



Republic of the Philippines
Office of the Solicitor General
Case Management Service

TERMS OF REFERENCE

1. ICT Equipment	Statement of Compliance
<ul style="list-style-type: none">The Bidder must be an authorized reseller/authorized dealer of the brand being offered. A current valid manufacturer's certification required as part of the technical component on bid proposal for major components such as for Lot 1: Notebook PC, Mobile devices, Mini PC, Scanners, VOIP phones and Network Upgrade.	
<ul style="list-style-type: none">The Bidder must not exceed to sixty (60) day delivery lead-time upon receipt of Notice to Proceed.	
<ul style="list-style-type: none">Must attach brochure of the brand being offered.	
2. For Corporate Notebook and Mini PC except high end notebook PC	
<ul style="list-style-type: none">The Bidder must be an Authorized Service Partner (ASP) of the brand being offered and a current valid manufacturer certificate is required as part of the technical component on bid proposal.	
<ul style="list-style-type: none">The Bidder must have at least two (2) manufacturer certified engineers for the brand of laptop and Mini PC. A current valid manufacturer certificate is required as part of the technical component on bid proposal.	
<ul style="list-style-type: none">The brand which represents the bidder must apply in the latest top 3 of the Leaders Group of Gartner's List for Global Enterprise Notebook and Desktop. Certification in the inclusion in the Top 3 is required from the brand's manufacturer.	
<ul style="list-style-type: none">Winning Bidder should replace a factory defective unit with a new unit within 30 days upon delivery of the item.	
<ul style="list-style-type: none">In case of outside repair within the 3-year warranty period, the winning bidder shall provide a service unit to the OSG.	
<ul style="list-style-type: none">For the two above items: Must submit Proof of warranty as part of the technical component.	
3. High End Notebook PC	
<ul style="list-style-type: none">Winning Bidder should replace a factory defective unit with a new unit within 30 days upon delivery of the item.	
<ul style="list-style-type: none">In case of outside repair within the warranty period, the winning bidder shall provide a service unit to the OSG.	

<ul style="list-style-type: none"> • Must submit Proof of warranty as part of the technical component. 	
4. Network Upgrade	
<ul style="list-style-type: none"> • The brand being offered must belong to the Leaders Magic Quadrant for the Wired and Wireless LAN Access Infrastructure. (Please attach certificate) 	
<ul style="list-style-type: none"> • The bidder must be an authorized reseller/authorized dealer of the brand being offered. A current valid manufacturer's certificate must be submitted as part of the technical component on bid proposal. 	

ICT EQUIPMENT - OFFICE PRODUCTIVITY (NEP)		
Item	Specifications	Statement of Compliance
FILE STORAGE FOR LEGAL DIVISIONS (10 Units)		
Technology	Must be High performance 2-bay NAS server	
Features	Must have High-speed data transfer and must be AES-NI hardware encryption engine	
	Must be screw less drive bay design and hot-swappable support	
	Must be dual core processor	
	Must have 4K Ultra HD video transcoding that allows you to transcode H.264 4K videos to 1080p and stream them to high-definition TVs, digital media players, mobile handsets, and computers in the required format	
	Must have User Home feature that automatically create a "home" folder for every user account	
	Must have Ultimate file center feature	
	Must be comprehensive network protocol support including FTP, SMB2, AFP, NFS and WebDAV. With Windows AD and LDAP integration	
	Must have Cloud Station Back up feature	
OS	Must include DiskStation Manager	
Specifications		
CPU	Intel Celeron N3060 Dual Core 1.6 burst up to 2.48 GHz 64 bit	
System Memory	1GB	
Storage	2 Drive Bays (Hot Swappable)	
	2 x 2TB NAS HDD, Interface : SATA 6Gb/s, Cache : 64MB, Spin Speed : 5900RPM	
	* Max Sustained Data Transfer Rate OD (MB/s): 159	
	* Voltage Tolerance, Including Noise (5V): ±5%	
	* Voltage Tolerance, Including Noise (12V): ±10%	
	* Load/Unload tested to 600,000 cycles	
Compatible Drive Type	3.5" SATA III / SATA II HDD	

	2.5" SATA III / SATA II HDD	
	2.5" SATA III / SATA II SSD	
Supported RAID Type	Hybrid RAID	
	Basic	
	JBOD	
	RAID 0	
	RAID 1	
RAID Migration	Basic to RAID 1	
File Sharing Capacity	Maximum Local User Accounts: 2048	
	Maximum Local Groups: 256	
	Maximum Shared Folder: 256	
	Maximum Shared Folder Sync Tasks: 4	
	Maximum Concurrent CIFS/AFP/FTP Connections: 256	
Snapshot Replication	Maximum Snapshots per Shared Folder: 256	
	Maximum Snapshots of all Shared Folder: 4096	
External Ports)	2 x USB 2.0 Port	
	1 x USB 3.0 Port	
	1 x eSATA Port	
	USB Copy	
Size (Height x Width x Depth)	165 mm x 108 mm x 233.2 mm	
Weight	1.25 kg	
Warranty	One year on parts and labor	
	The bidder must be an authorized reseller of the brand being offered	
CORPORATE NOTEBOOK PC (118 Units)		
Classification	True Branded Notebook PC	
Certification	Must belong in the top 3 of the Leaders Group of Gartner's Magic Quadrant for Global Enterprise Notebook and Desktop (Must provide certificate)	
Processor	8th Generation Intel Core i5 Processor	
	i5-8250U (3.40 GHz Max. Turbo Frequency)	
Cache Memory	6 MB SmartCache	
Chipset	Intel SoC (System on Chip) platform	
Memory	8G (1X8GBDDR4 2400) On Board	
Max Memory	up to 20 GB of DDR4-2400Mhz, dual channel capable	
Graphics	AMD Radeon R17M-M1-70 GDDR5 2G	
	supports three independent displays; Max resolution: 3840x2160@30Hz (HDMI); 1920x1200@60Hz (VGA)	
HDD	1TB 7MM 5400RPM	
Support HDD	Must Support Dual HDD (SSD + Traditional HDD)	
Display	14.0" (355mm) FHD TN (1920x1080) Anti-Glare, LED backlight, 220 nits, 16:9 aspect ration	

Connectivity	Integrated 10/100/1000 MBps Lan Controller; Wireless 802.11 ac 1x1 and Bluetooth 4.1	
Ports	Two USB 3.0 (one with optional Always On), one USB 3.1 Type-C Gen 1, one optional USB 3.1 Type-C Gen 1 (with the function of DisplayPort and PowerDelivery), one optional USB 2.0 in Ultra-bay, VGA, HDMI, Ethernet (RJ-45)	
Audio Support	HD Audio, Stereo speakers with Dolby® Audio™, 2W x 2	
Keyboard	6-row, spill-resistant, multimedia Fn keys	
Touchpad	One-piece touchpad, multi-touch	
Security	Security chip Fingerprint reader Power-on password, hard disk password, supervisor password, security keyhole	
Security Chip	Firmware TPM 2.0, integrated in chipset	
Fingerprint	Touch-type fingerprint reader	
Multimedia Options	Integrated Stereo Speakers, at least 0.3MP fixed focus, physical camera shutter	
Operating System	Windows 10 Pro Standard Preinstalled (Must provide certificate from the manufacturer that the OS installed is Genuine OS)	
Features	Sleek and robust design	
Color	Iron Gray	
Battery	2-cell 30Wh + 2-cell 39Wh Li-Polymer	
Adapter	BLACK 65W 3-PIN	
Carrying Case	Standard Carrying Case	
Dimensions	WxDxH: 13.5" x 9.72" x 0.79"; 343mm x 247mm x 20.3mm	
Maximum Weight	Must be 1.85 kg / 4.07 lb	
Other	Must include branded MiniSaver™ lock	
	Must include an Optical Travel Mouse (same brand)	
Warranty	Must be 3 years warranty on parts and labor. (A valid certificate issued by the manufacturer must be submitted).	
Environment	EPEAT Silver; ENERGY STAR (A valid certificate issued by the manufacturer must be submitted) 6.1; RoHS-compliant	
	The bidder must be an authorized reseller of the brand being offered. Must provide Manufacturer certificate	
HIGH END NOTEBOOK PC (35 Units)		
Display	<p>Widescreen display</p> <ul style="list-style-type: none"> 13.3-inch (diagonal) LED-backlit glossy widescreen display with support for millions of colors Supported resolutions: 1440 by 900 (native), 1280 by 800, 1152 by 720, and 1024 by 640 pixels at 16:10 aspect ratio and 1024 by 768 and 800 by 600 pixels at 4:3 aspect ratio 	

Finish	<ul style="list-style-type: none"> • Silver 	
Processor	<ul style="list-style-type: none"> • 1.8GHz dual-core Intel Core i5, Turbo Boost up to 2.9GHz, with 3MB shared L3 cache • Configurable to 2.2GHz dual-core Intel Core i7, Turbo Boost up to 3.2GHz, with 4MB shared L3 cache 	
Storage	<ul style="list-style-type: none"> • 128GB PCIe-based SSD • Configurable to 256GB or 512GB SSD 	
Memory	8GB of 1600MHz LPDDR3 onboard memory	
Battery and Power	<ul style="list-style-type: none"> • Up to 12 hours wireless web • Up to 12 hours iTunes movie playback • Up to 30 days of standby time • Built-in 54-watt-hour lithium-polymer battery • 45W MagSafe 2 Power Adapter with cable management; MagSafe 2 power port 	
Size and Weight	<ul style="list-style-type: none"> • Height: 0.3–1.7 cm (0.11–0.68 inch) • Width: 32.5 cm (12.8 inches) • Depth: 22.7 cm (8.94 inches) • Weight: 1.35 kg (2.96 pounds) 	
Graphics	<ul style="list-style-type: none"> • Intel HD Graphics 6000 	
Video Support	<ul style="list-style-type: none"> • Simultaneously supports full native resolution on the built-in display and up to 3840-by-2160 resolution at 60Hz on an external display, both at millions of colors • Thunderbolt digital video output • Native Mini DisplayPort output • VGA, HDMI, DVI, and dual-link DVI output using adapters (available separately) 	
Camera	<ul style="list-style-type: none"> • 720p FaceTime HD camera 	
Charging and Expansion	<ul style="list-style-type: none"> • Two USB 3 ports (up to 5 Gbps) • Thunderbolt 2 port (up to 20 Gbps) • MagSafe 2 power port • SDXC card slot 	
Wireless	<ul style="list-style-type: none"> • 802.11ac Wi-Fi wireless networking; IEEE 802.11a/b/g/n compatible • Bluetooth 4.0 wireless technology 	
Audio	<ul style="list-style-type: none"> • Stereo speakers • Dual microphones • 3.5 mm headphone jack 	
Keyboard and Trackpad	<ul style="list-style-type: none"> • Full-size backlit keyboard with: • 78 (U.S.) or 79 (ISO) keys, including 12 function keys and 4 arrow keys (inverted “T” arrangement) • Ambient light sensor • Multi-Touch trackpad for precise cursor control; supports inertial scrolling, pinch, rotate, swipe, three-finger swipe, four-finger swipe, tap, double-tap, and drag capabilities 	

Electrical and Operating Requirements	<ul style="list-style-type: none"> • Line voltage: 100–240V AC • Frequency: 50Hz to 60Hz • Operating temperature: 10° to 35° C (50° to 95° F) • Storage temperature: –25° to 45° C (–13° to 113° F) • Relative humidity: 0% to 90% noncondensing • Operating altitude: tested up to 3,000 meters (10,000 feet) • Maximum storage altitude: 4,500 meters (15,000 feet) • Maximum shipping altitude: 10,500 meters (35,000 feet) 	
Operating System	<ul style="list-style-type: none"> • Original macOS 	
Built-in Apps	<ul style="list-style-type: none"> • Photos • iMovie • GarageBand • Pages • Numbers • Keynote • Safari • Mail • FaceTime • Messages • Maps • Stocks • Home • Voice Memos • Notes • Calendar • Contacts • Reminders • Photo Booth • Preview • iTunes • Books • App Store • Time Machine 	
Accessability	<p>Accessibility features Features include:</p> <ul style="list-style-type: none"> • VoiceOver • Zoom • Increase Contrast • Reduce Motion • Dictation • Switch Control • Closed Captions • Text to Speech 	
Warranty	<ul style="list-style-type: none"> • Limited 90 days Telephone Support, 1 Year Warranty 	

Mobile Device 2 IN 1 TABLET (10 Units)	
Classification	Must be 2 in 1 Tablet
	Must be 10.1" IPS FHD display
Dimension	Width (mm / inches) 256.6 / 10.1"
	Thickness (mm / inches) 9.6 / 0.38"
	Height (mm / inches) 170.8 /6.72"
Weight	690 g (1.52 lbs)
Operating System	Android™ 6.0.1 Marshmallow (upgradable)
Processor	Intel® Atom™ x5-Z8550 Processor (2M Cache, Quad-Core, Up to 2.4 GHz)
Sound	Dolby Atmos
Memory	RAM (4 GB LPDDR3)
	ROM (64 GB)
	Card Slot (microSD™; Supports Up to 128 GB)
Battery	Type : Li-ion Polymer
	Capacity : 8500 mAh
	Standby Time : Over 70 Days
	General Usage : 15 Hours
Display	Size : 10.1" FHD IPS (1920 x 1200)
	Color Depth : 16.7 Million
	Color Gamut : 70%
	Brightness : 400 nits
	Touch :
	On Screen : Capacitive Touch with AnyPen Technology
	Create Pad : Capacitive Touch and EMR Pen Technology
	Material : Magnesium Aluminum Alloy
Colors	Gunmetal Grey
Connectivity	WLAN : WiFi 802.11 a/b/g/n/ac; Dual Channel (2.4 GHz and 5 GHz)
Camera	Rear : 8 MP Auto-Focus
	Front : 2 MP Fixed-Focus
Keyboard	Halo Keyboard
Sensors	Vibrator
	G-Sensor
	E-Compass
	Ambient Light Sensor Hall
	Sensor
	GPS
	A-GPS
Software	Note Saver
	Collection
	SHAREit
	SYNCit
	Google Docs
	Google Sheets
	Google Slides
	McAfee® Security

	Evernote®	
	ArtRage TouchPal	
	IME	
Includes	Charger	
	USB Cable	
	Warranty Card	
	Quick Start Guide	
	Real Pen	
	Ink Cartridge Refills (3x)	
	Book Pad	
	Book Sleeve	
Warranty	Must be 1 year on parts and labor (on site)	
	The bidder must be an authorized reseller of the brand being offered. Must provide Manufacturer certificate	
MINI PC FOR INTERACTIVE MONITORS (2 Units)		
Classification	True Branded Desktop PC	
Certification	Must belong in the top 3 of the Leaders Group of Gartner's Magic Quadrant for Global Enterprise Notebook and Desktop (Must provide certificate)	
Processor	Intel Core™ i3-8100T Processor (4 cores / 4 threads, 3.1GHz)	
Cache Memory	6 MB Cache	
Chipset	Intel B360 Chipset	
Memory	4GB DDR4 2666, two 260-pin SO-DIMM sockets, dual-channel capable *System automatically clocks down for the processors with lower memory controller (32GB max)	
Graphics	Intel UHD Graphics 630	
HDD	1TB SATA 6.0Gb/s, 2.5" Wide, 5400 rpm	
Front Ports	One USB 3.1 Gen1 (Always On and fast charge), one USB 3.1 Type-C Gen 1, one microphone (3.5mm), one headphone / microphone combo jack (3.5mm)	
Rear Ports	2x USB 3.1 Gen2, 2x USB 3.1 Gen1, 1x ethernet (RJ-45), 1x DisplayPort, 1x HDMI, 1x Serial, 1x VGA	
Audio Support	Realtek ALC233VB2	
Ethernet	Gigabit Ethernet, Intel Ethernet Connection I219-LM(Jacksonville), Wake on LAN	
Security chip	Discrete TPM 2.0, TCG Certified	
Security features	<ul style="list-style-type: none"> ● Security slot (in rear for optional Kensington MicroSaver cable) ● Chassis intrusion switch ● Power-on password ● Administrator password ● Hard disk password ● Boot sequence control ● Boot without keyboard and mouse ● Individual USB port disablement ● Smart USB protection, allows keyboard/ 	

	mouse only, blocks all storage devices	
Keyboard	USB Calliope Keyboard, black	
Mouse	USB Calliope Mouse, black	
Power Supply	65 watts AC/DC adapter, autosensing, 88% PSU	
Mechanical	Tiny (1L), black color; metal case with VESA MOUNT <ul style="list-style-type: none"> ● Toolless chassis open (need optional toolless chassis screw) ● Toolless HDD, SSD, memory removal 	
Environment	ENERGY STAR 7.0, EPEAT Gold rating (North America), ErP Lot 3, TCO, RoHS-compliant	
OS	Windows 10 Pro 64-bit Pre-installed (Must provide certificate from the manufacturer that the OS installed is Genuine OS)	
Warranty	Must be 3 years warranty on parts and labor. (A valid certificate issued by the manufacturer must be submitted).	
	The bidder must be an authorized reseller of the brand being offered. Must provide Manufacturer certificate	
HI-RESOLUTION DOCUMENT SCANNER-75PPM (3 Units)		
Type	Must be Desktop sheet-fed scanner	
Document Feeding	Must be Automatic or manual sheet feeding	
Document size		
Width	Must be 50.8 - 305mm	
Length	Must be 70 - 432mm	
Long Document Mode:	Must be up to 3,000mm	
Document thickness and weight		
Continuous Feeding	Must be 20 - 209g/m ² , 0.04 - 0.25mm	
Non-Separation Mode	Must be 20 - 255 g/m ² , 0.04 - 0.3mm	
Feeding Capacity	Must be 48mm stack or 500 sheets of 80 g/m ²	
Scanning Element	Must be 3-line CMOS CIS	
Light Source	Must be LED (red, green, and blue)	
Scanning Side	Must be Simplex / Duplex	
Scanning Modes	Black and White, Error Diffusion, Advanced Text Enhancement, Advanced Text Enhancement II, 256-level Grayscale, 24-bit Color, Auto Colour Detection	
Scanning Resolutions	150 x 150dpi, 200 x 200dpi, 240 x 240dpi, 300 x 300dpi,	
	400 x 400dpi, 600 x 600dpi	
Scanning speed*1 (A4 / LTR, 200dpi)		

B&W	Portrait: DR-G1100: 75ppm (Simplex) / 150ipm (Duplex) Landscape	
	Landscape: DR-G1100: 100ppm (Simplex) / 200ipm (Duplex)	
Grayscale	Portrait: DR-G1100: 75ppm (Simplex) / 150ipm (Duplex)	
	Landscape: DR-G1100: 100ppm (Simplex) / 200ipm (Duplex)	
Colour	Portrait: DR-G1100: 75ppm (Simplex) / 150ipm (Duplex)	
	Landscape: DR-G1100: 100ppm (Simplex) / 200ipm (Duplex)	
Interface	Hi-Speed USB 2.0	
Technical Specification		
Scanner driver	ISIS / TWAIN	
Useful functions	Job Function, Ultrasonic Double-Feed Detection, Staple Detection, Text Enhancement, Dropout and Color Enhancement, Auto Page Size Detection, 3-D Color Correction, Image Rotation, Skip Blank Page, Edge Emphasis, Moiré Removal, Prevent Bleed Through / Remove Background, Contrast Adjustment, Shading Correction, Brightness Adjustment, Deskew, Border Removal, Scanning Side Selection, Scan Area Settings, Add-on Settings, Text Orientation Recognition, Punch Hole Removal, Folio Scan, Unnecessary dots removal, Notch removal, Background Smoothing, Character Emphasis, Count Only Mode, Verify Scan, Rapid Recovery System, MultiStream™	
Power requirements	AC220-240V (50 / 60Hz)	
Power Consumption	220 - 240V: 94.3W (Scanning), 1.7W (Sleep mode)	
Operating Environment	10 - 32.5°C	
	Humidity: 20 - 80% RH	
Dimensions (W x D x H)	Feed trays closed: 480 x 535 x 315mm	
Weight	Approx. 22.8kg	
Warranty	Must be One year on parts and labor	
	The bidder must be an authorized reseller of the brand being offered. Must provide Manufacturer certificate	
VOIP PHONE WITH ADAPTOR (30 Units)		
Technology	Must be Business Media Phone	
	Must have 2 programmable lines/registrations	
	Must have 2.5" Graphical backlit LCD display with 5-way navigation cluster for control	
	Must be HD voice and Acoustic Fence Technology	
	Must have 2 x Ethernet 10/100 for network pass through	
	Must have RJ9 Headset support with electronic hook switch	

	Must have full duplex Type 1-compliant speakerphone features	
	Must be designed for interoperability and is certified to interoperate with the industry's broadest range of PBX systems and SIP call control platforms	
	Must have Zero Touch Provisioning and web-based configuration tool	
	Must be simple to deploy, easy to administer, upgrade, and maintain	
User interface features	Must have Voicemail support	
	Reversible desk stand/wall mount	
	Unicode UTF-8-character support	
Feature Keys	4 context-sensitive "soft" keys	
	2-line keys with bi-color (red/green) LED	
	"Home" feature key	
	4-way navigation key cluster with center "Select" key	
	2 volume control keys	
	Dedicated hold key	
	Dedicated headset key	
	Dedicated hands-free speakerphone key	
	Dedicated microphone mute key	
Call handling features	Shared call/bridged line appearance	
	Distinctive incoming call treatment/call waiting	
	Call timer and call waiting	
	Call transfer, hold, divert (forward), pickup	
	Called, calling, connected party information	
	Local three-way audio conferencing	
	One-touch speed dial, redial	
	Remote missed call notification	
	Do not disturb function	
	Electronic hook switch capable	
	Local configurable digit map/dial plan	
Network and provisioning	SIP Protocol Support	
	SDP	
	IETF SIP (RFC 3261 and companion RFCs)	
	Two-port Ethernet switch	
	10/100Base-TX across LAN and PC Ports	
	Manual or dynamic host configuration protocol (DHCP) network setup	
	Time and date synchronization using SNTP	
	FTP/FTPS/TFTP/HTTP/HTTPS server based central provisioning for mass deployments	
	Provisioning and call server redundancy supported	
	QoS Support–IEEE 802.1p/Q tagging (VLAN), Layer 3 TOS, and DHCP	

	Network Address Translation (NAT) – support for static configuration and “Keep-Alive” SIP signaling	
	RTCP and RTP support	
	Event logging	
	Syslog	
	Hardware diagnostics	
	Status and statistics reporting	
Security	802.1X Authentication and EAPOL	
	Media encryption via SRTP	
	Transport Layer Security (TLS)	
	Encrypted configuration files	
	Digest authentication	
	Password login	
	Support for URL syntax with password for boot server address	
	HTTPS secure provisioning	
	Support for signed software executables	
Power Adaptor	Must include External Universal AC Adapter 12V	
Warranty	Must be One year with premier service program that provides Service Partners with technical telephone support, advance parts replacement, software upgrades & updates, and access to Polycom’s enhanced support portal. The SLA must be included on the technical requirements	
	The bidder must be an authorized reseller of the brand being offered. Must provide Manufacturer certificate	
WIRELESS BARCODE (5 Units)		
Technology	Must be 802.11b/g/n	
	Must be rugged design	
Features	Must have flexible data capture options, a 1-D linear imager, a 1-D laser and a 1-D and 2-D area imager kit, and all three scan engines must capture damaged, dirty and scuffed bar codes on the first scan. QR Code Compatible.	
	Must enterprise-grade push-to-talk (PTT), plus centralized management features	
Development Tools	Must have RhoElements application development platform that allows you to create cross-platform applications that work on different mobile computers with different operating systems	
Keypad	Must have 27-key numeric; 2 programmable side buttons	
	Must support keypad overlays for localisation and custom functions	
	Must support HTML5	
Management tools	Must have Mobile Device Management (MDM) solutions that allows you to remotely stage, update, monitor and troubleshoot your devices	

Display	Must be 2.8 inches QVGA with backlight; TFT-LCD,64K colours	
Touchpanel	Must be Resistive touch panel	
Expansion Slot	Must have User accessible Micro SDHC card slot (up to 32GB)	
Connectivity	Must have Bluetooth; USB 1.1 full speed host/client	
Notification	Must have LED and audible alert	
CPU	Marvell PXA 320 624 MHz	
Operating System	Microsoft Embedded CE 6.0 Pro	
Memory	256 MB/256 MB ROM	
Battery	2400 mAh rechargeable Smart Li-Ion; user replaceable	
Exit Window	Corning Gorilla Glass	
WLAN Security	WEP, WPA, WPA2, 802.1x, EAP-TLS,TTLS (CHAP, MS-CHAP , MS-CHAPv2, PAP or MD5), PEAP (TLS, MSCHAPv2, EAP-GTC), LEAP, EAP-FAST (TLS, MS-CHAPv2, EAP-GTC), CCXv4 certified	
WPAN	Bluetooth Class II, v 2.0 with EDR; integrated antenna	
Accessories	Must include handstrap, active sync cable, and power supply	
	Must include US AC line cord, 7.5 feet long, grounded, three wire for power supplies	
Warranty	One year on parts and labor	
	The bidder must be an authorized reseller of the brand being offered. Must provide Manufacturer certificate	
NETWORK ATTACHED STORAGE FOR BACKUP AND REPLICATION (1 Unit)		
HARDWARE		
CPU	Intel Atom C2538 Quad Core 2.4GHz	
Hardware Encryption Engine	Yes (AES-NI)	
Floating Point	Yes	
RAM Size	DDR3 2 GB (Expandable up to 6 GB)	
Internal HDD/SSD	8 x 4TB 3.5" SATA 7200rpm	
Max Internal Capacity	48 TB (6 TB HDD X 8)	
Hot Swappable HDD	Yes	

External Ports	USB 3.0 ports X 4, eSATA X 2	
Size (HxWxD)	157 x 340 x 233 mm	
Weight	5.29 kg	
LAN	Gigabit X 4	
Wake on LAN/WAN	Yes	
Wireless Support	Yes	
Power Frequency	50 Hz to 60 Hz, Single Phase	
GENERAL		
Networking Protocols	CIFS, AFP, NFS, FTP, WebDAV, CalDAV, iSCSI, Telnet, SSH, SNMP, VPN (PPTP, OpenVPN™, L2TP)	
File System	Internal: EXT4	
	External: EXT4, EXT3, FAT, NTFS, HFS+	
Storage Management	Max File System Size: 108 TB, Max Internal Volume #: 512, Max iSCSI Target #: 32, Max iSCSI LUN#: 256;	
	Raid Clone/Snapshot support; Supported RAID Type: Synology Hybrid RAID, Basic, JBOD, RAID 0, RAID 1, RAID 5, RAID 6, RAID 10; Synology Expansion Unit Support: DX513, DX213	
File Sharing Capability	Max User Account: 2048, Max Group: 256, Max Shared Folder: 512, Max Concurrent CIFS/AFP/FTP Connections: 512	
Privilege	Windows Access Control List (ACL)	
Directory Service	Windows AD Integration: Domain Users login via Samba (CIFS)/AFP/FTP/File Station, LDAP Integration	
Virtualization	VMware vSphere 5, Microsoft Hyper-V, Citrix Ready	
Security	FTP over SSL/TLS, IP Auto-Block, Firewall, Encrypted Network Backup over Rsync, HTTPS Connection	

Supported Clients	Windows XP onward, Mac OS X 10.5 onward, Ubuntu 9.04 onward	
Supported Browsers	Chrome [®] , Firefox [®] Internet Explorer [®] : 8 or onward, Safari [®] 5 or onward, Safari (iOS 5 or later on iPad [®]), Chrome (Android™ 4.0 on tablets)	
APPLICATIONS		
File Station	Virtual Drive, Remote Folder	
Backup Solutions	Network Backup, Local Backup, Desktop Backup, Shared Folder Sync - Max Task Number: 8,	
	Configuration Backup	
Mail Server	Supported Mail Server Protocols: POP3, SMTP, IMAP	
FTP Server	Bandwidth Control, Custom FTP Passive Port Range, Anonymous FTP, Transfer Log	
Web Station	Virtual Host (up to 30 websites), PHP/MySQL [®] , 3rd-Party Applications Support	
Printer Server	Max Printer #: 2, Printing Protocols: LPR, CIFS, IPP, Apple iOS Printing, Google Cloud Print™, Multi-Functional Print Server (MFP functions are for Windows PC only)	
Log Center	SSL Connection, Log Rotation: 6 months, 1 year, 2 years, 3 years, Email Notification	
iOS/Android™ Applications	DS audio, DS cam, DS cloud, DS download, DS file, DS finder, DS photo+, DS video, DS note	
Windows™ Phone Applications	DS audio, DS download, DS file, DS finder, DS photo+, DS video	
Warranty	One year on parts and labor	
	The bidder must be an authorized reseller of the brand being offered.	
Network Uplink Upgrade to 10GB		
Item	Specifications	Statement of Compliance
Access Switches POE with 2x 10G Copper Uplink (33 Units)		
Specifications	Must be Fixed port switch	

	Must have 24 RJ-45 auto-negotiating 10/100/1000 PoE+ ports (IEEE 802.3 Type 10BASE-T, IEEE 802.3u Type 100BASE-TX, IEEE 802.3ab Type 1000BASE-T, IEEE 802.3af PoE, IEEE 802.3at.)	
	Must have 2 fixed 1000/10000 SFP+ ports	
	Must have 2 RJ-45 1/10GBASE-T ports	
	Must have 1 RJ-45 console port to access limited CLI port	
	Must have 128 MB flash; Packet buffer size: 1.5 MB, 1 GB SDRAM	
	Mounting: Mounts in an EIA-standard 19 in. telco rack or equipment	
	Must have 100 Mb Latency < 5 μ s	
	Must have 1000 Mb Latency < 5 μ s	
	Must have 10 Gbps Latency < 1.5 μ s	
	Must have Throughput of up to 95.2 Mpps (64-byte packets)	
	Must have Switching Capacity of 128 Gbps	
	Must have Routing Table Size: 32 entries (IPv4), 32 entries (IPv6)	
	Must have MAC Address Table Size : 16384 entries	
	Must be Voltage 100-240 VAC	
	Must be Frequency: 50/60 Hz	
	Must have Maximum Power Consumption of 425 W	
Warranty	Must be lifetime warranty on parts and one year on labor on site	
	The brand being offered must belong to the Leaders Magic Quadrant for the Wired and Wireless LAN Access Infrastructure. (Please attach certificate)	
	The bidder must be an authorized reseller/authorized dealer of the brand being offered. A current valid manufacturer's certificate must be submitted as part of the technical component on bid proposal.	
ADDITIONAL MODULE FOR OSG and APMC Core Switch (8 ports 10G Copper for Distribution switch uplink) 3 Units		
Specifications	Must be compatible to OSG's existing Core Switch	
	Must be 8 Ports multigig modules	
	Must be 1/2.5/5/XGT PoE+	
	Must be Lifetime warranty on parts and one year on labor on site	
	The brand being offered must belong to the Leaders Magic Quadrant for the Wired and Wireless LAN Access Infrastructure. (Please attach certificate)	
	The bidder must be an authorized reseller/authorized dealer of the brand being offered. A current valid manufacturer's certificate must be submitted as part of the technical component on bid proposal.	
10G COPPER DISTRIBUTION SWITCH (1 Unit)		
Specifications	Must be high performance switching	

	Must be fixed port 10G Copper switch	
	Must have 32 RJ-45 1/10GBASE-T ports; Duplex: 100BASE-TX/1000BASE-TX/10GBASE-TX: Full Only	
	Must have 2 QSFP+ 40-GbE ports	
	Must have 8 fixed 1000/10000 SFP+ ports	
	Must be Layer 3 Dynamic	
	Must be 17.32(w) x 25.98(d) x 1.72(h) in (43.99 x 65.99 x 4.37 cm) (1U height)	
	Must be 28.66 lb (13 kg)	
	Must have 1 RJ-45 serial console port	
	Must have 1 RJ-45 out-of-band management port	
	Must have 1 USB 2.0"	
	Must have 2 power supply slots	
	Must have 512 MB flash, 2 GB SDRAM; packet buffer size: 9 MB	
	Mounts in an EIA standard 19-in. telco rack or equipment cabinet (hardware included)	
	Must have 10 Gbps Latency < 1.5 μ s (64-byte packets)	
	Must have Throughput of 714.2 Mpps (64-byte packets)	
	Must have Switching Capacity of 960 Gbps	
	Routing Table Size: 128 entries (IPv4), 128 entries (IPv6)	
	MAC Address Table Size: 128,000 entries	
	Must be Voltage: 100 - 240 VAC	
	-48 to -60 VDC"	
	Frequency: 50/60 Hz	
	Maximum Power Consumption must be 350 W	
	Must include 2 x 650W AC Power Supply	
	Must include 2 x HV Fan Tray	
	Must be 1 Year warranty on parts and labor	
	Must include 3Y Foundation Care Next Business Day Support	
	The brand being offered must belong to the Leaders Magic Quadrant for the Wired and Wireless LAN Access Infrastructure. (Please attach certificate)	
	The bidder must be an authorized reseller/authorized dealer of the brand being offered. A current valid manufacturer's certificate must be submitted as part of the technical component on bid proposal.	
IMPLEMENTATION SERVICES (1 Lot)		
Scope of Works	1. Install, Start-Up and Configuration	
	a. Physical Checking Installation	
	i. Pre-staging	
	ii. Hardware Testing	
	iii. Rack mounting	
	iv. Inserting/connecting power supplies	
	v. Power-up	
	b. Management	
	i. Creation of management VLAN	

	ii. Assigning of management IP address per switch or per stacked of switches	
	c. VLAN Configuration	
	i. Configuration of VLANS	
	ii. Configuration of Tagged port (VLAN up links)	
	iii. Configuration of inter-VLAN routing	
	d. Perform the following testing	
	i. Inter VLAN connection	

Prepared by:

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