, Students, Guests) with different access rights and integration to school RADIUS Server for authentication 	<ul style="list-style-type: none"> 1x Multigigabit Ethernet interface (up to 5 Gigabit Ethernet) + 4x 1 Gigabit Ethernet interfaces (RJ-45) 1x service port: 1 Gigabit Ethernet port (RJ-45) 1x redundancy port: 1 Gigabit Ethernet port (RJ-45) 1x console port: Serial port (RJ-45) 1x console port: Serial port (mini-B USB) 1x USB 3.0 port Support up to 150 Aps Remote management of wired and wireless Wireless Standards: IEEE 802.11a, 802.11ac, 802.11b, 802.11g, 802.11d, wmm/802.11e, 802.11h, 802.11k, 802.11n, 802.11r, 802.11u, 802.11w AAA: IEE 802.1x RFC 2548 Microsoft Vendor-specific Radius attributes RFC 2865 Radius authentication RFC 2866 Radius Accounting RFC 3576 Dynamic Authorization Extension to Radius Web-based authentication TACACS support for management users
<ul style="list-style-type: none"> Supply, install and configure 9 * Cisco 1540 Outdoor Access Points 	<ul style="list-style-type: none"> 802.11ac Wave 2 radio: 867-Mbps data rates with 2 x 2 Multiuser Multiple-Input, Multiple-Output (MU-MIMO) with up to two spatial streams. Frequency: 802.11 a/ b/g/n/ac Data rates supported: 2.4Ghz and 5 Ghz: 867Mbps Interfaces: WAN Port: 10/100/1000Base-T Ethernet, autosensing (RJ-45), PoE Management console port (RJ-45) Client supported: 400 per access point Encryption: WPA2/WPA/WEK Operation Modes: WDS with access point, WDS/Bridge Antennas: 1542I: Integrated Dual-Band, Vertical polarization, omnidirectional antenna radome, 5 dBi (2.4 Ghz) and 5dBi (5.8 GHz) ,1542D: Integrated dual-band, dual polarization, directional antenna radome, vertically polarized 8 dBi (2.4 GHz), 9 dBi (5 GHz) PoE
<ul style="list-style-type: none"> Supply, install and configure Internet Management Solution 	<ul style="list-style-type: none"> Operating System supported: Windows 10, Windows server 2016 Control download, upload and bandwidth quota No client software installation Manage monthly & daily limits Fixed MAC to lock account to device Advanced User and Autologin Settings Exclude IP ranges to allow full access Block websites and redirect to desired URL, IP Watch online activity per user Control bandwidth down to user level Manage bandwidth quota limits for all users

	<ul style="list-style-type: none"> • Multiple location support • Control unknown users in your network • Connection log for all device connections • Activity log with session start and stop, time, traffic • Customize restricted page • Fixed MAC to lock account to device • MAC and IP whitelist to pass with no authentication • Host whitelist to allow free websites
Devices	
Description	Recommendation
Supply, install and configure 80 * Desktop computers	<ul style="list-style-type: none"> • Intel i5 – 8400 processor • 8GB RAM • 1 TB HDD • 17" Monitor • Govt to provide Operating System and other related software separately e.g. Office, Antivirus

